

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties

Note: It is important that you read the accompanying Explanatory Note and Guidelines document before completing this form.

1. **Date this sheet was completed/updated:**

July 18th, 2002

2. **Country:**

NORWAY

3. **Name of wetland:**

TRONDHEIMFIORD WETLAND SYSTEM

(consists of 4 separate areas (units))

4. **Geographical coordinates:**

Gaulosen: 63° 21'N - 10° 14'E

Eidsbotn: 63° 43'N - 11° 14'E

Rinnleiret: 63° 47'N - 11° 26'E

Ørin: 63° 48'N - 11° 28'E

5. **Elevation:** (average and/or maximum and minimum)

0-10 m.a.s.l.

1. **Area:** (in hectares)

Gaulosen 191,5 (ca. 1,9 km²)

Eidsbotn 230 (ca. 2,3 km²)

Rinnleiret 200 (ca. 2 km²)

Ørin 49 (ca. 0,49 km²)

Total 670 ha (ca. 6,7 km²)

7. **Overview:** (general summary, in two or three sentences, of the wetland's principal characteristics)

The Trondheimfiord wetlands are important for migratory birds, in particular ducks and waders. They consist of tidal marine areas and two river estuaries.

8. **Wetland Type:** (please circle the applicable codes for wetland types as listed in Annex I of the Explanatory Note and Guidelines document)

marine-coastal:	A	B	C	D	E	F	G	H	I	J	K	Zk(a)
inland:	L	M	N	O	P	Q	R	Sp	Ss	Tp	Ts	
	U	Va	Vt	W	Xf	Xp	Y	Zg	Zk(b)			
human-made:	1	2	3	4	5	6	7	8	9	Zk(c)		

Please now rank these wetland types by listing them from the most to the least dominant: G, F, A, B

9. **Ramsar Criteria:** (please circle the applicable criteria; see point 12 below)

1 2 **3** **4** **5** **6** 7 **8**

Please specify the most significant criterion applicable to this site: 3

10. **Map of site included? YES**

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits.)

11. **Name and address of the compiler of this form:**

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Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):

12. **Justification of the criteria selected under point 9, on previous page.** (Please refer to Annex II in the *Explanatory Note and Guidelines* document).

- 1 The sheltered marine tidal areas along the Trondheimfiord are representative tidal marine wetlands.

- 3 These are of vital importance for both migratory birds (either regional or Arctic), and for large numbers of wintering seaducks i.a. of eastern origin (Baltic). The local breeding population of seaducks (e.g. Eiders) in the fiord also relies on these sites.
- 4 The Pink-footed Goose *Anser brachyrhynchus* migration between the breeding sites on Svalbard and wintering sites has its most important stopover and feeding site in Norway in these areas for the entire population (>30.000 birds), and the migration of arctic waders also bring in thousands of birds.
- 5 More than 30.000 Pink-footed Geese *Anser brachyrhynchus* regularly concentrate in the site during migration.
- 6 The entire Svalbard/NE European population of Pink-footed Goose *Anser brachyrhynchus* uses the sites.
- 8 The local fiord population of Herring *Clupea herengius* is of importance, eg. for migrating or locally breeding birds when these feed on deposited rowan along the shoreline in spring time.

13. General location: (include the nearest large town and its administrative region)

Sør- and Nord-Trøndelag counties, Trondheim/Melhus municipalities (Gaulosen) - nearest town being Trondheim (ca. 150.000 inhab) to the north (5km), the other sites are in Nord-Trøndelag county: Levanger and Verdal municipalities, nearest town being Levanger (30.000 inhab) (distance ca. 1 km from Eidsbotn), and from Verdal (25.000 inhab) (distance ca. 1km to Ørin and Rinnleiret).

14. Physical features: (e.g. geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth; water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

Glaci-fluvial deposits have formed the shallow marine bays along the Trondheimfiord, at two of the sites the transport and sedimentation of silt etc. by large rivers (river Gaula and river Verdalselva) have formed estuaries and brackish conditions and high biological production. The wetland system lies along the Trondheimfiord, in an area of relatively warm and humid summers (>1000mm annual precipitation), and relatively mild winters. The tidal marine variations usually lies around 2 meters. Both river Gaula and Verdalselva are large rivers, draining water from huge areas (several 1000 km²).

15. Hydrological values: (groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.)

Gaula is protected against any hydropower development and its estuary is one of very few unspoilt large-river estuaries in Norway in the southern part of the country. Both rivers have an immense flooding control capacity, but due to degradation of surrounding wetlands in the catchment area the annual spring flooding more often in recent years have taken larger proportions than usual. Both rivers also transport huge amounts of sediments, mostly deposited at the estuaries and there contributing to a high production of biological material.

16. **Ecological features:** (main habitats and vegetation types)

Situated in the boreal zone, and characterized by:

- Mud, silt or gravel shores with tidal zones, partly covered with kelp beds.
- At one locality extensive seagrass *Zoostera* beds exist - inside the brackish lagoon of Eidsbotn.
- The shorelines are at places dominated by wet salt-influenced vegetation, e.g. *Carex palacea* and *Carex (palacea) x vacillans*.
- One site is a mainly salt influenced wet meadow.
- Large river estuaries and tidal zones.

17. **Noteworthy flora:** (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc.)

Some of the vegetation societies (wet salt influenced meadows) have been described as rare, while few or none truly endangered species occur.

At Ørin and Gaulosen wild stands of *Hippophae rhamnoides* grows.

18. **Noteworthy fauna:** (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

Common bird species: All sites are important for migratory and wintering birds. At some sites colonies of *Larus ridibundus* (tot. 2000 pairs) occur. The following species are particularly noteworthy: *Anser brachyrhynchus* (>30.000) – staging area, *Somateria mollissima* (regional wintering pop. 10.000-20.000), *Podiceps auritus* (staging area for locally 400-500 breeding pairs), *Calidris alpina* (thousands, variable during migration), *Limicola falcinellus* (stage area in spring, 10-20) and *Calidris temminckii* (breeding pop. ca. 10-20 pairs). The estuary at river Verdalselva (future Ramsar site) next to Ørin holds Norway's largest spring assemblage of *Melanitta nigra* (500-700).

19. **Social and cultural values:** (e.g., fisheries production, forestry, religious importance, archaeological site, etc.)

The estuaries are spawning areas for herring.

20. **Land tenure/ownership of:** (a) site Private (b) surrounding area Private

21. **Current land use:** (a) site No particular use locally (b) surroundings/catchment

High degree of agriculture. At some places industry etc. is situated close by.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects: (a) at the site: Low impact at the moment, runoff from agricultural land may locally be a problem. (b) around the site: Generally low, but hunting may be a problem, causing disturbance inside the protected sites. At Eidsbotn a horserace-course threatens with landfilling and adjacent to Ørin a debated major landfill is presently being discussed.

23. Conservation measures taken: (national category and legal status of protected areas - including any boundary changes which have been made: management practices; whether an officially approved management plan exists and whether it has been implemented): All sites protected according to the Nature Conservation Act, but with different categories:

Gaulosen: Nature reserve (0,6 km²) and landscape protection area (1,8 km²)
December 23rd 1983

Eidsbotn: Bird protection area (2,3 km²) December 14th 1984

Rinnleiret: Nature reserve (2 km²) November 24th 1995

Ørin: Nature reserve (0,49 km²) July 5th 1993

24. Conservation measures proposed but not yet implemented: (e.g, management plan in preparation; officially proposed as a protected area, etc.)

Draft management plans exist. New additional sites to the wetlands system have been officially proposed.

25. Current scientific research and facilities: (e.g., details of current projects; existence of field station, etc.)

At present the most important is the annual seabird counts in the entire fjord, which forms parts of the national programme for seabird monitoring. In addition a voluntary NGO-based monitoring goes on concerning bird watching counts and ringing activities.

26. Current conservation education: (e.g., visitors centre, hides, information booklet, facilities for school visits, etc.)

A number of different leaflets exists, as does posters on the sites.

27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

The site is used quite often by tourists and residents for walking, fishing and birdwatching.

28. Jurisdiction: (territorial, e.g., state/region and functional, e.g., Dept. of Agriculture/Dept. of Environment etc.)

The Ministry of the Environment.

29. Management authority: (name and address of local body directly responsible for managing the wetland)

The site is managed by the County Governor of Sør-Trøndelag and Nord-Trøndelag, which are subsidiary bodies of the Ministry of the Environment. Addresses: County Governor of Sør-Trøndelag, Statens Hus, N-7468 Trondheim, and County Governor of Nord-Trøndelag, Statens Hus, 7734 Steinkjer.

30. Bibliographical references: (scientific/technical only)

General natural history:

- Pedersen, S.M. 1995. Verneområdene i Gaulosen, oversikt over naturfaglig kunnskap. Fylkesmannen i Sør-Trøndelag, Miljøvernavdelingen. Rapport nr. 5:1-64. (in Norwegian - status of natural history knowledge, incl. literature review)

Flora:

- Baadsvik, K. 1974. Registrering av verneverdig strandengvegetasjon langs Trondheimsfjorden sommeren 1973. K. norske Vidensk. Selsk. Mus. Rapp. Bot. ser 4:1-65. (in Norwegian - description of botany along the fjord).

Birds: Many reports exists from the area, one report have summarised the knowledge for the areas in Nord-Trøndelag county:

- Haugskott, T. 1995. Fugleregistreringer i Trondheimsfjorden. Rapport til Fylkesmannen i Nord-Trøndelag. (in Norwegian - a summary of the birdlife in all important tidal areas and estuaries in the fjord).
- Lorentsen, S-H. 1996. Det nasjonale overvåkningsprogrammet for sjøfugl. Resultater fra sesongen 2000. NINA Oppdragsmelding 670:1-30. (in Norwegian with English summary - most recent report on the national monitoring programme for seabirds).
- Størkersen, Ø.R. & Haugskott, T. 1988. Fugleobservasjoner fra Gaulosen 1982-1988. Trøndersk Natur 15:98-111. (in Norwegian - sums up the records from the period 1982-1988 at Gaulosen).