Ramsar Information Sheet

Published on 17 April 2024
Update version, previously published on : 9 July 2018

Norway

Jaeren wetland system

Designation date	24 July 1985
Site number	309
Coordinates	58°44'26"N 05°38'11"E
Area	3 085,00 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 consists of several sub-sites, and cover an extensive area alongside the south-west coast of Norway. Ramsar areas are surrounded by farmland, which is characteristic for an open and flat landscape in this part of Norway. The Site is mainly characterized by the marine nature types along the beaches, but also has some inland lakes and mires. The marine areas are dominated by sand, mud, pebble or stone shores, with large areas of dune-systems. The coastline of Jæren is one of the most bird-rich areas in Norway, and it is very important for migratory and wintering seabirds, waterfowl and shorebirds. The Site is a natural resting stop for a high number of migratory birds. With its great variation of habitats, the shores are also important breeding areas for numerous bird species. Additionally, the area is important for its cultural heritage, it has been influenced by human land use through thousands of years.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	Norwegian Environment Agency
Postal address	P.O. Box 5672 Torgarden, N-7485 Trondheim, Norway

National Ramsar Administrative Authority

Postal address	Postboks 5672 Sluppen Trondheim Norway

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2002
To year	2021

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Jaeren wetland system

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) The boundary has been delineated more accurately	☑
(Update) The boundary has been extended	☐
(Update) The boundary has been restricted	☐
(Update) B. Changes to Site area	the area has increased
(Update) The Site area has been calculated more accurately	☑
(Update) The Site has been delineated more accurately	☐
(Update) The Site area has increased because of a boundary extension	☐
(Update) The Site area has decreased because of a boundary restriction	☐
(Update) For secretariat only: This update is an extension	☐

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?	Not evaluated

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<3 file(s) uploaded>

Former maps	0

Boundaries description

The boundaries are the same as for the independent nature reserves Alvevatnet, Orrevatnet, Lonavatnet, Øknsedvanntjønn, Bjårvatnet, Søylandsvatnet, Vigre, Hagavågen, Grannesbukta, Harvalandsvatnet, Strandesvågen, Storamyr, Linemyra and Smokkevatnet, as well as one bird protection area; Grudevatnet.
In addition, four bird protection areas and two plant protection areas along the coast are included. These are registered under the common name Jærstrendene Landscape Protection Area, which also includes protection areas that are not a Ramsar site.

2.2.2 - General location

a) In which large administrative region does the site lie?	Rogaland

b) What is the nearest town or population centre? Stavanger

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): 3085

Area, in hectares (ha) as calculated from GIS boundaries: 3085.186

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Atlantic

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

Other ecosystem services provided	The shoreline is important as storm protection, and the mire areas are important as carbon storage. The long and extensive sand beaches are a popular recreational area for both hiking, bathing, surfing and bird watching.
Other reasons	The Jæren Wetlands System is an important area for wetland related birds in Norway. This applies especially as a staging and wintering area. Large areas of kelp beds are important for seabirds, and kelp washed ashore supports huge numbers of migrating waders etc. along the coastline (the entire coastline have been protected - ca. 70 km). The freshwater areas are important in Norway for breeding birds.

☑ Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information	The area with its many sub-sites are important for several red-listed bird species. For most species, such as the greater scaup Aythya marila (EN) and the common guillemot Uria aalge (CR), it is used as a wintering and staging site. Some species, such as the common tern Sterna hirundo (EN) also use the area as a breeding site. In addition to birds, the area also contains several red-listed plants, insects and fungus.

☑ Criterion 3 : Biological diversity

Justification	Jærstrendene is one of the most bird-rich areas in Norway and it is very important for migratory and wintering seabirds, waterfowl and shorebirds. The shores with a great variety of habitats are also important breeding areas for numerous bird species.

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

Optional text box to provide further information	The site has importance as both staging/wintering site for a large number of migrating birds, and as breeding site.

☑ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers	min. 20000
Start year	2010
End year	2013
Source of data:	SeaPop and County Governor
Optional text box to provide further information	Highest counts of waders and waterfowls regularly exceed 20,000 individuals in the migration periods, and sometimes also in winter, given counts in the national monitoring programme of wintering waterfowl in Norway. Since this is site with many smaller sub-sites spread out over a geographically large area, it is difficult to give an exact total number on waterbirds.

☑ Criterion 6 : >1% waterbird population

Optional text box to provide further information: The winter and spring populations of the horned grebe Podiceps auritus regularly reach 1% of the North-West European population (55 individuals).

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

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA / LILIOPSIDA	*Ammophila arenaria*	☐	☑	☐		☐		Criterion 4: The sand-dunes are important for this species.
TRACHEOPHYTA / LILIOPSIDA	*Baldellia repens*	☑	☑	☐		☐	National red list status: EN	The sub-site Orrevatnet supports one of Norways few populations of this species.
CHAROPHYTA / CHAROPHYCEAE	*Chara vulgaris*	☑	☐	☐		☐	National red list status: EN	
TRACHEOPHYTA / LILIOPSIDA	*Dactylorhiza purpurella*	☑	☑	☐		☐	National red list status: EN	The sub-sites along the coast of Jæren supports important populations of this species.
TRACHEOPHYTA / LILIOPSIDA	*Epipactis palustris*	☑	☑	☐	LC	☐	National red list status: EN	The sub-site Brusand supports one of Norways few populations of this species.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Eryngium maritimum*	☑	☑	☐		☐	National red list status: EN	The sub-site Orre-Reve supports one of Norways few populations of this species.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Gentianella amarella septentrionalis*	☑	☑	☐		☐	National red list status: EN	This species has a very geographically limited range in Norway, only known from this Ramsar site and a few other sites in Rogaland county.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Ranunculus lingua*	☑	☑	☐	LC	☐	National red list status: EN	The sub-site Alvevatnet lake supports one of Norways few remaining populations of this species. It has however declined in the last years, most likely due to grazing.
TRACHEOPHYTA / LILIOPSIDA	*Zostera noltii*	☑	☑	☐	LC	☐	National red list status: EN	The sub-sites in Hafrsfjord supports healthy populations of this species.
Fungi								
ASCOMYCOTA / LECANOROMYCETES	*Cladonia glauca*	☑	☑	☐		☐	National red list status: VU	Criterion 4: Important site for this rare species.

It is referred to the National Red List of 2021.

Not yet listed in the Catalogue of life:
Coeloglossum viride islandicum, status EN on the National Red List.

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

Phylum	Scientific 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								
Birds																	

Phylum	Scientific 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 / AVES	*Accipiter gentilis*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: VU	Criterion 4: Breeding and feeding site for this species.
CHORDATA / AVES	*Alauda arvensis*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Criterion 4: Several of the lake sub-sites are breeding areas for this species.
CHORDATA / AVES	*Anas acuta*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: VU	Criterion 4: Staging and wintering site for this species.
CHORDATA / AVES	*Anas clypeata*	☑	☑	☐	☐	☑	☐	☐	☐					☐	☐	National red list status: VU	Criterion 4: This species has important breeding sites in the area.
CHORDATA / AVES	*Anas penelope*	☐	☑	☐	☐	☑	☐	☐	☐					☐	☐		Criterion 4: Important staging area for this species. Can appear in great numbers at once. As many as 2800 ind. observed at once in january 2018.
CHORDATA / AVES	*Anas querquedula*	☑	☑	☐	☐	☑	☐	☐	☐					☐	☐	National red list status: EN	Criterion 4: Staging site for this species.
CHORDATA / AVES	*Anas strepera*	☐	☑	☐	☐	☑	☐	☐	☐					☐	☐		Criterion 4: Important staging area for this species, especially sub-site Bjårvatnet and surrounding areas.
CHORDATA / AVES	*Anser albifrons*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Criterion 4: Staging site for this species.
CHORDATA / AVES	*Aythya fuligula*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Criterion 4: Staging and feeding site for this species.
CHORDATA / AVES	*Aythya marila*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: EN	Criterion 4: Important wintering site for this species.
CHORDATA / AVES	*Bucephala clangula*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Criterion 4: Important staging and moulting site for this species. As many as 1016 ind. observed at once in 1997 or 1998 at subsite Orrevatnet.
CHORDATA / AVES	*Calidris alpina*	☑	☑	☐	☐	☑	☑	☐	☐				LC	☐	☐	Annex II, Bern Convention	Criterion 4: Important staging and feeding site for this species, can gather in high numbers to feed along the shores.
CHORDATA / AVES	*Calidris canutus*	☑	☑	☐	☐	☑	☑	☐	☐				NT	☐	☐	National red list status: VU	Criterion 4: Staging and feeding site for this species, can appear in great numbers.
CHORDATA / AVES	*Chroicocephalus ridibundus*	☑	☑	☐	☐	☑	☑	☐	☐					☐	☐	National red list status: CR	Criterion 4: Important breeding and feeding site for this species.
CHORDATA / AVES	*Circus aeruginosus*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Criterion 4: Important feeding area for this species.
CHORDATA / AVES	*Circus cyaneus*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: EN	Criterion 4: Important feeding area for this species.
CHORDATA / AVES	*Crex crex*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: CR	Criterion 4: This nationally endangered species has known breeding sites in the area.
CHORDATA / AVES	*Cygnus olor*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Criterion 4: Important area for this species, both as staging and feeding site, as well as breeding. Can appear in large numbers, 284 ind. observed at once in 1997 or 1998 at subsite Orrevatnet.
CHORDATA / AVES	*Falco peregrinus*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☑	☐		Criterion 4: Regularly spotted in the area, especially in migrating periods.
CHORDATA / AVES	*Falco rusticolus*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☑	☐	National red list status: VU	Criterion 4: Regularly spotted hunting in the area.
CHORDATA / AVES	*Fulica atra*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: VU	Criterion 4: Several sub-sites are important wintering, staging and breeding sites for this species.
CHORDATA / AVES	*Gavia immer*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Criterion 4: Wintering and feeding site for this species.

Phylum	Scientific 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 / AVES	*Haematopus ostralegus*	☐	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐		Criterion 4: Breeding and feeding site for this species.
CHORDATA / AVES	*Hydrocoloeus minutus*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: VU	Criterion 4: This nationally rare species has been recorded breeding at the site.
CHORDATA / AVES	*Limosa limosa*	☑	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	National red list status: EN	Criterion 4: Important wintering area for this species.
CHORDATA / AVES	*Melanitta fusca*	☑	☑	☐	☐	☑	☐	☐	☐				VU	☐	☐	National red list status: VU	Criterion 4: Important wintering site for this species.
CHORDATA / AVES	*Mergellus albellus*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: VU	Criterion 4: Important wintering sites for this species in the area.
CHORDATA / AVES	*Numenius arquata*	☑	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	National red list status: EN	Criterion 4: Important wintering area for this species.
CHORDATA / AVES	*Philomachus pugnax*	☑	☑	☐	☐	☑	☐	☐	☐					☐	☐	National red list status: VU	Criterion 4: Important breeding site for this species.
CHORDATA / AVES	*Podiceps auritus*	☑	☑	☑	☐	☑	☐	☐	☐	175	2014	3.5	VU	☐	☐	National red list status: VU	Criterion 4: Important wintering site for this species. Criterion 6: The site regularly supports more than 1 % of the biographical population of this species.
CHORDATA / AVES	*Porzana porzana*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: EN	Criterion 4: This species has important breeding sites in the area.
CHORDATA / AVES	*Rallus aquaticus*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: VU	Criterion 4: This species has important breeding sites in the area.
CHORDATA / AVES	*Somateria mollissima*	☑	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	National red list status: VU	Criterion 4: Staging and feeding site for this species.
CHORDATA / AVES	*Uria lomvia*	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National red list status: CR	Criterion 4: Important staging and feeding area for this species.
CHORDATA / AVES	*Vanellus vanellus*	☑	☑	☐	☐	☑	☑	☐	☐				NT	☐	☐	National red list status: CR	Criterion 4: This species has important breeding sites in the area.

1) Percentage of the total biogeographic population at the site

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
Sand-dune system	☑	Consists of shifting sand-dunes, formed by sand from the sea blown inland by the wind.	Listed as VU in the Norwegian red list for ecosystems and habitat types 2018
Coastal heath	☑	A semi-natural nature type. Consists of low growing heath vegetation that is in need of grazing or burning in order to maintain its character.	Listed as EN in the Norwegian red list for ecosystems and habitat types 2018.
Semi-natural tidal and salt meadow	☑	Semi-natural vegetation in the tidal zone, consisting of salt-tolerant species of grass and herbs. Usually depending on grazing to avoid overgrowth.	Listed as EN on the Norwegian red list for Habitats and Ecosystems 2018. Threatened by overgrowth.
Alluvial forest	☑		Listed as VU in the Norwegian red list for ecosystems and habitat types 2018

Optional text box to provide further information

Coastal Heath: A traditional semi-natural nature type that used to be very common all along the coast of Norway, but is now highly threatened by overgrowth and cessation of farming.
Sand-dune system: A open-area nature type, usually by the coast. The areas closest to the shore are the most shifting and unstable, rarely supporting vegetation. Further inland the substrate get gradually more stable, supporting coastal vegetation.

Semi-natural tidal and salt meadow: Meadow vegetation in the tidal zone, characterized by salt-tolerant plant species. Usually dependent on grazing by livestock to maintain its character and species composition. This practice is getting less common in several places in Norway, and this vegetation type is threatened by overgrowth. These meadows are highly popular feeding grounds for several bird species.

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

4.1 - Ecological character

Situated in the boreonemoral zone, and characterized by:
• Mud, silt or gravel shores with tidal zones, partly covered with kelp beds.
• Extensive moraine deposited shores consisting of shingle and larger stones.
• Large intact dune-systems, with front dunes and dune slacks and tidal meadows. Characteristic dune species is i.a. Ammophila arenaria.
• Freshwater lakes in varying degree covered with lush vegetation Phragmites communis. Eel grass Meadows occur in two sub-sites.
• Both nutrient-poor precipitation mires and minerogenic mires.

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		4		
B: Marine subtidal aquatic beds (Underwater vegetation)		3		
E: Sand, shingle or pebble shores		1		Unique
G: Intertidal mud, sand or salt flats		2		Unique

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		1		Unique
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		2		

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	*Elatine hexandra*	The dune-systems with dune slacks and wet meadows are important for the flora, with the nationally rare species
TRACHEOPHYTA/EQUISETOPSIDA	*Equisetum rothmaleri*	The dune-systems with dune slacks and wet meadows are important for the flora, with the nationally rare species
TRACHEOPHYTA/MAGNOLIOPSIDA	*Gentiana pneumonanthe*	The dune-systems with dune slacks and wet meadows are important for the flora, with the nationally rare species
BRYOPHYTA/HAPLOMITRIOPSIDA	*Haplomitrium hookeri*	The dune-systems with dune slacks and wet meadows are important for the flora, with the nationally rare species

Invasive alien plant species

Phylum	Scientific name	Impacts	Changes at RIS update
TRACHEOPHYTA/LILIOPSIDA	*Elodea nuttallii*	Potential	No change

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	*Gallinago gallinago*				
CHORDATA/AMPHIBIA	*Lissotriton vulgaris*				This species can be found in some of the freshwater lakes.
CHORDATA/AVES	*Locustella naevia*				Characteristic species for the wetlands and mires in the area. Most likely breeding.
CHORDATA/AVES	*Motacilla flava*				Have been breeding in some of the sub-sites, but the status of the population today is uncertain.
CHORDATA/AVES	*Calidris minuta*				On the shores in the entire area huge numbers of waders occur in the migratory periods, and can at times count tens of thousands. In particular involving species like this species.
CHORDATA/AVES	*Cygnus cygnus*				Staging, wintering or moulting waterfowl at Orrevatn in 1997 or 1998
CHORDATA/AVES	*Pluvialis apricaria*				On the shores in the entire area huge numbers of waders occur in the migratory periods, and can at times count tens of thousands. In particular involving species like this species.
CHORDATA/AVES	*Pluvialis squatarola*				On the shores in the entire area huge numbers of waders occur in the migratory periods, and can at times count tens of thousands. In particular involving species like this species.

Invasive alien animal species

Phylum	Scientific name	Impacts	Changes at RIS update
CHORDATA/AVES	*Branta canadensis*	Potential	No change
CHORDATA/MAMMALIA	*Neovison vison*	Potential	No change

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfc: Subarctic (Severe winter, no dry season, cool summer)

The climate is typically Atlantic, with typically West-European mild winters and relatively warm summers with much annual precipitation (>1500mm).

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 0

a) Maximum elevation above sea level (in metres): 20

- 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.

North sea, 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)

Especially glacifluvial deposits have formed the flat landscape and the shores in the region. A number of moraine deposits are both nationally and internationally interesting.

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
Marine water	☐	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

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 importance of the remaining wetlands in the lowland is high in relation to their function as sediment traps, in water purification (high level of eg nitrogen pollution in the area).

4.4.6 - Water pH

Unknown ☑

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☑

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

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

Eutrophic ☑

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

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 ☐

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Erosion protection	Soil, sediment and nutrient retention	High
Pollution control and detoxification	Water purification/waste treatment or dilution	High
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	High
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	High
Spiritual and inspirational	Cultural heritage (historical and archaeological)	High
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Long-term monitoring site	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Nutrient cycling	Carbon storage/sequestration	Medium
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Medium

Other ecosystem service(s) not included above:

The importance of the remaining wetlands in the lowland is high in relation to their function as sediment traps, in water purification (high level of eg nitrogen pollution in the area). Flooding is not regarded as a significant problem in this area. The importance of the sites as shoreline stabilizers have become more accepted in the recent years and restrictions have been put on activities in the adjacent areas, and the entire coastline has been put under nature protection.

The shallow bays and kelp beds are recognized as important for fish production. Along the shorelines, one can find the densest collection of archeological sites in Norway, such as grave-mounds etc. dating 1000 AC or older.

The beaches in the area are most popular with local residents for sunbathing etc. and leisure activities, the freshwater lakes are good fishing grounds. The area is heavily used by tourists (walking, sunbathing etc) and for birdwatching, numbering tens of thousands peoples in a year.

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

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	☑	☑

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

site: Private
surrounding area: Private

5.1.2 - Management authority

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

Postal address: Statsforvalteren i Rogaland
Pb. 59
N-4001 STAVANGER

E-mail address: sfropost@statsforvalteren.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	High impact	☑	No change	☑	No change

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Marine and freshwater aquaculture	unknown impact	Medium impact	☑	No change	☑	No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Hunting and collecting terrestrial animals	Low impact	Medium impact	☑	No change	☑	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	High impact	☑	No change	☑	No change

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified/others	Medium impact	Medium impact	☑	No change	☐	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Agricultural and forestry effluents	Low impact	Low impact	☑	No change	☑	No change
Garbage and solid waste	Medium impact	Medium impact	☐	No change	☑	No change
Unspecified	Medium impact	Medium impact	☐	No change	☑	No change

Please describe any other threats (optional):

At the site: Today runoff from agricultural areas may locally be a problem, but has been subject to action plans to eliminate or reduce the problem and today this poses a lesser threat. Intensive agricultural activities close to the sites have raised the issue of establishing buffer-zones, also to prevent hunting taking place too close to the sites. Heavy traffic from tourists etc. have at places caused erosion of the dune-systems. Lowering of groundwater have caused problems for mire sites, since drier conditions mean a possibility for bushes and trees to grow. Kelp harvesting has been much debated as a possible threat concerning shore erosion and reduction of dead kelp on the shores.

Around the site: Intensively used for agriculture, at some places roads skirts the periphery of the protected sites and generally dumping of stones etc. from the agriculture may pose a problem inside or outside of the sites.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
bird protection area	Børaunen, Kvassheim, Nærlandstangen-Obrestad, Grudavatn		whole
landscape protection area	Kolnes, Orre-Reve, Skeie		partly
nature reserve	Alvevatn, Bjårvatn, Harvalandsvatn, Lonavatn, Orrevatn, Smokkevatn, Søylandsvatn, Øksnevadtjønn, Grannesbukta, Hagavågen, Strandnesvågen, Linemyr, Storamyr, Vigremyr		whole
plant protection area	Brusand and Ogna		partly

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 number of different leaflets exist, as do posters on the sites. Two birdwatching towers have been erected at Øksnevadstjønn and Grudavatn, while one is planned at Søylandsvatn. A nature-information centre has been erected near Orrevatn.

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

Most sites are part of the national seabird monitoring programme (winter counts).
Different research initiatives have been conducted and reports have been finalized, eg. on kelp harvesting and consequences for marine life and shore erosion protection, and study on erosion problems on dunes caused by tourist traffic.
The sites are continuously monitored by local bird watchers and annual bird report published. A ringing station have existed from the 1950ies and is today run by the Stavanger Museum and is situated on Reve close to Orrevatn and Orre-Reve.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

General:

www.artskart.artsdatabanken.no (Norway's Species Map Service)

Berg, B.S. 1995. Revidert verneplan for Jærstrendene landskapsvernområde. Miljø-rapport nr. 4:1-173 + app./map. Fylksmannen i Rogaland. (in Norwegian - review of natural history of the proposed Jæren landscape protection area, incl. literature list).
Fylkesmannen i Rogaland. 2010. Forvaltningsplan for Jærstrendene med biotopfredningar og naturminne. (In Norwegian - Translates: Management plan for Jærstrendene landskapsvernområde)
Fylkesmannen i Rogaland. 2011. Forvaltningsplan for Alvevatnet naturreservat. Klepp kommune, Rogaland. (In Norwegian - Translates: Management plan for Alvevatnet nature reserve)
Fylkesmannen i Rogaland. 2013. Forvaltingsplan for Bjårvatnet naturreservat. Hå kommune i Rogaland. (In Norwegian - Translates: Management plan for Bjårvatnet nature reserve)
Fylkesmannen i Rogaland. 2013. Forvaltningsplan for naturreservata Hagavågen, Strandnesvågen og Grannesbukta. Sola kommune, Rogaland (In Norwegian - Translates: Management plan for nature reserves Hagavågen, Strandnesvågen and Grannesbukta)
Fylkesmannen i Rogaland. 2013. Forvaltningsplan for Storamyr naturreservat. Sola kommune, Rogaland. (In Norwegian - Translates: Management plan for Storamyr nature reserve)
Fylkesmannen i Rogaland. 2013. Forvaltningsplan for Lonavatnet naturreservat. Klepp og Sandnes kommunar, Rogaland . (In Norwegian - Translates: Management plan for Lonavatnet nature reserve)
Fylkesmannen i Rogaland. 2013. Forvaltningsplan for Smokkevatnet naturreservat. Time kommune, Rogaland. (In Norwegian - Translates: Management plan for Smokkevatnet nature reserve)
Fylkesmannen i Rogaland. 2010. Forvaltningsplan for Søylandsvatnet naturreservat. Hå kommune, Rogaland. (In Norwegian - Translates: Management plan for Søylandsvatnet nature reserve)
Fylkesmannen i Rogaland. 2013. Forvaltningsplan for Øksnavadtjørn naturreservat. Klepp kommune, Rogaland. (In Norwegian - Translates: Management plan for Øksnavadtjønn nature reserve)

Artsdatabanken (2021, 24. november). Norsk rødliste for arter 2021. https://www.artsdatabanken.no/lister/rodlisteforarter/2021
Artsdatabanken (2018). Norsk rødliste for naturtyper 2018. Hentet (July 2022) fra https://www.artsdatabanken.no/rodlistefornaturtyper (The 2011 Red List for Ecosystemes and Habitat types. Norwegian Biodiversity Information Center, Norway)
Geology:
• Anundsen, K. & Sollie, I.H. 1987. Forslag til vern av kvartærgeologiske områder og forekomster i Rogaland. Rapport T-678:1-129. Miljøverndepartementet. (in Norwegian - proposal for protection scheme for quaternary deposits in Rogaland).

Flora:
• Steinnes, A. 1986. Myrvern i Rogaland. Stavanger Museums årbok 1986:37-59. (in Norwegianb, with English summary on protection of mires in Rogaland).

Birds:
Many local reports exists from the area, cf. annual bird report by the local bird club and national annual bird reports published in Vår Fuglefauna.

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
<10 file(s) uploaded>

vi. other published literature
<1 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:


Old stone fences, typical for this area. (*County Governor of Rogaland, 24-06-2008*)


The sub-site Børaunen (*County Governor of Rogaland, 24-06-2009*)


The mire at sub-site Storamyr. (*County Governor of Rogaland, 20-09-2012*)


Aerial photo of sub-site Orre With lake Ergavatnet. (*Norsk fly og flyfoto, 31-03-2000*)


Aerial photo of sub-site Børaunen (*Norsk fly og flyfoto, 10-09-2003*)


The sand beaches With lake Orrevatnet in the background (*Norsk fly og flyfoto, 03-03-2009*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation 1985-07-24