

Report

Norway's Fifth National Report to the Convention on Biological Diversity



NORWEGIAN MINISTRY OF
CLIMATE AND ENVIRONMENT

Executive Summary

Norway's fifth national report to the Convention on Biological Diversity presents information on status and trends for biodiversity in Norway, measures undertaken to implement the Convention since 2009, successes and remaining challenges. Norway's previous national reports were published in 1998, 2001, 2005 and 2009.

Status, trends and pressures

Norwegian nature is very varied, with striking differences between landscapes, habitat types and plant and animal species found in different parts of the country. There is a wide diversity of terrestrial habitat types, ranging from beech forest in the south to Arctic habitats in the north, and from wet coastal habitats to dry inland areas. The sea areas under Norway's jurisdiction are about six times larger than its land territory. They stretch from the temperate waters of the central North Sea to the Arctic Ocean, and from shallow bank areas down to deep sea areas at depths of 4 000–5 000 metres. Norway's biodiversity provides the foundation for a wide range of ecosystem services, of vital importance for human well-being and socio-economic development.

There are many different pressures on Norway's biodiversity. Figure 1 provides an overview of pressures on biological diversity as assessed in the 2010 Norwegian Red List for Species. Chapter 2 presents the main pressures on biodiversity in Norway. The importance of pressures for specific ecosystems is described in Chapter 3 on status and trends for Norwegian ecosystems.

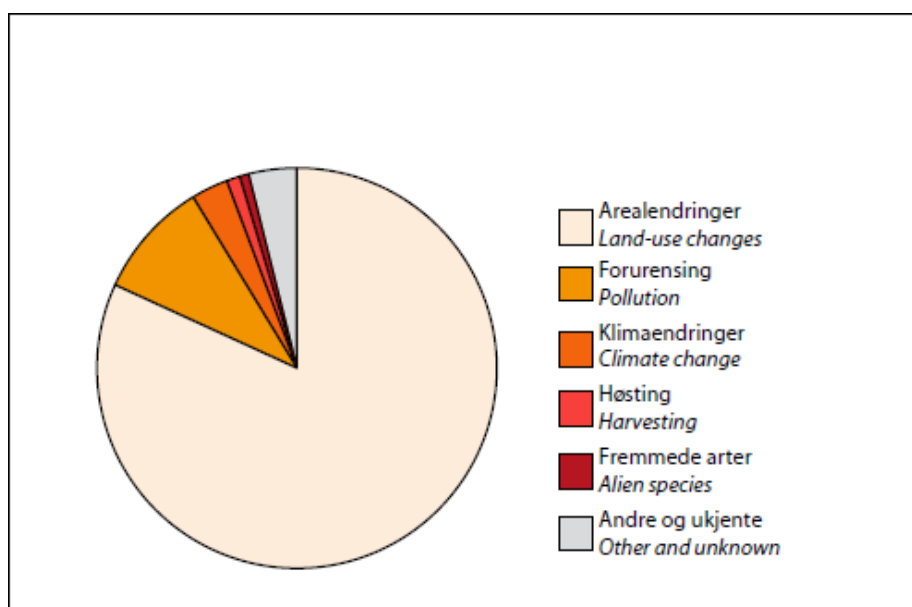


Figure 1: Land-use change, pollution, climate change, harvesting (over-exploitation) and alien species are the five major global pressures on biological diversity. In Norway, land-use change is by far the most significant factor. Other factors include noise, traffic and external pressures (originating outside Norway). Source: Norwegian Biodiversity Information Centre 2010.

Norway's red lists (*2010 Norwegian Red List for Species* and *Norwegian Red List for Ecosystems and Habitat Types*), the Norwegian Nature Index and the National Forest Inventory are the most important sources of information for assessing status and progress.

The Norwegian Nature Index documents overall trends for biodiversity in Norway's major ecosystems based on a large number of indicators (Table 1). Due to challenges concerning calculating the reference state in certain ecosystems, direct comparison between ecosystems should be avoided.

Table 1: Norway's major ecosystems: area, state and trends. The value for each indicator ranges between 1 and 0. The reference state is given the value 1, and approximates to the natural state, with no negative impacts of human activity.

Ecosystem ⁷	Area (km ²) (% of Norway's land area) ¹	Nature Index value in 2010 ² (95 % confidence interval)	Trend 1990–2010	No. of threatened and near-threatened species	No. of threatened and near-threatened habitat types
Open sea	875 995	0.75 (0.65-0.83) (seabed) 0.71 (0.65-0.76) (pelagic)	↗	87 ³	5
Coastal waters	89 091	0.73 (0.69-0.76) (seabed) 0.66 (0.49-0.71) (pelagic)	→		9 ⁴
Freshwater	19 620 (6.0 %)	0.73 (0.68-0.76)	↗	267	7
Forest	120 746 (37.3 %)	0.40 (0.38-0.43)	→	1838	18
Wetlands	17 000 (5.3 %)	0.53 (0.51-0.57)	→	443	15
Mountains	118 740 (36.7 %)	0.63 (0.57-0.69)	→	158 ⁵	

¹ The areas of different ecosystems are based on figures from Statistics Norway. Mountain areas were defined as those above the treeline and open lowland as traditional semi-natural vegetation types such as open grassland in the lowlands, boreal heaths and meadows around summer farms, coastal heaths and naturally open areas below the treeline (Blumentrath and Hanssen 2010) Open sea extends to the boundary of the Economic Zone of Norway (i.e. 200 nautical miles from the baseline).

² Updated Nature Index figures have been calculated for 2012.

³ Figure for open sea and coastal waters combined.

⁴ The figure includes shallow marine waters and the littoral zone.

⁵ Austrheim et al. (2010).

Open lowland	29 080 (9.0 %)	0.40 (0.36-0.44)	↘	741	3 ⁶
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Source unless otherwise specified in the footnotes: Nybø (2010).

Figures were first published for the period 1990–2010 and updated in 2012. The open sea and coastal waters show a clear positive trend, with an average 10 % rise in Nature Index values from 1990 to 2012. The Nature Index value for open lowland declined by 16 % in the same period, while wetlands showed an 8 % decline. There was a weakly negative trend for mountains and freshwaters and a weakly positive trend for forests. According to the red lists, the largest numbers of threatened species are found in forest, wetlands and cultural landscapes, while the largest numbers of threatened habitat types are found in forest and wetland ecosystems. In all, 3 682 species have been red-listed as threatened or near-threatened in Norway, of which 2061 are assumed to be negatively affected by former or current land-use changes due to physical disturbances. 503 of these species are considered naturally rare.

The *Norwegian Red List for Ecosystems and Habitat Types* assesses the status of 80 habitat types. There is no documentation that any habitat types have been lost completely, but 40 habitat types are listed as threatened (2 as critically endangered, 15 as endangered and 23 as vulnerable).

Generally, the state of Norwegian ecosystems is relatively good and, if managed wisely, they will be capable of sustaining a flow of important ecosystem services. The administrative, economic and legal framework in Norway has been identified as an important reason for this situation. However, biodiversity in Norway is under increasing pressure from a variety of sources, as indicated above. The cumulative effects are putting more pressure on the capacity of ecosystems to deliver ecosystem services, making continued monitoring even more important.

Implementation of the Convention and the Strategic Plan for Biodiversity 2011-2020, including the Aichi Biodiversity Targets.

All Norwegian authorities, industrial sectors and other relevant actors are required to play their part in efforts to ensure the conservation and sustainable use of biodiversity. Measures taken since the adoption of Norway's first National Biodiversity Strategy and Action Plan and last national report are described in Part II of this report. Norway has strengthened the knowledge base considerably, substantially improved existing legislative instruments and developed new ones. The Nature Diversity Act and the Planning and Building Act apply

⁶ Assessed at a less detailed level than habitat types in other major ecosystems.

⁷ Due to challenges concerning the calculation the reference state in certain ecosystems, direct comparison between ecosystems should be avoided.

across sectors and facilitate cross-sectoral coordination. The Convention on Biological Diversity inspired the development of the Nature Diversity Act, which entered into force in 2009. The purpose of the Act is to protect biological diversity and ecological processes through conservation and sustainable use. It also introduced new provisions on alien organisms and access to genetic material.

Other cross-sectoral measures include the management plans for Norway's sea areas and the river basin management plans. Such plans also encourage coordinated use of legislative and other instruments to protect the environment, through knowledge generation, clear targets and tools for finding a balance between environmental considerations and other important public interests. The National Budget includes an indicator set designed to monitor progress towards the targets of Norway's sustainable development strategy, some of which are based on Nature Index values.

The economic instruments that are most important in relation to biodiversity can be divided into three main categories: grant schemes, compensation schemes and taxation schemes. There has so far been little development and coordination of economic instruments, which was one of the areas highlighted in the first NBSAP. In 2013, an expert committee submitted an Official Norwegian Report on the values related to ecosystem services to the Minister of the Environment. A broad-based public consultation process has been held on the report's conclusions and recommendations. The Government will use the responses that have been received in deciding how to follow up the work and recommendations of the committee.

It is an important principle that Norway's environmental policy and all management of natural resources are to be knowledge-based. In response to the emphasis on knowledge-based management in the previous NBSAP and as an underlying principle of the Nature Diversity Act, budgets for this purpose have been increased and the Norwegian Biodiversity Information Centre has been established. The Biodiversity Information Centre has developed a new classification system for Norwegian nature, with the aim of using this as a basis for mapping at all levels – landscapes, ecosystems and habitats. The Centre has also established Artskart (Species Map Service), which provides quality-controlled spatial data on species occurrence in Norway. In addition, it runs the website Artsobservasjoner.no, which provides a platform for the public to register species observations. It also publishes Norway's red lists (2010 Norwegian Red List for Species and Norwegian Red List for Ecosystems and Habitat Types). These present assessments of the risk that species will become extinct or ecosystems or habitat types disappear in Norway over time.

Biodiversity monitoring programmes now ensure that there is some monitoring of all Norway's major ecosystems. These are normally long-term programmes that provide valuable information on the fauna and flora. However, publications on the Nature Index point out that the current monitoring system is incomplete. The knowledge base on ecosystem services also needs to be improved.

The authorities maintain a wide range of databases where large amounts of information is compiled, organised by topic, and made readily accessible. They include Naturbase (spatial

data on biodiversity), Villreinbasen (wild reindeer) Lakseregisteret (wild salmon stocks), havmiljø.no (the environmental value of Norway's sea areas at different times of year) Vann-Nett (information on inland water bodies), Elvedeltadatabasen (river deltas), Norsk Marint datasenter (Norwegian Marine Data Centre) and INON-basen (areas without major infrastructure development). For the general public in Norway, the most important source of updated information on the state of the environment and environmental trends is the website Miljostatus.no (State of the Environment Norway).

Many of the Aichi targets have already been included in Norway's environmental targets relating to environmental status. The global targets relating to means of implementation are reflected in processes and instruments that are either already in use or will be used in Norway's new national strategy and action plan. These are generally cross-cutting and applicable to a number of the environmental targets. The budget proposal each year also includes targets for the use of three categories of environmental policy instruments: knowledge and spatial data, legislation and planning procedures, and international cooperation.

Progress is underway to reach the Aichi targets and some of them are already almost fully implemented, for example target 16 on ratification and implementation of the Nagoya Protocol.

At the end of 2013, 16.9 % of the land area of the mainland was protected under the Nature Diversity Act. Overall, the extent of protected areas covers the major ecosystems of mainland Norway reasonably well. A large proportion of the total area protected is however in the mountains. Further, Norway has reported 12 marine protected areas to the Convention for the Protection of the Marine Environment in the North-East Atlantic (OSPAR), covering 85 416 km² (territorial waters and Norwegian Exclusive Economic Zone). Additionally, three new MPAs (74 km²) adopted under the Nature Diversity Act in 2013 are yet to be reported to OSPAR. A number of area based measures within the fisheries sector also contribute towards effective protection.

The Arctic archipelago of Svalbard covers a total land area of about 61 000 km². After extensions from 2002-2008, 65% of Svalbards land area and 87% of its territorial waters are protected as nature reserves and national parks under the Svalbard Environmental Protection Act. In 2010, most of the volcanic island of Jan Mayen, including its territorial waters was designated as a nature reserve.

Implementation of the nationwide national park plan and county protection plans is almost complete. Once the network of national parks is complete, 27 % of Norway's mountain areas will be protected. Since 2005, a total area of 15 000 km² has been given statutory protection in mainland Norway, including 12 new national parks and over 350 nature reserves. In addition, two existing national parks have been expanded and a number of protected landscapes have been established adjoining national parks. Management plans are required for all larger protected areas. These set out management and conservation targets as well as guidelines for use of the area, information, facilities for visitors and so on. On the mainland,

management responsibilities for national parks and other large protected areas have recently been delegated to the local level. Fifteen national park centres have been established to provide information and educate the public about the environmental value of the national parks. A programme on Norway's natural heritage as a value creator was carried out in the period 2009-13. On Svalbard, the management responsibility for protected areas rests with the Governor of Svalbard.

Integrated, ecosystem-based management plans have been drawn up for all Norway's sea areas. Plans for the Barents Sea–Lofoten area, the Norwegian Sea, and the North Sea and Skagerrak were adopted in 2006, 2009 and 2013, respectively, and provide a good basis for achieving important, far-reaching targets such as Aichi target 6. The Marine Resources Act is based on the principle that fisheries management must take place within a sustainable, knowledge-based framework. In 2011, new regulations were introduced restricting bottom fishing activities in the Economic Zone of Norway, the fisheries zone around Jan Mayen and the Fisheries Protection Zone around Svalbard. Their purpose is to protect vulnerable benthic habitats. Nine coral reef complexes have been protected against damage by fisheries activities under the Marine Resources Act. As part of its efforts to combat marine invasive alien species, Norway has ratified the Ballast Water Convention. A number of steps have been taken to reduce the risk of oil and other pollution from offshore oil and gas activities in marine and coastal waters and along the coastline.

In 2007, Norway adopted the Water Management Regulations, which incorporate the EU Water Framework Directive into Norwegian law. Since then, a great deal of work has been done to assess the environmental status of close to 30 000 water bodies in all parts of the country. The status of about one third of all Norway's water bodies is not satisfactory. The assessments will be used as a basis for the river basin management plans that are to be completed by the end of 2015.

Escaped farmed fish and sea lice are still substantial threats to wild salmon and sea trout. Norway has a special responsibility for the Atlantic salmon (*Salmo salar*), since about one fifth of the entire population is found in Norway. In 2013, quality norms were established for wild salmon stocks under the Nature Diversity Act.

A relatively large proportion of the area of wetlands in Norway, about 18 % of the total, is protected under the Nature Diversity Act. Nevertheless, there is considered to be a pressing need to establish more protected areas for most wetland habitat types. The protected wetland areas include 63 that are on the Ramsar list of wetlands of international importance. A national plan for restoration of wetlands up to 2018 is being drawn up.

In the period 2005–14, some 218 nature reserves have been established in Norwegian forests, totalling 580 km² of productive forest. Currently, most protected areas in forests are established in state-owned areas or on a voluntary basis on privately owned land. By January 2014, about 2.5 % of all productive forest in Norway was protected under the Nature Diversity Act.

In order to minimise the impacts of commercial forestry, Norwegian forestry policy gives priority to environmental considerations. Steps that have been taken in recent years include avoiding or tailoring logging operations in areas of particular importance for red-listed species. Valuable species and habitats have been registered in a large proportion of forest areas in Norway. Forest owners are required to take this information into consideration, and to plan forestry activities accordingly. Most productive forest is managed in accordance with the Norwegian PEFC standard. One threat to forest biodiversity is the establishment and spread of invasive non-native tree species. Priority is being given to the removal of such species in protected areas. In addition, new regulations governing the use of non-native tree species for forestry purposes entered into force in 2012.

Norway has retained its dual goals of maintaining livestock grazing in forested and other uncultivated areas and maintaining viable populations of carnivores. The main tool for achieving both goals is a clear division into zones where carnivores are given priority and other zones where livestock have priority. It is still a challenging task to achieve the dual goals.

Norway is using a variety of economic and legislative instruments to maintain the diversity of habitat types and species in the cultural landscape; these include the designation of selected habitat types and priority species, measures to control alien species, and cross-sector cooperation on specific environmental measures in agriculture. A number of economic instruments are being used to maintain areas of importance for species diversity, including pastures, hay meadows, coastal heathlands and tilled fields. These are all semi-natural habitat types, and their management and maintenance requires active use. The environmental strategy published by the Ministry of Agriculture and Food gives priority for 2008–15 to follow up the Government's environmental policy by strengthening and further developing environmental efforts within the agricultural sector. One objective is to maintain cultural landscapes and their environmental value through sustainable agriculture.

Conservation and sustainable use of genetic resources for food and agriculture has been enhanced through the programs of the Norwegian Genetic Resource Centre, through international cooperation and dialogue with industry actors, and through measures to encourage businesses, farmers and voluntary organisations to make use of traditional plant varieties and livestock breeds. Measures have been implemented to ensure the survival of

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