



# Ramsar Information Sheet

Published on 20 October 2020

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## Estonia

### Matsalu



Designation date	29 March 1994
Site number	104
Coordinates	58°45'27"N 23°34'58"E
Area	48 610,00 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

Matsalu wetland incorporates the shallow islet-rich brackish-water Matsalu Bay, some 50 marine islands and islets, the surrounding portion of the Väinameri Sea, reed beds, 4000 ha of floodplain of the Kasari River delta and various semi-natural communities (incl 3000 ha of coastal meadows). The site serves as excellent roosting and feeding place for large number of species of water and coastal avifauna. The area is particularly important as a roosting place for waterfowl on East-Atlantic Fly-way.

## 2 - Data & location

### 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	Environmental Board
Postal address	Narva mnt 7a, 15172 Tallinn, Estonia

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

From year	2003
To year	2018

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Matsalu
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#### 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 type="radio"/> No <input checked="" type="radio"/>
(Update) B. Changes to Site area	No change to area
(Update) For secretariat only: This update is an extension	<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
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## 2.2 - Site location

### 2.2.1 - Defining the Site boundaries

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

Former maps	0
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Boundaries description

The boundary of the Ramsar Site is the same as the Matsalu National Park.
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### 2.2.2 - General location

a) In which large administrative region does the site lie?	Lääne County
b) What is the nearest town or population centre?	Lihula

### 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):	48610
Area, in hectares (ha) as calculated from GIS boundaries	48877.5

### 2.2.5 - Biogeography

RIS for Site no. 104, Matsalu , Estonia

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Boreal

Other biogeographic regionalisation scheme

Baltic

### 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

Shoreline stabilization and flood control. Coastal meadows covering approximately 3000 hectares are subject to regular flooding by sea water.  
Sediment retention. Sediments transported by the Kasari River get trapped in the Matsalu Bay.  
Storage, recycling, processing and acquisition of nutrients.

Other ecosystem services provided

Biodiversity. The site 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.  
Provisioning services: fish, livestock fodder, reeds.  
Cultural services: recreation and tourism; scientific and educational services; spiritual and inspirational services.

Other reasons

The site is a particularly good representative of a mosaic complex of marine, coastal and inland wetlands (shallow sea waters, estuarine waters, coastal lagoons, inland deltas, saltmarshes, flooded meadows) characteristic of the Boreal Biogeographical Region.  
The alluvial meadow of the Kasari River delta (4000 ha) is one of the biggest open wet meadows in Europe, 2500 ha of which are actively managed.

- 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.  
The ecosystems of Matsalu are rich in species. More than 780 species of vascular plants, 280 species of birds and 40 species of mammals as well as five species of amphibians and four species of reptiles have been recorded.  
Matsalu's coastal meadows (being among the largest of their kind in Europe) are among its richest areas in terms of bird life, being particularly invaluable to waders. During the migration period, these are important feeding and resting places for cranes and geese. Flood meadow alongside the Kasari River and its tributaries (approx 4,000 ha, the largest of its kind in Northern Europe) is an important spawning ground for fish. In spring, the meadow serves as a feeding ground for swans, geese and ducks, and later is an invaluable nesting site for many birds. In summer cranes use it as a moulting site.  
Large reed beds, located in the delta of the Kasari River (approx 2,000 hectares) serve as nesting grounds for many birds and moulting ground for ducks. Also the density of bird populations of around 50 islets of Väinameri Sea is very high.

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

- Criterion 5 : >20,000 waterbirds

Overall waterbird numbers

230 000

Start year

2003

Source of data:

Mägi et al., 2013

- Criterion 6 : >1% waterbird population

Criterion 7 : Significant and representative fish

Justification 49 fish species (as of the 76 species registered in Estonia) have been found in the Matsalu Bay, incl. Lampetra fluviatilis River Lamprey and Salmo trutta Sea Trout, listed in Estonian Red Data Book.

Criterion 8 : Fish spawning grounds, etc.

Justification During spring floods floodplain meadows serve as a spawning ground for Esox lucius Pike, Leuciscus idus Ide and Rutilus rutilus Roach. The shallow Matsalu Bay serves good spawning conditions for Osmerus eperlanus eperlanus Smelt and Perca fluviatilis Perch.

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
<b>Plantae</b>								
<i>Carex glareosa</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	VU in Red List of Estonia	
<i>Cypripedium calceolus</i>	Lady's Slipper	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	Annex II of the EU Habitats Directive	
<i>Dactylorhiza viridis</i>	Frog Orchid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	CR in Red List of Estonia	Very rare. In danger of extinction in Estonia. Strongly protected (I category)
<i>Dianthus superbus</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	EN in Red List of Estonia	
<i>Festuca altissima</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	VU in Red List of Estonia	
<i>Geranium lucidum</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	VU in Red List of Estonia	
<i>Neotinea ustulata</i>	Burnt Orchid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	EN in Red List of Estonia	
<i>Polygonum oxyspermum</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	EN in Red List of Estonia	
<i>Prunus spinosa</i>	Blackthorn	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	VU in Red List of Estonia	
<i>Sagina maritima</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	VU in Red List of Estonia	
<i>Viola elatior</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	VU in Red List of Estonia	Rare. Nationally protected (II category)

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 <sup>1)</sup>	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5								
<b>Others</b>																
CHORDATA/ AMPHIBIA	<i>Epidalea calarita</i>	Natterjack toad	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>	EN in Red List of Estonia	Numbers have been drastically declined in Estonia. Strongly protected (I category)	
CHORDATA/ MAMMALIA	<i>Pusa hispida</i>	Ringed Seal	<input checked="" 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"/>	EN in Red List of Estonia		
<b>Fish, Mollusc and Crustacea</b>																
CHORDATA/ ACTINOPTERYGII	<i>Esox lucius</i>	Pike	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		LC	<input type="checkbox"/>	<input type="checkbox"/>			

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	8									
CHORDATA/ CEPHALASPIDOMORPHI	<i>Lampetra fluviatilis</i>	Lampren; River Lamprey	<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"/>	<input type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			
CHORDATA/ ACTINOPTERYGII	<i>Leuciscus idus</i>	Ide	<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"/>	<input checked="" type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			
CHORDATA/ ACTINOPTERYGII	<i>Osmerus eperlanus</i>	Smelt	<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"/>	<input checked="" type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			
CHORDATA/ ACTINOPTERYGII	<i>Perca fluviatilis</i>	European perch	<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"/>	<input checked="" type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			
CHORDATA/ ACTINOPTERYGII	<i>Rutilus rutilus</i>	Siberian roach	<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"/>	<input checked="" type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			
CHORDATA/ ACTINOPTERYGII	<i>Salmo trutta</i>	Sea Trout	<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"/>	<input type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			
<b>Birds</b>																			
CHORDATA/ AVES	<i>Anas acuta</i>	Northern Pintail	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9000	2003-2015	15	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: NW Europe
CHORDATA/ AVES	<i>Anas clypeata</i>	Northern Shoveler	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1000	2003-2015	2.5	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: NW & C Europe
CHORDATA/ AVES	<i>Anas crecca</i>	Green-winged Teal; Eurasian Teal	<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"/>	<input type="checkbox"/>	2500	2003-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/ AVES	<i>Anas penelope</i>	Eurasian Wigeon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27000	2003-2015	1.8	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: NW Europe
CHORDATA/ AVES	<i>Anser anser</i>	Greylag Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8000	2003-2015	1.3	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: NW Europe
CHORDATA/ AVES	<i>Anser erythropus</i>	Lesser White-fronted Goose	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	30	2012-2015		VU	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CR in Red List of Estonia; Annex I of EU Birds Directive	migration stop-over area, 30 ind
CHORDATA/ AVES	<i>Anser fabalis</i>	Bean Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1600	2003-2015	3.8	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: North-east Europe/North-west Europe
CHORDATA/ AVES	<i>Aythya ferina</i>	Common Pochard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17500	2003	5	VU	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: NE & NW Europe
CHORDATA/ AVES	<i>Aythya fuligula</i>	Tufted Duck	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22500	2003-2015	1.8	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: NW Europe
CHORDATA/ AVES	<i>Aythya marila</i>	Greater Scaup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25000	2003-2015	8	LC	<input type="checkbox"/>	<input type="checkbox"/>	CR in Red List of Estonia	Criterion 6: Biogeographic region: Northern Europe/Western Europe
CHORDATA/ AVES	<i>Botaurus stellaris</i>	Eurasian Bittern	<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"/>	40	2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding, 40 calling males
CHORDATA/ AVES	<i>Branta leucopsis</i>	Barnacle Goose	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	40000	2013-2015	5	LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	Criterion 4: over 40 000 Branta leucopsis are roosting annually on coastal grasslands a month before breeding Criterion 6: Biogeographic region: Russia/Germany & Netherlands
CHORDATA/ AVES	<i>Bubo bubo</i>	Eurasian Eagle-Owl	<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"/>	<input type="checkbox"/>	2	2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Bird Directive	breeding, 2 pairs
CHORDATA/ AVES	<i>Bucephala clangula</i>	Common Goldeneye	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20000	2003-2015	1.8	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: NW, Central Europe
CHORDATA/ AVES	<i>Calidris alpina schinzii</i>	Dunlin	<input checked="" type="checkbox"/>	<input 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	2003-2+15	3		<input type="checkbox"/>	<input type="checkbox"/>	EN in Red List of Estonia; Annex I of EU Birds Directive	Criterion 6: Biogeographic region: Baltic/SW Europe & NW Africa
CHORDATA/ AVES	<i>Charadrius hiaticula</i>	Common Ringed Plover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000	2003	4.1	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: Europe, N Africa
CHORDATA/ AVES	<i>Chlidonias niger</i>	Black Tern	<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"/>	15	2013		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding
CHORDATA/ AVES	<i>Circus aeruginosus</i>	Western Marsh Harrier	<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"/>	<input type="checkbox"/>	30	2013		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding, 30-35 pairs
CHORDATA/ AVES	<i>Crex crex</i>	Corn Crane	<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"/>	200	2013		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding; about 200 calling males

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence <sup>1)</sup>	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification	
			2	4	6	9	3	5	7	8									
CHORDATA/AVES	<i>Cygnus columbianus</i>	Tundra Swan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000	2013-2017	32	LC	<input type="checkbox"/>	<input type="checkbox"/>	VU in Red List of Estonia; Annex I of EU Birds Directive	Criterion 6: <i>Cygnus columbianus bewickii</i> . Biogeographic region: NW Europe
CHORDATA/AVES	<i>Cygnus cygnus</i>	Whooper Swan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000	2013-2015	5	LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	Criterion 6: Biogeographic region: North-west Mainland Europe
CHORDATA/AVES	<i>Fulica atra</i>	Eurasian Coot	<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"/>	15000	2003-2015		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Gallinago media</i>	Great Snipe	<input checked="" type="checkbox"/>	<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"/>	50	2013-2015		NT	<input type="checkbox"/>	<input type="checkbox"/>	VU in Red List of Estonia; Annex I of EU Birds Directive	Breeding area
CHORDATA/AVES	<i>Grus grus</i>	Common Crane	<input checked="" type="checkbox"/>	<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"/>	20	2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding (20 pairs); 7000 ind during autumn migration
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	2013		LC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Annex I of EU Birds Directive	Breeding area, 6-8 pairs. Strongly protected (I category)
CHORDATA/AVES	<i>Hydroprogne caspia</i>	Caspian Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	165	2013-2014		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive, VU in Red List of Estonia	breeding; mainly on islets
CHORDATA/AVES	<i>Mergellus albellus</i>	Smew	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	650	2003	1.6	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: Biogeographic region: NW & C Europe
CHORDATA/AVES	<i>Philomachus pugnax</i>	Ruff	<input checked="" type="checkbox"/>	<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"/>	5	2013			<input type="checkbox"/>	<input type="checkbox"/>	EN in Red List of Estonia; Annex I of EU Birds Directive	Breeding area, 5-10 females. Strongly protected (I category)
CHORDATA/AVES	<i>Porzana parva</i>	Little Crake	<input checked="" type="checkbox"/>	<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"/>	5	2013-2015			<input type="checkbox"/>	<input type="checkbox"/>	VU in Red List of Estonia; Annex I of EU Birds Directive	Breeding area
CHORDATA/AVES	<i>Recurvirostra avosetta</i>	Pied Avocet	<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"/>	<input type="checkbox"/>	10	2015		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding area
CHORDATA/AVES	<i>Sterna hirundo</i>	Common Tern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	320	2013-2014		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding; mainly on islets
CHORDATA/AVES	<i>Sterna paradisaea</i>	Arctic Tern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1500	2013-2014		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding (1300-1600 pairs), mainly on islets
CHORDATA/AVES	<i>Sterna albifrons</i>	Little Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20	2013-2014		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding, mainly on islets
CHORDATA/AVES	<i>Thalasseus sandvicensis</i>	Sandwich Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	2013-2014		LC	<input type="checkbox"/>	<input type="checkbox"/>	Annex I of EU Birds Directive	breeding, 4-5 pairs

1) Percentage of the total biogeographic population at the site

Criterion 4: The site supports bird species at a critical stage of their life cycles and provides refuge during adverse conditions. Matsalu wetland is the most important bird area in Estonia and among the most important roosting places for waterfowl of East-Atlantic Fly-way. Over 30 000 different waterfowl are moulting in the reedbed. During spring migration 40 000-60 000 *Branta leucopsis* are roosting on coastal grasslands.

### 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
Fennoscandian deciduous swamp woods 9080	<input checked="" type="checkbox"/>		Listed in Annex I of EU Habitats Directive
Mudflats and sandflats 1140	<input checked="" type="checkbox"/>		Listed in Annex I of EU Habitats Directive
Coastal lagoons 1150*	<input checked="" type="checkbox"/>		Listed as a priority habitat in Annex I of EU Habitats Directive
Sandbanks slightly covered by waters 1110	<input checked="" type="checkbox"/>	Widely spread (8000 ha) coastal sea areas with shallow water featured by <i>Zostera marina</i> , <i>Ruppia maritima</i> , <i>Potamogeton pectinatus</i> , <i>Chara</i> spp.,	Listed in Annex I of EU Habitats Directive
Estuaries 1130	<input checked="" type="checkbox"/>	4700 ha. The Matsalu Bay is the only estuary in Estonia,	Listed in Annex I of EU Habitats Directive
Large shallow inlets and bays 1160	<input checked="" type="checkbox"/>		Listed in Annex I of EU Habitats Directive
Boreal Baltic islets and small islands 1620	<input checked="" type="checkbox"/>		Listed in Annex I of EU Habitats Directive
Boreal Baltic coastal meadows 1630*	<input checked="" type="checkbox"/>		Listed as priority habitat type in Annex I of EU Habitats Directive
Northern boreal alluvial meadows 6450	<input checked="" type="checkbox"/>	5500 hectares, of which 3400 hectares are actively managed.	Listed in Annex I of EU Habitats Directive

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

Management planning and activities in protected sites is based on habitat types listed in Annex I of the Habitats Directive. The main wetland communities in Matsalu site are meadows, reed-beds and marine waters. Various types of meadow communities cover some 9700 hectares, most common are flood and coastal meadows.

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

### 4.1 - Ecological character

The main communities are:

- alluvial meadows (*Carex* ssp., *Salix* ssp., *Alopecurus pratensis*, *Deshampsia caespitosa*, *Phalaroides arundinacea*);
  - coastal meadows (sea-shore pioneer associations, alvars);
  - forests and wooded meadows (*Alnus glutinosa*, *Betula pubescens*, *Salix pentandra*, *Populus tremula*), latter have mostly overgrown;
  - reed-beds (*Phragmites australis*, *Typha angustifolia*, *Scirpus lacustris*, *S. tabernaemontani*);
  - marine waters - *Chara* ssp. and in some areas algal blooms caused by eutrophication (f.ex. *Cladophora glomerata*).
- All terrestrial vegetation types are influenced by human activities (semi-natural vegetation).

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

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
A: Permanent shallow marine waters		1	24493	Representative
D: Rocky marine shores		4	84	Representative
E: Sand, shingle or pebble shores		0	3	Representative
H: Intertidal marshes		2	9794	Representative
J: Coastal brackish / saline lagoons		4	21	Representative

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	45	
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		0	7	Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		3	1103	Representative
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		0	3	
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands		0	11	Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		4	174	Representative

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
2: Ponds		0	6
9: Canals and drainage channels or ditches		4	52

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
dry meadows, forests, pastures	

### 4.3 - Biological components

#### 4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
<i>Carex extensa</i>		Nationally protected (II category)
<i>Carex mackenziei</i>		Nationally protected (II category)
<i>Cephalanthera rubra</i>		Nationally protected (II category)
<i>Dactylorhiza incarnata cruenta</i>		Nationally protected (II category)
<i>Halimione pedunculata</i>		Nationally protected (II category)
<i>Hemimium monorchis</i>		Nationally protected (II category)
<i>Najas marina intermedia</i>		Nationally protected (II category)
<i>Ophrys insectifera</i>		Nationally protected (II category)
<i>Orchis mascula</i>		Nationally protected (II category)
<i>Suaeda maritima</i>		Nationally protected (II category)

Optional text box to provide further information

Totally 772 plant species have been described. 22 species are of II protection category (endangered species in Estonia with scientific value).

#### 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
CHORDATA/AVES	<i>Anas platyrhynchos</i>	Mallard				12000 males
CHORDATA/MAMMALIA	<i>Castor fiber</i>	Eurasian Beaver				Protected mammal
CHORDATA/AVES	<i>Cygnus olor</i>	Mute Swan				
CHORDATA/MAMMALIA	<i>Eptesicus nilssonii</i>	Northern Bat				Protected mammal
CHORDATA/MAMMALIA	<i>Halichoerus grypus</i>	Gray Seal				
CHORDATA/AVES	<i>Limosa limosa</i>	Black-tailed Godwit	15	2013-2017		Breeding area
CHORDATA/MAMMALIA	<i>Lutra lutra</i>	European Otter				Protected mammal
CHORDATA/MAMMALIA	<i>Myotis dasycneme</i>	pond bat;Pond Myotis				Protected mammal
CHORDATA/MAMMALIA	<i>Myotis daubentonii</i>	Daubenton's Myotis				Protected mammal
CHORDATA/MAMMALIA	<i>Myotis nattereri</i>	Natterer's bat;Natterer's Myotis				Protected mammal
CHORDATA/MAMMALIA	<i>Nyctalus noctula</i>	noctule				Protected mammal
CHORDATA/MAMMALIA	<i>Pipistrellus nathusii</i>	Nathusius's Pipistrelle				Protected mammal
CHORDATA/MAMMALIA	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle				Protected mammal
CHORDATA/MAMMALIA	<i>Plecotus auritus</i>	brown big-eared bat;Brown Long-eared Bat				Protected mammal

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	Changes at RIS update
CHORDATA/MAMMALIA	<i>Nyctereutes procyonoides</i>	Raccoon dog	Potential	No change

## 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)

Average temperatures range from -5°C in February to +17°C in July. The average rainfall is 745 mm and evaporation 450 mm.

### 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.

The Kasari River. The catchment area is 3210 sq km.  
The Baltic Sea.

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)

The soils are mainly Fluvisols, Gleysols and Clayey Gleysols, Eutric Histosols (fen areas) and Dystric Histosols (transition mires and bogs).

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

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

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

Presence?	Changes at RIS update
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.

Fluctuations over 2 m due to winds, no significant tidal variations. Average seasonal variation of the Kasari River exceeds 1.7 m.

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

Sediment regime unknown

4.4.6 - Water pH

Alkaline (pH>7.4)

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

Unknown

4.4.7 - Water salinity

Fresh (<0.5 g/l)

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

Mxohaline (brackish)/Mxosaline (0.5-30 g/l)

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

Euhaline/Eusaline (30-40 g/l)

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

Unknown

Please provide further information on salinity (optional):

Water salinity is 0-7 promils.

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic

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

Unknown

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 i) broadly similar  ii) significantly different  site itself.

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

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	Medium
Wetland non-food products	Livestock fodder	Medium
Wetland non-food products	Reeds and fibre	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Erosion protection	Soil, sediment and nutrient retention	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	High
Recreation and tourism	Nature observation and nature-based tourism	High
Spiritual and inspirational	Cultural heritage (historical and archaeological)	High
Scientific and educational	Educational activities and opportunities	High
Scientific and educational	Major scientific study site	High
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High
Scientific and educational	Long-term monitoring site	High

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	Medium
Soil formation	Sediment retention	Medium
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Medium
Nutrient cycling	Carbon storage/sequestration	High
Pollination	Support for pollinators	Medium

Within the site:

Outside 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

Over the centuries, human activity has given rise to open cultural landscapes and meadows rich in species. Matsalu Floodpains are among largest of the kind in Europe. The open grassland landscape in our climatic region are subject to natural succession, that means overgrowing with shrubs and trees. Maintaining of open landscape is related to mowing (or grazing) which is conducted by local farmers. Agricultural activities and their continuity is crucial for maintaining the biodiversity of the Ramsar site.

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

Description if applicable

The management and maintenance of coastal and flooded meadows depends on local farmers, because the open grassland landscape in our climatic region are subject to natural succession, that means overgrowing with shrubs and trees. Maintaining of open landscape is related to mowing (or grazing) which is conducted by local farmers.

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"/>

##### 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"/>

#### 5.1.2 - Management authority

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

Environmental Board, Lääne region

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

Kadri Hänni, Senior Nature Conservation Specialist

Postal address:

Roheline tee 64  
80010 Pärnu

E-mail address:

kadri.hanni@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
Drainage	Medium impact	Medium impact	<input checked="" type="checkbox"/>	decrease	<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	Low impact	Medium impact	<input checked="" type="checkbox"/>	No change	<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

#### Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	Medium impact	Medium impact	<input checked="" type="checkbox"/>	increase	<input checked="" type="checkbox"/>	increase

#### Pollution

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

#### Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Storms and flooding	Low impact	Medium impact	<input checked="" type="checkbox"/>	increase	<input checked="" type="checkbox"/>	increase

Please describe any other threats (optional):

Golden jackal invasion.

#### 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	Väinamere		whole

## National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National park	Matsalu		whole

## Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Väinamere		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
Habitat manipulation/enhancement	Implemented

## Species

Measures	Status
Reintroductions	Implemented
Threatened/rare species management programmes	Partially implemented

## Human Activities

Measures	Status
Fisheries management/regulation	Implemented
Communication, education, and participation and awareness activities	Implemented

## Other:

The Matsalu Bay is a part of HELCOM Baltic Sea Protected Area (BSPA).  
Investigation and reintroduction of *Bufo calamita* (1999- 2003).  
Melioration, construction, fishing and hunting are strongly restricted but not totally banned (waterfowl hunting is banned).

## 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:

Penijõe Manor - the centre of Matsalu National Park, hosting also the Matsalu Nature Centre, offers good possibilities for conservation education. Annually 20000 people visit the centre.  
A set of bird-watching towers and nature trails is available.

### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

Further information

There is no special restoration plan. Restoration needed for maintenance of traditional semi-natural communities (incl coastal meadows and flooded meadows) is planned in the management plan of the site.

### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented
Animal species (please specify)	Implemented
Plant community	Implemented
Water quality	Implemented

There are 110 monitoring stations/monitoring points of state monitoring program in the site (not all in regular use). Matsalu is the centre for bird-ringing in Estonia. Long-term monitoring of nesting and migration birds is going on since 1957.  
Monitoring of coastal fish and Bufo calamita population, monitoring of changes in vegetation of coastal meadows connected to grazing intensity.

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Eschbaum, R., Hubel, K., Jürgens, K., Rohtla, M., Saks, L., Špilev, H., Talvik, Ü., Verliin, A. 2013. Kalanduse riikliku andmekogumise programmi täitmine ja andmete analüüs. Rannikumere kalad. Eesti Mereinstituut.  
[http://www.envir.ee/orb.aw/class=file/action=preview/id=1197325/Rannikumeri\\_kokku\\_2012.pdf](http://www.envir.ee/orb.aw/class=file/action=preview/id=1197325/Rannikumeri_kokku_2012.pdf)

Erm, V., Järv, L., Lepik, I., Lotman, A., Matsalu kalad, kahepaiksed, roomajad ja imetajad. Fishes, amphibians, reptiles and mammals of Matsalu. Tartu, 1998.

Kalamees, A. (ed.) Important Bird Areas in Estonia. Tartu, 2000, Eesti Loodusfoto, 114 p.

Kaljuste, T. Matsalu taimede nimestik. Vascular plants of Matsalu. Lihula, 2001. 67p. Kumari (Sits), E. Materjale Matsalu lahe linnustikust. Tartu, 1937. 328 p. In Estonian with German summary. (Materials about birds of Matsalu Bay).

Kumari, E. (ed.). Ornitoloogiline kogumik III. Tartu, 1963. 208 p. In Estonian with Russian and English summaries. (Collection of ornithological research III.)

Kumari, E. (ed.) .Waterfowl in Estonia. Tallinn, 1970. 72 p.

Kumari, E. et al (ed.). Matsalu maastik ja linnud. Ornitoloogiline kogumik VI. Tallinn, 1973. 167 p. In Estonian with Russian and English summaries. (Landscape and Birds of Matsalu. Collection of ornithological research VI)

Kumari, E.(ed.). Estonian Wetlands and Their Life. Estonian Contributions to the International Biological Program, No 7. Tallinn, 1974. 208 p. (Collection of ornithological researches VI.) Kumari, E. (ed.). Matsalu -rahvusvahelise tähtsusega märgala. Tallinn, 1985. 311 p. In Estonian with Russian and English summaries. (Matsalu- a Wetland of International Importance).

Mägi, E., Kaise, K. Kui palju linde elab Matsalu niitudel. Loodusvaatlusi 1997-1999. Lihula, 1999. In Estonian and English summary. (How many bird are on the meadows of Matsalu). p.88- 104

Mägi, E., Kastepõld, T. Matsalu lindude nimestik. Birds of Matsalu. Tallinn, 1996.

Oulasvirta, P., Leinikki, J., Reitalu, T. Underwater biotopes in Väinameri and Kõpu area, western Estonia. Helsinki 2001. 76 p.

Trei, T. Phytobentos of Matsalu Bay. Tallinn 1991. (In Estonian with English summary)

#### 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:



Haeska coastal meadow (  
*Hertsis Fridolin, 28-05-  
 2015* )

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation