

NORWEGIAN FORESTS



Policy and Resources



Forestry in Norway

Norway has considerable forest resources as 41 % of the Norwegian land area is forest and other wooded land. The forest resources are of great historical importance and have played a major role in developing trade and industry in Norway.

Norwegian forestry and the wood industry continue to have great financial importance today, at a national, regional and local level. The primary value of Norwegian timber was 3 billion NOK in 2008. The same year timber and wood products had a gross value of approximately 48 billion NOK, corresponding to 5 % of the total gross domestic product in Norway.

Biomass and timber from Norwegian forests will continue to play an important role in the years to come, as welcomed renewable resources that can help us meet the challenges of climate change. According to the National Forest Inventory, 8.3 million hectares of the forest area is productive forest, that is to say forest areas that can produce more than 1 m³ per hectare per year. The most important types of wood, measured by volume and economic value, are spruce (*Picea abies*), Scots pine (*Pinus silvestris*) and birch (*Betula* spp.).

In 2009 the total growing stock in Norwegian forests was 823 million m³, with a yearly increment of 25 million m³. Over the last 90 years the total annual harvest has been between 8 and 11 million m³. This is considerably lower than the yearly increment. With the existing level of timber harvest and forest management the growing stock and its increment in 2011 is more than twice the level documented by the first National Forest Inventory in 1932. The amount of dead wood, old forest and deciduous trees, which is important for biological diversity, has increased considerably during the same period.

Forestry in Norway is characterized by small-scale farmers, combining forestry and agriculture. This structure is based on the Norwegian topography, varying production conditions and the ownership structure of Norwegian forests. In 2009 Norway had 120 000 forest owners with more than 2.5 hectares of forest. 97 % of these properties are privately owned, and constitute 80 % of the total productive forest area. The average size of privately owned farms with forest resources is 45 hectares.



Policy Instruments for Sustainable Forest Management

Norwegian forest policy is based on a wide range of measures. These include legislation, taxation, financial support schemes, research and advisory bodies. Norway's obligations under international agreements have also been incorporated in Norwegian law, i.e. the criteria for sustainable forest management that have been negotiated in the framework of forest policy cooperation in Europe.

The main objectives of the Forestry Act are to promote sustainable forest management with a view to promote active, local and national economic development, and to secure biological diversity, consideration for the landscape, outdoor recreation and the cultural values associated with the forest. The Forestry Act applies to all categories of forest ownership.

The National Forest Inventory has been an important basis for the development of forest policy since the beginning of the last century, and made for every county in Norway at certain intervals.

A regulation under the Forestry Act requires forest owners to reinvest a part of the revenue from forestry into a government administrated fund; the Forest Trust Fund. This fund was established to secure long term investment in sustainable forest management such as silviculture, building and maintenance of roads, forest management planning and environmental measures. A forest owner is required to deposit between 4 and 40 % of the gross revenue from the sale of timber and fire wood to a trust fund that remains with the forest holding. The forest owner is stimulated to use the trust fund actively as only a part of the money invested in the property will be subject to taxes.

Support schemes for forestry include financial support to i.e. silviculture, building of roads and environmental measures in the forest. Support is also granted in order to encourage the harvest of timber and forest residues for production of bio-energy. Some regions, mainly the western and the northern part of Norway have no traditions for commercial forestry. These regions are prioritized when aid is allocated. These support schemes are administered on regional and local level.

Economic support is also granted for developing forest management plans including environmental inventories. Such plans are important for ensuring that forest activities are carried out within the framework of sustainable forest management.



An asset for the public

Free, public access to land, including forests, is an old and important principle in Norway. The general public may use the forests for recreational activities and sports at any time of year. Public access to nature is enforced through the Outdoor Recreation Act. Motorized recreational activity is prohibited off-road.

Traditional activities such as berrypicking and mushrooming are still important, while modern activities such as off-road biking are increasingly popular. In order to prevent forest fires, the public is allowed to collect dry wood and make campfires in the forest from September 15th to April 15th only. Both municipalities and non-governmental organizations help maintain a vast network of trails for hiking and cross-country skiing.

The principle of public access is underlined by the forest policy and the environmental standards used by forest owners. When practicing forestry, forest owners are obliged to clear trails and ski tracks, and to repair damages caused by vehicles. The forestry sector contributes to outdoor activities by building and maintaining forest roads and by carrying out silvicultural measures to increase the accessibility of forests.

Norwegian forests are often mentioned as important for public health and as an educational arena for children and youth. Using the forests for recreation and sports can have a positive impact on both physical and mental health.

Hunting and fishing are also important forest activities in Norway. The right to hunt and fish is an exclusive right reserved landowners, but the public is granted the right to fish in lakes and rivers by purchasing licenses. Hunting licenses are also sold, which gives the public the possibility to hunt in privately owned forests, on common land and in municipal and state-owned forests.



Forests and climate change

Forests also have many important functions related to climate. In addition to the impact on water balance and local climatic conditions, the world's forest ecosystems also represent considerable stores of carbon that can impact on global warming if the carbon is emitted into the atmosphere. On the other hand, growing stocks are important carbon sinks that can reduce the impact of man-made emissions of CO₂. Through the photosynthesis the world's forests are, for the time being, capturing and storing carbon equivalent to 25 % of the total man-made emissions of greenhouse gases.

According to the Intergovernmental Panel on Climate Change (IPCC), sustainable forest management, with the aim of maintaining or increasing carbon storage in forest ecosystems while producing wood for timber, fibre and bio-energy, is an important contribution to climate mitigation. As biological carbon is part of nature's own carbon cycle, the amount of carbon that is emitted when burning forest biomass is the same as when biomass decomposes naturally. As long as we maintain our forests, carbon will be sequestered through the photosynthesis.

The current challenge of rapid climate change is mainly due to the fact that the atmosphere is being supplied with CO₂ from burning of fossil carbon in the form of oil, coal and gas. The continuous high level of CO₂ emissions is changing the long-term level of CO₂ in the atmosphere and results in global warming.

As less than half of the increment in Norwegian forests is harvested today, it is possible to increase the use of wood for production of energy and as building materials in order to reduce the consumption of oil, coal and gas. This can contribute to a reduction of emissions in accordance with the terms set out by the IPCC to avoid a rise in temperature of more than two degrees.

This understanding is the basis for the Governmental White Paper No. 39 (2008-2009) Climate challenges - Agriculture part of the solution, and Climate Cure 2020 (2010), a study led by the Norwegian Climate and Pollution Agency (KLIF) to assess the available options to reduce greenhouse gas emissions.



Programs for increased use of Wood and Bio-energy

Norway has an ambition to be a lead country in processing and innovative use of wood. An important goal for both Government and wood processing industry is to increase the use of wood where it can replace materials with higher negative environmental impact.

The Norwegian Wood-based Innovation Scheme is an important initiative that addresses different parts of the market: companies, decision-makers, architects, entrepreneurs, traders, research and innovation. Economic support is given in three areas: Industrial building and construction, Wood products and traditional use of wood and Innovation systems.

The Bio-energy Scheme was established in 2003. The programme aims to stimulate forest owners and farmers to both use and deliver more bio-energy to the market in the form of fuel or heating. The Bio-energy Scheme's budget has been tripled since 2003, in order to increase awareness of climate change and forests as a source of carbon-neutral energy. The aim is to reduce the use of fossil fuels, diversify energy supply and to provide a basis for economic development in rural areas. The most important measures under the program are investment support, aid to pilot projects and capacity building.

The Wood-based Innovation Scheme and the Bio-energy Scheme are administered by Innovation Norway, a public agency.



Sustainable forest management

Norwegian forest policy, as well as the environmental standards that forest owners are committed to follow, emphasise environmental considerations, such as maintaining and developing biological diversity, and the social and cultural functions of forests.

Due to the historically high rate of forestry, the share of virgin forests is small in Norway. Today there are therefore strong concerns that Norwegian forestry is environmentally sustainable and takes sufficient consideration of biological diversity and threatened habitats. Biodiversity rich habitats are registered and mapped in forest management plans. This registration is being done according to a standardized and well documented system.

The Nature Diversity Act contains provisions on forest conservation and provisions on prioritized species and selected habitats in forests that are important for specific groups of species. Voluntary protection is now the main strategy for forest conservation.

Protective forests are regulated in the Forestry Act. The main function of a protective forest is to protect climatically vulnerable forests and other forests against damage, and includes mainly the forest bordering mountain areas.

The Forestry Act, and the regulations given under the act, also regulates forestry related activity making allowance for the role of forests for recreational use and by protecting landscapes and cultural values.



Forest certification

The Living Forest Standard is a national standard for sustainable forest management in Norway. The standard was jointly developed in 1998 and revised in 2006, by stakeholders in forest management and the forest industry, environmental and outdoor recreation organisations, trade unions and consumer interests groups. The standard promotes sustainable forest management by creating a balance between forest production, environmental protection and social interests. The Living Forest Standard is an important basis for forest certification in Norway. The standard is also used in combination with the ISO14001 environmental management system that is applied to practically all commercial forestry in Norway. By group certification through the forest owners associations, the challenge of certifying small forest properties has been overcome with bearable costs for individual forest owners.

Since June 2010 the Living Forest Standard has been suspended pending an unsolved disagreement in the Living Forest Council related to reforestation and afforestation regarding the use of new and introduced tree species. Although formally suspended, the forestry sector continues to follow the rules and guidelines from the standard.



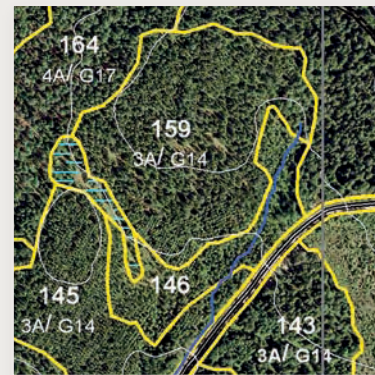


Forest management plans with environmental inventories

Forest management plans are important tools for the forest owner, in order to promote sustainable forest management. This includes both active commercial use of the forest resources as well as the forest owner's responsibility for the protection of biological diversity, landscapes, recreation and cultural values in the forest.

Forest management plans are offered to all forest owners in Norway every 10th to 15th year according to plans and grants at county level. Today, forest management plans are developed through analysis and descriptions based on photography and laser measurements conducted from the air. Field registrations are also important. The final product is customized to the individual forest owner and can give him or her recommendations for forestry measures. Providing an inventory of forest resources and environmental values on the property is a precondition for the allocation of grants.

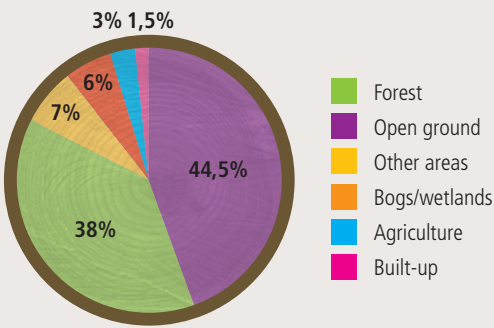
Important areas for biological diversity are being inventoried on the basis of knowledge about species and their habitat requirements. The environmental inventories developed through the forest management planning process are made publicly available. The forest owner must ensure that all activities in the forest are carried out in compliance with laws and regulations. Under the Forestry Act, each forest owner must have an overall view of the environmental values and pay regard to them when carrying out activities in the forest.



Facts and Figures

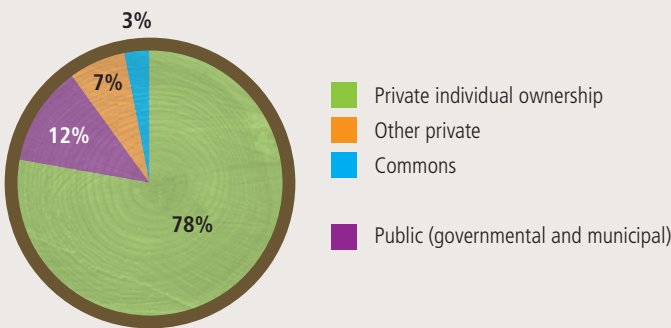
Land-use categories in Norway

Per cent of total land area

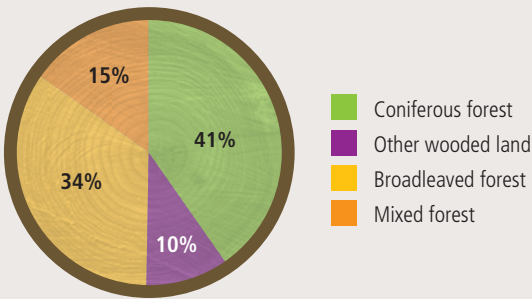


Source: The Norwegian Forest and Landscape Institute and SSB

Forest ownership by area (%)



The forested area of Norway



Forested area & other wooded land

area km²
134.000

Forested area	120.000
- Coniferous forest	55.000
- Broadleaved forest	45.000
- Mixed forest	20.000
Other wooded land	14.000

Source: The Norwegian Forest and Landscape Institute

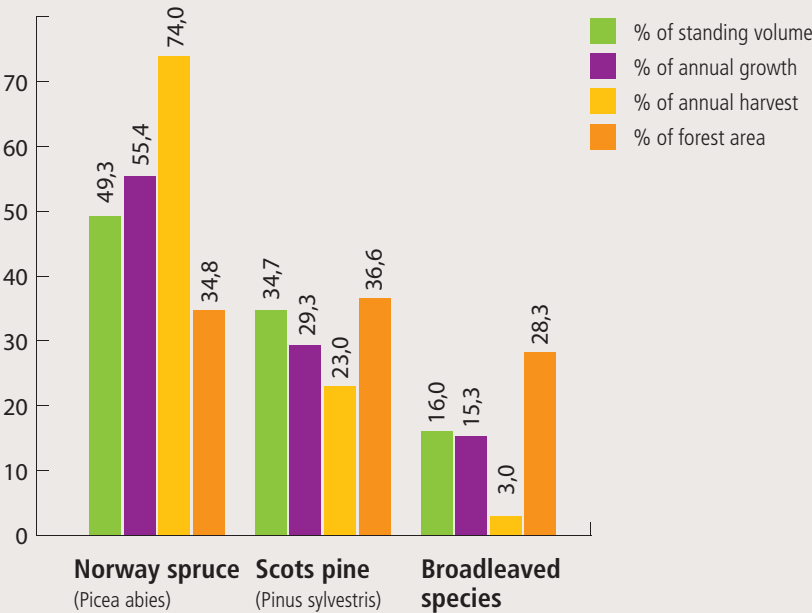
Status for forest certification, ISO 14001

Total certified forest area (hectares)

9.115.900

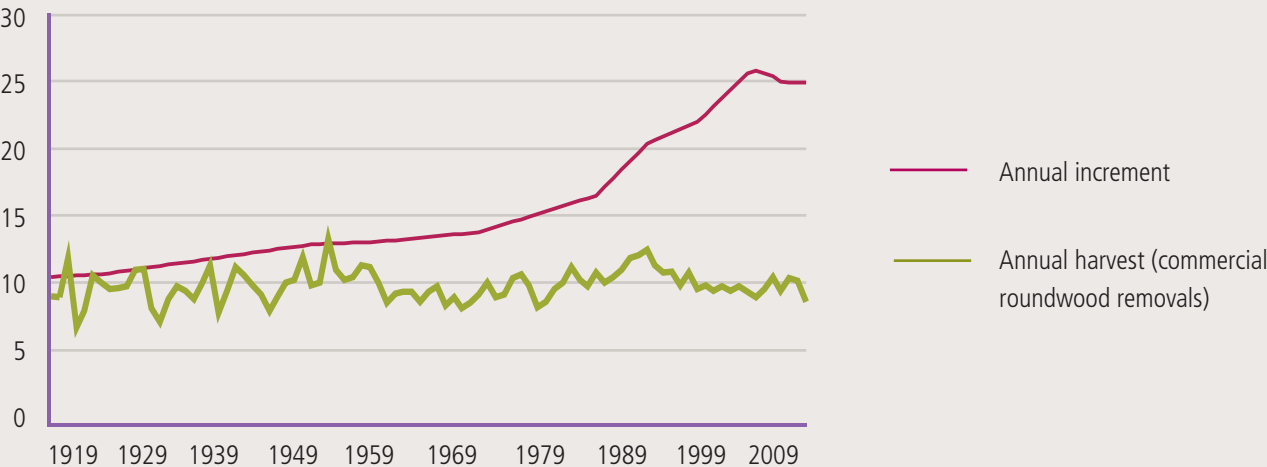
Kilde: PEFC Norway

Distribution of tree species



Source: The Norwegian Forest and Landscape Institute and SSB

Annual increment and harvest, million m³



Source: The Norwegian Forest and Landscape Institute

Useful web addresses

Public administration

Ministry of Agriculture and Food:

www.regjeringen.no/lmd

Norwegian Agricultural Authority: www.slf.dep.no

The offices of the County Governors:

www.fylkesmenn.no

Innovation Norway: www.innvanor.no

Climate and Pollution Agency : www.klif.no

Research

The Norwegian Forest and Landscape Institute:

www.skogoglandskap.no

Norwegian University of Life Sciences:

www.umb.no

Environmental information

Environment: www.miljostatus.no

Norwegian Directorate for Nature Management:

www.dirnat.no

Geographical information

Norwegian Mapping Authority: www.statkart.no

Statistics

Statistics Norway: www.ssb.no



Det norske Skogselskap

Forest certification

Living Forest: www.levendeskog.no

PEFC Norway: www.pefcnorge.org

Fishing and hunting

Inatur: www.inatur.no

Statskog SF – The Norwegian State-owned Land and

Forest Enterprise: www.statskog.no

Courses and further training

Forestry Extension Institute: www.skogkurs.no

Forest seed supply

The Norwegian Forest Seed Center:

www.skogfroverket.no

Organizations

Norwegian Forest Owners Associations:

www.skog.no

Norskog – Norwegian Forestry Association:

www.norskog.no

Det norske Skogselskap – The Norwegian Forestry

Society: www.skogselskapet.no



LANDBRUKS- OG MATDEPARTEMENTET

Utarbeidet av det Det norske Skogselskap på oppdrag av Landbruks- og matdepartementet.