

## Ramsar Information Sheet

Published on 9 July 2018 Update version, previously published on : 19 March 1996

## **Norway**

# Froan Nature Reserve and Landscape Protection Area



Designation date 18 March 1996

Site number 809

Coordinates 64°05'55"N 09°13'17"E

Area 49 097,00 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 large archipelago Froan, located northeast of the island Frøya. The Site is a coastal nature reserve, typified with hundreds of islands, skerries and islets, with shallow marine waters in the extreme outermost coastal zone. Extensive tidal zones with seaweed, kelp beds and to a lesser degree sandy shores, are also an important feature. The outermost parts of the area have naked skerries and rocky outcrops devoid of vegetation due to the rough seas, while the larger, more protected islands have bogs and meadows. The vegetation is to a large degree characterized by traditional agriculture methods, such as the large heather meadows that have been burned and grazed by livestock throughout centuries.

The Site is a very important wintering, moulting and breeding area for seabirds, and for breeding coastal seals, and supports both red-listed bird species as well as more common ones.

#### 2 - Data & location

#### 2.1 - Formal data

2.1.1 - Name and address of the compiler of this R	2.1.1	- Name	and	address	of the	compiler	of this	RIS
--	-------	--------	-----	---------	--------	----------	---------	-----

$\sim$			- 4
(,0	mnı	lor	-1
$\sim$	mpi		_

Name	Ellen Haakonsen Karr							
Institution/agency	Norwegian Environment Agency							
	Ŭ ,							
Postal address	P.O. Box 5672 Torgarden, N-7485 Trondheim, Norway							
E-mail	post@miljodir.no							
Phone	+47 73 58 05 00							

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

From year 1996

To year 2017

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Froan Nature Reserve and Landscape Protection Area

#### 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   No   O
(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 □

#### 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?

#### 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 Froan Nature Reserve and the Froan Landscape Protection Area. Due to conflicts caused by some established aquaculture within the boundaries of the Site, these areas were removed from the Ramsar Site and the area around the island Halten was added as a compensation. The removed area measures 30 ha, while the added area measures 440 ha.

#### 2.2.2 - General location

a) In which large administrative region does the site lie?	Trøndelag
b) What is the nearest town or population centre?	Trondheim

#### 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? Yes O No  $\odot$ 

#### 2.2.4 - Area of the Site

Official area, in hectares (ha): 49097

Area, in hectares (ha) as calculated from 49097.68 GIS boundaries

#### 2.2.5 - Biogeography

#### Biogeographic regions

Regionalisation scheme	Biogeographic region
EU biogeographic regionalization	1. Atlantic
Other scheme (provide name below)	Southern boreal zone, highly oceanic section (SbO3)

#### Other biogeographic regionalisation scheme

- 1. EU Habitat directive 92/43/EEC
- 2. Zonal division showing the variation in vegetation from south to north and from the lowlands to the mountains, and sectional graduation showing the variation between the coast and inland (In: Moen, A. 1998. Nasjonalatlas for Norge; vegetasjon. Statens kartverk, Hønefoss).

#### 3 - Why is the Site important?

#### 3.1 - Ramsar Criteria and their justification

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

Froan is a marine archipelago area with shallow waters dotted with numerous skerries, islets and islands. Other reasons This kind of archipelago is typical of the North-European coast, and supports high numbers of breeding seabirds, as well as seals. Froan is a very representative site for this type of coastal landscape.

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

Extensive marine shallow waters with a large production of marine invertebrates and fish, combined with large seaweed beds and kelp forests sustain a rich animal life.

Justification The area is an important breeding site for both red-listed and more common species of seabirds. There are also strong populations of several species of seals, such as the grey seal Halichoerus grypus and the harbour seal Phoca vitulina.

- ☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions
- ☑ Criterion 5:>20,000 waterbirds

Overall waterbird numbers 20 000 Start year 2005 Source of data: Norwegian Institute for Nature Research

- ☑ Criterion 6 : >1% waterbird population
- ☑ Criterion 9 : >1% non-avian animal population
- 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

Phylum	Scientific name	Common name	Species qualifies under criterion			Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds	Birds											
CHORDATA / AVES	Anser anser	Greylag Goose			2000	2005		LC •#			Annex III Bern Convention	Criterion 4: Important breeding and moulting site for this species.

	Scientific name	Common name		qua ur crit	nde teri	es r on	C	ontr un crite	cies ibute der erion	Si	op. ize	fpop. Est.	% occurrence 1)	IUCN Red A	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA Co	61.	Black Guillemot	æ	/ <b>V</b>	90	00	V	V		] 30	000			LC Sign			National Red List Status: VU	App. 3000 breeding pairs Criterion 4: The site is a important breeding area for this species.
AVES	ar 🔊	Oldsquaw; Long- tailed Duck	-	9	90	00	<b>V</b>			9	77 2005			VU ●\$ ●\$			Annex III Bern Convention	App. 977 wintering ind. Criterion 4: Important wintering site
CHORDATA From / AVES	601	Atlantic Puffin	S	9	90	00	J.							VU ●\$ ●\$			National Red List Status: VU	Criterion 4: The species has a breding population on the site.
CHORDATA Ga	avia adamsii	Yellow-billed Loon	n [	J	90	00	I.							NT •\$ •\$				Criterion 4: Wintering site for this species.
AVES	avia immer	Great Northern Loon; Great Northern Diver; Common Loon		] <del>[</del>	9 🖫	90	V			] 1	00 2005		2	LC •# •#			CMS Annex II	Criterion 4 & 6: Important wintering site for this species, supports more than 1 % of the European population in this period (1% = 50 ind.)
AVES	bicilla	White-tailed Eagle	e 🖫	9	90	00	J.							LC Sign	<b>✓</b>	$\checkmark$		Criterion 4: Important breeding site for this species.
CHORDATA La	ar 🌏	Herring Gull		J	90	00	•							LC OTH				Criterion 4: Breeding site for this species.
AVES	en 🌖	Great Black- backed Gull		V	90	00	V	V		34	150 2005			LC Sign				Criterion 4: Breeding site for this species.
CHORDATA Me / AVES	en. 🌖	Red-breasted Merganser		J	90	00	J.							LC ©SF				Criterrion 4: Important wintering and moulting site for this species.
AVES	et. 🌖	Eurasian Curlew	Ę.	9	90	00	J.							NT			National Red List Status: VU	Criterion 4: Important wintering site for this species.
	halacrocorax istotelis	European Shag	С	Q	90	00	J.	V		] 10	2005			LC Sign				Criterion 4: Breeding site for this species, app. 1000 ind.
AVES	arbo	Great Cormorant	×	7.	9 🖫	90	J	V		22	280 2005		2	LC •#			Annex III Bern convention.	Criterion 4 & 6: Important breeding site for this species (2280 ind.), supports more than 1% of North-West European population (1% 1200 ind.)
CHORDATA Ri.		Black-legged Kittiwake	Ę.	9	90	00	•							LC OM			National Red List Status: VU	Criterion 4: Important breeding site for this species.
CHORDATA So / mx AVES	ollissima	Common Eider	×	9		90	<b>V</b>	V		50	2005		1	NT			Annex III Bern Convention	Criterion 4: Important site for the species, app. 2800 breeding pairs and 5000 wintering individuals.
AVES	arasiticus 	Parasitic Jaeger	С		9	םכ								LC				Criterion 4: Important site for this species, that are declining nationally.
CHORDATA Ste	terna hirundo	Common Tern		9	9	םכ	<b></b>							LC •\$* •\$#			National Red List Status: EN, Annex II Bern Convention	Crterion 4: Breeds on the site.
CHORDATA Sto	terna paradisaea	Arctic Tern	С		9	םכ		V		70	2005			LC Single				Criterion 4: Important breeding site for this species, app. 7000 individuals counted in 2005.
Others										_								

Phylum	Scientific name	Common name	qua un	ecies lifies ider erion 6		contr un crite	011011	Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA / MAMMALIA	grypus <u>•••</u>	Gray Seal			<b>/</b> [	0		120	0 2016	2	LC •\$* •\$#				Criterion 4: Important breeding site for this species. The area most likely suports 1% of the biographic population (North-east Atlantic stock)
CHORDATA / MAMMALIA	ECL.	European Otter	VV			Z 🗆					NT	V		National Red List Status: VU Annex II Bern Convention	Criterion 4: Strong breeding population on the site.
CHORDATA / MAMMALIA	Phoca vitulina	Harbor Seal				0		600	2004		LC Sign				Criterion 4: Important breeding site for this species.

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

Black-legged kittiwake: The main breeding population nests on the island Halten, which is not a part of the Ramsar site. The surrounding areas is however naturally of great importance to the species.

#### 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 heath	$\checkmark$	Semi-natural nature type with low-growing heath vegetation	National Red List Status: EN		
Kelp forest		Marine shallow waters with a large production of seaweed and kelp.	Important to biodiversity on the site, as they sustain a rich animal life.		

#### Optional text box to provide further information

Coastal Heath: Semi-natural nature type that requires traditional managing in the form of grazing and burning. Since this activity is no longer a common practice, many of these heathlands along the coast of Norway is in danger of overgrowing.

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

#### 4.1 - Ecological character

The area is characterized by numerous skerries and islands in the extreme outermost coastal zone devoid of vegetation due to the rough seas. Extensive marine shallow waters with a large production of marine invertebrates and fish, combined with large seaweed beds and kelp forests sustains a rich animal life. Larger islands in the landscape protection area, and partly also in the nature reserve, with coastal meadows and small bogs. The vegetation is dominated by common species on coastal shores, bogs and meadows, like different sedge and heather species. The area is free of the mink Mustela vison, which is very positive for the bird populations.

#### 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
B: Marine subtidal aquatic beds (Underwater vegetation)		2		Representative
D: Rocky marine shores		3		Representative
E: Sand, shingle or pebble shores				

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		

#### 4.3 - Biological components

#### 4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Digitalis purpurea		The mild winter climate is ideal for cold sensitive plant species like Digitalis purpurea

#### 4.3.2 - Animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATAVAVES	Alle alle	Dovekie;Little Auk				Wintering species
CHORDATA/AVES	Hydrobates pelagicus	European Storm Petrel;European Storm- Petrel				Probably breeding on the site.
CHORDATA/AVES	Mergus merganser	Common Merganser				

#### 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 area has an Atlantic climate, with relatively cool summers and mild winters. Annual precipitation is relatively high exceeding 1200 mm.

4.4.2 -	Geomor	phic	settino
1 - 1 - 4	00011101	PINO	OOttilig

4.2 - Geomorphic setting
a) Mnimum elevation above sea level (in metres)
a) Maximum elevation above sea level (in metres)
Entire river basin
Upper part of river basin ☐
Mddle part of river basin ☐
Lower part of river basin $\square$
More than one river basin $\Box$
Not in river basin $\Box$

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 

O Decrease 

O Unknown 

O Are soil types subject to change as a result of changing hydrological Yes O No conditions (e.g., increased salinity or acidification)? Please provide further information on the soil (optional) The islands are characterised by hard granite rocks formed by the powers of the sea and ice. Extensive intertidal zones with seaweed and to a lesser degree sandy shores are important features. 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 Predominant water source Changes at RIS update Marine water No change Water destination Changes at RIS update Presence? Marine No change Stability of water regime Presence? Changes at RIS update Water levels fluctuating No change (including tidal) 4.4.5 - Sediment regime Sediment regime unknown 4.4.6 - Water pH Unknown 🗹 4.4.7 - Water salinity Euhaline/Eusaline (30-40 g/l) (Update) Changes at RIS update No change Increase O Decrease O Unknown O 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 i) broadly similar O ii) significantly different  $\odot$ Surrounding area has greater urbanisation or development Surrounding area has higher human population density  $\square$ Surrounding area has more intensive agricultural use

#### 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

#### Provisioning Services

Fishing

From storing Services		
Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium
Wetland non-food products	Livestock fodder	Low

Surrounding area has significantly different land cover or habitat types 
Please describe other ways in which the surrounding area is different:

#### **Cultural Services**

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	Low
Recreation and tourism	Water sports and activities	Low
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
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:

Parts of this archinelage has been abandoned	while historically interesting fishing villages	remain. Two monumental lighthouses are protected
	, writte ristorically interesting listling villages	Terriairi. Two monumentar lighthouses are protecte
according to the Cultural Heritage Act.		

Site: Nature conservation, fishing, grazing and some boating activity.

Surrounding/catchment: Fishing.

Boat tourists on a limited scale. Some houses have been turned into leisure houses.

Several long-running projects are conducted in the area. Notably, these are research on seals and monitoring of the breeding population of Phalacrocorax spp. At regular intervals, seabirds are counted. On a smaller scale, bird ringing and bird observations are conducted.

Have studies or assessments been made of the economic valuation of	Voc O No O I Inknown	(6
ecosystem services provided by this Ramsar Site?	les O NO O OIRIOWII	_

#### 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

Privat	h-	011	m	0	~	hi	'n
FIIVal	ı	Uν	VI I	ᆮ	5	ш	w

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<b>2</b>	

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

site: Private.
surrounding area: None

#### 5.1.2 - Management authority

Please list the local office / offices of any	County Governor Sør-Trøndelag
agency or organization responsible for	
managing the site:	
Postal address:	Statens Hus, N-7005 Trondheim.
E-mail address:	fmstpostmottak@fylkesmannen.no

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

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

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	unknown impact		No change	✓	increase

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	Low impact	<b>✓</b>	No change	<b>2</b>	No change

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

At the site: There is an established aquaculture inside the area that used to be Ramsar site. This was cause for some conflict at the time. The issue has been solved by removing these areas from the Ramsar area, and instead adding the area around island Halten. The removed area measured 30 ha, and the added island measures 440 ha.

In the surroundings/catchment: None.

#### 5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
landscape protection area	Froan		whole
nature reserve	Froan		whole

.3 - IUCN protected areas categories (2008)
la Strict Nature Reserve 🗹
lb Wilderness Area: protected area managed mainly for wilderness protection
Il National Park: protected area managed mainly for ecosystem protection and recreation
Natural Monument: protected area managed mainly for conservation

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 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 very large of the very large. Yes O No •

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:

Different leaflets and posters have been produced.

#### 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	
Animal species (please specify)	Implemented	
Birds	Implemented	

Several long running projects are conducted in the area. Notably, these are research on seals and monitoring of the breeding population of Phalacrocorax spp. At regular intervals, seabirds are counted. On a smaller scale, bird ringing and bird observations are conducted.

#### 6 - Additional material

#### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

County Governor in Sør-Trøndelag. 2015. Forvaltningsplan for verneområdene i Froan i Frøya kommune. (In Norwegian - Management plan for the protected areas in Froan in Frøya municipality).

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

Lindgaard, A. and Henriksen, S. (eds.) 2011. Norsk rødliste for naturtyper 2011 - Norwegian red list for ecosystems and habitat types 2011. Artsdatabanken, Norway.

Moen, A. 1998. National atlas of Norway. Vegetation. Norwegian Mapping Authority, Hønefoss.

Norwegian Institute for Nature Research. 2006. Kartlegging og overvåking av sjøfugl og sjøpattedyr i Froan. NINA rapport 202. (In Norwegian - Monitoring of sea birds and sea Mammals in Froan).

http://critical-sites.wetlands.org/en

Numerous reports (in Norwegian) and studies have been published on the natural history and botanical history of the area.

#### 6.1.2 - Additional reports and documents

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

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<1 file(s) uploaded>

vi. other published literature

<1 file(s) uploaded>

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

Please provide at least one photograph of the site:



Froan nature reserve ( Stein-Ame Andreassen, County Governor Sør-Trøndelag, 12-06-2012 )



Froan nature reserve ( Stein-Ame Andreassen, County Governor Sør-Trøndelag, 12-06-2012 )



Froan nature reserve ( Stein-Arne Andreassen, County Governor Sør-Trøndelag, 13-06-2012 )

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 1996-03-18