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:

Patvinsuo 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):

63°06' N / 30°44' 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 nearly unbroken area is situated in northeastern part of the province of Eastern Finland, in the municipalities of Lieksa city and Ilomantsi, 33 km southeast of Lieksa city centre and 16 km west of Russian border. The municipalities (6 195 sq.km of land) have ca. 22 300 residents.

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

270–143 m, mean 160 m.

9. Area: (in hectares)

12 727 ha

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

Patvinsuo National Park is an important area for the preservation and study of peatland and water ecosystems and includes a noteworthy selection of threatened and rare species. The site forms the largest wilderness area in South Finland.

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

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**

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 representative example of natural and near-natural wetland types (dominated by peatlands) in the EU Boreal region, including 4 priority natural wetland habitat types of the European Habitat Directive (aapa mires, active raised bogs, bog woodland, Fennoscandian deciduous swamp woods).

2) Threatened birds (VU in Finnish Red List) include 6 species, e.g. Merlin (*Falco columbarius*), Lesser Black-backed Gull (*Larus f. fuscus*) and Red-flanked Bluetail (*Tarsiger cyanurus*).
About 24 species of the EU Birds Directive Annex I breed in the area, of which the most common are Wood Sandpiper (*Tringa glareola*) with more than150 pairs, Capercaillie (*T. urogallus*) and Golden Plover (*Pluvialis apricaria*) with more than 80 pairs, Black Grouse (*Tetrao tetrix*) with more than 50 pairs and Crane (*Grus grus*) and Ruff (*Philomachus pugnax*) with more than 20 pairs. Scarce species include e.g. Red-throated Diver (*Gavia stellata*), Black-throated Diver (*G. arctica*), Whooper Swan

(*Cygnus cygnus*), Hen Harrier (*Circus cyaneus*), Osprey (*Pandion haliaetus*), Ural Owl (*Strix uralensis*), Short-eared Owl (*Asio flammeus*) and Red-breasted Flycatcher (*Ficedula parva*). The breeding waders include ca. 800 pairs of 14 species in the National Park.
Threatened mammals species of the EU Habitats Directive Annex II include the Wolverine (*Gulo gulo*) (EN, IUCN Red List) and the Otter (*Lutra lutra*) (NT).
Invertebrates of the EU Habitats Directive Annex II include beetle species *Stephanopachys linearis* and *S. substriatus*.
Finally it includes 6 nationally threatened bird species, 2 nationally (1 globally) threatened mammal species, 1 nationally threatened vascular plant species, 7 nationally threatened aphylophorales species.

4) The site supports a range variety of breeding, migrating and staging bird species and provides furthermore habitat to several threatened mammal species (see crit. 2).

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:

Middle 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 Archaean basement gneiss area. Bedrock is composed of granodiorite, tonalite, quartz diorite, granite and syenite.
Origins: Natural.
Hydrology: Aapa mires dependent on ground or surface waters and raised bogs on rain water.
Soil type: Mainly peat with smaller areas of glacifluvial gravel and sand, glacigenic ground moraine and bedrock terrain. Thickness of peat layer 1–3 m.

Water quality: General quality good in rivers and in Lake Suomunjärvi. Most of lakes and ponds naturally dystrophic. Lakes Suomunjärvi and Hietajärvi oligotrophic and semihumic. Mire waters and ponds oligotrophic–mesotrophic and dystrophic.
Depth of water: Lake Suomunjärvi: 5.5 m on average, maximum 24 m. Water-level high in spring because of melting snow.
Climate: Duration of growing season ca. 150 days, mean annual temperature ca. +2 ºC, mean annual rainfall ca. 650 mm. Ice- and snow-covered normally from mid November to late April. Middle 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.

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

Virgin mires play an important role in maintenance of water quality.

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)

Inland: U, Xp, O, Tp, Ts, M, Xf & Y

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.

U – Non-forested peatlands
Xp – Forested peatlands
O – Permanent freshwater lakes
Tp – Permanent freshwater pools
M – Permanent rivers and streams

Ts – Seasonal freshwater pools
Xf – Seasonally flooded forests
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 regions of Southern aapa mires and of Eccentric bogs and *Sphagnum fuscum* bogs. The National Park includes ca. 7 000 ha of mires and ca. 1 000 ha of water. The two mire complex types are encountered together with transitional forms of various types. The Mire Protection Area includes two eccentric bogs and two aapa mires. The largest mires are watery flark fens. In addition to the larger lakes like Suomunjärvi (over 600 ha), Hietajärvi and Nälämäjärvi there are also plenty of smaller lakes, ponds and streams in the area. The meandering rivers of Nälämänjoki and Suomunjoki are in natural condition. Old-growth coniferous forests (ca. 700 ha) are located between the mires.

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.***

Vascular plants include Fragrant Orchid (*Gymnadenia conopsea*) (VU in Finnish Red List) and a few near-threatened species, such as Yellow Bird's-nest (*Monotropa hypopitys*) and Brown Beak Sedge (*Rhynchospora fusca*). Aphylophorales include plenty of threatened and near-threatened species, such as *Amyloporia crassa* (EN), *Perenniporia tenuis* (EN), *Amylocystis lapponica* (VU), *Antrodiella citrinella* (VU), *Clavaria zollingeri* (VU), *Sceletocutis stellae* (VU) and *Steccherinum collabens* (VU). Bryophytes include a few rare species, such as moss species *Sphagnum subnitens* (NT) and *S. auriculatum* (NT 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 (VU in Finnish Red List) include 6 species, e.g. Merlin (*Falco columbarius*), Lesser Black-backed Gull (*Larus f. fuscus*) and Red-flanked Bluetail (*Tarsiger cyanurus*). Ca. 24 species of the EU Birds Directive Annex I breed in the area, of which the most common are Wood Sandpiper (*Tringa glareola*) with >150 pairs, Capercaillie (*T. urogallus*) and Golden Plover (*Pluvialis apricaria*) with >80 pairs, Black Grouse (*Tetrao tetrix*) with >50 pairs and Crane (*Grus grus*) and Ruff (*Philomachus pugnax*) with >20 pairs. Scarce species include e.g. Red-throated Diver (*Gavia stellata*), Black-throated Diver (*G. arctica*), Whooper Swan (*Cygnus cygnus*), Hen Harrier (*Circus cyaneus*), Osprey (*Pandion haliaetus*), Ural Owl (*Strix uralensis*), Short-eared Owl (*Asio flammeus*) and Red-breasted Flycatcher (*Ficedula parva*). The breeding waders include ca. 800 pairs of 14 species in the National Park.

Threatened mammals include Wolf (*Canis lupus*) (EN), Wolverine (*Gulo gulo*) (EN) and Russian Flying Squirrel (*Pteromys volans*) (VU Finnish Red List). Species of the EU Habitats Directive Annex II also include Brown Bear (*Ursus arctos*), Lynx (*Lynx lynx*) (Finnish population are except for both species) and Otter (*Lutra lutra*) (NT).

Beetles include plenty of threatened and rare species, such as *Ceruchus chrysomelinus* (VU), *Platyrhinus resinosus* (VU) and *Tragosoma depsarium* (VU Finnish Red List). Invertebrates of the EU Habitats Directive Annex II include beetle species *Stephanopachys linearis* and *S. substriatus*.

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 and outdoor recreation. A few small areas of valuable traditional rural biotopes are situated in the National Park.

22. Land tenure/ownership:
(a) within the Ramsar site:

State-owned.

(b) in the surrounding area:

Private-owned.

23. Current land (including water) use:
(a) within the Ramsar site:

Fishing is permitted in certain areas of the National Park. Picking of mushrooms and berries (important species is Cloudberry *Rubus chamaemorus*) is permitted.

(b) in the surroundings/catchment:

The shore banks of Lake Koitere on the borders of the National Park are in the progress of erosion because of the heavy regulation of water-level. Forestry is carried out in the surroundings.

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

About 230 ha of the mires were drained in 1963. Some of the forests in the area are young due to earlier logging.
The dams of the Canadian Beaver (*Castor canadensis*), introduced in 1945, have considerably changed the shores of small lakes and brooks. The recreational use of the National Park is strongly increasing. During berry picking time thousands of people visit the area.

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 as SCI. A major part of the site is included in the Mire Conservation Programme. The first parts of the area were protected already in the 1950s, and in 1968 an area of 8 641 ha was established as a primeval forest. Patvinsuo National Park (10 545 ha) was established in 1982 and enlarged in 1986. Kissansuo–Raanisuo–Tohlinsuo Mire Protection Area (1 532 ha) was established in 1982.

A master plan for the National Park was established in 1986 and renewed in 1998. An area of 5 900 ha is left without facilities or guidance activities. Four restricted mire areas (2 450 ha) have been established and access is prohibited outside the trails from March to mid July. At Lake Hietajärvi (500 ha) access outside marked trails is permitted only in late July. Forestry and hunting is prohibited in the Park. Use of motor vehicles outside the roads is prohibited in general. Two small forest areas in the middle of the mire were burned in 1989 to simulate a natural forest fire.

A management and land use plan for the Mire Protection Area was established in 1989. Forestry, ditching, extraction of earth material and damaging of soil or bedrock are prohibited in the Mire Protection Area. Also construction of new buildings and roads is prohibited in general.

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. Special plans for the restoration of mires and forests will be carried out in the near future.

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 of the National Park was studied in the 1970s–1990s and of the Mire Protection Area in 1992–94. The volume of bird populations of the Park was estimated during 1983–88 and of the Mire Protection Area in 1994 by using line transect censuses. The vegetation of the Park was mapped in 1983 and of Hietajärvi Integrated monitoring area in 1991–94. The area of ECE's (Economic Commission for Europe) integrated monitoring was established in the late 1980s at Lake Hietajärvi, where the effects of transboundary air pollution on ecosystems is being studied. The ecology and production of fish fauna, benthic fauna, plankton, algae and macrophytes of Lake Suomunjärvi has been studied by e.g. the University of Joensuu. Surveys on e.g. beetles and polypores have been carried out in the old-growth forests. The burnt forest areas are monitored.

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 National Park. Suomu Nature cabin with accommodation facilities, eleven campfire sites, three observation towers, three nature trails (11 km) and a network of marked trails (55 km) have been constructed in the National Park.

29. Current recreation and tourism:

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

The Park had about 15 000 visitors in 2003. The high season takes place in July, when Cloudberries ripen. Rowing boats and canoes can be hired. 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, Natural Heritage Services, Eastern 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, Eastern Finland, Akselinkatu 8, FIN-57130 Savonlinna, Finland.

32. Bibliographical references:

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

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.

Hokkanen, T.J. & Ieshko, E. (eds.) 1995. Karelian biosphere reserve studies. North Karelian biosphere reserve, Mekrijärvi research station, Joensuu.

Leivo, A., Rajasärkkä, A. & Toivonen, H. 1984. Patvinsuon kansallispuiston kasvillisuus. Metsähallitus SU 4:57.

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 1989. Kissansuon–Raanisuon–Tohlinsuon soidensuojelualueen hoito- ja käyttösuunnitelma. Metsähallitus SU 4:98.

Metsähallitus 1998. Patvinsuon kansallispuiston runkosuunnitelma. Metsähallituksen luonnonsuojelujulkaisuja B 47.

Simola, H., Huttunen, P., Rönkkö, J. & Uimonen-Simola, P. 1991. Paleolimnological study of an environmental monitoring area, or are there pristline lakes in Finland? Hydrobiologia 214.

Toivonen, H. & Lappalainen, T. 1980. Ecology and production of aquatic macrophytes in the oligotrophic, mesohumic lake Suomunjärvi, eastern Finland. Ann. Bot. Fenn. 17.

Tuominen, S. 2001. Hietajärven yhdennetyn seurannan kasvillisuus. Suomen ympäristö 456, Suomen ympäristökeskus.

Virolainen, E. 1991. Patvinsuon linnut. Metsähallitus SU 5:41.

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