



Ramsar Information Sheet

Published on 5 April 2018

Update version, previously published on : 1 January 2012

Norway

Kurefjorden



Designation date	24 July 1985
Site number	306
Coordinates	59°19'53"N 10°44'22"E
Area	392,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

The site is situated in the east of Oslofjorden in Østfold County. Kurefjorden is a very shallow fjord arm with large mudflats in the inner parts which are exposed at low tide, and with large amounts of mussels, snails and invertebrates supporting a high diversity of birds. Large eelgrass meadows are present in the submerged areas of the fjord, while areas of *Phragmites australis*, *Scirpus maritimus*, and *Carex* spp. are spread around the reserve. The shores around the fjord contain well-developed salt marshes/tidal meadows of high importance to birdlife. The Site is very important for a number of migrating and feeding species, especially for ducks and waders. The area is also a moulting site for waterfowl, as well as a breeding site for a number of species. A total of around 250 bird species are recorded in the reserve, including numerous breeding and/or nationally red-listed species. Typical species include the great crested grebe *Podiceps cristatus*, the Slavonian grebe *Podiceps auritus*, the common teal *Anas crecca*, the mallard *Anas platyrhynchos*, the ruff *Philomachus pugnax* and the dunlin *Calidris alpina*.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Ellen Haakonsen Karr
Institution/agency	Norwegian Environment Agency
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2.1.2 - Period of collection of data and information used to compile the RIS

From year	2012
To year	2017

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Kurefjorden
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2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary Yes No

(Update) B. Changes to Site area No change to area

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS? No

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps	0
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Boundaries description

The Ramsar site border is the same as for the Kurefjorden Nature Reserve

2.2.2 - General location

a) In which large administrative region does the site lie?	Østfold
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b) What is the nearest town or population centre?	Moss
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2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes No

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):	392
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Area, in hectares (ha) as calculated from
GIS boundaries

391.24

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	1. Boreal
Other scheme (provide name below)	2. Boreonemoral vegetation zone, slightly oceanic section (Bn-O1).

Other biogeographic regionalisation scheme

1. Biogeographical regions of Europe, European Environment Agency, 2005
2. Zonal division showing the variation in vegetation from south to north and from the lowlands to the mountains, and sectional graduation showing the variation between the coast and inland (In: Moen, A. 1998. Nasjonalatlas for Norge; vegetasjon. Statens kartverk, Hønefoss).

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

- Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided The area functions as a sediment trap for eroded material carried along the streams flowing into the shallow waters.

Other reasons The site is a very shallow fjord arm where large mud- and sandflats are regularly revealed at low tide. These are of high importance to feeding, resting and wintering birds, especially ducks and waders. Surrounding the site is large areas of interesting tidal Meadow vegetation. like these have become scarce as the result of infilling for industrial or other economic developments.

- Criterion 2 : Rare species and threatened ecological communities

- Criterion 3 : Biological diversity

Justification The site supports a high diversity of both water birds and vegetation.

- Criterion 4 : Support during critical life cycle stage or in adverse conditions

- Criterion 8 : Fish spawning grounds, etc.

Justification The two streams Kureåa and Heiabekken that flow into Kurefjorden support populations of the sea trout *Salmo trutta* and the European eel *Anguilla Anguilla* (CR-Norwegian red list and IUCN red list). The site has a function as migration and feeding ground for the sea trout and migration route for the European eel.

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<i>Carex hartmanii</i> 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	National Red List: VU	This species is recorded in the saltmarshes/tidal meadows.
<i>Centaurium littorale</i> 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	National Red List: VU	This species is recorded in the saltmarshes/ tidal meadows.
<i>Trifolium fragiferum</i> 	Strawberry Clover	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	National Red List: VU	This species is recorded in the salt marshes/tidal meadows.
<i>Zostera marina</i> 		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		Criterion 3: This species is an important part of the eel grass meadows supporting birdlife.

Red list status is given according to the National Red List 2015.

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	GITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA/AVES	 <i>Anas acuta</i>	Northern Pintail	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	Criterion 4: Feeding and staging site for this species.
CHORDATA/AVES	 <i>Anas penelope</i>	Eurasian Wigeon	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: Kurefjorden is a staging and feeding site for this species.
CHORDATA/AVES	 <i>Aythya marila</i>	Greater Scaup	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	The site regularly hosts this species in winter.
CHORDATA/AVES	 <i>Calidris alpina</i>	Dunlin	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: Kurefjorden is a very important migration and feeding site for this species.
CHORDATA/AVES	 <i>Calidris canutus</i>	Red Knot	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	500			NT 	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as EN	(500 ind.) Criterion 4: Kurefjorden is a very important migration and feeding site for this species.
CHORDATA/AVES	 <i>Charadrius hiaticula</i>	Common Ringed Plover	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species is a regular breeder.
CHORDATA/AVES	 <i>Falco peregrinus</i>	Peregrine Falcon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Criterion 4: The species is regularly observed hunting in the area.
CHORDATA/AVES	 <i>Grus grus</i>	Common Crane	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Annex II, Bern Convention	Criterion 4: Resting and staging area for this species.
CHORDATA/AVES	 <i>Haematopus ostralegus</i>	Eurasian Oystercatcher	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species is a regular breeder, but the number of breeding couples seem to have been decreasing in the last years.
CHORDATA/AVES	 <i>Larus marinus</i>	Great Black-backed Gull	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species breeds on the site.
CHORDATA/AVES	 <i>Melanitta fusca</i>	White-winged Scoter; Velvet Scoter	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	Criterion 4: Staging/feeding site for this species.
CHORDATA/AVES	 <i>Numenius arquata</i>	Eurasian Curlew	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	Criterion 4: Feeding and staging site for this species.
CHORDATA/AVES	 <i>Pandion haliaetus</i>	Osprey, Western Osprey	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Annex II, CMS	Criterion 4: Important feeding area for this species.
CHORDATA/AVES	 <i>Philomachus pugnax</i>	Ruff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as EN	Criterion 4: Important staging and feeding site for this species.
CHORDATA/AVES	 <i>Podiceps auritus</i>	Horned Grebe	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	Criterion 4: Staging/feeding site for this species.
CHORDATA/AVES	 <i>Podiceps cristatus</i>	Great Crested Grebe	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: Feeding and staging site for this species.
CHORDATA/AVES	 <i>Somateria mollissima</i>	Common Eider	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: Feeding and staging site for this species.
CHORDATA/AVES	 <i>Tadorna tadorna</i>	Common Shelduck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Annex II, Bern Convention	Criterion 4: Important staging and feeding area for this species.
CHORDATA/AVES	 <i>Vanellus vanellus</i>	Northern Lapwing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as EN	Criterion 4: This species is a regular breeder.
Fish, Mollusc and Crustacea																		

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/ ACTINOPTERYGII	<i>Anguilla anguilla</i>	Sing eel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				CR	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as CR	Criterion 3: Kurefjorden includes this species typical or representative for the biogeographical region. Criterion 8: The two streams Kureåa and Heiabekken that flow into Kurefjorden support populations of this species.
CHORDATA/ ACTINOPTERYGII	<i>Salmo trutta</i>	Herring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 8: The two streams Kureåa and Heiabekken that flow into Kurefjorden support populations of this species.

1) Percentage of the total biogeographic population at the site

Criterion 2: The site supports several-red listed species, such as the horned grebe and the Eurasian curlew.
 Criterion 4. Kurefjorden is a very important migration and feeding site for a number of species, especially for ducks and waders. The area is also a moulting site for wildfowl, as well as a breeding site for a number of species. A total of 252 species have been recorded.
 Criterion 8: The Ramsar site has a function as migration and feeding ground for the sea trout and migration route for European eel.
 Red list status is given according to the national red list 2015.

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Mud- and sand flats	<input type="checkbox"/>	Large areas of intertidal mud- and sandflats with large amounts of invertebrates and mussels.	Highly important for feeding and resting birds.
Eel grass meadows	<input type="checkbox"/>	Large areas with well-developed eel grass meadows in shallow waters.	Highly important for feeding birds, as well as fish.
Tidal meadows/salt marsh	<input checked="" type="checkbox"/>	Large areas of intact tidal meadows with interesting flora.	Listed as VU on the National Red List for Ecosystems and Habitat types. Important for the birdlife.

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The site is a very shallow fjord arm, with water levels only 5 meters at most, with several areas considerably lower than this. This creates large, flat areas of mud- and sandflats exposed at low tide, which are rich in invertebrates, mussels and snails supporting a high diversity of bird species. In the permanently submerged areas, there are well-developed populations of the eel grass *Zostera* and some *Ruppia*, which are an important food source for certain bird species like Swans *Cygnus* sp. The flat landscape and small differences in tidal water levels have created large, connected areas of saltmarshes and tidal meadows surrounding the fjord. The outer parts of the saltmarshes are dominated by the *Puccinellia maritima* which is extremely salt-tolerant. A little farther toward land are other salt-tolerant species such as the *Tripolium pannonicum*, the *Plantago maritima*, the *Glaux maritima* and the *Triglochin maritima*. Scattered in the area are stands of *Phragmites australis*, *Schoenoplectus maritimus* and *Carex paleacea*. In the past, these saltmarshes/ tidal meadows used to cover much larger areas, but in the beginning of the 1970s, much of this land was turned into agricultural fields. Today the remaining areas are grazed by livestock in order to keep its meadow vegetation and not succumb to overgrowing. Meadows like these also contain a high insect diversity.

In addition to this, there is a common alder wood in the south with species such as the *Solanum dulcamara* and the *Lycopus europaeus*, and in the outer parts of the site, there are a few naked skerries and small islands, also important to seabirds.

The catchment area of the Kureåa stream which flows into Kurefjorden is 12.5 km² and comprises farmland (7,3 km²), woodland (1,9 km²) and built-up areas (3,3 km²).

4.2 - What wetland type(s) are in the site?

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
A: Permanent shallow marine waters		1		Rare
G: Intertidal mud, sand or salt flats		2		

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
<i>Centaurium pulchellum</i>		National Red List: NT. Registered in the meadows/saltmarshes.
<i>Glaux maritima</i>		Species associated with the saltmarshes/tidal meadows
<i>Ononis spinosa hircina</i>		National Red List: NT. Species connected to the saltmarshes/tidal meadows
<i>Puccinellia maritima</i>		Species associated with the saltmarshes/tidal meadows.
<i>Salicornia europaea</i>		Species associated with the saltmarshes/tidal meadows.
<i>Spergularia marina</i>		Species associated with the saltmarshes/tidal meadows.
<i>Tripolium pannonicum</i>		Species associated with the tidal meadows/saltmarsh vegetation.

Invasive alien plant species

Scientific name	Common name	Impacts	Changes at RIS update
<i>Rosa rugosa</i>		Potentially	unknown

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range / endemism/other
CHORDATA/AVES	<i>Anas platyrhynchos</i>	Mallard				The site is an important breeding area for this species.

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	Changes at RIS update
CHORDATA/AVES	<i>Branta canadensis</i>	Canada Goose	Potentially	unknown

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfb: Humid continental (Humid with severe winter, no dry season, warm summer)

The area has a coastal climate and average temperatures measured at Rygge airfield in the period 1961-1990 are -3.70 C in January and 16.00 C in July and annual precipitation in the same period was about 880 mm. In winter winds are predominantly northerly, with south-western in the summer months. The climate is typically coastal with warm summers and mild winters.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

Kureåa stream. Also, another minor stream, Heiebekken, drains part of the area. Norwegian Sea

4.4.3 - Soil

Mineral

(Update) Changes at RIS update No change Increase Decrease Unknown

No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

Please provide further information on the soil (optional)

The soils are of marine clay, as well as some marine sludge, seaweed remains and shellsand which create nutrient-rich soil.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water	<input type="checkbox"/>	No change
Water inputs from rainfall	<input type="checkbox"/>	No change
Marine water	<input type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels fluctuating (including tidal)	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

Large areas are very shallow and are exposed at low tide. The tidal range in the Oslofjord is small, normally 0.5 m. Throughout the site, the water does not exceed five meters depth.

4.4.5 - Sediment regime

Significant accretion or deposition of sediments occurs on the site

(Update) Changes at RIS update No change Increase Decrease Unknown

Sediment regime unknown

Please provide further information on sediment (optional):

The area functions as a sediment trap for eroded material carried along the streams flowing into the shallow waters.

4.4.6 - Water pH

Unknown

4.4.7 - Water salinity

Euhaline/Eusaline (30-40 g/l)

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

4.4.8 - Dissolved or suspended nutrients in water

Unknown

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself. i) broadly similar ii) significantly different

Surrounding area has greater urbanisation or development

Surrounding area has higher human population density

Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

Please describe other ways in which the surrounding area is different:

The area is mainly surrounded by intensive agricultural areas as well as some holiday houses. The agricultural land is mainly used for production of cereals and fodder.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Erosion protection	Soil, sediment and nutrient retention	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High
Scientific and educational	Long-term monitoring site	Medium

Other ecosystem service(s) not included above:

Considered one of the very best birdwatching sites in the county due to the species diversity and ease of viewing. Access is forbidden between 1st April and 10th July and from 20th August to 1st October. Only boats to and from the holiday huts and boats used for commercial fishing are allowed access during these periods.

Some commercial net fishing in some of the deeper parts out in the fjord in practiced.

The area functions as a sediment trap for eroded material carried along the streams flowing into the shallow waters.

There are no formal scientific studies, although local ornithologists monitor the birdlife at Kurefjorden on a voluntary basis. The management authorities have plans to produce a report with bird observations.

Farming is predominantly corn production.

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

<no data available>

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
Local authority, municipality, (sub)district, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Provide further information on the land tenure / ownership regime (optional):

within the Ramsar site: Private and municipality
 in the surrounding area: Private and municipality

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Norwegian Directorate for Nature Management (DN)

Postal address:

Tungasletta 2, 7485 Trondheim

E-mail address:

postmottak@dimat.no

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	Medium impact	Medium impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fishing and harvesting aquatic resources	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Please describe any other threats (optional):

within the Ramsar site:
 Ornithologists have reported breaches of the reserve boundaries by hunters during the open season, and that birds have drowned in fishing nets. Watersports are also a problem, previously by surfboarders but now from kiting (2005).

in the surrounding area:
 The largest saltmarshes and productive coastal plains in the Oslofjord were formerly a natural part of this wetland system, but in 1973-74 seawalls were built and large areas of coastal plain were cultivated. This cultivation has greatly reduced the site's natural values, not only botanically and in terms of the vegetation, but also as important breeding areas for wetland birds have been lost. Land masses are currently rising at a rate of 3 – 3.5 mm and this slowly, but surely, will recreate some saltmarsh.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
nature reserve	Kurefjorden		whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

A bird observation tower has been erected on western side, and it is a good observation point during the afternoons and evenings when the sun is behind the observer.
 There are a number of active local ornithologists, and updated species lists can be found on the internet (artskart.no).

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented

There are no formal scientific studies, although local ornithologists monitor the birdlife at Kurefjorden on a voluntary basis. The management authorities have plans to produce a report with bird observations.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

- Botnemyr, R. 1993. Ornitologiske registreringer i Kurefjorden 1989-91. Østfold-Natur 33: 5-38. (In Norwegian – Bird observations in Kurefjorden 1989-1991).
- Fylkesmannen i Østfold. 2012. Forvaltningsplan for Kurefjorden Naturresevat. Rapport 3/2012. (In Norwegian - Management plan for Kurefjorden Nature reserve).
- Henriksen S and Hilmo O. 2015. Norwegian Red List of Species 2015. Norwegian Biodiversity Information Centre, Norway
- Hovda, J.R. & Aasgaard, K. 1993 Floraen i Rosnesbukta 1972. Østfold-Natur 33: 39-45. (In Norwegian – On the Flora of Rosenbukta).
- Kålås, J.A., Viken, Å., Henriksen, S. and Skjelseth, S. (eds.). 2010. The 2010 Norwegian Red-list for Species. Norwegian Biodiversity Information centre, Norway.
- Lundberg, A. & Rydgren, K. 1994. Havstrand på Sørøstlandet. Regionale trekk og botaniske verdier. NINA Forskningsrapport 47: 142-144. (In Norwegian – On Seashores and botanical importance in SE Norway).
- Lågbu, Ø. & Rosnes, A. (red). 1980. Kurefjorden 1973-78. Ornitologiske undersøkelser og utviklingen i området. Østfold Natur 10: 1-84. (In Norwegian – On Bird studies at Kurefjorden 1973-1978).

6.1.2 - Additional reports and documents

- i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<no file available>
- ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>
- iii. a description of the site in a national or regional wetland inventory
<no file available>
- iv. relevant Article 3.2 reports
<no file available>
- v. site management plan
<1 file(s) uploaded>
- vi. other published literature
<no file available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Kurefjorden, Rock skerries in the background. (Gunnar Bjare, County Governor Østfold, 11-06-2011)



Horse grazing in the tidal meadows. (Gunnar Bjare, County Governor Østfold, 11-06-2011)



Phragmites stand in the north-east corner of the site. (Gunnar Bjare, County Governor Østfold, 04-10-2015)



Tidal meadow vegetation (Gunnar Bjare, County Governor Østfold, 16-06-2011)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 1985-07-24