IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 06 November 2014

Please note: this is an archived Conservation Outlook Assessment for West Norwegian Fjords – Geirangerfjord and Nærøyfjord. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

West Norwegian Fjords – Geirangerfjord and Nærøyfjord

SITE INFORMATION

Country:
Norway
Inscribed in: 2005
Criteria:
(vii) (viii)

Site description:
Situated in south-western Norway, north-east of Bergen, Geirangerfjord and Nærøyfjord, set 120 km from one another, are part of the west Norwegian fjord landscape, which stretches from Stavanger in the south to Andalsnes, 500 km to the north-east. The two fjords, among the world's longest and deepest, are considered as archetypical fjord landscapes and among the most scenically outstanding anywhere. Their exceptional natural beauty is derived from their narrow and steep-sided crystalline rock walls that rise up to 1,400 m from the Norwegian Sea and extend 500 m below sea level. The sheer walls of the fjords have numerous waterfalls while free-flowing rivers cross their deciduous and coniferous forests to glacial lakes, glaciers and rugged mountains. The landscape features a range of supporting natural phenomena, both terrestrial and marine, such as submarine moraines and marine mammals. © UNESCO

SUMMARY

2014 Conservation Outlook

Good

The conservation outlook of the property is good, thanks to the robustness of its values, limited threats and effective management. However, coordination between different management authorities involved in the management of the property could be improved. Some concerns also exist regarding addressing some of the threats, particularly those from cruise ships.

Current state and trend of VALUES

Good
Trend: Stable

Reflecting their relatively robust nature, limited threats and overall effective management, the conservation status of the geological and scenic values of the property is good and stable.

Overall THREATS

Very Low Threat

Current threats include mining and aquaculture, as well as cruise ship travel, harbour infrastructure development and water pollution. However, all these threats are localized and their impact on the geological and scenic features that constitute the OUV of the property appears well controlled and limited. Some of the biodiversity values of the property might, however, be more affected. Potential threats to the property are mainly from natural disasters (rick falls, avalanches), which are part of the natural dynamics of the system and do not pose a significant threat to the site’s values.

Overall PROTECTION and MANAGEMENT

Mostly Effective

Protection and management of the property are effective. However, coordination between different management authorities involved in the management of the property could be improved. Some concerns also exist regarding addressing some of the threats, particularly from cruise ships. There is a long history of research and monitoring within the property, however, these could be more focused on the site’s OUV.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Exceptional fjord landscapes**
Criterion:(vii)

The two fjords that make up this property are considered to be among the most scenically outstanding fjord complexes worldwide. They display narrow and steep-sided crystalline rock walls that rise up to 1,400 m from the sea surface and extend 500 m below sea level. Along the sheer walls of the fjords are numerous waterfalls while free-flowing rivers run through deciduous and coniferous forest to glacial lakes, glaciers and rugged mountains. There is a great range of supporting natural phenomena, both terrestrial and marine such as submarine moraines and marine mammals. (WHC, 2014b, UNEP-WCMC, 2011).

▶ **Classic, superbly developed fjords**
Criterion:(viii)

The West Norwegian Fjords are archetypical, exceptionally developed fjords, considered as the most typical example of this geological phenomenon in the world. They are comparable in scale and quality to other existing fjords on the World Heritage List and are distinguished by the climate and geological setting. The property displays a full range of the inner segments of two of the world’s longest and deepest fjords, and provides well-developed examples of young, active glaciation during the Pleistocene ice age. (WHC, 2014b, UNEP-WCMC, 2011)

Other important biodiversity values

- **Full range of marine, freshwater and terrestrial ecosystems of this area with their associated biota**

  There is a great range of supporting natural phenomena, including terrestrial, freshwater and marine. Vegetation is typical of West Norway, with both deciduous (mainly Betula spp.) and coniferous (mainly Pinus sylvestris) forest, as well as alpine formations with dwarf birch Betula spp. and polar willow (Salix Polaris). Noteworthy are the natural free-flowing river systems with their associated biota, including emblematic species such as Eurasian Otter (Lutra lutra) and Dipper (Cinclus cinclus). The terrestrial mammal fauna comprises a wide range of ungulates and carnivores typical of the region; while both harbour seals (Phoca vitulina) and porpoise (Phocoena phocoena) and several other species of cetaceans are inhabiting the sea. Ichthyofauna such as Salmon (Salmo salar) and Sea trout (S. trutta) and avifauna such as White tailed eagle (Haliaeetus albicilla) and Golden eagle (Aquila chrysaetos) are also rich and typical of this geographical setting (UNEP-WCMC, 2011).

Assessment information

Threats

Current Threats

Very Low Threat

Current threats include mining and aquaculture, as well as cruise ship travel, harbour infrastructure development and water pollution. However, all these threats are localized and their impact on the geological and scenic features that constitute the OUV of the property appears well controlled and limited. Some of the biodiversity values of the property might, however, be more affected.

► Mining/ Quarrying

Low Threat
Inside site
Outside site

Peridotite mining near Geirangerfjord, underground anorthosite rock mining inside the site boundaries at Nærøyfjord, with limited but significant impacts on property's values (UNEP-WCMC, 2011).

► Changes in traditional ways of life and knowledge systems

Very Low Threat
Inside site
Outside site

Some farmland dependent biodiversity reportedly threatened by abandonment of traditional farming (UNEP-WCMC, 2011).

► Marine/ Freshwater Aquaculture

Very Low Threat
Outside site

Salmon aquaculture in the wider fjord systems around property reportedly threatening local salmon and sea trout stocks. Some limitations to aquaculture production now in place (Manzetti, 2011).

► Tourism/ visitors/ recreation

Low Threat
Inside site
Outside site

Increasing cruise ship traffic and visitation noted as a concern by environmental groups (News in English.no, 2009). The level of boat traffic (including rib-boats and kayaking) in the Nærøyfjord, may negatively affect the seal population through disturbing.

► Water Pollution

Low Threat

Inside site
Outside site

At least one localized significant incident of water pollution from cruise ship fuel in 2009, risk of renewed incidents noted (News in English.no, 2009). Concerns exist around sewage and grey water. Some air pollution is also caused by cruise ships.

► Invasive Non-Native/ Alien Species

Very Low Threat
Inside site
Outside site

Spruce (Picea abies), a non-natural occurring species in the area, is spreading from plantations, threatening biodiversity values of the site (IUCN Consultation, 2014).

Potential Threats

Very Low Threat

Potential threats to the property are mainly from natural disasters (rick falls, avalanches), which are part of the natural dynamics of the system and do not pose a significant threat to the site's values.

► Shipping Lanes

Very Low Threat
Inside site
Outside site

Plans to construct small-scale sea walk to reach cruise ships at Geirangerfjord harbour (Geirangerfjord Cruise Port, 2013, WHC, 2014a).

► Avalanches/ Landslides, Earthquakes/ Tsunamis

Very Low Threat
Inside site
Outside site

Persistent risk of avalanches, rock falls and landslides in several parts of the property, but this is part of the natural dynamics of the area and is not seriously threatening the OUV of the property (UNEP-WCMC, 2011). This is

expected to increase due to climate change.

Protection and management

Assessing Protection and Management

► Tourism and interpretation

Some Concern

Fragmented management responsibilities were considered a challenge to effective visitor management (Brendehaug, 2014). A dedicated visitor management strategy is needed but missing and the standard of both the visitor centre and guided educational tours was considered poor in the Periodic Report, but its information booths and trail network are considered adequate (WHC, 2014a). A new visitor management plan is currently being developed (IUCN Consultation, 2014).

► Relationships with local people

Highly Effective

There are more than 500 people living within the property, engaged in tourism, agriculture and also natural resource use (UNEP-WCMC, 2011). 82% of land is privately owned. Separate advisory committees for both component areas are foreseen in management plans (Møre and Romsdal County Government, 2008, County Governor of Sogn og Fjordane, 2008). Relationship with local people, landowners and tourism sector was characterized as "fair" by State Party (WHC, 2014a).

► Legal framework and enforcement

Mostly Effective

The terrestrial and limnic parts of the site are legally protected as county-governed Protected Landscapes and Nature Reserves. The marine part is not protected presently but the County Gouvernor of Sogn and Fjordane has started a process to protect larger parts of the Sognefjord, including the World Heritage area (IUCN Consultation, 2014). There are also legally binding local development plans and additional legal safeguards for specific parts of the areas (e.g. banning hydropower development along rivers) (UNEP-WCMC,

2011). Presently the marine part is regulated by the EU Water framework directive in addition to many other laws and regulations. Legal framework for protection of the OUV was characterized as adequate, but weaknesses in its implementation were noted by State Party (WHC, 2014a). Fragmented management system was noted as one challenge to effective implementation of legal framework (Brendehaug, 2014).

► Integration into regional and national planning systems

Mostly Effective

There is a range of planning and development mechanisms at different levels (national. county, municipal, local) Coordination between different management authorities could, however, be improved (WHC, 2014a).

► Management system

Mostly Effective

Valid management plans are in force for both components of the property (Møre and Romsdal County Government, 2008, County Governor of Sogn og Fjordane, 2008). However, the overall management system is considered only partially effective to maintain the OUV of the property by the State Party (Periodic report).

► Management effectiveness

Mostly Effective

No systematic management effectiveness assessment has been undertaken. Management effectiveness was considered generally sufficient, but implementation and effectiveness gaps were noted in the Periodic Report. Shortcomings appear to exist in the area of tourism (particularly cruise ship) management and inter-institutional coordination (Brendehaug, 2014, WHC, 2014a, News in English.no, 2009).

► Implementation of Committee decisions and recommendations

Highly Effective

Request from Decision 29 COM 8B.7 to monitor and report on plans to further expand mining in the area (WHC, 2005) was fulfilled (UNEP-WCMC, 2011).

► Boundaries

Highly Effective

The boundaries of the property are considered adequate (UNEP-WCMC, 2011, WHC, 2014a). They are known to all relevant parties. There is no buffer zone as it is not considered necessary by the State Party (WHC, 2014a), IUCN (IUCN, 2005) or the World Heritage Committee (WHC, 2005).

► Sustainable finance

Mostly Effective

Funding is sourced from national (60%), provincial (20%) and local government (10%) as well as other sources. It has been assessed as acceptable and secure but suboptimal by the State Party (Periodic report).

► Staff training and development

Mostly Effective

Property managed by staff from various institutions (UNEP-WCMC, 2011). Staff qualification generally rated as good or fair by State Party, but deficits in the field of visitor management and risk preparedness have been noted. Availability of training opportunities for all relevant areas apart from the latter is sufficient (Periodic report).

► Sustainable use

Highly Effective

There are 56 small farms at Nærøyfjord area (12 main farms and 24 smaller holdings still active). At Geirangerfjord there are 12 small working farms and 24 with grazing. Grazing, mainly by goats and sheep, occurs in the marginal upland valleys. Hunting is undertaken to cull deer; local fishing is now mostly recreational (UNEP-WCMC, 2011). Use appears to be sustainable and not to cause any conflicts.

► Education and interpretation programs

Mostly Effective

Education and interpretation programmes as well as infrastructure exist as part of the management plans of component sites (Møre and Romsdal

County Government, 2008, County Governor of Sogn og Fjordane, 2008), but could be improved according to the Periodic report. Several printed materials are available for visitors (e.g. Directorate for Cultural Heritage and Directorate for Nature Management, 2008).

► Monitoring

Mostly Effective

There are monitoring programmes in place for geological activity, flora and fauna, monuments, buildings and landscapes, farmland, tourism and land use has been reported (UNEP-WCMC, 2011). Monitoring was, however, considered insufficient to meet all information needs for effective management (Periodic report). Particularly, monitoring of the marine are is insufficient.

► Research

Mostly Effective

A wide range of research on aspects of geology, biodiversity, ichthyology, ecology and other aspects of both components of the property has been conducted since the 18th Century (Norwegian Ministry of the Environment, 2004). The recently established International Centre for Geohazards financed by the Norwegian Research Council also has this among its focus areas.. Research could be focused more strongly on the management of the OUV, according to the Periodic report (WHC, 2014a).

Overall assessment of protection and management

Mostly Effective

Protection and management of the property are effective. However, coordination between different management authorities involved in the management of the property could be improved. Some concerns also exist regarding addressing some of the threats, particularly from cruise ships. There is a long history of research and monitoring within the property, however, these could be more focused on the site’s OUV.

► Assessment of the effectiveness of protection and management in

addressing threats outside the site

Mostly Effective

Among relevant threats outside the property are mining and marine pollution in its vicinity, as well as potentially aquaculture which could have an impact on the biota of the property. In the absence of more specific information on this matter, it is assumed that these threats are controlled.

► Best practice examples

Participation of local people, municipalities, landowners and resource users in the decision making, management and benefit sharing of the property - as developed throughout the nomination and foreseen in the management plans of the component sites - is exemplary and could be replicated elsewhere.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► Exceptional fjord landscapes

Low Concern
Trend:Stable

The exceptional scenic values of the site are relatively robust against anthropogenic impacts and are not under threat currently (UNEP-WCMC; 2011), although this might change if mining is further developed at or near the property.

► Classic, superbly developed fjords

Good
Trend:Stable

The geological formations of the site remain very well preserved and are very robust against any possible impacts.

Other important biodiversity values

► Full range of marine, freshwater and terrestrial ecosystems of this area with their associated biota

There is a great range of supporting natural phenomena, including terrestrial, freshwater and marine. Vegetation is typical of West Norway, with both deciduous (mainly Betula spp.) and coniferous (mainly Pinus sylvestris) forest, as well as alpine formations with dwarf birch Betula spp. and polar willow (Salix Polaris). Noteworthy are the natural free-flowing river systems with their associated biota, including emblematic species such as Eurasian Otter (Lutra lutra) and Dipper (Cinclus cinclus). The terrestrial mammal fauna comprises a wide range of ungulates and carnivores typical of the region; while both harbour seals (Phoca vitulina) and porpoise (Phocoena phocoena) and several other species of cetaceans are inhabiting the sea. Ichthyofauna such as Salmon (Salmo salar) and Sea trout (S. trutta) and avifauna such as White tailed eagle (Haliaeetus albicilla) and Golden eagle (Aquila chrysaetos) are also rich and typical of this geographical setting (UNEP-WCMC, 2011).

Summary of the Values

► Assessment of the current state and trend of World Heritage values

Good

Trend: Stable

Reflecting their relatively robust nature, limited threats and overall effective management, the conservation status of the geological and scenic values of the property is good and stable.

► Assessment of the current state and trend of other important biodiversity values

Low Concern

Trend: Data Deficient

Biodiversity values of the site remain in good condition and stable, but some concerns exist regarding fish species abundance and richness.

Additional information

Key conservation issues

▶ Lack of focus of ongoing research on aspects that are relevant to the management of the property

Local

Although a considerable range of research is carried out within the property, it could be focused more clearly on knowledge gaps related to its management (WHC, 2014a).

▶ Lack of integrated visitor management strategy

Local

An overall visitor management strategy for the entire property needs to be developed.

▶ Lack of coordination between various institutions

National

Coordination between various institutions responsible for different aspects of the management (particularly visitor management) could be improved.

Benefits

Understanding Benefits

▶ Does management of the site provide jobs (e.g. for managers or rangers)?

The property provides jobs in the direct management and many additional jobs related to tourism and visitation.

▶ Fishing areas and conservation of fish stocks

There are small-scale traditional fisheries operating in the area which benefit from the property's marine biodiversity.

▶ Traditional agriculture, Livestock grazing areas

There are 56 small farms at Nærøyfjord area (12 main farms and 24 smaller holdings still active). At Geirangerfjord there are 12 small working farms and 24 with grazing. Grazing, mainly for goats and sheep, occurs in the marginal upland valleys (UNEP-WCMC, 2011).

▶ Outdoor recreation and tourism

The property received more than a million visitors in 2002 overall, two fifth of which arrived on cruise ships. There were about 150 cruise ship visits to each component property in the same year (UNEP-WCMC, 2011).

▶ Importance for research

The site has been an important source of scientific knowledge since the 18th Century, and has also been a source of local traditional knowledge (UNEP-WCMC, 2011).

▶ Contribution to education

Many of the numerous visitors to the property from both its vicinity and further afield use their visits to learn about the geological history of the fjord landscape, its geology and ecology, as well as associated cultural traditions.

Summary of benefits

Although it is situated in a relatively sparsely populated part of Europe, the property provides a wide range of benefits to local people, as well as to more than a million visitors from all over Norway and beyond who go there each year.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Nærøyfjorden Protected Area Management Board and Geirangerfjorden Protected Area Management Board		Various projects on management and monitoring of the property.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	N.A.	Investigation/documentation of the poorly known hard bottom marine fauna on the fjord walls.	
2	N.A.	Analysis of the interrelation of the seal population and the populations of salmon and other fish species in the area.	
3	N.A.	Analysis of the impact of salmon aquaculture on the biodiversity values of the property and development of a sustainable marine aquaculture management framework for the property including its surroundings.	

REFERENCES

№	References
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