

Information Sheet on Ramsar Wetlands (RIS) – 2006-2008 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

Niklas Kemi, County administration board of Norrbotten, S-971 86 Luleå, Sweden.
Tel. +46 920 96147. E-mail: Niklas.Kemi@bd.lst.se

2. Date this sheet was completed/updated:

11.06.2008

3. Country:

Sweden

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.

Tavvavuoma

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:

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 boundary of the Ramsar site partly follows the western parts of the catchment area of the river Tavvaätno.

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.

68°30'N 020°45'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.

The Tavvavuoma site is situated in northernmost Sweden, in the county of Norrbotten (population 250 800), municipality of Kiruna (pop. 23 122).

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

min.– max. 541–900 metres

11. Area: (in hectares)

28 700 hectares

12. General overview of the site:

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

The Tavvavuoma site is a large, unexploited mire complex comprised of palsa mires, alpine rivers, freshwater lakes, pools and mountain birch woodland. Due to the cold climate in the region there are unusually extensive formations of palsa mires containing permafrost, some palsas reaching heights of up to 7 meters. The vegetation is strongly influenced by permafrost. The birdlife at the site is extremely rich for mires in this region, and as many as 78 bird species have been noted. At least 50% of these species breed within the site, and densities of breeding *Anatidae* and waders reach the regionally high figure of 70 pairs per square kilometre.

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).

1. Tavvavuoma contains a rare/unique example of a natural wetland type in the alpine region in the sense of an unexploited mire complex with a high concentration of palsa mires.

2. Nationally red listed species include e.g. bar-tailed godwit (*Limosa lapponica*)* (VU), hen harrier (*Circus cyaneus*)* (VU), red-throated pipit (*Anthus cervinus*) (VU), ruff (*Philomachus pugnax*)* (VU) and slavian grebe (*Podiceps auritus*)* (VU). Tavvavuoma is also one of the few remaining sites in Sweden where you can find lesser white-fronted goose (*Anser erythropus*)*, globally red listed as VU and nationally red listed as CR.

* = listed in the EU Birds directive, Annex I.

3. The site supports a rich avian fauna such as arctic tern (*Sterna paradisaea*)*, bean goose (*Anser fabalis*), black-throated diver (*Gavia arctica*)*, bluethroat (*Luscinia svecica*)*, broad-billed sandpiper (*Limicola falcinellus*), golden eagle (*Aquila chrysaetos*)*, golden plover (*Pluvialis apricaria*)*, hawk owl (*Surnia ulula*)*, lapland bunting (*Calcarius lapponicus*), long-tailed duck (*Clangula hyemalis*), long-tailed skua (*Stercorarius longicaudus*), merlin (*Falco columbarius*)*, pintail (*Anas acuta*), red-necked phalarope (*Phalaropus lobatus*)*, short-eared owl (*Asio flammeus*)*, spotted redshank (*Tringa erythropus*), teal (*Anas crecca*), Temminck's stint (*Calidris temmenckii*), whimbrel (*Numenius phaeopus*), whooper swan (*Cygnus cygnus*)* and wood sandpiper (*Tringa glareola*)*.

* = listed in the EU Birds directive, Annex I.

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:

Alpine

b) biogeographic regionalisation scheme (include reference citation):

European Environment Agency. 2003. Europe's environment: the third assessment, p 231. Environmental assessment report No 10. Luxembourg: Office for Official Publications of the European Communities.

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.

The site is situated in a depression in one of the northernmost plateau regions of the Lapland province. The site forms part of the catchment of the Lainio River, one of the two main tributaries of the Torne River. The site is unusual in Sweden in that Tavvavuoma's natural hydrological regime remains intact. Many other river valleys in this region of Sweden have been regulated for the generation of hydro-electricity. Tavvavuoma is a large mire complex situated in the middle of the Tsáktso tundra. It contains the largest and best developed palsa mires in the region. The wetland is dominated by a mosaic of palsa mires, lakes and alpine rivers. The climate in the county of Norrbotten is characterized by cold winters and short summers. Tavvavuoma is situated in the alpine region with relatively harsh conditions during the winter season. The average precipitation is app. 700 mm/year and the average temperature is -13° C (January) and 10° C (July).

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 area consists of a big plateau on the tundra and the highest mountains reach about 800 meters above the sea level. The bedrock is mainly acid and the area consists mainly of sand, peat and moraine. Geomorphological formations like glacial fluvial residuals and ridges are common. The area has a low impact of human activities. Reindeer management has been present in the area for a long time. Tavvavuoma is situated in the alpine region with relatively harsh conditions during the winter season. The average precipitation is app. 700 mm/year and the average temperature is -13° C (January) and 10° C (July).

18. Hydrological values:

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

The great mire complexes surely have a major function in the meaning of flood control and sediment trapping. The stream Tavvaätno passes through the area.

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 • Q • 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.

Vt, M, O, U, W

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.

Tavvavuoma contains mainly mire complexes and alpine heaths. It is unique in the alpine region because of the high concentration of palsamires. In some parts of the area (especially in the central parts of the site), the subalpine birch forest *Betula pubescens.ssp. Czerepanovii* dominates. The birdlife at the site is extremely rich. The arctic environment that can be seen here is also unique in the EU. The Ramsar site provides ecosystem services concerning recreation (e.g. hunting, fishing, bird-watching, canoeing, hiking) and ecological factors like biodiversity, sediment trapping, etc.

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.*

In Tavvavuoma you can find the moss *Meesia longiseta*, which is nationally red listed as (NT) and nationally protected by law. The species is also listed in the EU Habitat Directive Annex II and in the Bern Convention.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. 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.*

See above (14).

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:

The area is frequently used by the indigenous Saami people for reindeer husbandry. Around this wetland, there are numerous archaeological sites related to reindeer husbandry, represented by hearts, stáallo-sites and places for food storage, but also prehistoric settlements. Tavvavuoma has provided good pastures for the reindeer as well as good hunting and fishing grounds.

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?

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:

State-owned.

b) in the surrounding area:

State-owned.

25. Current land (including water) use:

a) within the Ramsar site:

The site is used mainly for reindeer farming and recreational activities (e.g. sport fishing, hunting and canoeing.).

b) in the surroundings/catchment:

Same as a).

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:

Some parts of the area are vulnerable to terrain damage by vehicles, especially when there is no protective snow cover. However, no significant negative effects have been detected from the use of snowmobiles and motorcycles.

Climate change is a serious threat to the palsa mires, as a warmer climate will affect the habitat and the character of the site in a negative way.

b) in the surrounding area:

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.

The Tavvavuoma site is listed as being of national importance for nature conservation, but is not protected as a nature reserve. However, the site is covered by special provisions in the Swedish Environmental Code, (Chapter 4, section 5: Special provisions concerning land and water management in certain areas in Sweden), which restrict exploitation for buildings and other structures. The site has been designated as an EU Special Protection Area (SPA) in the Natura 2000 network (SE0820619 Tavvavuoma (53 966 ha) – SPA, pSCI).

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?:

A management plan has been approved according to the Natura 2000 legislation.

d) Describe any other current management practices:

28. Conservation measures proposed but not yet implemented:

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

Tavvavuoma has been proposed to become a legally protected area (National Park) by The Swedish Environmental Protection Agency (2007).

29. Current scientific research and facilities:

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

A biodiversity monitoring program concerning palsa mires and climate change is planned in the near future.

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.

31. Current recreation and tourism:

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

Some parts of the Ramsar site are used for sport fishing and hunting.

32. Jurisdiction:

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

County Administrative Board of Norrbotten

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 county Administrative board of Norrbotten, S- 971 86 Luleå

34. Bibliographical references:

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

European Environment Agency. 2003. Europe's environment: the third assessment, p 231.

Environmental assessment report No 10. Luxembourg: Office for Official Publications of the European Communities.

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