

Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

March 2012

3. Country:

Norway

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Ørland Wetland System; Innstrandfjæra

(International No. 310, National No: 8)

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or
b) Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or
- ii) the boundary has been extended ; or
- iii) the boundary has been restricted**

and/or

If the site area has changed:

- i) the area has been measured more accurately ; or
- ii) the area has been extended ; or
- iii) the area has been reduced**

** **Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

None

7. Map of site:

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) a **hard copy** (required for inclusion of site in the Ramsar List): ;
- ii) an **electronic format** (e.g. a JPEG or ArcView image) ;
- iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** .

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The boundaries are the same as for the Innstrandfjæra Bird Sanctuary.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

63° 44' N 09° 38' E

9. General location:

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

Situated in the municipality of Ørland, Sør-Trøndelag county. The nearest town being Trondheim, approximately 45 km to the southeast.

10. Elevation: (in metres: average and/or maximum & minimum)

0 m – 3 m.a.s.l.

11. Area: (in hectares)

110,6 ha

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Innstrandfjæra is a marine wetland with large inter-tidal sand- and mudflats and shallow waters. Belts of seaweed forms the outer edge of the tidal zone. The site is of special importance to migratory and wintering seabirds, waterfowl and shorebirds, especially waders on autumn migration. Small areas of seashores with salt-influenced wet meadows and marshes also provide breeding sites for shorebirds.

13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criterion 1. The Ørland sites with their huge tidal mudflats and large areas of shallow marine waters are perhaps the best example in southern Norway for this kind of marine wetland.

Criterion 2. Harbour Seal *Phoca vitulina* (VU, Ann. III Berne Conv.) is rather common while Eurasian Otter *Lutra lutra* (VU, Ann. II Berne Conv.) are only seen occasionally. It is also an important staging site for Ruff *Philomachus pugnax* (VU, Ann. III Berne Conv.). It is referred to the national red list 2010. See also point 22.

Criterion 4. The site is very important for large numbers of divers, grebes, ducks and waders during spring and autumn migration. The site is also important for wintering and breeding waterbirds. See also justification of criterion 2 and point 22.

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

1. Southern boreal vegetation zone, strongly oceanic section (SbO3)
2. Atlantic

b) biogeographic regionalisation scheme (include reference citation):

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. Biogeographical regions of Europe, European Environment Agency, 2005

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Geology	The bedrock in the area consists of hard granites and sandstones, but it is covered with deep layers of marine deposits at the site.
Geomorphology	The site has extensive tidal sand- and mudflats, sheltered bays and large areas of shallow marine waters, formed by raising landmasses. It is part of a large-scale, flat coastal landscape.

Substrate/soil type	Clay and silt dominates the tidal zone, whereas sand is predominate on the shores – somewhere forming small sand-dunes. Pebble and shingle shores occurs in the outer part of the tidal zone.
Hydrology	The remains of a brackish pond is included in the protected area. A refuse deposit has ruined most of the pond.
Water depth/fluctuations	Large areas of shallow water, less than 3 meters depth. The variation between high and low tides averages annually 162 cm measured at Trondheim and 143 cm at Heimsjø – Ørland lying in between these two stations.
Climate	The site has a strongly oceanic climate with mild winters and wet, but rather warm summers. Annual precipitation is approx. 1030 mm, and the area receives precipitation 220-240 days in a year.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

The catchment areas is rather small, comprising mainly wetlands drained for agricultural use and other cultivated land. The site is surrounded by shallow marine waters. The geomorphology, soil types and climate is similar to those described within the site.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

There are practically no freshwater inside the protected area, though a small brackish pond (Kråktjern) lies in the southern part. The shallow waters reduce the impact of waves coming from the open sea, and no particular erosion problems have been noted. The deposit of piles of seaweed on the contrary helps stabilizing the shoreline.

19. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar “Classification System for Wetland Type” present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

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)

b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area. A, G, B, E, H

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

Innstrandfjæra is characterized by large tidal mudflats and shallow marine waters. Only small areas of land and seashore vegetation are included in the protected area. The site though has many salt-tolerant vegetation communities, including wet salt-influenced meadows, salt marshes and swamps, and brackish water vegetation, with some regionally rare submerged plants. The mudflats and shallow waters have large biomasses of benthic animals and mussels, especially *Mytilus*, supplying food to a great number of diving ducks and waders.

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Some rare plants grows at the site, including the near threatened species *Catabrosa aquatica*. Other regionally rare species found in the brackish pond are *Cicuta virosa*, *Myriophyllum spicatum* spp. *spicatum*, *Ranunculus sceleratus*, and *Scirpus tabernaemontani*.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Mammals:

Small whales, mainly Harbour Porpoise *Phocoena phocoena*, are regularly seen at the sites. Harbour Seal *Phoca vitulina* (VU) is rather common, while Grey Seal *Halichoerus grypus* (NT) and Eurasian Otter *Lutra lutra* (VU) are only seen occasionally.

Birds:

Nationally rare or internationally rare or interesting species: The site have small wintering population (a few individuals) of Great Northern Diver *Gavia immer*, White-billed Diver *Gavia adamsii* (NT), Red-necked Grebe *Podiceps grisegena*, and Slavonian Grebe *Podiceps auritus*.

Nationally common species: Innstrandfjæra is of special importance to migratory wetland dependent birds, especially waders at autumn migration. Nationally high numbers have been recorded for Curlew Sandpiper *Calidris ferruginea* (600 ind.) and Common Snipe *Gallinago gallinago* (350 ind.). Wintering site for divers, grebes, drabbling and diving ducks and waders. Small numbers of breeding waders, e.g. 3-8 pairs of Northern Lapwing (NT) and 2-4 pairs of Eurasian Curlew *Numenius arquata* (NT). Turnstone *Arenaria interpres* and Purple Sandpiper *Calidris maritima* are common wintering species.

23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

None in particular.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide 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) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:

- iv) sites where 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:

24. Land tenure/ownership:

a) within the Ramsar site: Private/State (marine area)

b) in the surrounding area: Private/State (marine area)

25. Current land (including water) use:

a) within the Ramsar site:

Cutting of seaweed is permitted on a small scale.

b) in the surroundings/catchment:

Farmlands neighbouring the site, also a refuse deposit. The surrounding marine waters are used for fishing, both leisure and commercial.

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

a) within the Ramsar site:

Before the site received legal protection, large areas of salt-marshes and salt-influenced wet meadows were drained for agriculture use. Only small remains of these seashores are left in the bird sanctuary. Also other encroachments have reduced the natural vegetation and landscape at the site (see pt. b). The permitted cutting of seaweed is thought to have negative effect on avian food sources at the site.

b) in the surrounding area:

A refuse deposit is situated close to the bird sanctuary – partly filled into the brackish pond Kråktjern, have caused increased predation by crows and gulls on eggs and chicks of breeding ducks and waders at the site.

27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

Innstrandfjæra was designated as a bird sanctuary at December 23rd 1983.

Part of IBA Ørland wetland system

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?:

No

d) Describe any other current management practices:

None in particular.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

A management plan for the site is under preparation by the management authority.

29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Trondheimsfjorden (including the three wetland sites at Ørlandet) is one of 10 areas in the national monitoring programme for wintering seabirds and waterfowl.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

An information booklet is produced by the management authorities, comprising all the Ramsar sites in Trøndelag. A wetland information center is being planned within the new house of culture in Brekstad.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

The site is to a low degree used by residents and tourists for fishing and bird-watching.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

Norwegian Directorate for Nature Management (DN), Tungasletta 2, 7485 Trondheim

Ph +47 73580500

Fax +47 73580501

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33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

The site is managed by the County Governor of Sør-Trøndelag, which is under the instruction of DN.

Address: County Governor of Sør-Trøndelag, Statens Hus, N-7468 Trondheim (phone: +47 74 16 80 00).

E-mail: postmottak@fmst.no

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Kålås, J.A., Viken, Å., Henriksen, S. and Skjelseth, S. (eds.). 2010. The 2010 Norwegian Red-list for Species. Norwegian Biodiversity Information centre, Norway.

Flora:

Kristensen, J. N. 1988. Seashore in Trøndelag. Site descriptions and conservation proposals. Økoforsk Rapp. 1998, 7B: 1-139. (In Norwegian with English abstract, including all four sub-sites)

Birds:

Bevanger, K. & Frengen, O. 1979. Ornitologiske verneverdier i Ørland kommune, Sør-Trøndelag. K. norske Vidensk. Selsk. Mus. Rapport Zool. Ser. 1979-1: 1-93. (In Norwegian – on important bird areas in Ørland municipality)

Follestad, A., Larsen, B. H. & Nygård, T. 1986. Seabird investigations along the coast of Sør- and Nord-Trøndelag and southern parts of Nordland 1983-86. DN-viltrapport 41: 1-113. (In Norwegian with 7 pages English summary)

Lorentsen, S.-H. & Nygård, T. 2001. The National Monitoring Programme for Seabirds. Results from the monitoring of wintering seabirds up to and including 2000. NINA Oppdragsmelding 717. 62 pp. (In Norwegian with English abstract, includes Trondheimsfjorden/Ørlandet)

Ring, H. E. 2007. Ornitologiske undersøkelser i verneområdene på Ørlandet i 2001-2002. Rapport. (In Norwegian – monthly bird counts in the three mainland sub-sites between February 2001 and January 2002).

Størkersen, Ø. 1993. Guide til fuglelokaliteter ved Trondheim og andre nærliggende lokaliteter. Vår Fuglefauna 16: 34-40. (In Norwegian – sums up the ornithological qualities of Ørland Wetland System)

Please return to: **Ramsar Convention Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
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