



Background note

Natural forest heritage in Norway

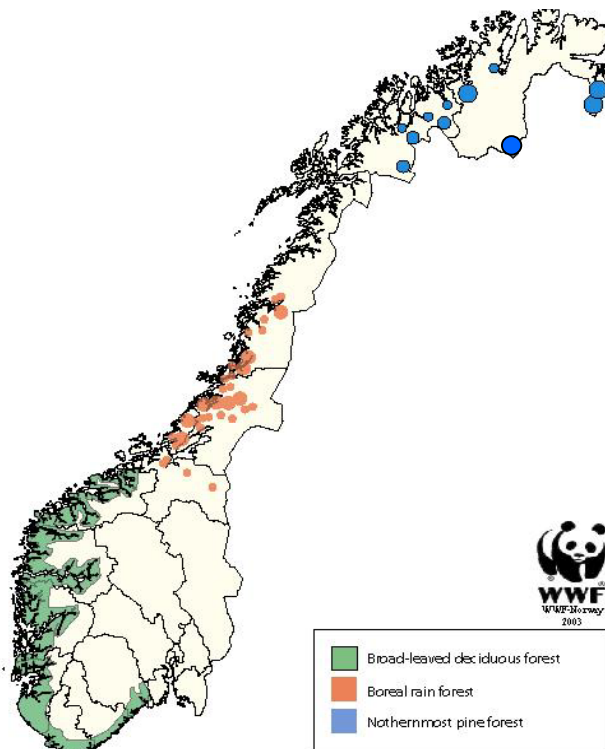
By Arnodd Håpnes, forest officer. WWF-Norway, March 2003

The fjords and scenery are highly valued by tourists. What about forests and biodiversity?

The amazing rainforest of Europe

Central Norway is the only place where the Taiga meets the Atlantic sea. This is the European boreal rain forest, unique in its distribution and species diversity, which means that Norway has an international responsibility for protection of these forests. It's not only the swarms of mosquitoes that distinguish the boreal rain forest. Climatic factors and a specialized epiphytic lichen flora give characteristics to these forests.

Some of Norway's forest treasures



Boreal rainforest. Photo: WWF / Arnodd Håpnes

The boreal rain forest is characterized by:

- spruce forest often mixed with boreal deciduous tree species (birch, rowen, aspen and willow)
- high and frequent precipitation, annual mean above 1200 mm, and more than 200 days with more than 0,1 mm.
- A unique epiphytic flora containing a number of species which have their main or only European or world distribution in these areas, e.g. *Cavernularia hultenii*, *Pannaria ahlneri*, *Rinodina disjuncta*, *Erioderma pedicellatum* and *Gyalideopsis piceicola*. The lichen *Lichinodium ahlneri* has its known world distribution here.

It is estimated that 70-90% of the original boreal rain forest in Norway has been destroyed in the last 70 years! Clearcutting and (forest) road construction are the main threats to the boreal rain forest. Less than 25 small and scattered localities are protected. Around 260 localities (2 - 250 hectares in size) are known. The common in the boreal rain forest is logging operations. It should be forest protection. Scientists have given the boreal rain forest very high priority based on the gap analysis on forest protection in Norway.



Outpost of Europe's broad-leaved deciduous forest

The broad-leaved deciduous forest along the coast in southern and western Norway is known as the most biodiversity rich terrestrial land habitat in Fennoscandia. High precipitation and warm winters give this area a bright colour of fresh and green forests. Tree stems are covered by a huge diversity of lichen and moss species, and also the bird and insect diversity is high. From the luxuriant green forests in the valleys you can see straight up to the glaciers, sliding down from the ragged mountain range.

The west coast of Norway is highly recognized for its scenery, and hundreds of thousands of tourists visit this part of Norway every year. In May you can go skiing on the glaciers and afterwards trek through the luxuriant forests on the valley slopes. This time of the year is the awakening of nature after a long winter resting period. Birds are nesting and the plants are starting a new season of growth and flowering. The trees get their first, tiny light green leaves and life starts again. These forests are poorly protected. Scientists have given the broad-leaved forests very high priority in their gap analysis on forest protection in Norway.

Threats

Today, more than 20 per cent of the broad-leaved forests are logged and replaced with non-native tree species. The forest sector continues this destructive management, manipulating living forests into boring monoculture of non-native species. This is the biggest threat to this unique and biodiversity rich forest ecosystem, for which Norway has an international responsibility!



Oak forest in western Norway. Photo: Rune Aanderaa.

Species diversity

Because of the warm winters, some plant species that are common in Central Europe have extended their limits to western Norway. They find suitable habitats here in the broad-leaved forests in Norway. Examples are Holly (*Ilex aquifolium*), English Yew (*Taxus baccata*) and English Ivy (*Hedera helix*). These forests are also the home to the only viable population of the White-backed woodpecker in Europe! These forests, scattered with large, old dying trees and dead wood, are home to many of the endangered bat species found in Norway. The bats use dead hollow trees for hibernation.

Protection is needed!

Less than 0,7 % of these forests are protected. Threats include habitat loss and destruction. Unprotected HCVF are replaced with non-native monoculture forests. High Conservation Value Forest (HCVF) should be protected, so please, help us to save our living forests for future generations.



The northernmost pine forests in the world

Close to the arctic permafrost zone in northern Norway we find some of the world's most unique forest types. This is the land of the Sami people and their reindeer herds, in the land where the sun shines all summer. During the long and dark winter months, the brown bear might hibernate under a 400-year-old pine tree. The tracks of a wolverine mother and her cub cross the old growth stand, where a couple of Siberian jay whistles their soft, flute tunes. This is the land of silent sound and light, the land where we find the world's northernmost pine forest.

Historical forests, remnants from the stone age.

These scattered pine forests are remnants from a much larger pine forest in the past warm period (4000-4500 BP). Even though the climate has become a few degrees colder over

the last 4000 years, these forests survive in some climatically favourable spots. Some of the individual trees in these old growth forests are more than 500 years old. They look like "dwarf giants" because they are quite short but the stem might have a diameter of more than one meter. Remember, this is almost the Arctic! The northernmost populations of bird species like Siberian jay (*Perisoreus infaustus*), Three-toed Woodpecker (*Picoides tridactylus*), Lesser spotted Woodpecker (*Dendrocopus minor*) and Osprey (*Pandion haliaetus*) are also found in these northernmost "arctic forests".

Some of these unique pine forests are already protected. Norway has an international responsibility for protecting this forest type and to secure the biodiversity in a way that we are not fulfilling today. There is a need for more protection because important localities still are unprotected.



Old pine with golden eagle nest, Troms County. Photo: WWF / Andreas Tveteraas