

Proposed OSPAR Marine Protected Area

Ytre Hvaler, Norway

A General information

1. Proposed name of MPA

Ytre Hvaler

2. Aim of MPA

The aim of the original designation of this area as a national park is to (translated from the national regulation in Norwegian):

- *conserve a unique, large and relatively untouched nature area by the coast of south eastern Norway,*
- *conserve a subsea landscape with varied benthic topography,*
- *conserve ecosystems on land and in sea with naturally occurring species and stocks, coastal landscape with sea surface and seafloor with coral reefs, hard and soft bottoms.*

The public shall be given the opportunity to explore the nature through the practise of traditional and simple outdoor life with a modest degree of technical arrangements.

The aim of designating this area as an OSPAR MPA reflects that of the national regulation, and also aims to protect and conserve several species and habitats on the OSPAR list in a part of the OSPAR maritime area sparsely covered by existing OSPAR MPAs.

3. Status of the location

Territorial sea of Norway

4. Marine region

OSPAR Region II, Greater North Sea

5. Biogeographic region

Dinter biogeographic province: Norwegian Coast; Skagerrak subprovince

6. Location

Ytre Hvaler National Park is part of the Hvaler-Fredrikstad archipelago, situated in the coastal areas of south eastern Norway. This area has a rich diversity of species both on land and below sea level and is a popular recreational area. The national park covers 14 km² of land in addition to the 340 km² of sea area. For the purpose of designating this area as an OSPAR MPA only the marine part of the national park is included.

The national park borders up to the Kosterhavet Marine National Park in Sweden. These national parks were developed in close collaboration between the Norwegian and Swedish regional governmental offices. The management of the sites will also be co-ordinated between Norway and Sweden. Because of this close relationship between the two areas they are now nominated to the OSPAR network of MPAs as a jointly managed transboundary MPA. For practical reasons separate nomination proformas are elaborated for the areas from each of the two contracting parties. Kosterhavet Marine National Park is part of the previously nominated Swedish OSPAR MPA named «Koster-Väderö archipelago», which is now resubmitted by Sweden because the scope of the MPA has been enlarged.

Two previously nominated MPAs from Norway, **Tisler** (MPA ID: O-N-005) and **Fjellknausene** (MPA ID: O-N-006), are included in Ytre Hvaler National Park. These two areas therefore have to be withdrawn from the OSPAR network of MPAs, as they are now covered by the new Ytre Hvaler MPA (see fig 1).

The border of MPA Ytre Hvaler follows the coastline and consists of several hundred break points. Because of this, the full set of coordinates for the area is too extensive to be included here. Coordinates are therefore only supplied for the four corners of a polygon which is a rough approximation of the actual border of the MPA (see fig 1). The actual borders are submitted in shape-format.

Latitude	Longitude
59° 07,52 N	10° 40,04 E
59° 07,84 N	10° 51,37 E
58° 58,94 N	11° 04,52 E
58° 54,18 N	10° 41,91 E

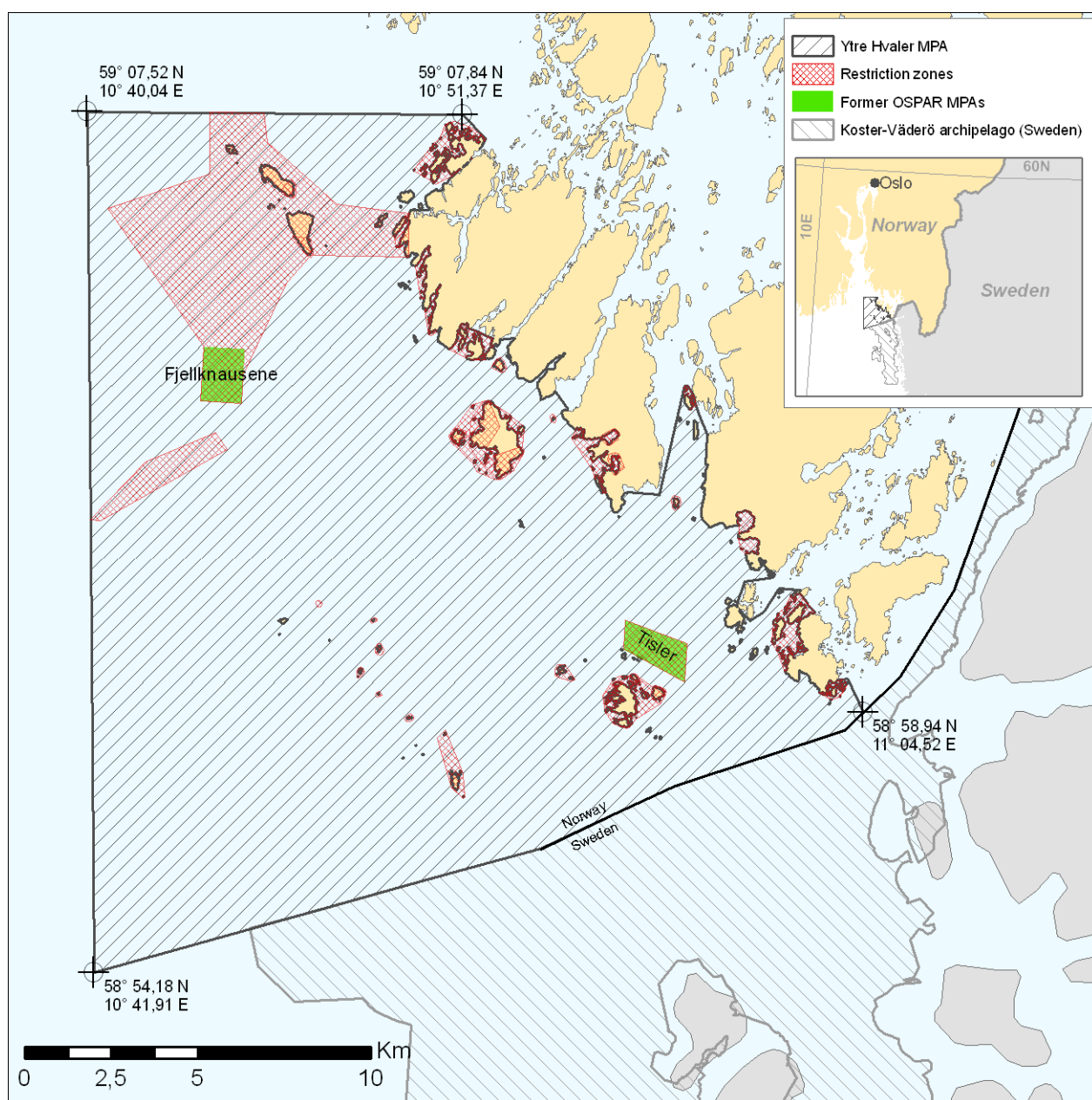


Fig 1: MPA Ytre Hvaler

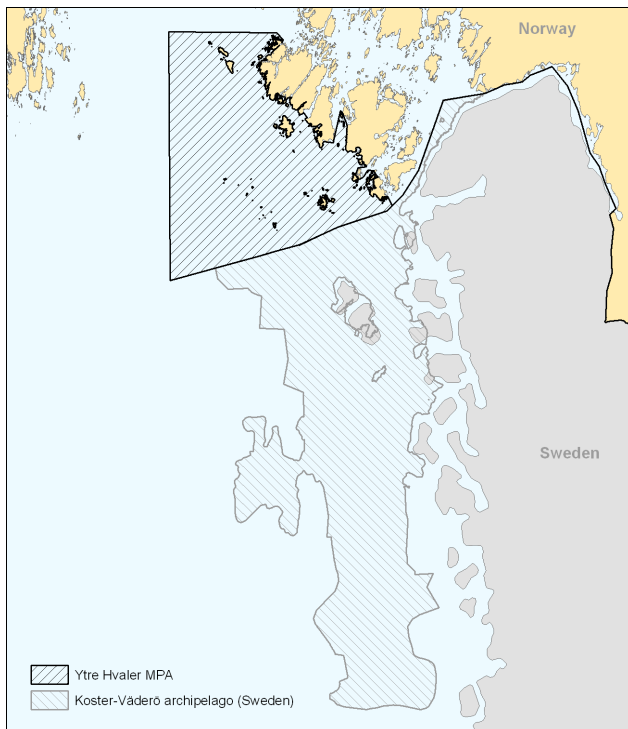


Fig 2: The Norwegian and Swedish MPAs

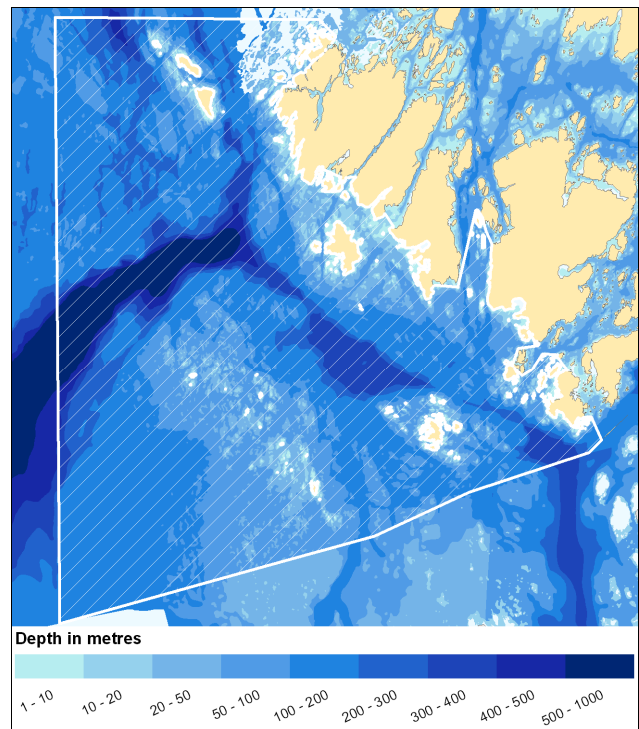


Fig 3: Sea floor characteristics of the area

7. Size

The MPA covers an area of **340 km²**.

8. Characteristics of the area

The Hvaler – Fredrikstad archipelago boasts a rich diversity of species both on land and below sea level.

Most of the park consists of seabed. With its soft bottom, rich kelp forests and corals, the park has a complete subsea ecosystem. Above sea level, you can enjoy a landscape ranging from rocky shores worn smooth by ice and water to coastal woodland shaped by the wind. The area is also attractive for outdoor pursuits typically linked with the coast. Many people regard it as a summer paradise, but its scenery and natural history also have much to offer the rest of the year.

Most of the national park is below sea level and ranges from depths of 470 m to shallows where skerries pierce the surface. Almost 200 m high, vertical, underwater cliffs line parts of Hvalerrenna, a huge cleft formed in a marginal fault zone created as a result of the collision of crustal plates and subsequent crustal fracturing some 300 million years ago in what is now outer Oslofjord. The area between the marginal rift faults sank and new rocks formed on the more than 800 million-year-old bedrock cropping out elsewhere in Østfold.

B Selection criteria

a. Ecological criteria/considerations

1. Threatened and/or declining species and habitats

Several of the species mentioned in the OSPAR list are found in this area but not in great numbers. The most sensitive or special habitats are mentioned below. The marine species of invertebrates and fish listed below must be considered as an indication since the area is not fully mapped.

Latin name	English name	Norwegian name	Norwegian Red List status	Living area	Sporadically appearing
<i>Arctica islandica</i>	Ocean Quahog	Kuskjell	LC		
<i>Nucella lapillus</i>	Dog Whelk	Purpursnegl	LC		
<i>Ostrea edulis</i>	Flat Oyster	Østers	EN		
<i>Alosa alosa</i>	Allis shad	Maisild	-		X
<i>Anguilla anguilla</i>	European eel	Ål	CR	X	
<i>Centroscymnus coelolepis</i>	Portuguese dogfish	Dypvannshå	-	?	
<i>Centrophorus squamosus</i>	Leafscale gulper shark	Brunhå	-	?	
<i>Cetorhinus maximus</i>	Basking shark	Brugde	NA		X
<i>Coregonus lavaretus (oxyrinchus)</i>	Houting	Sik	LC		X
<i>Dipturus batis</i>	Common skate	Storskate	DD	X	
<i>Raja montagui</i>	Spotted ray	Flekkskate	DD	?	
<i>Gadus morhua</i>	Cod	Torsk	LC	X	
<i>Lamna nasus</i>	Porbeagle	Håbrann	VU		X
<i>Petromyzon marinus</i>	Sea lamprey	Havniøye	LC	X	
<i>Raja clavata</i>	Thornback skate	Piggs skate	LC	X	
<i>Rostroraja alba</i>	White skate	Hvitskate	-	?	
<i>Salmo salar</i>	Salmon	Laks	LC	X	
<i>Squalus acanthias</i>	Northeast Atlantic Spurdog	Pigghå	CR	X	
<i>Phocoena phocoena</i>	Harbour porpoise	Nise	LC		X

* Species marked with a grey background are listed as occurring within the MPA in the Environmental Impact Assessment for the national park, but is not specified further.

Habitats:

- Lophelia pertusa reefs – Two larger reef complexes are known: The Tisler and Fjellknausene reefs. Several smaller occurrences are also registered (see also B.a.2).
- Sea-pens and burrowing megafauna communities – This habitat is abundant. Shrimp and *Nephrops norvegicus* fisheries have been practised in the area for many years and some areas are influenced by this.
- Zostera beds – several occurrences in the shallow areas.
- Intertidal Mytilus edulis beds – common where there are intertidal flats but in this region the tidal zone is very narrow. The *Mytilus edulis* occur many places on shallow hard bottoms and soft bottoms.

2. Important species and habitats

The deep marine areas include several important habitats. The most well known are several coral reefs (*Lophelia pertusa*) that are in good shape. The more than 1 200 m long Tisler reef complex, formerly an OSPAR MPA on its own, is now included in the new Ytre Hvaler MPA. It is one of the largest known inshore coldwater coral reefs. There are several smaller reefs around the Søster Islands including the Fjellknausene reef complex, another former OSPAR MPA, now included in the Ytre Hvaler MPA. There has not been a complete mapping of the area so new reefs might still be discovered. Other species of corals and sponges are also found in association with the *Lophelia* reefs and as solitary specimens on the seafloor. The biggest threat to these sensitive habitats (which is possible to regulate through national park regulations) is physical damage by human disturbance from fisheries and other activities.

Other special habitats are underwater cliffs populated with large clams (*Acesta excavata*), which are found in great numbers. The underwater cliffs are close to 200 m high.

Several marine species in the area are on the 2006 Norwegian Red List (only critically endangered (CR) species listed here):

- Common guillemot (*Uria aalge*) – are seen regularly, often during the winter, but are no longer found breeding.
- European eel (*Anguilla anguilla*) – Common in the area but declining population. Commercial fishery until restrictions set in effect in 2009/2010.
- Northeast Atlantic Spurdog (*Squalus acanthias*)

3. Ecological significance

The national park has an abundance of birds. Islets, narrow inlets, wetlands and shore meadows offer breeding, resting and overwintering sites for seabirds. Skipstadkilen and Vikerkilen are particularly important resting places for ducks and waders. The number of species observed in the area is higher than usual for Norway; more than 260 have been observed on Akerøya alone. The sea between Heia and Torbjørnskjær is an important pupping area for common seals, and more than 12 000 eider ducks moult there. Large flocks of common scoters as well as various ducks overwinter or can be seen on their spring and autumn migrations.

Many marine habitats are found in both shallow and deep water. The mud and silt are the home of shrimps and Norway lobsters, as well as various species of bristleworms, starfish, cnidarians (e.g. anemones, corals and jellyfish) and molluscs. The dense kelp forest in the shallows between Heia and Torbjørnskjær has a rich biological production. Fish, crabs and several species of shellfish are among the creatures living there, besides various algae and anemones which grow on the seaweed.

The large clam is abundant on the cliffs lining Hvalerrenna. Several coral reefs occur where strong currents flow. Tisler is the largest inshore coldwater coral reef in Europe, 1 200 m long. The reefs are habitats for numerous species and along with the rest of the marine fauna they make the area unique, not only in the Skagerrak but also in a European context.

4. High natural biological diversity

The great topographic varieties from shallow to deep waters, exposed and sheltered areas and the main flow of Atlantic sea water coming up the Hvaler trench are believed to be important factors for the high variety of habitats and species found in this area. Glomma, the largest river in Norway, has its outflow in the vicinity of the archipelago. This is affecting the water chemistry in the area, but mostly when the discharge from the river is large. The supply of nutrients from the river may boost primary production, but the supply of nutrients with the currents from the European continent is considered more important.

5. Representativity

The habitats found in Ytre Hvaler are representative for the southern Norwegian coast and the Skagerrak area. Most of these habitats can be found other places as well. The coral reefs, the trenches and the currents coming through the trenches are special for this MPA. The large variety of habitats within short distances is also special.

6. Sensitivity

The *Lophelia* coral reefs have special requirements for water temperature and salinity and are sensitive to large quantities of sedimentation. They are also quite fragile and one of the biggest threats is physical damage by human disturbance from fisheries and other activities that affect the sea floor. The increasing ocean acidification affects their ability to form calcareous skeletons and may dissolve existing structures. The deep soft bottoms with sea-pens and burrowing megafauna communities are also sensitive to human impact, in particular to fishing with bottom tending gear.

7. Naturalness

The area is close to a natural state despite the closeness to heavily populated areas (on a Norwegian scale). The Glomma river brings freshwater outflows and siltation related problems to the area. These are natural

conditions but could also be affected by human activities upstream. However, shrimp and nephrops trawling have influenced much of the deep soft bottoms and damaged some of the coral reef structures.

b. Practical criteria/considerations

1. Potential for restoration

The area is believed to be close to a natural state today and future management has a high potential to maintain or improve this.

Activities that may harm the sea floor are prohibited in three restriction zones covering areas with known coral reef structures, and speed limits for boats are implemented in some zones. Fishing with bottom tending gear within the two former OSPAR MPAs Tisler and Fjellknausene (part of the restriction zones for damage to the sea floor; see fig 1) is also specifically prohibited by other national regulation. These measures are believed to help protect the present population of *Lophelia pertusa* and habitats exposed to recreational boat traffic.

2. Degree of acceptance

The potential for conflict is considered low, because:

- The area is already protected through national regulations. The nomination of this area to the OSPAR network will not add any further restrictions.
- The process leading to the national regulations and management plan is extensive, and includes the involvement of all relevant stakeholders and several political systems/administrative levels.
- Stakeholders may continue to use most of the area for both commercial and recreational purposes, provided the rules set forward by the management plan is followed.

3. Potential for success of management measures

Some management measures are already in effect, others will be implemented as the management plan is finished. These measures are expected to be sufficient to fulfil the aims of the designation.

4. Potential damage to the area by human activities

The national park provides ample opportunities for nature exploration, and the extent and diversity of outdoor activities is large. The Ytre Hvaler area is very important for outdoor life in both a local, regional and national context. Part of the motivation behind the designation of this area as a national park is to conserve the area as a recreational area for the general public. Simultaneous use and conservation of nature are not necessarily contradictions. The value of the area for recreational purposes depends on a healthy state of the environment. Nevertheless – potential damage may arise from the human activities in the area.

The most important activities in the area are related to fisheries (in particular scrimp fisheries), recreation and outdoor life, including motorized traffic at sea. Hvaler has around 4 500 vacation homes, of which around 50 are situated within the national park. Recreational traffic at sea is large on a national scale. Parts of the area on land are used as pasture and for logging. Except from a ban on activities that may harm the sea floor (particularly important in relation to trawling for shrimp and nephrops) in 10 % of the sea area, most of the existing activity within the park may carry on as usual.

There are important routes for ship traffic through the area. Restriction zones with reduced speed are implemented in particularly sensitive areas.

The potentially most damaging human influence on the area arises from actions outside the area itself. Long range pollution is transported with the ocean currents from the European continent. Ytre Hvaler is situated in the outlet of Norway's largest river Glomma, which may also transport potentially harmful substances to the area. Ocean acidification is also an important threat to corals and other calcifying organisms in this area and the effects of climate change poses a general threat to the distribution of species along the coast.

5. Scientific value

This area has a high value for research and monitoring. Several monitoring schemes exist in the area already. The water quality has been monitored under the framework of the North Sea treaty. The closeness of the area to universities and research institutes has brought about intensive research and monitoring of fisheries, marine habitats and species and water quality in general in the area. Some modifications may be needed to ensure good monitoring of protected values in the national park.

C. Proposed management and protection status

1. Proposed management

The management of the national park is described in the national regulations. A management plan is currently being elaborated based on these and a draft is expected to be finished by April 1, 2010. The management plan process includes extensive consultations with stakeholders, and is based on methods developed by The Conservation Measures Partnership (CMP; www.conservationmeasures.org).

Ytre Hvaler National Park and Kosterhavet Marine National Park in Sweden were developed in close collaboration between the Norwegian and Swedish regional governmental offices. The management of the sites will also be co-ordinated between Norway and Sweden.

The management of the national park is governed by the County Governor of Østfold as a temporary solution. A more permanent management scheme will be determined based on a model for management of protected areas currently under development by the Norwegian government.

2. Any existing or proposed legal status

- I National legal status: National park (national regulation: FOR 2009-06-26 nr 883: Forskrift om vern av Ytre Hvaler nasjonalpark, Hvaler og Fredrikstad kommuner, Østfold - <http://www.lovdata.no/cgi-wift/ldles?doc=/lf/lf-20090626-0883.html>)
- II Other international legal status: No

Presented by

Contracting Party: Norway (in conjunction with the resubmission of the Koster-Väderö archipelago MPA by Sweden)

Organisation:

Date: **January 8, 2010**