

# Ramsar Information Sheet

Published on 27 April 2023 Update version, previously published on : 1 January 2005

# **Finland**

# Martimoaapa - Lumiaapa - Penikat Mires



Designation date 28 May 1974

Site number 11

Coordinates 65°50'25"N 25°07'53"E

Area 14 086,00 ha

# Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

# 1 - Summary

#### Summary

Martimoaapa—Lumiaapa—Penikat is exceptionally rich in the variety of mire types in natural condition. The eccentric raised bog of Martimoaapa is one of the most valuable bird-mires in Finland. Within this large bog complex there are two lakes, Martimojärvi and Pikkujärvi, and several smaller tarns and streams. A significant part of the aapa mires within the complex are rich fens. Western taiga forests are mainly located in Penikat hill area in a western part of the site.

The site represents the Mire vegetation region of Southern aapa mires. The area includes ca. 10 000 ha of mires and ca. 300 ha of water. The area is characterized by six extensive and well developed aapa mires close to each other. Within these there are also active raised bogs, of which Martimoaapa is among the best developed in Northern Finland. Mires are rich of flarks and ponds and include also two lakes. The hill chain of Kivalo is rich in vegetation because of calcareous soil. On lower slopes of the hills there are various types of alkaline fens and rich wooded meadows with old-growth forests.

In the area there are Stone Age house pits and traces of quarrying quartz for raw material of stone tools.

# 2 - Data & location

#### 2.1 - Formal data

2.1.1 - Name and	d address	of the	compiler	of this	RIS
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Res	ponsil	ble	comr	lic	er

Postal address Finnish Environment Institute (SYKE), Natural Environment Centre

PO Box 140
FI-00251
Finland

National Ramsar Administrative Authority

Institution/agency

Metsähallitus, Parks and Wildlife Finland

PO Box 94
FI-01301 Vantaa
Finland

2.1.2 - Period of collection of data and information used to compile the RIS

From year 2003

To year 2017

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Martimoaapa - Lumiaapa - Penikat Mires

Unofficial name (optional)

originally designated as: Martimoaapa - Lumiaapa

2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary Yes O No 

(Update) B. Changes to Site area

(Update) For secretariat only: This update is an extension □

### 2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?

 $\ensuremath{^{\text{(Update)}}}$  Optional text box to provide further information

Wetland types and species, and ecosystem services have been reassessed according to current knowledge, but there are no changes to the ecological character.

#### 2.2 - Site location

# 2.2.1 - Defining the Site boundaries

b) Digital map/image

<2 file(s) uploaded>

Former maps 0

#### Boundaries description

For its original designation in 1974 the site extended over 7400 ha, in 1998 the site was extended and now covers the whole Natura 2000 site Martimoaapa - Lumiaapa - Penikat SAC/SPA (FI1301602).

#### 2.2.2 - General location

a) In which large administrative region does the site lie?	Lapland
b) What is the nearest town or population	Simo, Keminmaa

### 2.2.3 - For wetlands on national boundaries only

- a) Does the wetland extend onto the territory of one or more other countries?
- b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes O No lacktriangle

# 2.2.4 - Area of the Site

Official area, in hectares (ha): 14086

Area, in hectares (ha) as calculated from 14083.864 GIS boundaries

# 2.2.5 - Biogeography

#### Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Middle boreal forest vegetation zones
EU biogeographic regionalization	Boreal

### Other biogeographic regionalisation scheme

Vegetation zones of Finland according to Ruuhijärvi et al. 2000.

# 3 - Why is the Site important?

# 3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided	Virgin aapa mires play an important role in maintenance of water quality and in flood control.
	As an active and mostly pristine peat bog, the site is very valuable for carbon storage and flood control. The site also harbours biodiversity and serves as a source of inspiration and recreation.
Other reasons	A rare example of natural wetland types (dominated by peatlands) in the EU Boreal region, including 3 priority natural wetland habitat types of the Habitats Directive Annex II (aapa mires, active raised bogs, bog woodland).

- ☑ Criterion 2 : Rare species and threatened ecological communities
- ☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further information of the Site supports endagered species and bird species of Annex I of the Birds Directive during breeding period.

3.2 - Plant species whose presence relates to the international importance of the site

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Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
BRYOPHYTA/ BRYOPSIDA	Zygodon conoideus	<b>/</b>					National Red List - EN	
Fungi								
ASCOMYCOTA / LECANOROMYCETES	Physcia phaea	V					National Red List - CR	

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name		uali cı	ite	ur	ide 1	uı	con	r cr	ies oute iteri	ion	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Others														<u>'</u>					
CHORDATA/ MAMMALIA	Lutra lutra	G	0												NT	$\checkmark$		EU Habitats Directive - Annexes II, IV	
Birds													<b>'</b>				I.		
CHORDATA / AVES	Aegolius funereus	G	<b>7</b>					][							LC			EU Birds Directive - Annex I	
AVES	Anas acuta	G	0	<b>2</b>				0							LC			National Red List - EN	The Site support this species during breeding period.
CHORDATA / AVES		6	0	1		С	0	0							LC			National Red List - VU	The Site support this species during breeding period.
CHORDATA / AVES		G	<b>7</b>				) [	0							LC			National Red List - EN; EU Birds Directive - Annex I	
CHORDATA/ AVES	Buteo buteo	G	<b>7</b>			С									LC			National Red List - VU	
CHORDATA / AVES	Circus cyaneus	[	0	1		С		0							LC			National Red List - VU; EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA / AVES	Cygnus cygnus	G	0	Z)		С	) [	0							LC			EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA/ AVES	Limicola falcinellus	0		Z)		С		0											The Site support this species during breeding period.
CHORDATA / AVES	Lymnocryptes minimus	0		<b>/</b>		С	) [	0							LC				The Site support this species during breeding period.
CHORDATA/ AVES	Lyrurus tetrix	G	0	<b>/</b>		С	) [	0							LC			EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA/ AVES	Mergellus albellus	G	0	1		С	) [	0							LC			EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA/ AVES	Pernis apivorus	G	7	2		С		0							LC			National Red List - EN; EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA/ AVES	Phalaropus Iobatus	G	7	2		С		0							LC			National Red List - VU; EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA/ AVES	Philomachus pugnax	G	0	1		С	) [	0							LC			National Red List - CR; EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA /	-	G	7	<b>2</b>		С		0							VU			National Red List - EN; EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA/ AVES	Tetrao urogallus	G	0	<b>/</b>		С		0							LC			EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA/ AVES	Tringa glareola	G	0	1		С	) [	0							LC			EU Birds Directive - Annex I	The Site support this species during breeding period.
CHORDATA/ AVES	Tringa totanus	G	0	<b>2</b>		С	) [	0							LC			National Red List - VU	The Site support this species during breeding period.

<sup>1)</sup> Percentage of the total biogeographic population at the site

# 3.4 - Ecological communities whose presence relates to the international importance of the site

RIS for Site no. 11, Martimoaapa - Lumiaapa - Penikat Mires, Finland

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Fennoscandian natural rivers	<b>2</b>		Habitats Directive - Annex I
Water courses of plain to montane levels with Ranunculion fluitantis and Callitricho- Batrachion vegetation	Ø		Habitats Directive - Annex I
Natural dystrophic lakes and ponds	<b>2</b>		Habitats Directive - Annex I
Aapa mires	<b>2</b>		Habitats Directive - Annex I
Active raised bogs	<b>2</b>		Habitats Directive - Annex I
Alkaline fens	<b>2</b>		Habitats Directive - Annex I
Transition mires and quaking bogs	<b>2</b>		Habitats Directive - Annex I
Bog woodland	<b>2</b>		Habitats Directive - Annex I

# 4 - What is the Site like? (Ecological character description)

# 4.1 - Ecological character

The site represents the Mire vegetation region of Southern aapa mires. The area includes ca. 10 000 ha of mires and ca. 300 ha of water. The area is characterized by six extensive and well developed aapa mires close to each other. Within these there are also active raised bogs, of which Martimoaapa is among the best developed in Northern Finland. Mires are rich of flarks and ponds and include also two lakes. The hill chain of Kivalo is rich in vegetation because of calcareous soil. On lower slopes of the hills there are various types of alkaline fens and rich wooded meadows with old-growth forests.

# 4.2 - What wetland type(s) are in the site?

#### Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks		4	274	Representative
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		3	360	Representative
Fresh water > Marshes on peat soils >> U: Permanent Non- forested peatlands		1	7000	Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		2		Representative

#### Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Western taiga	2300

# 4.3 - Biological components

#### 4.3.1 - Plant species

<no data available>

#### 4.3.2 - Animal species

<no data available>

# 4.4 - Physical components

### 4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfc: Subarctic (Severe winter, no dry season, cool summer)

#### 4.4.2 - Geomorphic setting

4.2 - Geomorphic setting
a) Minimum elevation above sea level (in metres)
a) Maximum elevation above sea level (in metres)
Entire river basin $\Box$
Upper part of river basin ☐
Middle part of river basin $\Box$
Lower part of river basin $\Box$
More than one river basin $lacktriangledown$
Not in river basin $\square$

Aapa mires dependent on ground or surface waters and raised bogs on rain water.

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

# 4.4.5 - Sediment regime

Sediment regime unknown

# 4.4.6 - Water pH

Unknown 🗹

#### 4.4.7 - Water salinity

Fresh (<0.5 g/l)

(Update) Changes at RIS update No change Increase O Decrease Unknown Unknown □

# 4.4.8 - Dissolved or suspended nutrients in water

Dystrophic 🗹

(Update) Changes at RIS update No change 

● Increase 

O Decrease 

O Unknown 

O

Unknown

Please provide further information on dissolved or suspended nutrients (optional):

Nutrient-poor and dystrophic.

# 4.4.9 - Features of the surrounding area which may affect the Site

ease describe whether, and if so how, the landscape and ecological aracteristics in the area surrounding the Ramsar Site differ from the i) broadly similar $O$ ii) significantly different $\Theta$ site itself:
Surrounding area has greater urbanisation or development
Surrounding area has higher human population density $\Box$
Surrounding area has more intensive agricultural use
urrounding area has significantly different land cover or habitat types 🗹
ase describe other ways in which the surrounding area is different:
e site is surrounded by land extensively managed for forestry, including drainage of peatlands.

# 4.5 - Ecosystem services

# 4.5.1 - Ecosystem services/benefits

Provisioning Services

1 Townstorning Oct Wices						
	Ecosystem service	Examples	Importance/Extent/Significance			
Food for humans  Wetland non-food products		Sustenance for humans (e.g., fish, molluscs, grains)	Low			
		Livestock fodder	Medium			

Regulating Services

regulating our wood					
Ecosystem service	Examples	Importance/Extent/Significance			
Maintenance of hydrological regimes	Groundwater recharge and discharge	Low			
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	Medium			
Hazard reduction	Flood control, flood storage	Medium			

#### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Nature observation and nature-based tourism	Low
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Low
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Low
Scientific and educational	Major scientific study site	Low

# Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Accumulation of organic matter	Medium
Nutrient cycling	Carbon storage/sequestration	High

#### Other ecosystem service(s) not included above:

Significant values include scientific research, outdoor recreation and reindeer husbandry.  In the area there are Stone Age house pits and traces of quarrying quartz for raw material of stone tools.			
Within the site:	11000		
Outside the site:	1000s		

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site?

and cultural values	1.5.2 - Social and cu
ovides a model of wetland wise use, demonstrating the aditional knowledge and methods of management and see that maintain the ecological character of the wetland	application of traditiona
has exceptional cultural traditions or records of former have influenced the ecological character of the wetland	
ical character of the wetland depends on its interaction with local communities or indigenous peoples	iii) the ecological cha

iv) 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

<no data available>

# 4.6 - Ecological processes

<no data available>

# 5 - How is the Site managed? (Conservation and management)

# 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

		owners	
I UL	JIIC	OWITEIS	HIIP

Category		Within the Ramsar Site	In the surrounding area
	National/Federal government	<b>/</b>	<b>/</b>

#### Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)		<b>✓</b>

#### 5.1.2 - Management authority

agency or organization responsible for	Metsähallitus Parks and Wildlife Finland
managing the site:  Provide the name and/or title of the person	
or people with responsibility for the wetland:	Ms. Elisa Pääkkö, Specialist
Postal address:	Jäämerentie 6 99600 Sodankylä Finland
E-mail address:	elisa.paakko@metsa.fi

# 5.2 - Ecological character threats and responses (Management)

### 5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Hunting and collecting terrestrial animals	Low impact	Medium impact	<b>✓</b>	No change		No change

#### Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities			<b>&gt;</b>			
(Para)military activities			✓			

# Please describe any other threats (optional):

Reindeer husbandry is carried on in nearby areas and is also permitted in the Mire Protection Area. Hunting is permitted for local residents. Also picking of mushrooms and berries is permitted. The area is used for training by the Finnish Defence Forces (Probably only once a year.)

Hunting might have negative effects on the site.

Probably the training of FDF causes only minor effects (exact data not available). The snowmobile trail has been planned so that it causes no effects on sensitive early-breeding species. The increasing recreational use might have effects, but the data is missing.

#### 5.2.2 - Legal conservation status

Regional (international) legal designations

regional (monational) logal designations				
	Designation type	Name of area	Online information url	Overlap with Ramsar Site
	EU Natura 2000	Martimoaapa - Lumiaapa - Penikat SAC/SPA	http://natura2000.eea.europa.eu/ Natura2000/SDF.aspx?site=FI13016 02	whole

National legal designations			
Designation type	Name of area	Online information url	Overlap with Ramsar Site
Mire Conservation Programme			partly
Protected Area			partly

## Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Martimoaapa-Lumiaapa- Penikat	http://datazone.birdlife.org/sit e/factsheet/martimoaapa-lumiaapa - penikat-iba-finland	whole

### 5.2.3 - IUCN protected areas categories (2008)

la Strict Nature Reserve	
lb Wilderness Area: protected area managed mainly for wilderness protection	
II National Park: protected area managed mainly for ecosystem protection and recreation	
III Natural Monument: protected area managed mainly for conservation of specific natural features	
IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention	¥
V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation	
VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems	

#### 5.2.4 - Key conservation measures

#### Legal protection

Logar protoction		
Measures	Status	
Legal protection	Implemented	

#### Other

VI

The site is included in the Natura 2000 Network, designated both as SPA and SCI. A major part is included in the Mire Conservation Programme and an area of 650 ha is included in the Programme for the Protection of Old-growth Forests. Martimoaapa-Lumiaapa-Penikat Mire Protection Area (13 354 ha) was established in 1981. Further conservation of aapa mires is carried out under the EU Life project in 1997-2002. A management and land use plan for the Mire Protection Area was established in 1991. 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.

Conservation of the Natura 2000 site outside the already protected areas will be carried out under the Nature Conservation Act. If necessary, restricted areas will be established.

# 5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site?

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes  $\overline{O}$  No  $\overline{\odot}$ processes with another Contracting Party?

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

Four wilderness huts, a bird-watching tower, a hiking trail (13 km) and a nature trail (2.5 km) have been constructed in the Mire Protection Area. A ski trail and a snowmobile trail crosses the area. The eastern part of the area is crossed by a road. Licensed recreation fishing is carried out in the two lakes. The high season takes place in summer.

URL of site-related webpage (if relevant): http://www.nationalparks.fi/en/martimoaapa?inheritRedirect=true

# 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Yes, there is a plan

#### Further information

Forest restoration plan (controlled burning)

# 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented
Plant community	Implemented

The breeding bird fauna was surveyed in the 1970s, 1987 and 1997. The forest vegetation was studied in 1993.

# 6 - Additional material

#### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Hyvärinen, E., Juslén, A., Kemppainen, E., Uddström, A. & Liukko, U.-M. (eds.) 2019. The 2019 Red List of Finnish Species. Ympäristöministeriö & Suomen ympäristökeskus. Helsinki. 704 p.

Junninen, K. 1993. Martimoaavan-Lumiaavan-Penikkain soidensuojelualueen metsäkasvillisuusselvitys. 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.

Metsähallitus 1991. Martimoaavan-Lumiaavan-Penikkain soidensuojelualueen hoito- ja käyttösuunnitelma. Metsähallitus SU 4:119.

Rauhala, P. 1987. Martimoaavan-Lumiaavan-Penikkain soidensuojelualueen linnusto 1987. Manuscript. Metsähallitus.

Tiainen, J., Mikkola-Roos, M., Below, A., Jukarainen, A., Lehikoinen, A., Lehtiniemi, T., Pessa, J., Rajasärkkä, A., Rintala, J., Sirkiä, P. & Valkama, J. 2016. The 2015 Red List of Finnish Bird Species. Ministry of Environment & Finnish Environment Institute, Helsinki.

Väisänen, R.A. & Järvinen, O. 1977. Structure and fluctuation of the breeding bird fauna of a north Finnish peatland area. Ornis Fennica 54.

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.

#### 6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<no file available>

<no data available>

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site



A view over the Martimoaapa mire complex. ( Juha Paso, 01-09-2009 )



A reindeer on aapa mire. ( Juha Paso, 30-06-2010

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 1974-05-28