

## Ramsar Information Sheet

Published on 6 April 2018 Update version, previously published on : 1 January 2012

# **Norway** Karlsøyvær



Designation date 6 August 2002 Site number 1192 Coordinates 67°34'11"N 14°39'19"E Area 4 936,00 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

Karlsøyvær is a marine archipelago with shallow waters, dotted with approximately 220 islands, skerries and islets, typical for the North-European coastal landscape. Helløya is the largest and highest island (101 m.a.s.l.). Habitats and ecosystems in the area vary from wet meadows, dunes and dune slacks, drift lines to brackish marshes and lagoons. The climate in combination with topography provide a diverse and varied vegetation cover, which however remains low, apart from some deciduous forest on a few of the islands. In total, more than 250 different plant species are registered in Karlsøyvær. The archipelago is among the largest coastal conservation areas found in Norway.

The site is one of several important areas along the coast for staging, breeding, moulting and wintering seabirds. Slovær is an especially important breeding area for cormorants, gulls and the black guillemot. The central parts of Karlsøyvær (Karlsøya, Lågøya, Dragan, Einholmen, Dypingen and Engøya) host the largest breeding populations of waders, common eiders and red-breasted mergansers in the archipelago, while Bestemorholmen is an important breeding location for black guillemots. Karlsøyvær is also an important breeding- and nesting location for the white-tailed eagle.

The area is important for shoreline stabilization. Traditionally the site was used for eiderdown- and egg collection from common eiders; except for sporadic collection of eggs, this practice has now ceased. Other human activities include recreational activities, fishing, berry picking (cloudberry), and sheep grazing (Karlsøya and Hjelløya). Helløya is a former farmland that is now characterized by overgrowth.

Common eiders used to be a common breeding species in Karlsøyvær, but the population have drastically declined, along with populations of the Northern lesser black-backed gull, the great black-backed gull, the Northern lapwing and the Eurasian curlew. Mink has established as a species during the last decade, and is likely a driving force for the population decline seen for these breeding species. In particular for common eiders, the cessation of eider down and egg collection, and the subsequent loss of predator protection and the building of nesting houses, is likely a large contributor for the population decline seen for this species.

## 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 1988

To year 2017

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish) Karlsøyvær

#### 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 O 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?

(Update) Optional text box to provide further information

Common eiders used to be a common breeding species in Karlsøyvær, but the population has drastically declined, along with populations of the Northern lesser black-backed gull, the great black-backed gull, the Northern lapwing and the Eurasian curlew. Mink has established as a species during the last decade, and is likely a driving force for the population decline seen for these breeding species. In particular for common eiders, the cessation of eider down and egg collection, and the subsequent loss of predator protection and the building of nesting houses, is likely a large contributor for the population decline seen for this species.

#### 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 the existing nature reserve Karlsøyvær.

#### 2.2.2 - General location

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

Nordland

b) What is the nearest town or population centre?

Bodø, approx pop. est. 55 500 (2016)

#### 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

#### 2.2.4 - Area of the Site

Official area, in hectares (ha): 4936

Area, in hectares (ha) as calculated from GIS boundaries 4938.85

### 2.2.5 - Biogeography

## Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Mddle boreal zone (MbO2 – clear oceanic section)
EU biogeographic regionalization	2. Atlantic

#### Other biogeographic regionalisation scheme

1. 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). 2. EU Habitat directive 92/43/EEC

## 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

This is a marine archipelago with shallow waters dotted with numerous islands, skerries and islets. This kind of archipelago is typical in the North-European coastal landscape. The shores are mostly hard rock and gravel, but in parts of the archipelago there are calcareous rocks, wet meadows and brackish marshes occur on a smaller part of the area.

Other reasons

Some of the habitats in the Ramsar site are considered as coastal heatland (EN), hay meadow (NRL: EN) and semi-natural grassland (NRL: VU). Red list categories are given according to Norwegian Red List for Ecosystems and Habitat types 2011.

- ☑ Criterion 2 : Rare species and threatened ecological communities
- ☑ Criterion 3 : Biological diversity

Justification

The area is a traditional breeding site for numbers of seabirds, e.g. the herring gull (NRL: NT), the black-backed gull, breeding area for Northern Scandinavian and Baltic subspecies of the lesser black-backed gull. the Common eider, and the white-tailed eagle, all characteristic species for this kind of archipelago in this biogeographic region.

- ☑ 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

<no data available>

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

3.3 - An	3 - Animal species whose presence relates to the international importance of the site											
Phylum	Scientific name	Common name	Species qualifies under criterion 2 4 6 9	Speci contrib unde criter	utes er on	p. Period of pop. Est. o	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds												
CHORDATA / AVES	<b>CL</b> 🔊	Greylag Goose			3	3		LC				18-20 pairs. Criterion 4: This species uses this area during moulting.
CHORDATA / AVES	Arenaria interpres	Ruddy Turnstone						LC				Criterion 4: This species uses this area during breeding season.
/ AVES	Cepphus grylle	Black Guillemot			□□ 4	4		LC ©#			National Red List: Considered as VU	22 pairs. Criterion 4: The site has a stable breeding population of this species.
CHORDATA / AVES	Clangula hyemalis	Long-tailed Duck; Oldsquaw	<b>22</b> 00					VU ●# ●#			National Red List: Considered as NT	Criterion 4: Staging and wintering site for this species.

Phylum	Scientific name	Common name	qua un crite	ecies diffies der erion 6	CC	und crite	outes er rion		IUCN Red A List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA / AVES	Fratercula arctica	Atlantic Puffin	<b>V V</b>						<b>VU</b> <b>€ 6:</b> <b>⊙</b> (5)			National Red List: Considered as VU	Criterion 4: This species uses this area during forage and staging.
CHORDATA / AVES	gallinago	Common Snipe						10	LC •				5 pairs. Criterion 4: This species uses this area during breeding season.
CHORDATA / AVES	Gavia stellata	Red-throated Diver; Red- throated Loon	1					4	LC Single			Ann. II Berne Convention, Emerald Network	2 pairs. Criterion 4: This species breeds in the area.
	Haematopus ostralegus	Eurasian Oystercatcher						164	NT				81-82 pairs. Criterion 4: This species uses this area during breeding season.
AVES	albicilla <u>•••</u>	White-tailed Eagle						75	LC •°° •°°	V	<b>/</b>		50-100 ind., 8 breeding pairs. Criterion 3: Characteristic species for this kind of archipelago in this biogeographic region. Criterion 4: This species breeds in the area.
AVES	Larus argentatus	Herring Gull						216	LC © SS © TSF				108 pairs. Criterion 4: This species breed witin this wetland area.
CHORDATA / AVES	Larus canus	Mew Gull							LC •			National Red List: Considered as NT	Criterion 3 & 4: The area is a traditional breeding site for numbers of seabirds, e.g. This species.
	Larus fuscus fuscus	Northern Scandinavian and Baltic subspecies of Lesser Black- backed Gull											Criterion 3 & 4: The area is a traditional breeding site for numbers of seabirds, e.g. this species.
AVES	Larus marinus	Great Black- backed Gull						400	LC © SS © TSF				200 pairs. Criterion 3 & 4: The area is a traditional breeding site for numbers of seabirds, e.g. This species.
CHORDATA / AVES	Melanitta nigra	Black Scoter							LC Sign				Criterion 4: This species uses this area during staging.
	Mergus merganser	Common Merganser							LC Sign				Criterion 4: This species uses this area during moulting.
CHORDATA / AVES	Mergus serrator	Red-breasted Merganser						56	LC © SS © TSF				22-35 pairs. Criterion 4: Staging and wintering site for this species.
CHORDATA / AVES	Numenius arquata	Eurasian Curlew	<b>V V</b>					12	NT			National Red List: Considered as VU	6 pairs. Criterion 4: This species uses this area during breeding season.
/	Phalacrocorax aristotelis	European Shag	<b>V</b>					64	LC			Ann II. Berne Convention	27-36 pairs. Criterion 4: Staging and wintering site for this species.
	Somateria mollissima	Common Eider						72	NT				30-41 pairs. Criterion 3: Characteristic species for this kind of archipelago in this biogeographic region. Criterion 4: Staging and wintering site for this species.
AVEO	ea.	Parasitic Jaeger							LC Si Sign			National Red List: Considered as NT	Criterion 4: This species uses this area during breeding season.
CHORDATA / AVES	Sterna paradisaea	Arctic Tern	<b>V V</b>						LC •å: •®			Ann. Il Berne Convention, Emerald Network	Criterion 4: This species uses this area during breeding season.

Phylum	Scientific name	Common name	Species qualifies under criterion	Species contributes under criterion	Pop. Size	% occurrence	IUCN Red /	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA / AVES	Vanellus vanellus	Northern Lapwing		10000			NT Sign			National Red List: Considered as EN	Criterion 4: This species breeds within this wetland area.
Others											
MAMMALIA	grypus	Gray Seal					LC ©#			Emerald Network	Criterion 4: This area is important staging area for this species.
CHORDATA / MAMMALIA	Lutra lutra	European Otter					NT ©#	<b>✓</b>		National Red List: Considered as VU, Ann. Il Berne Convention	Criterion 4: The site has a stable population of the breeding Eurasian Otter.
CHORDATA / MAMMALIA	Phoca vitulina	Harbor Seal					LC ©#			National Red List: Considered as VU, Ann. III Berne Convention	Criterion 4: This species used to breed here, whether that is the case present is uncertain, but the area is still important for this species.

<sup>1)</sup> Percentage of the total biogeographic population at the site

Additional information under Criterion 4: In total, there are approximately 582-633 breeding pairs inside the Ramsar area. The registrations of breeding birds have been performed in 2009. Numbers will vary between years.

Staging and wintering site for 1000-2000 seabirds, including Gavia spp. Little research and counts on birds have so far been conducted in the

area.

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
Hay meadow	✓		National Red List: Considered as EN
Eelgrass meadow		Northern limits of distribution of eelgrass meadows are found in this area	Eelgrass meadows constitute important foraging sites for diving ducks and waders during staging.
Semi-natural grassland	<b>2</b>		National Red List: Considered as EN
Coastal heath	Ø	Coastal heath is the dominating vegetation type. Karlsøyær is one of six areas in Nordland with coastal heath suggested to be a reference area for coastal heath in Norway.	National Red List: Considered as VU
Drift line		An area of the shore on which material is deposited or washed up. As a result, high richness of nutrients occur.	Drift lines constitute important foraging sites for staging waterfowl.

Optional	text hox	to	provide	further	inforn	nation

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

Situated in the boreal vegetational zone, and characterised by:

- Shallow marine waters, with numerous islands, skerries and islets.
- Coastal substrate characterized by rocks and gravel shores, inland calcareous deposits occur (seashells and corals) creating substrate for flora dependent on calcareous soil.
- Highly differentiated vegetation types, depending on influence from seawater, e.g. tidal shand shore with drift lines, salt meadows, brackish meadows including brackish lagoons and freshwater ponds, herb-rich meadows.
- Typical flora contains Puccinellia spp., Carex subspathacea, Juncus arcticus ssp.balticus and Blysmus rufus.
- Brackish/aquatic flora typically includes Hippuris, Potamogeton and Myriophyllum.

### 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
E: Sand, shingle or pebble shores		3		
H: Intertidal marshes		4		

#### 4.3 - Biological components

#### 4.3.1 - Plant species

Other noteworthy plant species

Common name	Position in range / endemism / other
	Nationally rare species
	Common name

#### Optional text box to provide further information

Species listed under biological components which are not yet included in the Catalogue of Life: Chara cfr. contraria, National Red List: Considered as NT

#### 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
CHORDATAAVES	Charadrius hiaticula	Common Ringed Plover	5			(5 pairs) Nationally common species
CHORDATAAVES	Tringa totanus	Common Redshank	10			(10 pairs) Nationally common species

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	Changes at RIS update
CHORDATA/MAM/MALIA	Neovison vison	American Mink	Potentially	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 typical Atlantic-oceanic with high annual precipitation (>1500mm and average 200-220 days with precipitation pr. year), wet summers and mild winters. October is the month that recives the highest amount of precipitation. Average yearly temperatures of 5,2 °C (Helligvær), with an average monthy temperature of -0,4 °C in February and 12,2 °C in July/August.

442-	C	م اما مس	
44/-	(aeomc	rnnic	semino

a) Mnimum elevation above sea level (in metres)
a) Maximum elevation above sea level (in metres)
Entire river basin
Upper part of river basin $\Box$
Mddle part of river basin ☐
Lower part of river basin $\Box$
More than one river basin ☐
Not in river basin $\square$
Coastal <b>☑</b>

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 

O

No available information  $\square$ 

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes O No (9)

Please provide further information on the soil (optional)

The entire area is characterised by outcrops of hard bedrock (mica slate, granites, etc.) and at places also calcareous rock. Typified by shallow marine waters with numerous islets and skerries.

Fjærvær, the island group to the South, contain a belt of calcium silicate schist. Marine deposits containing sand, silt and shell sand.

#### 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

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.

Shallow marine waters mostly less than six metres deep at low tide; includes sea bays and straits. Some deeper areas (>100 m). Middle tidal amplitude is approx. 174 cm (Bodø harbour).

All fresh water in the area originates from precipitation.

#### 4.4.5 - Sediment regime

Sediment regime unknown

#### 4.4.6 - Water pH

Unknown 🗹

#### 4.4.7 - Water salinity

Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ₩

## 4.4.8 - Dissolved or suspended nutrients in water

Unknown 🗹

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

	and if so how, the landscape a surrounding the Ramsar Site	and ecological differ from the i) broadly similar (
		site itself:
Surrounding a	rea has greater urbanisation o	r development
Surroundin	ng area has higher human pop	ulation density
Surround	ling area has more intensive a	gricultural use
Surrounding area has sig	gnificantly different land cover o	or habitat types
	s in which the surrounding are	
Fishing	5 III William the during and	a io amorone
4.5 - Ecosystem s	services	
4.5.1 - Ecosystem serv	rices/benefits	
Provisioning Services Ecosystem service	Examples	Importance/Extent/Significance
Wetland non-food products	Other	Medium
Wetland non-food products	Livestock fodder	Low
Regulating Services		
Ecosystem service	Examples	Importance/Extent/Significance
l lamend on decation	Coastal shoreline and river	N. An allis see
Hazard reduction	bank stabilization and storm protection	Medium
Cultural Continue		
Cultural Services Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and	Low
Recreation and tourism	fishing Picnics, outings, touring	Low
Spiritual and inspirational	Cultural heritage (historical	Medium
Scientific and educational	and archaeological)	Medium
Cachano ana caudationial	Long-term monitoring site	IVEUIUIII
Supporting Services		
Ecosystem service	Examples Carbon	Importance/Extent/Significance
Nutrient cycling	storage/sequestration	Low
Other coopy pt ( )	) not included of	
Other ecosystem service(s) Shoreline stabilization	·	
Shoreline stabilization	ı.	
,	011	non eider were used for dov
	•	ation of eiders (predator proved sites (outside this site)
		ng is still performed. It is als
	of sheep graze in the are	
omalier populations of	n sneep graze in ine are	a.
The area is to a low d	legree used by residents	s and tourists, mainly for fish
The marine site was a	earlier included in the na	tional monitoring program f
THE MAINE SILE WAS 6	samer moluded in the ha	tional monitoring program f
Have studies or assessme	ents been made of the econon	nic valuation of Yes O No O Unk
ecosy	stem services provided by this	Ramsar Site?
4.5.2 - Social and cultu	ıral values	
i) the site provides a m	nodel of wetland wise use, den	nonstrating the
application of traditional k	nowledge and methods of ma	nagement and
	intain the ecological character	
ii) the site has excep	ptional cultural traditions or rec	cords of former
	enced the ecological character	
	cter of the wetland depends or ith local communities or indige	
	values such as sacred sites a	
	linked with the maintenance of	_
		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

Pu				

Category	Within the Ramsar Site	In the surrounding area
National/Federal	<b></b>	<b></b>
government	66.3	6823

#### Private ownership

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

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

Within the Ramsar site:

Privately owned approx. 2/3 and State owned approx. 1/3.

In the surrounding area:

State owned.

## 5.1.2 - Management authority

Please list the local office / offices of any	County Governor of Nordland
agency or organization responsible for	
managing the site:	
Postal address:	Moloveien 10, N- 8002 Bodø
E-mail address:	postmottak@fmno.no

## 5.2 - Ecological character threats and responses (Management)

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

**Actual threat** 

Potential threat

Medium impact

#### Human intrusions and disturbance

Factors adversely

affecting site

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes	
Recreational and tourism activities	Low impact	Low impact	✓	No change		No change	
Natural system modifications							

Within the site

 $\checkmark$ 

Changes

No change

In the surrounding area

Changes

No change

## Unspecified/others Medium impact

Invasive and other problematic species and genes								
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes		
Invasive non-native/ alien species	Medium impact	High impact	<b>2</b>	No change		No change		

#### Please describe any other threats (optional):

#### Within the Ramsar site:

The cessation of traditional agriculture with grazing animals and haymaking has led to an abandon of the unique collaboration between man and seabirds (predator control, building of houses for the common eider, and also to a succeeding overgrowing of the landscape).

The depopulation of the islands and the cessation of traditional agriculture with grazing animals and haymaking has likely resulted in a population decline for species such as the Northern lapwing, the Eurasian curlew and the common snipe resulting from overgrowing of important semi-natural open grasslands of which these species are associated.

Mink was established as a species on the islands in 2004, and in 2011 work began in order to try to manage the mink population. This is a highly prioritized task.

Efforts are also being made in order to prevent overgrowing, and grazing on additional islands in the archipelago is suggested. Overgrowing can also displace plant species important in order to keep the high biological diversity in the area.

In the surrounding area:

None known

#### 5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Nature Reserve	Karlsøyvær		whole

#### 5.2.3 - IUCN protected areas categories (2008)

		_	C 16
la Strict	Mature	Reserve	1

lb 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

VProtected Landscape/Seascape: protected area managed mainly for

landscape/seascape conservation and recreation

VI Managed Resource Protected Area: protected area managed mainly  $\hfill\square$ for the sustainable use of natural ecosystems

#### 5.2.4 - Key conservation measures

Legal protection

Logar protection		
Measures	Status	
Legal protection	Proposed	

Species

Measures	Status	
Control of invasive alien animals	Partially implemented	

#### Other:

The Ramsar site is expected to be included as a part of the national plan for marine protected areas.

#### 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?

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

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

A new information folder is produced by the management authorities.

#### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

#### Further information

Management of the mink population is a highly prioritized task. Discussions of introducing grazing fauna to additional islands in order to prevent overgrowing.

## 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented

The marine site was earlier included in the national monitoring program for seabirds (SEAPOP).

## 6 - Additional material

## 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Forvaltningsplan for Karlsøyvær naturreservat Bodø kommune, Nordland. 2012-1017 Fylkesmannen i Nordland. Rapport 2011 – 6.

Sjøfugltelling i Karlsøyvær naturreservat 2017, NOF-notat 2017-14

Larsen, B. H. & Wergeland Krog, O. M. 2009. Karlsøyvær naturreservat i Bodø kommune. Naturtyper, fugl og sjøpattedyr. Miljøfaglig Utredning Rapport 2009:37. ISBN: 978-82-8138-366-1

Elven, R., Alm, T., Edvardsen, H., Fjelland, M., Fredriksen, K. E. & Johansen, V. 1988. Botaniske verneverdier på havstrender i Nordland. B: Beskrivelser for regionene Nord-Helgeland og Salten. Økoforsk rapport 1988:2B, pages 227-233. In Norwegian - botanical survey of beaches in Northern parts of Norway).

#### 6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

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

iv. relevant Article 3.2 reports

<no file available:

v. site management plan

<1 file(s) uploaded?

vi. other published literature

<2 file(s) uploaded>

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site



Beach meadow at Karlsøya ( Nordland, 11-06-2013 )



Fjærkvitingen - Overgrowing of rich mire facing north ( Kiell Eivind Madsen/Fylkesmannen i Nordland, 12-09-2016 )



Sand dunes in Fjærkvitingen ( Hilde Ely-Nordland, 15-09-2009 )



Engøya in Fjærvær. Overgrowing of beach meadow ( Kjell Eivind Madsen/Fylkesmannen i Nordland, 12-09-2016 )



Engøya in Fjærvær. Beach meadow and beach swamp ( Kjell Eivind Madsen/Fylkesmannen i Nordland, 15-09-2009 )



Overview of Karlsøy vær ( Hilde Ely-Astrup/Fylkesmannen i Nordland, 15-09-2009 )

## 6.1.4 - Designation letter and related data

## Designation letter

<1 file(s) uploaded>

Date of Designation 2002-08-06