Ramsar Information Sheet

Published on 9 July 2018
Update version, previously published on : 27 May 2013

Norway

West-Vikna Archipelago

Designation date	27 May 2013
Site number	2165
Coordinates	64°53'48"N 10°43'35"E
Area	13 592,00 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 includes the major part of the West-Vikna archipelago consisting of several larger islands and numerous islets in shallow marine waters. The landscape has a mosaic pattern with rocky shores, narrow mires/bogs, and sparse vegetation influenced by seabird guano. Many of the islets have rocky shores where the vegetation cover is sparse. Some of the islands, with Kalvøya as the most spectacular example, are covered by a nationally endangered heathland in a mosaic with bogs and ponds. The large mires constitute important water reservoirs during dry periods and play an important role for flood control during periods of heavy precipitation. Deciduous forests cover about 5 % of Kalvøya island, mainly dominated by low-herb birch woodlands. The forest supports several old tree communities ranging 100-175 years and which support several interesting species such as the ghost orchid. More than 10 species of orchids are registered at Kalvøya. Hardly any other area in Norway has that many registered species of orchids.

The Site hosts a great biodiversity of flora compared to other coastal areas of central Norway. In total, more than 345 vascular plant species are registered, and on Kalvøya alone there are registered 289 species. Several species in this area are also found at their northernmost/southernmost distribution range.

The numerous islands and islets, the large shallow areas and a varied landscape also provide the basis for a rich and diverse birdlife throughout the year. The wetland supports breeding, staging and wintering populations of many nationally threatened species such as the black guillemot, the Atlantic puffin, and the black-legged kittiwake. The greylag goose also moult here in summer and the large shallow areas constitute important overwintering sites for seabirds. The islets also hold populations of the grey seal and the harbour seal. More rarely, the false killer whale, and the Eurasian otter visit the archipelago. The European roe deer is common on some of the islands.

There are also registered coastal spawning areas for fish within the Ramsar Site, particularly for the Atlantic cod (spawning period from February to May).

Human activity and land use within the Site includes fishing, agriculture and grazing.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Pernille Kvernland
Institution/agency	Norwegian Environment Agency
Postal address	Post box 5672 Torgarden, N-7485 Trondheim, Norway
E-mail	post@miljodir.no
Phone	+47 73580500

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

From year	1997
To year	2017

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	West-Vikna Archipelago
Unofficial name (optional)	Vest-Vikna

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?	Not evaluated

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

Former maps	0

Boundaries description

The boundaries are the same as for the existing:
Borgann and Frelsøy Nature Reserve and Borgann and Frelsøy Animal Protected Area.
Kvaløy and Rauøy Nature Reserve and Kvaløy and Rauøy Animal Protected Area.
Sklinnaflesin Protected Area
Fruflesa Nature Reserve
Nordøyan Nature Reserve
Sørøyan Nature Reserve
Ytre Brosmflesa Protected Area
Tronflesa Protected Area

2.2.2 - General location

a) In which large administrative region does the site lie?	Nord-Trøndelag
b) What is the nearest town or population centre?	Rørvik, approx pop. est. 3 000 (2016)

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): 13592

Area, in hectares (ha) as calculated from GIS boundaries: 13589.32

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	1. Atlantic

Other biogeographic regionalisation scheme

1. Biogeographical Regions, European Environment Agency, 2005.

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 reasons: West-Vikna archipelago with its islands, islets and shallow waters are representative wetland types in this biogeographic region. It has large areas with northern coastal heathland, which is typical for the region, but due to changes in agricultural practice, this habitat type is highly threatened. On Raudøya, there is a unique complex of asymmetric concentric raised bogs.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification: The protected area host a great biodiversity of flora compared to other coastal areas of central Norway. In total, more than 345 vascular plant species are registered, and on Kalvøya alone there are registered 289 species. Several species in this area is also found at their northernmost/southernmost distribution range. Additionally, the numerous islands and islets, the large shallow areas and the varied landscape provide the basis for a rich and diverse bird life that exists here thoughout the year.

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

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
Calamagrostis stricta	Neglected reed grass	☐	☑	☐		☐		A grass species with an Eastern distribution that is found at Kalvøya.
Carex appropinquata	Fibrous tussock-sedge	☐	☑	☐	LC	☐		A sedge species with an Eastern distribution that is found at Kalvøya.
Carex bigelowii	Stiff sedge	☐	☑	☐		☐		An Apline/Northernboreal species that is fairly common at Kalvøya, but otherwise rare for this region.
Carex buxbaumii	Club sedge	☐	☑	☐	LC	☐		Carex buxbaumii ssp. buxbaumii. A sedge species with an Eastern distribution that is found at Kalvøya.
Carex chordorrhiza	Creeping sedge	☐	☑	☐	LC	☐		A sedge species with an Eastern distribution that is found at Kalvøya.
Carex diandra	Lesser tussock-sedge	☐	☑	☐	LC	☐		A sedge species with an Eastern distribution that is found at Kalvøya.
Carex livida	Livid sedge	☐	☑	☐	LC	☐		A sedge species with an Eastern distribution that is found at Kalvøya.
Carex rariflora	Looseflower alpine sedge	☐	☑	☐	LC	☐		An Apline/Northernboreal species that is fairly common at Kalvøya, but otherwise rare for this region.

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Catoscopium nigritum	Golf-club Moss	☐	☑	☐		☐		A moss species with an Alpine/Northern distribution that is commonly found on Kalvøya.
Cinclidium stygium	Lurid cupola-moss	☐	☑	☐		☐		A moss species with an Alpine/Northern distribution that is commonly found on Kalvøya.
Corallorhiza trifida	Early coralroot	☐	☑	☐		☐		This species is rarely found along the coast, but can be found at Kalvøya.
Epipogium aphyllum	Ghost orchid	☑	☑	☐		☐	National Red List: Considered as VU	The rarest orchid in Norway.
Gymnocolea borealis		☐	☑	☐		☐		A moss species with an Alpine/Northern distribution that is commonly found on Kalvøya.
Holcus lanatus	Meadow soft grass	☐	☑	☐		☐		A Western species that is fairly common in this protected area, but otherwise rare for this region.
Luzula sylvatica	Great wood-rush	☐	☑	☐		☐		A Western species that is fairly common in the deciduous forests on Kalvøya, but otherwise rare for this region.
Ophioglossum vulgatum	Adders-tongue fern	☑	☐	☐		☐	National Red List: Considered as VU	
Potamogeton polygonifolius	Bog pondweed	☐	☑	☐	LC	☐		A Western species that is fairly common in this protected area, but otherwise rare for this region.
Sphagnum lindbergii	Lindberg's bog-moss	☐	☑	☐		☐		A moss species with an Alpine/Northern distribution that is commonly found on Kalvøya.
Trichophorum alpinum	Alpine bulrush	☐	☑	☐	LC	☐		A sedge species with an Eastern distribution that is found at Kalvøya.

Species not yet included in the Catalogue of Life:
Sphagnum austinii - Criterion 3 - A Western species that is fairly common in the mires found at Kalvøya and Borgan, but otherwise rare for this region.
Hierochloë odorata odorata - Criterion 3 - A species with an Eastern distribution that is found at Kalvøya.

There are also several nationally common species found at Kalvøya which are regionally rare for this location, such as the Equisetum sylvaticum (wood horsetail), the Galium boreale (Northern bedstraw) and the Saussurea alpina (Alpine Sawwort).

Capitalized letters shows the species' status on 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	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA / AVES	*Alauda arvensis*	Eurasian Skylark; Sky Lark	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	National Red List: Considered as VU	Criterion 4: The wetland supports breeding, staging and wintering populations of this species.
CHORDATA / AVES	*Anas crecca*	Green-winged Teal; Eurasian Teal	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: The wetland supports breeding populations of this species.
CHORDATA / AVES	*Anser anser*	Greylag Goose	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: This species both breed and moult in this protected area.
CHORDATA / AVES	*Arenaria interpres*	Ruddy Turnstone	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: This species breeds within the protected area.
CHORDATA / AVES	*Bubo bubo*	Eurasian Eagle-Owl	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	National Red List: Considered as EN	Criterion 4: The wetland supports breeding, staging and wintering populations of this species.
CHORDATA / AVES	*Calidris alpina*	Dunlin	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	Ann. II Berne Convention	Criterion 4: This species breeds in low numbers in this wetland area.
CHORDATA / AVES	*Cepphus grylle*	Black Guillemot	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	National Red List: Considered as VU	Criterion 4: The wetland supports breeding, staging and wintering populations of this species.
CHORDATA / AVES	*Fratercula arctica*	Atlantic Puffin	☑	☑	☐	☐	☐	☐	☐	☐				VU	☐	☐	National Red List: Considered as VU	Criterion 4: The wetland supports breeding, staging and wintering populations of this species.
CHORDATA / AVES	*Gavia adamsii*	Yellow-billed Loon	☑	☑	☐	☐	☐	☐	☐	☐				NT	☐	☐	National Red List: Considered as NT, Ann. II Berne Convention, Emerald Network	Criterion 4: This area function as an overwintering location for this species.
CHORDATA / AVES	*Gavia immer*	Great Northern Loon; Great Northern Diver; Common Loon	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	Ann. II Berne Convention, Emerald Network	Criterion 4: This area function as an overwintering location for this species.
CHORDATA / AVES	*Gavia stellata*	Red-throated Loon; Red-throated Diver	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	Ann. II Berne Convention, Emerald Network	Criterion 4: This species breeds in the mires of this wetland.
CHORDATA / AVES	*Haliaeetus albicilla*	White-tailed Eagle	☑	☑	☐	☐	☐	☐	☐	☐				LC	☑	☑		Criterion 4: Common breeding species in this area.
CHORDATA / AVES	*Larus argentatus*	Herring Gull	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: Common breeding species. in this area.
CHORDATA / AVES	*Larus canus*	Mew Gull	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	National Red List: Considered as NT	Criterion 4: The wetland supports breeding populations of this species.
CHORDATA / AVES	*Larus fuscus*	Lesser Black-backed Gull	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: This species is a common breeder on the site.
CHORDATA / AVES	*Larus marinus*	Great Black-backed Gull	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: Common breeding species in this area.
CHORDATA / AVES	*Mergus serrator*	Red-breasted Merganser	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: The wetland supports breeding populations of this species.
CHORDATA / AVES	*Numenius arquata*	Eurasian Curlew	☑	☑	☐	☐	☐	☐	☐	☐				NT	☐	☐	National Red List: Considered as VU	Criterion 4: This species breeds in the mires of this wetland.

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 / AVES	*Numenius phaeopus*	Whimbrel	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: This species breeds in the mires of this wetland.
CHORDATA / AVES	*Phalacrocorax aristotelis*	European Shag	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	Ann. II Berne Convention	Criterion 4: The site holds considerable breeding colonies of this species.
CHORDATA / AVES	*Phalacrocorax carbo*	Great Cormorant	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: The site holds considerable breeding colonies of this species.
CHORDATA / AVES	*Pluvialis apricaria*	European Golden Plover; European Golden-Plover	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: This species breeds in the mires of this wetland.
CHORDATA / AVES	*Podiceps grisegena*	Red-necked Grebe	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	Ann. II Berne Convention, Emerald Network	Criterion 4: This area function as an overwintering location for this species.
CHORDATA / AVES	*Rissa tridactyla*	Black-legged Kittiwake	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	National Red List: Considered as EN	Criterion 4: The wetland supports breeding, staging and wintering populations of this species.
CHORDATA / AVES	*Somateria mollissima*	Common Eider	☐	☑	☐	☐	☐	☐	☐	☐				NT	☐	☐	Norwegian Red List: Considered as NT	Criterion 4: This is a common species that breed in this area.
CHORDATA / AVES	*Somateria spectabilis*	King Eider	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	Ann. II Berne Convention	Criterion 4: This area function as an overwintering location for this species.
CHORDATA / AVES	*Stercorarius parasiticus*	Parasitic Jaeger	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	Norwegian Red List: Considered as NT	Criterion 4: This species breeds within the protected area.
CHORDATA / AVES	*Sterna hirundo*	Common Tern	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	National Red List: Considered as EN, Ann. II Berne Convention, Emerald Network	Criterion 4: The wetland supports breeding populations of this species.
CHORDATA / AVES	*Sterna paradisaea*	Arctic Tern	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	Ann. II Berne Convention, Emerald Network	Criterion 4: Common breeding species in this area.
CHORDATA / AVES	*Tringa totanus*	Common Redshank	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Criterion 4: This species breeds in the mires of this wetland.
Fish, Mollusc and Crustacea																		
MOLLUSCA / BIVALVIA	*Mya arenaria*	softshell clam; softshell; sand gaper; long necked clam; steamer clam	☑	☐	☐	☐	☐	☐	☐	☐					☐	☐	National Red List: Considered as VU	
Others																		
CHORDATA / MAMMALIA	*Lutra lutra*	European Otter	☑	☑	☐	☐	☐	☐	☐	☐				NT	☑	☐	National Red List: Considered as VU	Criterion 4: The wetland supports breeding, staging and wintering populations of this species.
CHORDATA / MAMMALIA	*Phoca vitulina*	Harbor Seal	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	National Red List: Considered as VU	Criterion 4: The wetland supports breeding, staging and wintering populations of this species.

1) Percentage of the total biogeographic population at the site

Capitalized letters shows the species' status on 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
Coastal heathland	☑	Vest-Vikna archipelago exhibits excellent examples of northern coastal heathland. Due to changes in agricultural practice, this habitat type is threatened.	National Red List: Considered as EN
Coastal bog	☑		National Red List: Considered as VU

Optional text box to provide further information

Capitalized letters shows the habitats' status on the National Red List for Ecosystems and Habitat types 2011.

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

4.1 - Ecological character

Marine shallow waters with a large production of marine invertebrates and fish, combined with seaweed beds and kelp forests sustains a rich animal life throughout the year.

Kalvøya is the largest island in the protected area, Borgan the second largest. Other large islands are Møskja, Ivarsøya, Bøsseløya og Brusøya. The skerries and islands in the outermost coastal zone have generally little vegetation cover due to the rough seas, however, certain rich hot-spots do exist (Kalvøya). Coastal heath and mires are the dominating habitat types on Kalvøya, with some deciduous forests and shrubs. In Northern parts of the island, one can find relatively large deciduous forests that are more than 100 years old. These old forests host several interesting species, such as the ghost orchid. The Site has a rocky coastal zone including areas with boulders and gravel. The vegetation on the smaller islets is often influenced by seabird droppings. On some of the islands, common heather is the dominating vegetation, often in a mosaic with bogs and ponds. Large mires are the dominating vegetational cover on some of the other islands.

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		Representative
D: Rocky marine shores		2		Representative

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 > Marshes on peat soils >> U: Permanent Non-forested peatlands		3		Unique

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Calluna vulgaris	Common heather	This species is common on the site.
Carex lepidocarpa		National Red List: Considered as NT
Cochlearia officinalis	Common scurvygrass	In the gulls and cormorants colonies the droppings give nitrogenous substrate which benefit plants like this species.
Empetrum nigrum	Crowberry	This species is common on the site.
Entoloma griseocyaneum	Felted pinkgill	National Red List: Considered as NT
Entoloma mougeotii		National Red List: Considered as NT
Gentianella campestris	Field gentian	National Red List: Considered as NT
Hygrocybe aurantiosplendens	Orange waxcap	National Red List: Considered as NT
Hygrocybe russocoriacea		National Red List: Considered as NT
Rumex acetosa	Common sorrel	In the gulls and cormorants colonies the droppings give nitrogenous substrate which benefit plants like this species.
Salix triandra	Almond willow	National Red List: Considered as NT
Silene dioica	Red campion	This species is common on the site.
Tripleurospermum inodorum	Scentless false mayweed	This species is common on the site.

Invasive alien plant species

Scientific name	Common name	Impacts	Changes at RIS update
Ribes rubrum	Red currant	Potentially	No change

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	*Hydrobates pelagicus*	European Storm Petrel;European Storm-Petrel				This species probably breeds on the site.
ARTHROPODA/INSECTA	*Bombus muscorum*	Moss Carder-bee;Large Carder-bee				National Red List: Considered as NT
CHORDATA/MAMMALIA	*Capreolus capreolus*	Western roe deer				This species is common on some of the islands.
CHORDATA/MAMMALIA	*Halichoerus grypus*	Gray Seal				The site holds a population of this species.
CHORDATA/MAMMALIA	*Pseudorca crassidens*	False Killer Whale				This species visits rarely the site.

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 a typical coastal Atlantic climate with annual precipitation of 700-1000 mm and averaging about 200 days with precipitation pr. year. High humidity, cool summers and mild winters. October is the month with the heaviest precipitation (average of 100 mm), while May is the driest month (average precipitation below 40 mm).

A yearly middle temperature of 6,0°C. August is the warmest month, with an average of 12,5°C, while January/February are the coldest months (average 0,6°C).

Snow usually occurs in the period between November-April, with an expected highest snow depth in December.

4.4.2 - Geomorphic setting

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

a) Maximum elevation above sea level (in metres): 109

- 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.

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)

Vest-Vikna archipelago consists of granite formed during the Caledonian orogeny. Kalvøya is dominated by calcareous/siliceous slate and mica shists.

Migmatic gneiss is the most common bedrock found in Vikna, however, on Kalvøya softer and more calcareous bedrocks dominate, such as calcium silicate minerals and schist. While hard and acidic gneiss erode slowly and provide a thin, acidic and nutrient-poor soil, calcium silicate minerals and schists are softer bedrocks that erode more quickly, providing a more basic and nutrient-rich soil. Along the coast of Nord-Trøndelag and Fosen the gneiss bedrock dominate, making Kalvøya a special location in this regard.

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 rainfall	☐	No change
Marine water	☐	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:

The site consists mostly of shallow marine waters less than 50 metres deep at low tide. However, some deeper areas occur in the surrounding ocean. The archipelago is situated in a larger area of shallow water with water depth between 0 and 50 meters. Between some of the islands there are narrow straits with strong currents.
Middle tidal amplitude is approx. 1,5-2,0 m, creating strong East-Western tidal currents.

The large mires constitute important water reservoirs, provide stability in water flow and availability by constituting reservoirs in dry periods and flood control during periods of heavy precipitation.

4.4.5 - Sediment regime

Sediment regime unknown ☑

(ECD) Water temperature: The annual average oceanic temperature ranges from 6°C in March to 13°C in August.

4.4.6 - Water pH

Unknown ☑

4.4.7 - Water salinity

Mixohaline (brackish)/Mixosaline (0.5-30 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:

Fishing and fish farming takes place in surrounding waters.
There might still be some collection of eggs from gulls in the traditional manner on neighbouring islands, but it is somewhat unclear if people in the area still follow this tradition.

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
Fresh water	Drinking water for humans and/or livestock	Medium
Wetland non-food products	Livestock fodder	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	Low
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Low
Scientific and educational	Long-term monitoring site	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Nutrient cycling	Carbon storage/sequestration	Medium

Other ecosystem service(s) not included above:

Fishing. Agriculture (Borgan) and grazing (Kalvøya, Borgan).

In the past some of the islands had settlements. A few islands (e.g. Ivarsøya, Frelsøya, Raudøya, Kvaløya) still have houses or cottages, today mainly used for recreational purposes.

Some of the islands are part of the national monitoring program for seabirds (SEAPOP).

No current recreation or tourism, except some tourism on the island Borgan, where transportation is available with the local ferry and one can find simple overnight accommodation, but no shops or resturants/cafes.

Due to the fact that most of the shoreline consists of hard granite rocks; erosion is minimal, despite a harsh winter climate. The large mires constitute important water reservoirs. They provide stability in water flow and availability by constituting reservoirs in dry periods and flood control during periods of heavy precipitation.

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

(ECD) Nutrient cycling: Some of the smaller islands have a vegetation cover influenced by seabird guano.

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
National/Federal government	☑	☑

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):

Within the Ramsar site:
Private (most of the islands). The Norwegian Government (sea, Sørøyan and some smaller islands)

In the surrounding area:
The Norwegian Government (sea)

5.1.2 - Management authority

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

Provide the name and title of the person or people with responsibility for the wetland: Inge Hafstad

Postal address: Statens Hus, N-7734 Steinkjer

E-mail address: postmottak@fmnt.no

5.2 - Ecological character threats and responses (Management)

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

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Housing and urban areas	Medium impact	Medium 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	Low impact	Medium impact	☐	No change	☑	No change

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Renewable energy	unknown impact	High impact	☐	No change	☑	No change
Oil and gas drilling	unknown impact	High 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
Fishing and harvesting aquatic resources	Low impact	Medium impact	☑	No change	☑	No change

Please describe any other threats (optional):

Within the Ramsar site:
Constructions (weekend cottages, quays).
In the past, the seabirds profited of gubbins from local fishing industry.

Previously several islands had grazing fauna, these islands are now characterized by overgrowth.

There have also previsouly been collection of eider down and eggs, berry picking and peat-harvesting.

In the surrounding area:
Fish farming and constructions in the nearby area (weekend cottages, quays).

In a screening of potential conflict areas regarding wind power plants and seabirds, Vikna was recognized as a vulnerable location regarding the development of wind power plants.

Potential oil spills also constitute a threat.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Nature Reserve & Animal Protected Area 1	Borgan and Frelsoy		whole
Nature Reserve & Animal Protected Area 2	Kvaløy and Raudøy		whole
Nature Reserve 1	Fruflesa		whole
Nature Reserve 2	Nordoyan		whole
Nature Reserve 3	Soroyan		whole
Protected Area 1	Sklinnaflesin		whole
Protected Area 2	Ytre Brosmflea		whole
Protected Area 3	Tronflesa		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

Human Activities

Measures	Status
Regulation/management of recreational activities	Implemented

Other:

The area is given status as a Nature Reserve, Animal Protected Area and Protected Area. Human activity is regulated by an official set of regulations. The aim is to conserve the landscape with important
botanical and zoological elements on land and at sea.

5.2.5 - Management planning

Is there a site-specific management plan for the site?	No
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 ◉

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

Some of the islands are part of the national monitoring program for seabirds (SEAPOP).

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Henriksen, S., Hilmo, O., 2015. Norsk rødliste for arter 2015 (red). Artsdatabanken, Norge - 2015 Norwegian Red List. Artsdatabanken, Norway

Lindgaard A, Henriksen S (eds) (2011) Norsk rødliste for naturtyper 2011. Artsdatabanken, Norge - 2011 Norwegian Red List for Ecosystems and Habitat Types. Artsdatabanken, Norway

Nilsen, L.S. & Moen, A. 2003. The plant cover of Kalvøya at Borgan, Vikna, Central Norway; and management plan for the coastal heathlands. NTNU Vitensk.mus. Rapp. Bot. Ser. 2003-3: 1-51.

Christensen-Dalsgaard, S., Lorentsen, S.-H., Dahl, E. L., Follestad, A., Hanssen, F. & Systad, G. H. 2010. Marine wind farms - seabirds, white-tailed eagles, Eurasian eagle-owl and waders. A screening of potential conflict areas - NINA Report 557. 100 pp.

Østerås, T.R. & Thingstad, P.G. 2011. Hekkefaunaen på Kråkøya, Vikna kommune, sommeren 2011, og mulige konflikter ved endret arealbruk. – NTNU Vitenskapsmuseet Zoologisk Notat 2011, 5: 1-14.

Nilsen, L.S. & Moen, A. 2009. Langtidsstudier, overvåking og skjøtsel på Kalvøya ved Borgan, Vikna. – NTNU Vitensk.mus. Bot. Notat 2009-6: 1-13.

Hassel, K. & Holien. H. 2012. Epifyttfloraen av moser og lav på Kalvøya, Vikna i Nord-Trøndelag. – NTNU Vitensk.mus. Bot. Notat 2012–3: 1-16.

Kaspersen, T.E. 1997. Utkast til verneplan for sjøfuglområder i Nord-Trøndelag. - Fylkesmannen i

Nord-Trøndelag, Miljøvernavdelingen. Rapport 3-1997. 1-221.

Lorentsen, S.-H. & Christensen-Dalsgaard, S. 2009. Det nasjonale overvåkingsprogrammet for sjøfugl. Resultater til og med hekkesesongen 2008. Norsk institutt for naturforskning (NINA), Rapport 439: 53 pp.

Moen, A. 1998. Nasjonalatlas for Norge; vegetasjon. Statens Kartverk, Hønefoss

Nilsen, L.S. & Moen, A. 2003. Plantelivet på Kalvøya ved Borgan, Vikna, og forslag til skjøtsel av kystlyngheilandskapet. NTNU Vitensk.mus. Rapp. Bot. Ser. 2003-3: 1-51.

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
<no file available>

vi. other published literature
<7 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

The islets and skerries found just outside Kalvøya. (*Hilde Ely-Aastrup, 10-04-2010*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation	2013-05-27