



Ramsar Information Sheet

Published on 13 July 2020

Update version, previously published on : 1 January 2012

Estonia Alam-Pedja



Designation date	5 June 1997
Site number	905
Coordinates	58°28'46"N 26°11'48"E
Area	34 220,00 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

Alam-Pedja is a large flat wilderness area in the north-eastern corner of the Võrtsjärv Lowland in Central Estonia. It comprises complex of mires separated by unregulated rivers and associated floodplain meadows and alluvial forests, surrounded by extensive forests, including swamp forests. Due to the extremely small slope, the only outflow through the Suur-Emajõgi River is very slow, and big floods are characteristic. The Site is a very important spawning ground for a number of fish species, an important stop-over point for several species of migrating waterfowl. The site is one of the largest areas left in Estonia with nearly no human influence (no settlements and hardly any roads).

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Kai Kimmel
Institution/agency	Estonian Wetland Society
Postal address	Suurküla 21, Häädemeeste, 86001 Pärnumaa
E-mail	kkimmel@hotmail.ee
Phone	+3725077652

Compiler 2

Name	Marika Kose
Institution/agency	Estonian Wetland Society
Postal address	Suurküla 21, Häädemeeste, 86001 Pärnumaa, Estonia
E-mail	marika.kose@mail.ee
Phone	+37256561373

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

From year	2012
To year	2019

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Alam-Pedja
---	------------

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 <input checked="" type="radio"/> No <input type="radio"/>
(Update) The boundary has been delineated more accurately	<input checked="" type="checkbox"/>
(Update) The boundary has been extended	<input type="checkbox"/>
(Update) The boundary has been restricted	<input type="checkbox"/>
(Update) B. Changes to Site area	the area has increased
(Update) The Site area has been calculated more accurately	<input type="checkbox"/>
(Update) The Site has been delineated more accurately	<input checked="" type="checkbox"/>
(Update) The Site area has increased because of a boundary extension	<input type="checkbox"/>
(Update) The Site area has decreased because of a boundary restriction	<input type="checkbox"/>

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?	No
(Update) Optional text box to provide further information	No principal change but due to restoration projects carried out in 2013-2019 hydrological conditions and quality of habitats of two bog massifs (Soosaare and sangla) is improving. Also the ecosystems of River Emajõgi with its oxbow lakes (2009-2012) and River Laeva natural riverbed (2013-2018) are restored.

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

Former maps

Boundaries description

The boundary is the same as an existing protected area – the Alam-Pedja Nature Reserve

2.2.2 - General location

a) In which large administrative region does the site lie?

b) What is the nearest town or population centre?

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes No

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):

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

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	1. Boreal Biogeographic region according to the EEA
Freshwater Ecoregions of the World (FEOW)	2. terrestrial area Sarmatic mixed forests

Other biogeographic regionalisation scheme

1. EEA, European Environment Agency, http://www.eea.europa.eu/publications/report_2002_0524_154909

2. Olson, D. M., E. Dinerstein, E.D. Wikramanayake, N.D. Burgess, G.V.N. Powell, E.C. Underwood, J.A. D'amico, I. Itoua, H.E. Strand, J.C. Morrison, C.J. Loucks, T.F. Allnutt, T.H. Ricketts, Y. Kura, J.F. Lamoreux, W.W. Wettengel, P. Hedao, & K.R. Kassem. 2001. Terrestrial Ecoregions of the World: A New Map of Life on Earth. - BioScience 51:933-938.

Abell, R., Thieme, M. L., Revenga, C., Bryer, M., Kottelat, M., Bogutskaya, N., Coad, B., Mandrak, N., Contreras Balderas, S., Bussing, W., Stiassny, M., Skelton, P., Allen, G., Unmack, P., Naseka, A., Ng, R., Sindorf, N., Robertson, J., Armijo, E., Higgins, J., Heibel, T.J., Wikramanayake, E., Olson, D., Lopez, H. L., Reis, R. E., Lundberg, J.G., Sabaj Perez, M.H., Petry P., 2008, Freshwater Ecoregions of the World: A New Map of Biogeographic Units for Freshwater Biodiversity Conservation. - BioScience 58: 403-414.

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

The paludified and forested site acts as a natural regulator of the runoff and the water regime of the rivers. Together with Lake Võrtsjärv the accumulation area of the River Emajõgi is the largest (900 sq.km) naturally regulated area of river runoff in Estonia. The site plays an important role in the maintenance of water quality, acting as a natural buffer zone to the Emajõgi River and the town of Tartu.

Other ecosystem services provided

Biodiversity maintenance. Soil (peat) formation. Nutrient cycling. Water purification. Climate change mitigation. Pollution control and detoxification. Flood control. Aesthetic and landscape values. Spiritual and inspirational services. Recreation and tourism. Scientific and educational services.

Other reasons

The site is a particularly good representative of mosaic wetland complex including natural non-forested peatlands (bogs and fens), forested peatlands (peatswamp forests), freshwater swamp forests, permanent rivers, floodplains and oxbow lakes characteristic of the Boreal Biogeographical region. The area is the largest one left in Estonia without any or almost no human influence.

Wetland habitats occurring in Alam-Pedja Nature Reserve and listed in Annex I of the Habitat Directive are: active raised bogs (*7110), transition mires and quaking bogs (7140), bog woodland (*91D0), Fennoscandian deciduous swamp woods (*9080), northern boreal alluvial meadows (6450), rivers and streams (3260), alkaline fens (7230), alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (91E0) and riparian mixed forests of *Quercus robur*, *Ulmus laevis*, *Fraxinus excelsior* along the great rivers (91F0). The wetland complex plays a substantial hydrological, biological and ecological role in the region and it is identified both as an IBA and Natura 2000 site.

- Criterion 2 : Rare species and threatened ecological communities

- Criterion 3 : Biological diversity

Justification

The site supports populations of plants and animal species important for maintaining the biological diversity of the Boreal Biogeographical Region.

- Criterion 4 : Support during critical life cycle stage or in adverse conditions

- Criterion 8 : Fish spawning grounds, etc.

Justification

The floodplains and old river beds (especially of River Emajõgi) are very important as spawning sites for fish species such as Bream *Abramis brama*, Pike *Esox lucius* and also *Leuciscus aspius* (Annex II of EU Habitats Directive) and Wels *Silurus glanis*.

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

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<i>Betula humilis</i>	Shrubby Birch	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	VU in Red List of Estonia	Locally, the number of localities has decreased during the last decades
<i>Botrychium simplex simplex</i>	Dwarf Moonwort	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	CR in Red List of Estonia	Protected species (I category). Extremely rare in Estonia
<i>Carex glareosa glareosa</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	EN in Red List of Estonia	Protected species (II category). Very rare mire species
<i>Corallorhiza trifida</i>	Coralroot Orchid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	EN in Red List of Estonia	Protected species (II category). Scattered throughout Estonia, number of localities decreasing
<i>Cypripedium calceolus</i>	Lady's Slipper	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	Annex II and IV of EU habitats Directive	Protected species (II category). Scattered throughout Estonia
<i>Eriophorum gracile</i>	Slender Cotton-grass	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	EN in Red List of Estonia	Protected species (II category).
<i>Gladiolus imbricatus</i>	Meadow-sword Lily	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	VU in Red List of Estonia	Protected species (II category). Scattered throughout Estonia
<i>Hammarbya paludosa</i>	Bog Orchid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	EN in Red List of Estonia	Protected species (II category). Rare in Estonia
<i>Liparis loeselii</i>	Fen Orchid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Annex II and IV of EU habitats Directive; VU in Red List of Estonia	Protected species (II category) growing only in transitional bogs
<i>Malaxis monophyllos</i>	Single leaf Malaxis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	VU in Red List of Estonia	protected species (II category).
<i>Neottia cordata</i>	Lesser Twayblade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	VU in Red List of Estonia	Protected species (II category)
<i>Pedicularis sceptrum-carolinum</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	EN in Red List of Estonia	Protected species (II category). Numbers decreasing
<i>Saxifraga hirculus</i>	Yellow rockfoil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	Annex II and IV of EU Habitats Directive; EN in Red List of Estonia	Protected species (II category). Rare species growing in spring mires

Alam-Pedja supports three species of Annex II of EU Habitats Directive (*Liparis loeselii*, *Saxifraga hirculus* and *Cypripedium calceolus*) and some endangered and vulnerable species of Red List of Estonia. Inventory of protected plant species was carried out in 2017.

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

Phylum	Scientific name	Common name	Species qualifies under criterion			Species contributes under criterion			Pop. Size	Period of pop. Est.	% occurrence ¹⁾	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification	
			2	4	6	9	3	5									7
Birds																	
CHORDATA/AVES	<i>Accipiter gentilis</i>	Northern Goshawk	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	6-9 breeding pairs
CHORDATA/AVES	<i>Alcedo atthis</i>	Common Kingfisher	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	6-10 pairs

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	GITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/AVES	<i>Aquila chrysaetos</i>	Golden Eagle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC; VU in Red List of Estonia; strongly protected (I category)	2-3 breeding pairs
CHORDATA/AVES	<i>Aquila pomarina</i>	Lesser Spotted Eagle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	2012-2019		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	1-2 breeding pairs
CHORDATA/AVES	<i>Botaurus stellaris</i>	Eurasian Bittern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC;	7-9 breeding pairs
CHORDATA/AVES	<i>Caprimulgus europaeus</i>	European Nightjar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	200	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC;	200-230 pairs
CHORDATA/AVES	<i>Chlidonias niger</i>	Black Tern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	100-120 pairs
CHORDATA/AVES	<i>Ciconia nigra</i>	Black Stork	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	2012-2019		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC; EN in Red List of Estonia; strongly protected (I category)	1-2 pairs; strongly protected (I category)
CHORDATA/AVES	<i>Circus aeruginosus</i>	Western Marsh Harrier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	15-20 breeding pairs
CHORDATA/AVES	<i>Circus cyaneus</i>	Northern Harrier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	3-5 breeding pairs
CHORDATA/AVES	<i>Circus pygargus</i>	Montagu's Harrier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	4-7 breeding pairs
CHORDATA/AVES	<i>Crex crex</i>	Corn Crake	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	150	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	130-150 breeding pairs
CHORDATA/AVES	<i>Cygnus columbianus bewickii</i>	Bewick's Swan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	2016			<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	
CHORDATA/AVES	<i>Ficedula parva</i>	Red-breasted Flycatcher	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	150	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	100-200 breeding pairs
CHORDATA/AVES	<i>Gallinago media</i>	Great Snipe	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	2016		NT	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC; VU in Red List of Estonia	Criterion 4: It is the most important breeding area for Gallinago media in the Baltic States . 100-120 individuals.
CHORDATA/AVES	<i>Grus grus</i>	Common Crane	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	20-35 breeding pairs
CHORDATA/AVES	<i>Haliaeetus albicilla</i>	White-tailed Eagle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	2016		LC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Annex I of Council directive 2009/147/EEC; VU in Red List of Estonia; strongly protected (I category)	4-5 breeding pairs
CHORDATA/AVES	<i>Hydrocoloeus minutus</i>	Little Gull	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	15-100 pairs
CHORDATA/AVES	<i>Lagopus lagopus</i>	Willow Ptarmigan; Willow Grouse	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	EN in Red List of Estonia	1-3 pairs; strongly protected (I category). Numbers are decreasing seriously
CHORDATA/AVES	<i>Lanius collurio</i>	Red-backed Shrike	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	30-50 breeding pairs
CHORDATA/AVES	<i>Limosa lapponica</i>	Bar-tailed Godwit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	2016		NT	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	100 ind during migration
CHORDATA/AVES	<i>Limosa limosa</i>	Black-tailed Godwit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15	2016		NT	<input type="checkbox"/>	<input type="checkbox"/>	listed as Vulnerable in Europe by the IUCN Red list.	
CHORDATA/AVES	<i>Lyrurus tetrix</i>	Eurasian Black Grouse; Black Grouse	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	200	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	200-300 individuals
CHORDATA/AVES	<i>Pandion haliaetus</i>	Osprey; Western Osprey	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	1-2 breeding pairs. Strongly protected (I category)
CHORDATA/AVES	<i>Pernis apivorus</i>	European Honey Buzzard	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10	2012-2019		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	10-15 breeding pairs

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	GITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/AVES	<i>Philomachus pugnax</i>	Ruff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	2016			<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC ; EN in Red List of Estonia	5-10 pairs; strongly protected (I category)
CHORDATA/AVES	<i>Fluvialis apricaria</i>	European Golden Plover; European Golden-Plover	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	80	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	80-100 breeding pairs
CHORDATA/AVES	<i>Porzana porzana</i>	Spotted Crake	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	130	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	100-200 breeding pairs
CHORDATA/AVES	<i>Sterna hirundo</i>	Common Tern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	20-30 pairs
CHORDATA/AVES	<i>Strix uralensis</i>	Ural Owl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC;	30-40 pairs
CHORDATA/AVES	<i>Tetrao urogallus</i>	Western Capercaillie	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	55	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	55-75 ind
CHORDATA/AVES	<i>Tetrastes bonasia</i>	Hazel Grouse	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	200	2016			<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC;	200-300 pairs
CHORDATA/AVES	<i>Tringa glareola</i>	Wood Sandpiper	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50	2016		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of Council directive 2009/147/EEC	50-60 breeding pairs
CHORDATA/AVES	<i>Vanellus vanellus</i>	Northern Lapwing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	60	2016		NT	<input type="checkbox"/>	<input type="checkbox"/>	listed as Vulnerable in Europe by the IUCN Red list.	
Fish, Mollusc and Crustacea																		
CHORDATA/ACTINOPTERYGII	<i>Abramis brama</i>	Aral bream	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 8: The floodplains and old river beds are very important as spawning sites for this species.
CHORDATA/ACTINOPTERYGII	<i>Cobitis taenia</i>	Spiny loach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex II of EU Habitats Directive	Criterion 8: The floodplains and old river beds are very important as spawning sites for this species.
CHORDATA/ACTINOPTERYGII	<i>Cottus gobio</i>	Common bullhead	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex II of EU Habitats Directive	
CHORDATA/ACTINOPTERYGII	<i>Esox lucius</i>	Snake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 8: The floodplains and old river beds are very important as spawning sites for this species.
CHORDATA/ACTINOPTERYGII	<i>Leuciscus aspius</i>	Schied; Schied; Schied	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Annex II of EU Habitats Directive	Criterion 8: The floodplains and old river beds are very important as spawning sites for this species.
CHORDATA/ACTINOPTERYGII	<i>Misgurnus fossilis</i>	Mud loach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex II of EU Habitats Directive	
CHORDATA/ACTINOPTERYGII	<i>Silurus glanis</i>	Sheatfish; Sheatfish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 8: The floodplains and old river beds are very important as spawning sites for this species.
Others																		
CHORDATA/MAMMALIA	<i>Canis lupus</i>	Wolf	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Criterion 4: The site supports species at a critical stage of their life cycles and provides refuge during adverse conditions, serving as a feeding and breeding ground and a shelter for this species.
CHORDATA/MAMMALIA	<i>Lutra lutra</i>	European Otter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30	2012-2019		NT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Annexes II and IV of EU Habitats Directive	over 30 individuals
CHORDATA/MAMMALIA	<i>Lynx lynx</i>	Eurasian Lynx	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: The site supports species at a critical stage of their life cycles and provides refuge during adverse conditions, serving as a feeding and breeding ground and a shelter for this species.

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	GITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/ MAMMALIA	<i>Mustela lutreola</i>	European Mink	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR	<input type="checkbox"/>	<input type="checkbox"/>	(Annexes II and IV of EU Habitats Directive)		
CHORDATA/ MAMMALIA	<i>Myotis dasycneme</i>	pond bat; Pond Myotis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	650			NT	<input type="checkbox"/>	<input type="checkbox"/>	Annexes II and IV of EU Habitats Directive	The site supports one of the largest breeding colonies of <i>Myotis dasycneme</i> Pond Bat in Europe (600- 700 individuals in a summer colony).	
CHORDATA/ MAMMALIA	<i>Pteromys volans</i>	Siberian Flying Squirrel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Annexes II and IV of EU Habitats Directive		
CHORDATA/ MAMMALIA	<i>Ursus arctos</i>	Brown Bear; Grizzly Bear	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Criterion 4: The site supports species at a critical stage of their life cycles and provides refuge during adverse conditions, serving as a feeding and breeding ground and a shelter for this species.	
CHORDATA/ MAMMALIA	<i>Vespertilio murinus</i>	Particolored Bat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex IV of EU Habitats Directive		

1) Percentage of the total biogeographic population at the site

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

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Riparian mixed forests (91F0)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive
Bog woodland (*91D0)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive, priority habitat type
Alkaline fens (7230)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive
Hydrophilous tall herb fringe communities of plains (6430)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive
Active raised bogs (*7110)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive, priority habitat type
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (*91E0)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive, priority habitat type
Water courses (rivers) (3260)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive
Natural dystrophic lakes and ponds (3160)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive
Northern boreal alluvial meadows (6450)	<input checked="" type="checkbox"/>	Flooded meadows along rivers Emajõgi, Põltsamaa, Pedja, Umbusi, Pikknurme, laeva and Elva. Semi-natural communities depending on active management.	Annex I of EU Habitats Directive
Transition mires and quaking bogs (7140)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive
Fennoscandian deciduous swamp woods (*9080)	<input checked="" type="checkbox"/>		Annex I of EU Habitats Directive, priority habitat type

[Optional text box to provide further information](#)

In Estonia management planning (inventories, monitoring and reporting) in protected sites is largely based on habitat types listed in Annex I of EU Habitats Directive.

Wetland habitats of Annex I occurring in Alam-Pedja are: natural dystrophic lakes and ponds (3160), water courses of plain to montane levels with the *Ranuncion fluitans* and *Callitricho-Batrachion* vegetation (3260), hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430), northern boreal alluvial meadows (6450), active raised bogs (7110*), transition mires and quaking bogs (7140), depressions on peat substrates of the *Rhynchosporion* (7150), alkaline fens (7230), Fennoscandian deciduous swamp woods (9080*) and bog woodland (91D0*), Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (91E0)

Other important types are: Western taiga (*9010) and Fennoscandian herb-rich forests with *Picea abies* (9050), Fennoscandian lowland species-rich dry to mesic grasslands (*6270)

The biggest area is covered by active raised bogs, fennoscandian deciduous swamp woods and bog woodland. Large areas are also floodplain meadows.

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

4.1 - Ecological character

Mires are represented by bogs (Põltsamaa, Umbusi), fens (Karisto, Ulila), transition bogs, and their complexes (Laeva). The bogs are of a continental type, with numerous bog-pools.

The extensive un-drained forests include birch-dominated swamp forests and carrs. Alluvial broad-leaved forests with elm, ash and oak in tree layer (Humulus floodplain forest site type) and with high species diversity are of special botanical value. As relicts of warmer climatic periods they have been preserved in Estonia in very few fragments, mainly on the territory of Alam-Pedja. In the lower part of the floodplains, the *Carex elongata* floodplain swamp forests grow.

In the open floodplain meadow of River Emajõgi thick bushes of *Betula humilis* are found in places.

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		0	440	Representative
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools		0		Representative
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		0	130	Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		3	2343	Representative
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		2	8197	Representative
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands		0	938	Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		4	1090	Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		1	17146	Representative

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
2: Ponds		2	6	
9: Canals and drainage channels or ditches		1	26	

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
forests on mineral soils	

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
<i>Allium ursinum</i>	Wild garlic	Protected species (III category)
<i>Carex disperma</i>	Soft-leaf sedge	Protected species (II category)
<i>Carex magellanica irrigua</i>		Protected species (II category)
<i>Dactylorhiza fuchsii</i>	Common Spotted Orchid	Protected species (III category)
<i>Dactylorhiza incarnata</i>	Early Marsh Orchid	Protected species (III category)
<i>Dactylorhiza maculata</i>	Heath Spotted Orchid	Protected species (III category)
<i>Epipactis palustris</i>	Marsh Helleborine	Protected species (III category)
<i>Goodyera repens</i>	Creeping Lady's Tresses	Protected species (III category)
<i>Huperzia selago</i>	Clubmoss	Protected species (III category)
<i>Iris sibirica</i>	Siberian Iris	Protected species (III category)
<i>Juncus stygius</i>		Protected species (II category), very rare in Estonia
<i>Platanthera bifolia</i>	Lesser Butterfly Orchid	Protected species (III category)
<i>Platanthera chlorantha</i>	Greater Butterfly Orchid	Protected species (III category)
<i>Thalictrum lucidum</i>		Protected species (III category)
<i>Viola uliginosa</i>		Protected species (III category)

Optional text box to provide further information

The site is important in maintaining the geographic range of plant species and communities common to raised bogs, transitional bogs, floodplain meadows and wet forests.
32 species of nationally protected vascular plant species have been recorded, most of them growing in wet habitats.

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range / endemism/other
ARTHROPODA/INSECTA	<i>Aeshna mixta</i>	Migrant Hawker				
ARTHROPODA/INSECTA	<i>Anax imperator</i>	Emperor dragonfly				
CHORDATA/MAMMALIA	<i>Castor fiber</i>	Eurasian Beaver				
CHORDATA/AVES	<i>Numenius phaeopus</i>	Whimbrel	13	2016		Nationally protected
ARTHROPODA/INSECTA	<i>Sympetma paedisca</i>	Siberian Winter Damsel				
CHORDATA/AVES	<i>Tringa nebularia</i>	Common Greenshank	30	2016		Nationally protected
CHORDATA/AVES	<i>Tringa totanus</i>	Common Redshank	15	2016		Nationally protected

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfb: Humid continental (Humid with severe winter, no dry season, warm summer)

Climate is transitional from the sub-maritime to the sub-continental. Mean annual temperature is 4.5°C, precipitation averages about 590 mm per year and snow cover lasts approximately 115 days, with rivers and lakes covered with ice from December until April (but there could be winters nearly without snow and ice cover).

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin

Not in river basin

Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

River Emajõgi and its tributaries River Pedja, River Põltsamaa, River Laeva
The wetland is a part of an inland paludified lowland, the Lowland of Lake Võrtsjärv (1750 sq.km).

4.4.3 - Soil

Mineral

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

Organic

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

No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

Please provide further information on the soil (optional)

Bedrock is formed by Devonian sandstones and covered by limnological sediments (varved clay, sand and silt), lake marl, gyttja and peat. Alluvial and peat soils dominate.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water	<input checked="" type="checkbox"/>	No change
Water inputs from groundwater	<input type="checkbox"/>	No change
Water inputs from rainfall / snowfall	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
To downstream catchment	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels fluctuating (including tidal)	No change
Water levels largely stable	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

Hydrology is partly influenced by river floods. At the highest water level one third of the territory of the wetland is flooded. Hydrological conditions of bog massifs is largely stable.

4.4.5 - Sediment regime

Significant accretion or deposition of sediments occurs on the site

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

Significant transportation of sediments occurs on or through the site

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

Sediment regime unknown

4.4.6 - Water pH

Acid (pH<5.5)

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

Circumneutral (pH: 5.5-7.4)

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

Unknown

Please provide further information on pH (optional):

Acid in bogs, circumneutral in other habitat types

4.4.7 - Water salinity

Fresh (<0.5 g/l)

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

Unknown

4.4.8 - Dissolved or suspended nutrients in water

Unknown

<no data available>

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

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ii) significantly different

- Surrounding area has greater urbanisation or development
- Surrounding area has higher human population density
- Surrounding area has more intensive agricultural use
- Surrounding area has significantly different land cover or habitat types

Please describe other ways in which the surrounding area is different:

The land is used for forestry, peat excavation and agriculture.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium
Wetland non-food products	Timber	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	Medium
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climatic processes	High
Hazard reduction	Flood control, flood storage	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Water sports and activities	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Major scientific study site	Medium
Scientific and educational	Long-term monitoring site	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium

Supporting Services

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

Optional text box to provide further information

The paludified and forested site acts as a natural regulator of the runoff and the water regime of the rivers. Together with Lake Võrtsjärv the accumulation area of the River Emajõgi is the largest (900 sq.km) naturally regulated area of river runoff in Estonia. The site plays an important role in the maintenance of water quality, acting as a natural buffer zone to the Emajõgi River and the town of Tartu.

The site is an important area for traditional berry-picking (*Oxycoccus palustris*). The rivers are important for local fishery (especially River Emajõgi), in past some traditional fishing forms (fishing with fish-garts) have been in use.

Only about 10 permanent inhabitants.

Within the site:

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

- i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

Description if applicable

Traditional use of floodplain meadows for hay-making. In the past the meadows were widely used. Stacks were left to dry on the spot. Part of the hay was taken downstream on barges but usually it was sledged home in winter. Special floodplain watchmen were hired to alert in case of possible damage to be caused to the haystacks by wind or water. Haymaking was organised as a haying bee with thousands of haymakers. Now it is important to find resources to keep the haymaking on meadows alive.

- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples
- 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

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

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Local authority, municipality, (sub)district, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Provide further information on the land tenure / ownership regime (optional):

within the Ramsar site: About 95% of the site is state-owned, 5% is private land

in the surrounding area: state, municipal and privately owned land

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

South Region of Environmental Board

Provide the name and title of the person or people with responsibility for the wetland:

Mrs Ena Poltimäe, director of the Tartu Region of Environmental Board

Postal address:

Aleksandri 14, 51004 Tartu, Estonia

E-mail address:

ena.poltimae@keskkonnaamet.ee

5.2 - Ecological character threats and responses (Management)

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

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Canalisation and river regulation	unknown impact	unknown impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

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	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change
Fishing and harvesting aquatic resources	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change
Unspecified	Medium impact	Medium impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	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	Medium impact	Medium impact	<input checked="" type="checkbox"/>	increase	<input type="checkbox"/>	No change

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified/others	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Agricultural and forestry effluents	Medium impact	Medium impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Industrial and military effluents	unknown impact	unknown impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Please describe any other threats (optional):

within the Ramsar site: Almost one-half of the area was occupied by the Soviet army (until 1991); a minor part of the reserve was used as a bombing range. The remainder has been subjected to almost no human influence and was closed to the public for 40 years. Now the main threat lies in the overgrowth of flood-plain meadows with scrub, also the mowing of the meadows was resumed in 2000. Potential threats are the uncontrolled access to the area (including motorboats on rivers and jeeps in forests), nonlegal hunting, and the intensification of fishery.

in the surrounding area: pollution from the peat excavation and growing forest clearance reaching the floodplains and old riverbeds at the Emajõgi River, and agricultural pollution coming via rivers.

5.2.2 - Legal conservation status

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	Alam-Pedja		whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
nature reserve	Alam-Pedja		whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Alam-Pedja		whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib 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

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Hydrology management/restoration	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Partially implemented

Human Activities

Measures	Status
Harvest controls/poaching enforcement	Implemented
Regulation/management of recreational activities	Implemented
Research	Partially implemented
Communication, education, and participation and awareness activities	Partially implemented

Other:

Restoration projects:
 LIFE+ project "Saving life in meanders and oxbow lakes of Emajõgi River on Alam-Pedja Natura 2000 area (HAPPYFISH) 2009-2012
 LIFE project "Restoring the integrity of freshwater habitats in Alam-Pedja Natura 2000 area - bringing River Laeva back to life" (HAPPYRIVER), 2013-2018

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? Yes No

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

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

The education and visitor's centre in Kirna was opened in 2008. Two nature trails (Selli-Sillaotsa study trail and Kirna hiking trail with tower) have been set up in the marginal areas of the reserve about which information booklets are available. Special book introducing the wetland was published in 1997 and a nice photo album in 2012. One of the main tasks is to promote nature conservation education, special nature camps for schoolchildren are organized in the nature school at Palupõhja. Since 2009 the visiting management is the responsibility of the State Forest Management Centre.

5.2.6 - Planning for restoration

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

Further information

The basic document for mire restoration is the Action plan for Estonian protected mires 2016-2023 which designates the restoration needs, areas, and order of planning and implementing.

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Implemented
Birds	Implemented
Animal community	Implemented

The biodiversity of the wetland was thoroughly studied and documented during the preparation of management plans (first plan 1998).

Several stations of state monitoring programme are located in Alam-Pedja: biological monitoring of rivers, monitoring of beavers and otters, monitoring of birds, monitoring of rare and protected plant communities. As Alam-Pedja consists one of Estonia's biggest preserved floodplain grasslands, the monitoring of management effectiveness has high priority: changes in floral composition and plant cover, communities of dragonflies, butterflies, bumble-bees and birds are monitored

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Aaviksoo, K., Paal, J., Dislis, T. 2000. Mapping of wetland habitat diversity using satellite data and GIS: an example from the Alam-Pedja nature reserve, Estonia. - Proc. Estonian Acad.Sci.Biol.Ecol., 49 (2), 177-193.

Ader, A., Tammur, E. (comp.) 1997. Alam-Pedja looduskaitseala. Alam-Pedja Nature Reserve. Tallinn, 64 pp.

Alam-Pedja looduskaitseala. 2001. Special issue devoted to the Alam-Pedja Nature Reserve. Eesti Loodus 9-10. (in estonian with english summaries)

Alam-Pedja looduskaitseala kaitsekorralduskava 1999-2001. Compiled by NC Society "Kotkas". 1998. Tartu (in estonian).

Alam-Pedja looduskaitseala kaitsekorralduskava 2003-2007. Compiled by NC Society "Kotkas". 2002. Tartu (in estonian).

Kalamees, A. (ed.) 2000. Important Bird Areas in Estonia. – Eesti Loodusfoto, Tartu, 114 pp. Lõhmus, A. et al. 1994. Laeva-Palupõhja linnustikust. Hirundo Supplementum, 35 pp. (in estonian with english summary).

Lõhmus, A., Kalamees, A., Kuus, A., Kuresoo, A., Leito, A., Leivits, A., Luigujõe, L., Ojaste, I., Volke, V. 2001. Bird species of conservation concern in the Estonian protected areas and important bird areas. Hirundo Supplementum 4, 37-167.

Mäemets, A. (ed.) 1968. Eesti järved (Estonian Lakes). Tallinn, 548 pp. (in estonian with english summary)

Orru, M. 1995. Eesti sood (Estonian mires). Eesti Geoloogiakeskus, Tallinn. 240 pp. (in estonian with english sumarmy).

Ristkok, J. 1969. Emajõe vanajõed. - Tartu Riikliku Ülikooli Toimetised, 231. Zoologia-alaseid töid V, lk. 3-87.

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

<1 file(s) uploaded>

vi. other published literature

<1 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



River with flooded meadow (*Herdís Fridolin, 25-05-2016*)



Flooded meadow (*Herdís Fridolin, 25-05-2016*)



River Emajõgi (*Herdís Fridolin, 25-05-2016*)



Transition bog (*Kaivi Viirma, 20-10-2015*)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation