

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

Note 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. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Bureau. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

FOR OFFICE USE ONLY.

DD MM YY

Designation date Site Reference Number

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

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2. Date this sheet was completed/updated:

January 2005

3. Country:

Finland

4. Name of the Ramsar site:

Koitelainen Mires

5. Map of site included:

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

a) hard copy (required for inclusion of site in the Ramsar List): Yes.

b) digital (electronic) format (optional): Yes.

6. Geographical coordinates (latitude/longitude):

67°46' N / 27°10' E

7. General location:

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

The unbroken area is situated in central part of the province of Lapland, in the municipality of Sodankylä, 40 km northeast of Sodankylä village. The municipality (11 773 sq.km of land) has ca. 9 900 residents.

8. Elevation: (average and/or max. & min.)

410–219 m, mean 255 m.

9. Area: (in hectares)

48 938 ha

10. Overview:

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

Koitelainen is one of the most representative aapa mire areas. In Central Lapland it is the most important area for the conservation of rare or threatened birds and mammals because of the untouched wilderness and the extremely watery bogs.

11. Ramsar Criteria:

Circle or underline 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).

1, 2 & 4

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	5	6	7	8
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12. Justification for the application of each Criterion listed in 11. 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) A rare example of natural wetland types (dominated by peatlands) in the EU Boreal region, including 3 priority natural wetland habitat types (aapa mires, bog woodland, Fennoscandian deciduous swamp woods) listed in Annex I of the EU Habitats Directive.

2) 4 nationally threatened bird species, 2 nationally (1 globally) threatened mammal species, 1 nationally threatened vascular plant species.

Threatened vascular plant species (VU) in Finnish Red List and Annex II of the EU Habitats Directive is Marsh Saxifrage (*Saxifraga hirculus*).

Threatened birds included in the Birds Directive Annex I are Peregrine Falcon (*Falco peregrinus*) (EN in Finnish Red List), White-tailed Eagle (*Haliaeetus albicilla*) (VU), Golden Eagle (*Aquila chrysaetos*) (VU) and Merlin (*F. columbarius*) (VU. Scarce

species include e.g. Red-throated Diver (*Gavia stellata*), Whooper Swan (*Cygnus cygnus*), Smew (*Mergus albellus*), Crane (*Grus grus*), Great Grey Owl (*Strix nebulosa*) and Short-eared Owl (*Asio flammeus*).

Threatened mammals include Wolverine (*Gulo gulo*) (EN in Finland, globally VU A2c IUCN Red List) and the Otter (*Lutra lutra*) as a species of the EU Habitats Directive Annex II.

4) About 23 species of the EU Birds Directive Annex I breed in the area, including significant populations of Wood Sandpiper (*Tringa glareola*) with 2 400 pairs, Red-necked Phalarope (*Phalaropus lobatus*) with 1 200 pairs, Ruff (*Philomachus pugnax*) with 700 pairs, Capercaillie (*Tetrao urogallus*) with 600 pairs, Arctic Tern (*Sterna paradisaea*) with more than 100 pairs and Hen Harrier (*Circus cyaneus*) with 30 pairs. 17 species of waterfowl and 13 species of waders breed in the area.

Bird list (Status in Finnish Red List, BD=Birds Directive Annex I, FRS=Finland's Responsibility Species):

Breeding grouses, waders, wetland passerines and/or valuable species (woodpeckers–passerines), pairs, minimum estimation (based on line transect counts): Willow Grouse (*Lagopus lagopus*) >450, Capercaillie (*Tetrao urogallus*) >650 (NT, BD, FRS), Crane (*Grus grus*) >10 (BD), Broad-billed Sandpiper (*Limicola falcinellus*) >250 (NT, FRS), Ruff (*Philomachus pugnax*) >450 (NT, BD), Jack Snipe (*Lymnocyptes minimus*) >30 (FRS), Snipe (*Gallinago gallinago*) >650, Whimbler (*Numenius phaeopus*) >20 (FRS), Spotted Redshank (*Tringa erythropus*) >400 (FRS), Redshank (*Tringa totanus*) >40, Greenshank (*Tringa nebularia*) >50 (FRS), Wood Sandpiper (*Tringa glareola*) >2800 (BD, FRS), Red-necked Phalarope (*Phalaropus lobatus*) >900 (BD), Cuckoo (*Cuculus canorus*) >80 (NT), Meadow Pipit (*Anthus pratensis*) >3700, Yellow Wagtail (*Motacilla flava*) >1950, Sedge Warbler (*Acrocephalus schoenobaenus*) >400, Siberian Tit (*Parus cinctus*) >700 (NT), Siberian Jay (*Perisoreus infaustus*) >300 (NT, FRS), Rustic Bunting (*Emberiza rustica*) >1550, Little Bunting (*Emberiza pusilla*) >150, Reed Bunting (*Emberiza schoeniclus*) >2450.

13. 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:

Northern boreal forest vegetation zone.

b) biogeographic regionalisation scheme (include reference citation):

Etelä-Suomen ja Pohjanmaan metsien suojelun tarve-työryhmä. Puheenjohtaja: Ruuhijärvi, R., Sihteerit: Kuusinen, M., Raunio, A. and Eisto, K. 2000. Metsien suojelun tarve Etelä-Suomessa ja Pohjanmaalla. Etelä-Suomen ja Pohjanmaan metsien suojelun tarve-työryhmän mietintö. Suomen ympäristö 437. Ympäristöministeriö. Helsinki.

Working group on the need for forest protection in southern Finland and Ostrobothnia. Chairman Ruuhijärvi, R., Secretaries Kuusinen, M., Raunio, A. and Eisto, K. 2000. Forest protection in southern Finland and Ostrobothnia. The Finnish Environment 437. Ministry of the Environment.

14. 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: Geochemically included in Greenstone area. Bedrock is composed mainly of gabbro and peridotite with smaller areas e.g. quartzite, arkosite, mica schist and metavolcanic rocks.

Origins: Natural

Hydrology: Aapa mires dependent on ground or surface waters.

Soil type: Mainly peat and glacial ground moraine with small areas of bedrock terrain.

Water quality: Mesotrophic in rivers. Mire waters and ponds dystrophic.

Depth of water: Shallow. Water-level high in spring because of melting snow.

Climate: Duration of growing season ca. 125 days, mean annual temperature ca. -2 °C, mean annual rainfall ca. 550 mm. Ice- and snow-covered normally from late October to late May. Northern boreal forest vegetation zone.

15. Physical features of the catchment area:

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

The climate and general geological features are much the same in the catchment areas as in the Ramsar sites. Look partly chapter 14. Data not available.

16. Hydrological values:

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

Virgin aapa mires play an important role in maintenance of water quality and in flood control.

17. 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)
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Inland: U, Xp, Xf, M, Tp, Ts & O

L	<u>M</u>	N	<u>O</u>	P	Q	R	Sp	Ss	<u>Tp</u>	<u>Ts</u>	<u>U</u>	Va	Vt	W	<u>Xf</u>	<u>Xp</u>	Y	Zg	Zk(b)
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Human-made:

1	2	3	4	5	6	7	8	9	Zk(c)
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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.

- U – Non-forested peatlands
- Xp – Forested peatlands
- Xf – Seasonally flooded forests
- M – Permanent rivers and streams
- Tp – Permanent freshwater pools
- O – Permanent freshwater lakes
- Ts – Seasonal freshwater pools

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

The site represents the Mire vegetation region of Main aapa mires of middle and northern types. The area includes >20 000 ha of mires and >1 000 ha of water. Koitelainen is an extensive and mire-rich watershed area between the rivers LUIRO and Kitinen. Extremely wet flark fens and minerotrophic birch-rich aapa mires are typical of the area. Rivulets and brooks comprise nearly 100 km. Herb- and grass-rich Spruce (*Picea abies*) mires and growths of willows (*Salix* spp.) occur along the brooks. All forest types of the Northern Finland are represented on the slopes of Koitelainen Fjeld. The forests are dominated by Spruce and they are mostly >200 years old and in natural state.

19. Noteworthy flora:

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. ***Do not include here taxonomic lists of species present - these may be supplied as supplementary information to the RIS.***

Threatened vascular plants include Marsh Saxifrage (*Saxifraga hirculus*) (VU in Finnish Red List).

20. 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.***

Threatened birds include Peregrine Falcon (*Falco peregrinus*) (EN in Finnish Red List), White-tailed Eagle (*Haliaeetus albicilla*) (VU), Golden Eagle (*Aquila*

chrysaetos) (VU) and Merlin (*F. columbarius*) (VU). Ca. 23 species of the EU Birds Directive Annex I breed in the area, including significant populations of Wood Sandpiper (*Tringa glareola*) with 2 400 pairs, Red-necked Phalarope (*Phalaropus lobatus*) with 1 200 pairs, Ruff (*Philomachus pugnax*) with 700 pairs, Capercaillie (*Tetrao urogallus*) with 600 pairs, Arctic Tern (*Sterna paradisaea*) with >100 pairs and Hen Harrier (*Circus cyaneus*) with 30 pairs. Scarce species include e.g. Red-throated Diver (*Gavia stellata*), Whooper Swan (*Cygnus cygnus*), Smew (*Mergus albellus*), Crane (*Grus grus*), Great Grey Owl (*Strix nebulosa*) and Short-eared Owl (*Asio flammeus*). 17 species of waterfowl and 13 species of waders breed in the area.

Threatened mammals include Wolf (*Canis lupus*) (EN) and Wolverine (*Gulo gulo*) (EN, globally VU). Species of the EU Habitats Directive Annex II also include Brown Bear (*Ursus arctos*), Lynx (*Lynx lynx*) and Otter (*Lutra lutra*).

21. Social and 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.

Significant values include reindeer husbandry and scientific research.

22. Land tenure/ownership:

(a) within the Ramsar site:

State-owned.

(b) in the surrounding area: State-owned and private-owned.

23. Current land (including water) use:

(a) within the Ramsar site:

a) and b) Reindeer husbandry is an important livelihood in the area.

(b) in the surroundings/catchment:

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

The planned mining of ore deposits has reduced the proposed protection area with 7 500 ha. The planned Kevitsa Mine will not be inside the site, but nearby. The construction and mining is planned to start in 2007, production lasting nine years. It includes two open mines, together 5 ha, and later underground parts. The construction areas will cover 100–300 ha, and the annual quarrying is planned to be 300.000–500.000 tons.

Reindeers' overgrazing. Hunting may have negative effects on the site.

25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

The site is included in the Natura 2000 Network, designated both as SPA and SCI. Three smaller areas are also included in the Programme for the Protection of Old-Growth Forests.

26. Conservation measures proposed but not yet implemented:

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

The conservation of the Natura 2000 site will be carried out under the Nature Conservation Act and the Land Use and Building Act.

The first parts of Environmental Impact Assessment Study for the planned Kevitsa Mine have been carried out and are under process.

27. Current scientific research and facilities:

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

The breeding bird fauna was studied in the 1960s and 1976–77 and the volume of bird populations was estimated in 1994 by using line transect censuses. The vegetation was studied in 1994. The area is a classic research site of aapa mire vegetation. The geology was studied in the 1990s.

28. Current conservation education:

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

None significant.

29. Current recreation and tourism:

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

Only few visitors. No facilities. A snowmobile trail crosses the eastern part of the area.

30. Jurisdiction:

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

a) Metsähallitus – Forest and Park Service, Natural Heritage Services, Northern Finland, **b)** Ministry of the Environment.

31. 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.

Metsähallitus – Forest and Park Service, Natural Heritage Services, Northern Finland, PO Box 8016, FIN-96101 Rovaniemi, Finland.

32. Bibliographical references:

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

Kalpio, S. & Latvalehto, P. 1994. Raportti Viiankiaavan soidensuojelualueesta ja Koitelaiskairan ehdotetun luonnonpuiston eteläpäästä: kasvillisuudesta, biotooppikuvaukset. Manuscript. Metsähallitus.

Leivo, M. 2000. Suomen kansainvälisesti tärkeät lintualueet. Linnut-vuosikirja 1999. (English summary: Important Bird Areas in Finland).

Leivo, M., Asanti, T., Koskimies, P., Lammi, E., Lampolahti, J., Mikkola-Roos, M. & Virolainen, E. 2002. Suomen tärkeät lintualueet FINIBA. BirdLife Suomen julkaisuja 4, Suomen graafiset palvelut, Kuopio.

Outila, T. 1996. Keivitsan kaivoshanke – kaavoitusjärjestelmät ja luonnonsuojelu. Suomen ympäristö 42.

Rassi, P., Alanen, A., Kanerva, T. & Mannerkoski, I. (eds.) 2001. The 2000 Red List of Finnish Species. Ministry of the Environment & Finnish Environment Institute, Helsinki.

Ruokanen, H. 1995. Koitelainen–Keivitsa alueen ympäristön tila: Kirjallisuusselvitys. Ympäristöministeriö, alueidenkäytön osasto, selvitys 11.

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