

# 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.

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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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PO Box 140, FIN-00251 Helsinki, Finland. Timo.Asanti@ymparisto.fi

## 2. Date this sheet was completed/updated:

January 2005

## 3. Country:

Finland

## 4. Name of the Ramsar site:

Liminganlahti Bay Area

## 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):

64°56' N / 25°21' 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 four separate areas are situated in western part of the province of Oulu, on the coast of the Bothnian Bay, in the municipalities of Kempele, Liminka, Lumijoki and Oulunsalo and Oulu city, 5–12 km south–southwest of Oulu city centre. The municipalities (1 481 sq.km of land) have ca. 148 900 residents.

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

5–0 m

## 9. Area: (in hectares)

12 275 ha

## 10. Overview:

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

The fauna and flora are extremely varied: northern, southern and eastern species characteristic of both sweet and brackish waters are included. The breeding and migrating wetland bird fauna is among the richest and contains the most representative selection of species in Finland. The area holds important threatened and endemic plant communities.

## 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, 5, 6 & 8

<u>1</u>	<u>2</u>	3	<u>4</u>	<u>5</u>	<u>6</u>	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 near-natural wetland types (dominated by shallow sea bays and estuarine waters) in the EU Boreal region, including 3 priority natural wetland habitat types (coastal lagoons, boreal Baltic coastal meadows, Fennoscandian deciduous swamp woods) of the EU Habitats Directive Annex II.

2) Threatened vascular plants include saltmarsh-grass species *Arctophila fulva* (CR in Finnish Red List), Four-leaved Mare's tail (*Hippuris tetraphylla*) (EN, arctic group), Siberian Primrose (*Primula nutans*) (EN, arctic group), Arctic Salt-grass (*Puccinellia phryganodes*) (EN, arctic group) and Submerged Water-plantain (*Alisma wahlenbergii*) (VU, endemic), all of which listed in the EU Habitats Directive Annex II.

Threatened birds include 8 species, e.g. Dunlin (*Calidris alpina schinzii*) (CR in Finnish Red List) with 16 pairs, Yellow-breasted Bunting (*Emberiza aureola*) (CR) with 3 pairs, Black-tailed Godwit (*Limosa limosa*) (EN) with 25 pairs, Little Tern (*Sterna albifrons*) (EN) with 8 pairs, Temminck's Stint (*Calidris temminckii*) (VU) with 6 pairs and Black-headed Gull (*Larus ridibundus*) (VU) with more than 1 800 pairs.

About 21 species of the EU Birds Directive Annex I breed in the area, of which the most common are Ruff (*Philomachus pugnax*) with 430 pairs, Arctic Tern (*Sterna paradisaeae*) with 220 pairs, Common Tern (*S. hirundo*) with 80 pairs, Red-necked Phalarope (*Phalaropus lobatus*) with 42 pairs, Wood Sandpiper (*Tringa glareola*) with 32 pairs and Marsh Harrier (*Circus aeruginosus*) with 25 pairs. Scarce species include e.g. Slavonian Grebe (*Podiceps auritus*), Bittern (*Botaurus stellaris*), Smew (*Mergus albellus*), Hen Harrier (*Circus cyaneus*), Corncrake (*Crex crex*) (globally VU), Spotted Crake (*Porzana porzana*), Crane (*Grus grus*) and Short-eared Owl (*Asio flammeus*).

4) Supports endemic and isolated plant communities dependent on special circumstances (see also section 19) and provides a refuge for a nearly vanished bird species during migration.

The breeding waterfowl includes about 1 800 pairs of 22 species and the breeding waders about 1 100 pairs of 18 species. Finland's responsibility species include e.g. 650 pairs of Tufted Ducks (*Aythya fuligula*), 200 pairs of Little Gull (*Larus minutus*), 150 pairs of Red-breasted Mergansers (*Mergus serrator*), 130 pairs of Curlews (*Numenius arquata*), 120 pairs of Wigeons (*Anas penelope*) and 80 pairs of Teals (*A. crecca*). Greylag Goose (*Anser anser*) (important gamebird) breeds with more than 100 pairs.

5) More than 8 500 Bean Geese (*Anser fabalis*) migrate regularly through the area in spring. On the peak days of May and August rest e.g. about 5 500 Teals (*Anas crecca*) and 4 500 of each Goldeneyes (*Bucephala clangula*) and Goosanders (*Mergus merganser*) on the site. The number of staging Cranes reach 550 individuals in spring.

6) The site supports also more than 1% of the Whooper Swan, Bean Goose, Teal, Goldeneye & Goosander population.

Whooper Swan (*Cygnus cygnus*) **950** (spring) and **850** (autumn)

Bean Goose (*Anser fabalis*) **8 500** (spring)

Teal (*Anas crecca*) **5 500** (spring) and **4 200** (autumn)

Pintail (*Anas acuta*) **1 200** (spring) and **3 500** (autumn)

Shoveler (*Anas clypeata*) **450** (spring) and **700** (autumn)

Goldeneye (*Bucephala clangula*) **4 500** (spring) and 2 400 (autumn)

Smew (*Mergus albellus*) **350** (spring) and 50 (autumn)

Goosander (*Mergus merganser*) **4 500** (spring) and 250 (autumn)

Broad-billed Sandpiper (*Limicola falcinellus*) **450** (spring)

Spotted Redshank (*Tringa erythropus*) **3 500** (spring) and 550 (autumn)

Other significant numbers:

Red-necked Grebe (*Podiceps grisegena*) 110 (spring)

Lesser White-fronted Goose (*Anser erythropus*) 15 (spring)

Greylag Goose (*Anser anser*) 1 100 (spring) and 1 200 (autumn)

Wigeon (*Anas penelope*) 4 300 (spring) and 4 500 (autumn)  
Tufted Duck (*Aythya fuligula*) 7 500 (spring) and 4 500 (autumn)  
Red-breasted Merganser (*Mergus serrator*) 480 (spring)  
Marsh Harrier (*Circus aeruginosus*) 130 (autumn)  
Crane (*Grus grus*) 550 (spring)  
Little Stint (*Calidris minuta*) 900 (autumn)  
Dunlin (*Calidris alpina*) 4 500 (spring)  
Ruff (*Philomachus pugnax*) 19 000 (spring)  
Redshank (*Tringa totanus*) 450 (spring)  
Greenshank (*Tringa nebularia*) 1200 (spring)  
Wood Sandpiper (*Tringa glareola*) 6 700 (spring) and 4 500 (autumn)

Source: Pessa, J. & Anttila, I. 2000. Conservation of habitats and species on wetlands. A case of Liminganlahti LIFE Nature-project in Finland. The Finnish Environment 389. North Ostrobothnia Regional Environment Centre.

8) Liminganlahti is also an important spawning area for Whitefish (*Coregonus lavaretus*), Perch (*Perca fluviatilis*) and Pike (*Esox lucius*)

**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 Jotnian sandstones and siltstones. Bedrock is composed of siltstone and shale.

**Origins:** Natural

**Soil type:** Mainly silt and clay and littoral gravel and sand.

**Water quality:** General quality good in Kempeleenlahti, satisfactory in outer part of Liminganlahti and passable in inner part of Liminganlahti. Eutrophic in Akionlahti, mesotrophic–eutrophic in Liminganlahti and mesotrophic in Kempeleenlahti. Salinity ca. 2–3 ‰ in Liminganlahti.

**Depth of water:** Liminganlahti: mean 2.6 m, mostly 0.5–2 m in inner part and up to 8 m in outer part. Kempeleenlahti: mostly 0.5–1.5 m. Akionlahti: maximum 1.3 m.

Water-level usually low in spring and high in autumn and winter.

**Climate:** Duration of growing season ca. 150 days, mean annual temperature ca. +1 °C, mean annual rainfall ca. 500 mm. Waters ice-covered normally from early November to late May. 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.

### 16. Hydrological values:

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

None significant.

### 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:** Coastal: F, A, J, E & H

<u>A</u>	B	C	D	<u>E</u>	<u>F</u>	G	<u>H</u>	I	<u>J</u>	K	Zk(a)
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**Inland:** W, Ts, Xf, M & Tp

L	<u>M</u>	N	O	P	Q	R	Sp	Ss	<u>Tp</u>	<u>Ts</u>	U	Va	Vt	<u>W</u>	<u>Xf</u>	Xp	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.

F – Estuarine waters

A – Permanent shallow marine waters

Ts – Seasonally flooded meadows and sedge marshes  
J – Coastal brackish lagoons  
H – Salt meadows  
Xf – Seasonally flooded forests  
E – Sand shores and dune systems  
W – Shrub-dominated wetlands  
M – Permanent rivers and streams  
Tp – Permanent 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.

Liminganlahti covers 11 823 ha, Kempeleenlahti 192 ha and Akionlahti 260 ha. The area includes >10 000 ha of water. Liminganlahti is the largest sea bay and estuary area in the Bothnian Bay. Kempeleenlahti is a wide and shallow sea bay sharing many similarities with Liminganlahti. Akionlahti is a small and shallow sea bay between the two bays.

The shores of Liminganlahti are in continual process of changing because of the rapid landupheaval (3 mm per year), and the shore line has moved 1.5 km towards the sea in less than 100 years. The shape of Liminganlahti is also determined by eskers lying on both northern and southern sides. The area is connected with the so-called Muhos-formation in which the sunken bedrock is covered with thick and solid layers of sand and clay. Three major rivers (Lumijoki, Temmesjoki and Liminkajoki) and a number of brooks and ditches discharge into the bay. The basic elements typical of the coast of the Bothnian Bay such as shoals, lagoons, muddy shores, coastal meadows, reedbeds, natural forests of primary succession stages, sands and small islets, form together a wide and varied entirety. As the shores are low-lying and the water-level varies, the vegetation zones are exceptionally extensive and varied. Wrinkling flads and gloe ponds are typical of the area. Reeds, typically Common Club-rush (*Schoenoplectus lacustris*) and Common Reed (*Phragmites australis*), and thickets have conquered large areas after the cessation of grazing and hay cutting. Reed zone covers ca. 1 200 ha, sedge (*Carex* spp.) zone 520 ha and bush zone 370 ha. Liminganlahti is surrounded by wide plains of agricultural land.

The shores of the bottom of Kempeleenlahti are composed of extensive coastal meadows, dominated by sedges, such as Water Sedge (*Carex aquatica*) and *C. halophila*, and in drier areas by Salt-marsh Rush (*Juncus gerardii*), Narrow Small-reed (*Calamagrostis stricta*) or Red Fescue (*Festuca rubra*). Tea-leaved Willow (*Salix phylicifolia*) is abundant in the bush-zone and the Water Horsetail (*Equisetum fluviatile*) in swampy areas. Small patches of Grey Alder (*Alnus incana*) occur on drier hillocks. Akionlahti is nearly wrinkled apart from the sea. In the middle of the bay there is a zone of Perfoliate Weed (*Potamogeton perfoliatus*) and Ivy-leaved Duckweed (*Lemna trisulca*). Coastal meadows are reminiscent of those of Kempeleenlahti with especially large meadows of Salt-marsh Rush (*Juncus gerardii*).

### 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.**

The flora contains two very special groups, the endemic species of the Gulf of Bothnia and the so-called *Primula nutans* –group of arctic species (17 species or subspecies) in isolation from the main distribution areas of the Arctic Ocean. Threatened vascular plants include saltmarsh-grass species *Arctophila fulva* (CR in Finnish Red List), Four-leaved Mare's tail (*Hippuris tetraphylla*) (EN, arctic group), Siberian Primrose (*Primula nutans*) (EN, arctic group), Arctic Salt-grass (*Puccinellia phryganodes*) (EN, arctic group) and Submerged Water-plantain (*Alisma wahlenbergii*) (VU, endemic), all of which listed in the EU Habitats Directive Annex II and including also knotgrass species *Polygonum foliosum* (NT). Near-threatened vascular plants include 4 species. Endemic species include also Bothnian Hair-grass (*Deschampsia bottnica*) and Bothnian Eyebright (*Euphrasia bottnica*).

### 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 8 species, e.g. Dunlin (*Calidris alpina schinzii*) (CR in Finnish Red List) with 16 pairs, Yellow-breasted Bunting (*Emberiza aureola*) (CR) with 3 pairs, Black-tailed Godwit (*Limosa limosa*) (EN) with 25 pairs, Little Tern (*Sterna albifrons*) (EN) with 8 pairs, Temminck's Stint (*Calidris temminckii*) (VU) with 6 pairs and Black-headed Gull (*Larus ridibundus*) (VU) with >1 800 pairs. Ca. 21 species of the EU Birds Directive Annex I breed in the area, of which the most common are Ruff (*Philomachus pugnax*) with 430 pairs, Arctic Tern (*Sterna paradisaeae*) with 220 pairs, Common Tern (*S. hirundo*) with 80 pairs, Red-necked Phalarope (*Phalaropus lobatus*) with 42 pairs, Wood Sandpiper (*Tringa glareola*) with 32 pairs and Marsh Harrier (*Circus aeruginosus*) with 25 pairs. Scarce species include e.g. Slavonian Grebe (*Podiceps auritus*), Bittern (*Botaurus stellaris*), Smew (*Mergus albellus*), Hen Harrier (*C. cyaneus*), Corncrake (*Crex crex*) (globally VU), Spotted Crake (*Porzana porzana*), Crane (*Grus grus*) and Short-eared Owl (*Asio flammeus*).

### 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.

The plains of Liminka form a nationally important landscape area. The site includes two nationally (68 ha), five provincially (190 ha) and three locally (21 ha) important traditional rural biotopes. Significant values also include scientific research, environmental education, bird-watching and outdoor recreation.

**22. Land tenure/ownership:**

(a) within the Ramsar site:

Private-owned.

(b) in the surrounding area:

private-owned

**23. Current land (including water) use:**

(a) within the Ramsar site:

Intense hunting of waterfowl in autumn. Fishing is carried out to some extent.

(b) in the surroundings/catchment:

Agriculture 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:**

Nutrients from the nearby fields have contributed to eutrophication and large amounts of soil is brought by rivers into Liminganlahti. Grazing and hay cutting have nearly vanished from the coastal meadows after the 1950s and reeds and scrubland have conquered space. As a result of the eutrophication, and decrease of grazing and hay cutting, reeds have increased and the area of coastal meadows has diminished. Ditching has drained several small ponds and increased the load of humus and nutrients.

Intensive hunting prevents the staging of waterfowl during autumn. Nearly 50 small boat harbours are located at Liminganlahti Bay, weakening e.g. the function of the area protected against waterfowl hunting. Increased building of holiday cottages, fishing lodges, hunting cabins and roads cause disturbance. American Mink (*Mustela vison*) and Raccoon Dog (*Nyctereutes procyonoides*) may cause damage to the breeding of birds.

**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, in the Waterfowl Habitats Conservation Programme, and in the Helsinki Commission (HELCOM) network of Baltic Sea Protected Areas. Private protected areas cover 800 ha at Liminganlahti and 160 ha at Kempeleenlahti. Hunting of waterfowl is prohibited in an area of ca. 2 000 ha.

A plan for sustainable use for Liminganlahti Bay was established in 1998; management measures have been carried out under the EU Life project in 1995–98.



Mowing and grazing of coastal meadows and small islands and islets was started in 1996 to reduce the area of reedbeds by 200 ha. Management of sedge meadows was started in 1997 to maintain the grazing grounds of Lesser White-fronted Goose. For Kempeleenlahti Bay a management and conservation plan was established in 1996. Clearing of bushes has been carried out in an area of 7 ha.

**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 sites outside the already protected areas will be carried out under the Nature Conservation Act and Water Act.

**27. Current scientific research and facilities:**

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

Liminganlahti Bay is an important research area for Oulu University. The bird populations are monitored annually. Studies on bird fauna have been published since the early 1950s and on flora since 1905. The breeding waterfowl has been monitored since 1954. Phytoplankton, benthic fauna, fish fauna, water quality and the ecology of coastal meadows have been studied since the 1970s.

**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 e.g. at the nature information centre.

**29. Current recreation and tourism:**

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

The area is a very popular bird-watching site in migration periods and in summer. A nature information centre with accommodation facilities is located at Liminganlahti Bay. Eight bird-watching towers, seven nature trails and a hide have been constructed in the areas.

**30. Jurisdiction:**

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

**a)** North Ostrobothnia Regional Environment Centre, **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.

North Ostrobothnia Regional Environment Centre, PO Box 124, FIN-90101 Oulu, 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.

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.

Oulun kaupungin ympäristövirasto 1996. Kempeleenlahden luonnonsuojelualueen käyttö- ja hoitosuunnitelma. Oulun kaupungin ympäristöviraston julkaisu 1.

Pessa, J. 1994. Akionlahti – arvokas osa Liminganlahden lintuvesialuetta. Aureola 19. (English summary: Akionlahti – an important part of the Liminganlahti wetland area).

Pessa, J. & Anttila, I. 1998. Liminganlahden ja Ison Matalan–Maasyvänlahden kestävä käytön yleissuunnitelma. Alueelliset ympäristöjulkaisut 90, Pohjois-Pohjanmaan ympäristökeskus. (Summary: Plan for sustainable use of wetlands of Liminganlahti and Iso Matala–Maasyvänlahti).

Pessa, J. & Anttila, I. 2000. Conservation of habitats and species on wetlands; A case of Liminganlahti LIFE Nature-project in Finland. The Finnish Environment 389, North Ostrobothnia Regional Environment Centre.

Siira, J. 1984. On the vegetation and ecology of the primary saline soils of Bothnian Bay. Aquilo Ser. Bothnica 20.

Siira, J. 2002. Liminganlahden pesimälinnusto vuosina 1953–2001. Linnut-vuosikirja 2001. (English summary: Breeding birds of Liminganlahti Bay in 1953–2001).

Tynjälä, M. 1994. Kempeleenlahti lintuvetenä. Aureola 19. (English summary: The birds of Kempeleenlahti).

Viininkoski, K. & Hynninen, P. 1995. Liminganlahden vesistöalueen vesiensuojelusuunnitelma. Vesi- ja ympäristöhallituksen julkaisuja A 211. (English summary: Water protection plan for the Bay of Liminka).

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