

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:**

ØVRE FORRA

4. **Geographical coordinates:**

63° 37'N - 11° 35'E

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

400-735 m.a.s.l.

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

10.800 (ca. 1080km²)

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

An huge intact peat mire system at higher elevation, partly forested with notably *Picea abies*, interspersed with several smaller lakes and a meandering river. The landscape is undulating and mires also exist on sloping terrain (due to high precipitation), some smaller peaks and areas with drier vegetation exists.

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: U, M, Xp

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: 1

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. A huge representative unspoilt mire and forested (*Picea abies*) mire-system.
2. Supports a number of rare or threatened breeding bird species, eg. Black-throated Diver *Gavia arctica*, Red-throated Diver *Gavia stellata*, Great Snipe *Gallinago media* and an inland locality for the internationally threatened Otter *Lutra lutra*. In the site occur the rare orchids *Coeloglossum viride* and *Hammarbya paludosa*.
3. The size of the area alone means that it contains a high number of habitats and bird populations, some of which are of particular importance eg. Great Snipe.

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

Nord-Trøndelag county, Levanger, Stjørdal, Verdal and Meråker municipalities, nearest town Levanger lies to the west (distance ca. 8 km), with population of 20.000.

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)

Cambro-silurian bedrock, with minerotrophic rock in the western parts and harder rocks in the eastern. Gravel and silt deposits from the meltdown of the ice (moraine). Some huge drumlin deposits goes east-west. Water quality is high and nutritiously poor, with a flow of 20m³/sec in the river Forra on the average. The large lake Feren is the source of the river. All smaller waterbodies in the area are shallow (deepest being 11m). Normal annual precipitation is high and around 1500mm, with cold winters and relatively warm summers. Slow snow melting in the spring also creates a humid climate.

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

The river is not regulated and is protected against all hydropower development. The area has an important flood control role, since its catchment area is large and the river Forra drains into one of the larger rivers in the region, the river Stjørdalselva situated in an agricultural valley with spring flood problems.

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

Situated in the boreal zone, and characterized by:

- Extensive mire areas (62% of the area), both flat mires and on sloping terrain (blanket mire). Often trees *Picea abies* grow on the sloping mires.
- Extensive forested areas with coniferous forests (36% of the protected area, of which 11% grow on mires)
- Freshwater bodies are numerous, and the slow flowing and meandering river Forra is often covered with aquatic vegetation, *Potamogeton*, *Carex* and *Nymphaea* (in all 24 species).
- Gallery (partly swamp) forests occur along the river (*Betula pubescens*, *Alnus incana* and *Salix* spp), and are an important feature for flora and fauna.
- Some higher elevated hills and peaks with nutrient demanding vegetation occurs to the west
- Small hay-gathering areas exist from former times, while these are today growing back to natural vegetation.

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

Totally 328 species of vascular plants have been described from the area, and 28 different vegetation types have been identified. No nationally rare vascular plants have been found, but internationally noteworthy are the orchids *Coeloglossum viride* and *Hammarbya paludosa*. In total 370 species of fungus have been described, of which several are new to science. It could

be expected that this huge area contains several interesting and rare lichen and moss species, however this remains to be seen.

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

Birds: 132 species have been recorded, and 78 are regular breeders. No quantitative data have been published, but the following species are common breeders: *Gavia arctica*, *Gavia stellata*, *Melanitta nigra*, *Aythya fuligula*, *Mergus merganser*, *Aquila chrysaetos*, *Buteo lagopus*, 20 different species of waders: *Pluvialis apricaria*, *Gallinago gallinago*, *Gallinago media*, *Numenius phaeopus*, *Tringa glareola*, *Tringa nebularia*, *Philomachus pugnax*. *Bubo bubo*, *Surnia ullula*, *Picoides tridactylus* (in total 6 species of woodpeckers) and 57 species of passerines (41 regular breeders).

Mammals: A number of species have been recorded, but no specific survey have been conducted. *Lemmus lemmus*, *Lynx lynx* and *Lutra lutra* may be mentioned.

Fish: *Salmo salar* goes up the river Forra, but does not enter the site.

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

Forestry is among the main sources of income in the area (not involving the site). The site itself is used for some hunting activities, fishing, trekking and some berry picking. Old iron melting sites have been uncovered (>1000-2000 years old). The area is partly used by reinherders, but on an extensive scale.

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

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

The use of natural resource in the region is low and habitation is very low. Forestry is one of the most important income in the region.

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: Little impact today. (b) around the site: Little impact today.

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): Established as a Nature reserve December 21st 1990.

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

A draft management plan exist. This include re-opening of the hay-gathering (scything) of some formerly used areas.

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

None at present. But extensive research on a number of fields have been conducted in the past: Hydrology, limnology, climate, geology, flora and fauna.

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

A leaflet exist, and a poster have been put on display at the different entrances to the area. A cabin with facilities for 30 persons is open for visitors, inside this cabin an information center on the site have exhibits etc, meeting facilities etc. One person is in daily charge of this cabin. In addition some unmanned cabins can be hired.

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

The area is used quite often by tourists and residents for hunting, berry-picking, trekking, canoeing, skiing etc.

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 Nord-trøndelag, which is a subsidiary body of the Ministry of the Environment. Adress: County Governor of Nord-trøndelag, Statens Hus, N-7734 Steinkjer.

30. Bibliographical references: (scientific/technical only)

Natural history/general:

- Solem, T. 1975. Naturhistoriske undersøkelser i Forra-dalsområdet - et suboseanisk, høytliggende myrområde i Nord-Trøndelag. DKNVS Rapp. Zool. Ser. 4. (in Norwegian - a report on natural history).
- Moen, A. & Jensen, J.W. 1979. Naturvitenskapelige interesser og verneverdier i Forra-vassdraget og Øvre Forradalsområdet i Nord-Trøndelag. DKNVS. Gunneria 33. (in Norwegian - natural history)

- Solem, T. 1974. Klima- og vegetasjonshistorie i Forradalsområdet i Nord-Trøndelag. Hovedfagsoppgave ved Universitetet i Trondheim. (in Norwegian - thesis on climate and vegetation history).
- Øien, D-I., Nilsen, L.S. & Moen, A. 1997. Skisse til skjøtelsesplan for deler av Øvre Forra naturreservat i Nord-Trøndelag. NTNU, Vitenskapsmuseet Rapp. Bot. Ser. 2:1-26. (in Norwegian - proposal for management plan, includes a list on literature on the protected site).

Flora:

- Moen, A., Kjølvik, L., Bretten, S., Sivertsen, S. & Sæther, B. 1976. Vegetasjon og flora i Øvre Forradalsområdet i Nord-Trøndelag, med vegetasjonskart. DKNVS. Rapp. Bot. Ser. 9. (in Norwegian - flora mapping and vegetation map)
- Birds:
- Moksnes, A. 1970. Ornitologiske undersøkelser i Forradalsområdet i Nord-Trøndelag sommeren 1970. Notat. (in Norwegian - short report on the birdlife).
- Moksnes, A. 1977. Fuglefaunaen i Forraområdet i Nord-Trøndelag. Sluttrapport fra undersøkelsene 1970-.1972. DKNVS Rapp. Zool. Ser. 3. (in Norwegian - report on bird research 1970-1972).

Fish:

- Jensen, J.W. 1972. Fiskeribiologiske undersøkelser i Øvre Forra 1971. DKNVS Rapp. Zool. Ser. 11. (in Norwegian - on fishbiology)

Archaeology:

- Berre, I. 1983. Om jarnvinna og jarnvinneanlegg. Levanger historielag. Årsskrift 1983. (in Norwegian - on the iron production)