

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:

Lemmenjoki National Park

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):

68°35' N / 25°36' 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 northwestern part of the province of Lapland, in the municipalities of Inari and Kittilä, 24 km west of Inari village. The area is restricted to Norway in the west. The municipalities (23 422 sq.km of land) have ca. 13 200 residents.

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

600–147 m, mean 319 m.

9. Area: (in hectares)

285 990 ha

10. Overview:

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

Lemmenjoki is Finland's largest National Park and one of Europe's most extensive roadless and uninhabited wilderness areas. The Park is an important conservation area of northern mire, riverine and forest ecosystems. All the mire types of northern Forest Lapland can be found in the area.

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 & 8

<u>1</u>	<u>2</u>	3	<u>4</u>	5	6	7	<u>8</u>
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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 unique example of natural wetland types (dominated by peatlands and rivers) in the EU Alpine region, including 3 priority natural wetland habitat types included in Annex I of the EU Habitats Directive (aapa mires, bog woodland, palsa mires).

2) 6 nationally threatened bird species, 2–3 nationally (1 globally) threatened mammal species, 1 nationally threatened fish species, 4 nationally threatened vascular plant species.

Vascular plants of the EU Habitats Directive Annex II include buttercup species *Ranunculus lapponicus* and Marsh Saxifrage (*Saxifraga hirculus*).

Threatened raptor species include several pairs of Gyr Falcon (*Falco rusticolus*) (EN in Finnish Red List), Peregrine Falcon (*F. peregrinus*) (EN), White-tailed Eagle (*Haliaeetus albicilla*) (VU), Golden Eagle (*Aquila chrysaetos*) (VU) and Merlin (*F. columbarius*) (VU) – all included in the Bird directive Annex I. Scarce species of the

Bird Directive include e.g. Red-throated Diver (*Gavia stellata*), Whooper Swan (*Cygnus cygnus*), Smew (*Mergus albellus*), Hen Harrier (*Circus cyaneus*), Osprey (*Pandion haliaetus*), Crane (*Grus grus*), Dotterel (*Charadrius morinellus*), Bar-tailed Godwit (*Limosa lapponica*) and Short-eared Owl (*Asio flammeus*).

Threatened mammals living in the Park include Wolverine (*Gulo gulo*) (EN in Finland, globally VU A2c IUCN Red List) as well as Arctic Foxes (*Alopex lagopus*) (CR) and Otter (*Lutra lutra*) as species of the EU Habitats Directive Annex II.

4) Temminck's Stint (*Calidris temminckii*) (VU) breeds regularly in the area. About 29 species of the EU Bird Directive Annex I breed in the area, including significant populations of Golden Plover (*Pluvialis apricaria*), Wood Sandpiper (*Tringa glareola*) and Bluethroat (*Luscinia svecica*) with thousands of pairs, and Capercaillie (*Tetrao urogallus*), Ruff (*Philomachus pugnax*), Red-necked Phalarope (*Phalaropus lobatus*) and Three-toed Woodpecker (*Picoides tridactylus*) with hundreds of pairs.

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*) >3700, Capercaillie (*Tetrao urogallus*) >2900 (NT, BD, FRS), Ringed Plover (*Charadrius hiaticula*) >150, Dotterel (*Charadrius morinellus*) >900 (NT, BD), Golden Plover (*Pluvialis apricaria*) >2300 (BD), Broad-billed Sandpiper (*Limicola falcinellus*) >1150 (NT, FRS), Ruff (*Philomachus pugnax*) >120 (NT, BD), Jack Snipe (*Lymnocyptes minimus*) >250 (FRS), Snipe (*Gallinago gallinago*) >1000, Whimbler (*Numenius phaeopus*) >450 (FRS), Spotted Redshank (*Tringa erythropus*) >600 (FRS), Greenshank (*Tringa nebularia*) >500 (FRS), Green Sandpiper (*Tringa ochropus*) >100, Wood Sandpiper (*Tringa glareola*) >4000 (BD, FRS), Common Sandpiper (*Actitis hypoleucos*) >200 (FRS), Red-necked Phalarope (*Phalaropus lobatus*) >1500 (BD), Cuckoo (*Cuculus canorus*) >500 (NT), Wryneck (*Jynx torquilla*) >150 (VU), Three-toed Woodpecker (*Picoides tridactylus*) >500 (NT, BD, FRS), Meadow Pipit (*Anthus pratensis*) >12 000, Yellow Wagtail (*Motacilla flava*) >12 000, Bluethroat (*Luscinia svecica*) >4800 (BD), Whinchat (*Saxicola rubetra*) >350 (NT), Wheatear (*Oenanthe oenanthe*) >4000 (NT), Sedge Warbler (*Acrocephalus schoenobaenus*) >300, Siberian Tit (*Parus cinctus*) >1650 (NT), Siberian Jay (*Perisoreus infaustus*) >1700 (NT, FRS), Pine Grosbeak (*Pinicola enucleator*) >1200 (FRS), Lapland Bunting (*Calcarius lapponicus*) >950, Rustic Bunting (*Emberiza rustica*) >150, Reed Bunting (*Emberiza schoeniclus*) >3700.

8) The fish population includes Salmon (*Salmo salar*) (EN, IUCN Red List)

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 and (western part) Fjeld Lapland birch forest vegetation zones.

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 and in Lapland granulite zone. Bedrock is very variable and composed of e.g. garnet-bearing paragneiss, tonalite-trondhjemite-granodioritic gneiss and migmatite, mafic metavolcanic rocks, granite and granodiorite with gneissic inclusions, quartzite, arkosite and mica schist.

Origins: Natural

Hydrology: Aapa mires dependent on ground or surface waters.

Soil type: Mainly glacial ground moraine, peat and bedrock terrain, also glacial fluvial gravel and sand in river valleys and smaller areas of boulder fields and hummocky moraine.

Water quality: General quality excellent in largest rivers. Mire waters dystrophic.

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

Climate: Duration of growing season ca. 120 days, mean annual temperature ca. -2 °C, mean annual rainfall ca. 450 mm. Ice- and snow-covered normally from mid October to late May. Northern boreal and (western part) Fjeld Lapland birch forest vegetation zones.

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, O, Tp, M, Xf, W, Ts & Y

L	<u>M</u>	N	<u>Q</u>	P	Q	R	Sp	Ss	<u>Tp</u>	<u>Ts</u>	<u>U</u>	Va	Vt	<u>W</u>	<u>Xf</u>	<u>Xp</u>	<u>Y</u>	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
- O – Permanent freshwater lakes
- Tp – Permanent freshwater pools
- M – Permanent rivers and streams
- Xf – Seasonally flooded forests
- W – Shrub-dominated wetlands
- Ts – Seasonal freshwater pools
- Y – Freshwater springs

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 Northern aapa mires. The area includes ca. 75 000 ha of mires and ca. 3 400 ha of water. The mire complexes reach up to several thousand hectares in size. The largest mires are in the southern part between the rivers Repojoki and Lemmenjoki and beside the upper tributaries of River Ivalojoiki. Repokaira is composed of uplands characterized by Mountain Birch (*Betula pubescens* ssp. *czerepanovii*), and the mires have a special character with barren heaths and numerous small waterbodies. Extensive open mires spread out between forest ridges on both sides of River Ivalojoiki. In these mires grassy flarks are well developed, characterized by extensive growths of the cotton-grass species *Eriophorum russolleum*. The largest (ca. 4 000 ha) continuous mire area is the barren, hummocky raised bog of Naskama-aapa, which extends to the southern margins of the Park. Blanket mires occur everywhere on the hill-slopes of river valleys, and the springs are accompanied by rich fen-like mires.

The central part of the National Park is dominated by the more than 70 km long River Lemmenjoki and the Maarestatunturi and Viipustunturi fjeld clusters surrounding it. The high fell plateau is crossed by several river valleys, of which the mightiest is the 20 km long Lemmenjoki Valley. The western part of the Park is bordered by the steeply profiled line of Kietsimätunturit Fjelds. The area is rich of lakes and ponds. Old, open and mossy forests of Spruce (*Picea abies*) are abundant in southern parts of the Park. The northern limit of Spruce crosses the southern section of the Park, and the ridges between rivers in the northern parts are dominated by old-growth forests of Pine (*Pinus sylvestris*). The western and northwestern parts lack coniferous forest and Mountain Birch is the only tree species. The river banks are characterized by alluvial meadows with extensive growths of willow (*Salix* spp.).

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 plant species (VU in Finnish Red List) include Alpine Arnica (*Arnica angustifolia*), sedge species *Carex heleonastes*, Boreal Fleabane (*Erigeron borealis*) and Marsh Saxifrage (*Saxifraga hirculus*). Vascular plants of the EU Habitats Directive Annex II also include buttercup species *Ranunculus lapponicus*.

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 raptor species include several pairs of Gyr Falcon (*Falco rusticolus*) (EN in Finnish Red List), Peregrine Falcon (*F. peregrinus*) (EN), White-tailed Eagle (*Haliaeetus albicilla*) (VU), Golden Eagle (*Aquila chrysaetos*) (VU) and Merlin (*F. columbarius*) (VU). Temminck's Stint (*Calidris temminckii*) (VU) breeds regularly in the area. Ca. 29 species of the EU Bird Directive Annex I breed in the area, including significant populations of Golden Plover (*Pluvialis apricaria*), Wood Sandpiper (*Tringa glareola*) and Bluethroat (*Luscinia svecica*) with thousands of pairs, and Capercaillie (*Tetrao urogallus*), Ruff (*Philomachus pugnax*), Red-necked Phalarope (*Phalaropus lobatus*) and Three-toed Woodpecker (*Picoides tridactylus*) with hundreds of pairs. Scarce species include e.g. Red-throated Diver (*Gavia stellata*), Whooper Swan (*Cygnus cygnus*), Smew (*Mergus albellus*), Hen Harrier (*Circus cyaneus*), Osprey (*Pandion haliaetus*), Crane (*Grus grus*), Dotterel (*Charadrius morinellus*), Bar-tailed Godwit (*Limosa lapponica*) and Short-eared Owl (*Asio flammeus*). A strong population of Willow Grouse (*Lagopus lagopus*) (important game bird) inhabits the area. Important populations of Finland's responsibility species also include several hundreds of pairs of e.g. Siberian Jays (*Perisoreus infaustus*).

Threatened mammals living in the Park include Wolf (*Canis lupus*) (EN) and Wolverine (*Gulo gulo*) (EN, globally VU). A few Arctic Foxes (*Alopex lagopus*) (CR) may still wander in the area. Species of the EU Habitats Directive Annex II also

include Brown Bear (*Ursus arctos*), Lynx (*Lynx lynx*) and Otter (*Lutra lutra*). Fish include Salmon (*Salmo salar*) (EN).

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 environmental education, scientific research, reindeer husbandry, outdoor recreation, recreation fishing and gold washing. The site includes two provincially (3 ha) and one locally (3 ha) important traditional rural biotopes. "Traditional rural biotope" is a synonym for a group of biotopes as semi-natural grassland, wooded pastures and grazed forests. (They are the most important areas for biodiversity in the agricultural landscape and also unreplaceable for the cultural heritage. They are classified as nationally, provincially or locally valuable. Most of these areas are very small. Most valuable areas are threatened because of e.g. overgrowing and enrichment caused by fertilization.)

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:

Reindeer husbandry is an important livelihood in the Park. Over 5 000 reindeers are kept in the area by the owners. Hunting and fishing is permitted for local residents (hunting is restricted to mammals in River Lemmenjoki Valley). An economically important species is Willow Grouse, which is caught by tripwires. Unmechanized goldwashing is permitted. Also picking of mushrooms and berries (an important species is Cloudberry *Rubus chamaemorus*) is permitted.

(b) in the surroundings/catchment:

The Park is restricted to Övre Anarjokka National Park in Norway and the areas form together a protected area of over 4 000 sq.km.

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

Reindeer husbandry is changing the vegetation. Mechanized goldwashing has weakened the natural state of the tributaries of River Lemmenjoki until the late 1980s. Increasing tourism and hiking cause disturbance. 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. Lemmenjoki National Park (285 484 ha) was established in 1956, extended in 1971 and 1982. A master plan for the National Park was established in 1988. Restricted Areas have been established at Ravadasköngäs and at Naukusuo Mire, where access is prohibited from early May to mid July. Use of motor vehicles is permitted only for local residents. Mechanized gold washing is prohibited. The first part of the park was established long before the mire conservation programme existed and also the later parts have been included in programme of national parks, so there was no need to double the programmes in the site to get it protected.

26. Conservation measures proposed but not yet implemented:

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

Conservation of the Natura 2000 site outside the already protected areas will be carried out under the Nature Conservation Act.

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, lepidopteran fauna, flora and geology of the area have been studied intensively since the 1930s. The data is collected systematically by Kevo Research Station of Turku University as a part of Inari-Lapland's biological survey. A part of this material has been published as distribution maps (Kevo Notes and Reports from the Kevo Subarctic Station). A geological study has been carried out of the geomorphological formations of River Lemmenjoki Valley.

28. Current conservation education:

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

Various educational themes are carried out in the Park and it functions as an important education site for the Kevo Research Station of Turku University.

29. Current recreation and tourism:

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

Northern Lapland Nature Centre is situated in Inari village. A nature cabin, two information points, a nature trail, camping sites, ten wilderness huts, boat transport services and over 40 km of marked trails have been constructed in the National Park. The Park had ca. 10 000 visitors in 2003. Licensed recreation fishing is permitted in certain areas.

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, Northern Lapland District for Wilderness Management, 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, Northern Lapland District for Wilderness Management, PO Box 36, FIN-99801 Ivalo, Finland.

32. Bibliographical references:

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

http://eunis.eea.eu.int/temp/SiteFactsheet_C3B2278C8E4EA599899E0D69E9B2EE22.pdf

<http://www.metsa.fi/natural/nationalparks/lemmenjoki/first.htm>

Iso-Iivari, L. 1990. Birds of Inari Lapland (published observations). Turun yliopisto, Lapin biologinen tutkimusasema Kevo.

Koponen, S., Laasonen, E.M. & Linnaluoto, E.T. 1982. Lepidoptera of Inari Lapland. Kevo Notes 6.

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.

Metsähallitus 1988. Lemmenjoen kansallispuiston runkosuunnitelma. Metsähallitus, SU 4:91.

Mäkinen, I. & Kallio, P. 1979. The vascular plants of Inari Lapland, Finland. Kevo Notes 4.

Piirola, J. 1972. The Inari region of Finnish Lapland. Fennia 111.

Rautava, E. 1972. Amphiphytic and aquatic moss vegetation in the rivers Vaskojoki and Kettujoki in Finnish Lapland. Reports from the Kevo Subarctic Research Station 9.

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.

Sihvo, J. 2002. Ylä-Lapin luonnonhoitoalueen ja Urho Kekkosen kansallispuiston luontokartoitus; Loppuraportti osa 2: Ylä-Lapin luontotyytit. Metsähallituksen luonnonsuojelujulkaisuja A 137.

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