



Ramsar Information Sheet

Published on 11 July 2017

Update version, previously published on : 1 January 2002

Sweden Västra Roxen



Designation date	14 November 2001
Site number	1133
Coordinates	58°29'02"N 15°35'14"E
Area	4 108,00 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

Roxen is a shallow and nutritious lake, which attracts large numbers of wetland birds not least during the spring and autumn migrations. More than 250 species of birds have been observed in the area. Three large water courses discharge into the western part of the lake (the Rivers of Stångån, Motala Ström River and Svartån), and here one can find one of the largest concentrations of maintained freshwater meadows in the country. The main visitors' areas are the nature reserves of Svartåmyrningen and Kungsbro. Here birdlife in the water meadows and in shallow areas of water can be studied from three different observation towers.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

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Compiler 2

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

From year	2002
To year	2015

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Västra Roxen
Unofficial name (optional)	Västra Roxen (lake)

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 checked="" type="checkbox"/>
(Update) The boundary has been restricted	<input checked="" type="checkbox"/>
(Update) B. Changes to Site area	the area has decreased
(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 checked="" 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?	Yes (actual)
(Update) Are the changes	Positive <input checked="" type="radio"/> Negative <input type="radio"/> Positive & Negative <input type="radio"/>
(Update) No information available	<input checked="" type="checkbox"/>
(Update) Changes resulting from causes operating within the existing boundaries?	<input type="checkbox"/>
(Update) Changes resulting from causes operating beyond the site's boundaries?	<input type="checkbox"/>

(Update) Changes consequent upon site boundary reduction alone (e.g., the exclusion of some wetland types formerly included within the site)?

(Update) Changes consequent upon site boundary increase alone (e.g., the inclusion of different wetland types in the site)?

(Update) Please describe any changes to the ecological character of the Ramsar Site, including in the application of the Criteria, since the previous RIS for the site.

The site has been better delineated, small wetlands and arable land of importance for migrating birds have been included and non-wetland habitats (forest, arable land, built-up areas) have been excluded from the Ramsar site. In the north east parts of the lake has been excluded from the site to better correspond to the Natura 2000 site.

(Update) Is the change in ecological character negative, human-induced AND a significant change (above the limit of acceptable change) Yes

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps

Boundaries description

In large parts the boundary corresponds to the Natura 2000 site Västra Roxen, but the Ramsar site is larger and also includes parts of the three water courses that enter the lake.

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
Udvardy's Biogeographical Provinces	10 Boreonemoral
Bailey's Ecoregions	240 Marine division
WWF Terrestrial Ecoregions	Sarmatic mixed forest
EU biogeographic regionalization	Boreal
Freshwater Ecoregions of the World (FEOW)	406 Northern Baltic drainages

Other biogeographic regionalisation scheme

Nordiska ministerrådet, 1977. Naturgeografisk regionindelning av Norden. NU B 1977:34. = Boreonemoral zon.
EEA, 2002. Digital Map of European Ecological Regions, (DMEER) = Sarmatic mixed forest.

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

This site is important for flood control and water purification.

Other ecosystem services provided

Fish production for fishing, both commercial and recreational. The regular flooding of the grasslands provides good growth of vegetation for grazing cattle.

Other reasons

The site contains large areas of grazed wet grasslands. There are few sites in the EU boreal region that has such a concentration of this habitat. The grasslands and the shallow waters at the site are important for migrating and breeding birds. There are also other wetland types (the freshwater lake and the connecting rivers) at the site having a representative value for the EU boreal region.

- Criterion 2 : Rare species and threatened ecological communities

- Criterion 3 : Biological diversity

Justification

The site supports a high diversity of birds, fish, amphibians, and insects. Great numbers of migratory birds use the area for food and resting during migration. For instance more than 260 bird species have been observed at the site. About 30 nationally red-listed species occur at the site. The flora is to a large extent formed by and dependent upon haymaking and grazing. Such large area of managed grasslands is not common in the EU Boreal region and the site is therefore important for supporting the biodiversity dependant on such habitat.

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

- Criterion 5 : >20,000 waterbirds

Overall waterbird numbers

>20,000

Start year

2012

Source of data:

Artportalen database Sweden






- Criterion 6 : >1% waterbird population

- Criterion 8 : Fish spawning grounds, etc.

Justification


















The lake is rich in fish and has spawning grounds and nursery habitats on which fish stocks depend. Classified as nationally important for commercial fishing. Important spawning area for the not so common *Leuciscus aspius*.

















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>Cardamine parviflora</i> 		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Swedish Red List 2015, EN.	See textbox below.
<i>Carex hartmanii</i> 		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Swedish Red List 2015, VU.	See textbox below.
<i>Scolochloa festuacea</i> 		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	Swedish Red List 2015, NT.	One of very few sites in Sweden. See textbox below.
<i>Viola persicifolia</i> 		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Swedish Red List 2015, NT.	See textbox below.

Criterion 3: The bryophyte *Physcomitrella patens* (Swedish Red List 2015, NT) may still be present at the site but hasn't been seen for a long time.

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	8								
Birds																		
CHORDATA/AVES	<i>Anas acuta</i> 	Northern Pintail	<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"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015, (VU).	Important site for resting during migration. See text box below the table and in section 3.1.
CHORDATA/AVES	<i>Anas querquedula</i> 	Garganey	<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"/>	<input type="checkbox"/>	Swedish Red List 2015, (VU).	Important site for breeding and resting during migration. See text box below the table and in section 3.1.
CHORDATA/AVES	<i>Anser anser</i> 	Greylag Goose	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10000	2015	1.6	LC 	<input type="checkbox"/>	<input type="checkbox"/>		Important site for resting during migration. The total numbers for the NW Europe/South-west Europe population is 610 000 individuals according to WI. See text box below the table and in section 3.1.
CHORDATA/AVES	<i>Anser erythropus</i> 	Lesser White-fronted 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 type="checkbox"/>	25	2015	18	VU 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Swedish Red List 2015, (CR). EC Birds Directive Annex I.	Important site for resting during migration. The total population is app. 140. Swedish individuals 70 (not calculated by WI) and 70 individuals in the Fennoscandia/Eastern Mediterranean population. See text box below the table the table and in 3.1.
CHORDATA/AVES	<i>Aythya fuligula</i> 	Tufted Duck	<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"/>	4000	2015	0.3	LC 	<input type="checkbox"/>	<input type="checkbox"/>		Important site for resting and feeding during migration. See text box below the table and in section 3.1.
CHORDATA/AVES	<i>Chlidonias niger</i> 	Black Tern	<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"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015, (VU). EC Birds Directive Annex I.	Important breeding site and resting site during migration. See text box below the table and in section 3.1.
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"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015, (CR).	See text box below the table and in section 3.1.
CHORDATA/AVES	<i>Mergellus albellus</i> 	Smew	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	500	2012	1	LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I.	Important site for resting during migration. The total numbers for the North-west & Central Europe (win) population is 40 000 individuals (WI). See text box below.
CHORDATA/AVES	<i>Mergus merganser</i> 	Common Merganser	<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"/>	7000		3	LC 	<input type="checkbox"/>	<input type="checkbox"/>		The total numbers for the merganser, North-west & Central Europe (win) 226 000 individuals according to WI. See text box below the table and in section 3.1.

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								
CHORDATA/ AVES	<i>Phalacrocorax carbo</i> 	Great Cormorant	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5000			LC 	<input type="checkbox"/>	<input type="checkbox"/>		Important feeding area for the species. See textbox below the table and in section 3.1.
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 type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015, (VU). EC Birds Directive Annex I.	Important resting site during migration. See text box below the table and in section 3.1.
CHORDATA/ AVES	<i>Porzana porzana</i> 	Spotted Crane	<input checked="" type="checkbox"/>	<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"/>	Swedish Red List 2015, (VU). EC Birds Directive Annex I.	Breeding site and resting place during migration. See text box below the table and in section 3.1.
CHORDATA/ AVES	<i>Remiz pendulinus</i> 	Eurasian Penduline Tit	<input checked="" 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"/>	Swedish Red List 2015, (EN).	See text box below the table and in section 3.1.
Fish, Mollusc and Crustacea																	
CHORDATA/ ACTINOPTERYGII	<i>Cobitis taenia</i> 		<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"/>	EC Habitats Directive Annex II.	See text box below the table and in section 3.1.
CHORDATA/ ACTINOPTERYGII	<i>Leuciscus aspius</i> 		<input 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"/>		See text box below the table and in section 3.1.
CHORDATA/ ACTINOPTERYGII	<i>Squalius cephalus</i> 		<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"/>		See text box below the table and in section 3.1.
Others																	
ARTHROPODA/ INSECTA	<i>Chlaenius nigricornis</i> 		<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"/>	<input type="checkbox"/>	Swedish Red List 2015, (LC), but partly extinct on subnational level.	See text box below the table and in section 3.1.
CHORDATA/ MAMMALIA	<i>Lutra lutra</i> 	European Otter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015, (NT). EC Habitats Directive Annex II.	See text box below the table and in section 3.1.
ARTHROPODA/ INSECTA	<i>Lycaena dispar hippothoe</i> 		<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"/>	<input type="checkbox"/>	Rare.	See text box below the table and in section 3.1.

1) Percentage of the total biogeographic population at the site

Criterion 2, 3 and 4: For all species, their status in the Swedish Red List and general information for that classification etc can be found at <http://artfakta.artdatabanken.se/>. Observations can be found in www.artportalen.se.

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
Freshwater grasslands	<input checked="" type="checkbox"/>	Freshwater grasslands managed by grazing cattle with yearly flooding in the deltas.	Freshwater grasslands are of very high conservation value in Sweden and the suitable EU-habitat (6410) has a bad conservation status in EU boreal region.

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

4.1 - Ecological character

Roxen is a shallow and nutritious lake with a high productivity. Three large water courses discharge into the western part of the lake (the Rivers of Stångån, Motala Ström River and Svartån), and here one can find one of the largest concentrations of freshwater meadows in the country. The grasslands are managed by mowing and grazing. Especially at the efflux of River Svartån there is a large wetland delta with grazed wet meadows. The grasslands, reed beds and the shallow waters at the site are important for migrating and breeding birds. The flora is to a large extent formed by and dependent upon haymaking and grazing. It contains several rare plants. There are also conservation values in non-wetland habitats where old oaks with associated flora and fauna are present. The main visitors' areas are the nature reserves of Svartåmyningen and Kungsbro.

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 >> L: Permanent inland deltas		3		Rare
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks		4		Rare
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		1		Representative
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		4		Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		1		Rare
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		4		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
4: Seasonally flooded agricultural land		1		

4.3 - Biological components

4.3.1 - Plant species

<no data available>

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	Asio flammeus	Short-eared Owl				EC Birds Directive Annex I.
CHORDATA/AVES	Botaurus stellaris	Eurasian Bittern				Swedish Red List 2015, NT. EC Birds Directive Annex I.
CHORDATA/AVES	Circus aeruginosus	Western Marsh Harrier				EC Birds Directive Annex I.
CHORDATA/AVES	Circus cyaneus	Northern Harrier				Swedish Red List 2015, NT. EC Birds Directive Annex I.
CHORDATA/AVES	Crex crex	Corn Crane				Swedish Red List 2015, NT. EC Birds Directive Annex I.
CHORDATA/AVES	Haliaeetus albicilla	White-tailed Eagle				Swedish Red List 2015, NT. EC Birds Directive Annex I.
CHORDATA/AVES	Sturnus vulgaris	Common Starling; European Starling	12000	2011		Swedish Red list 2015, WJ. Important resting site during migration.

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	Changes at RIS update
MOLLUSCABIVALVIA	Dreissena polymorpha	null	Potentially	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)

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 site is part of the Motåla Ström River Basin. A channel and a number of water courses enter the lake Roxen. Six of these water courses have their outlet within the site. The site drains eastwards through Motåla Ström, further on drainages can either continue through Motåla ström or continue via the channel Göta kanal. They finally end in the Baltic sea.

4.4.3 - Soil

Mineral

(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

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	
Usually seasonal, ephemeral or intermittent water present	

Source of water that maintains character of the site

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

4.4.5 - Sediment regime

Sediment regime unknown

<no data available>

4.4.6 - Water pH

Circumneutral (pH: 5.5-7.4)

(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

Unknown

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 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

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
Fresh water	Water for energy production (hydro-electricity)	Medium
Fresh water	Water for irrigated agriculture	Low
Wetland non-food products	Livestock fodder	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Erosion protection	Soil, sediment and nutrient retention	Medium
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High
Recreation and tourism	Picnics, outings, touring	Low
Recreation and tourism	Recreational hunting and fishing	Low
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Medium
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

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

<no data available>

4.6 - Ecological processes

<no data available>

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

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input 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:

County Administrative Board of Östergötland

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

Head of Nature conservation unit at the County Administration

Postal address:

58186 Linköping

E-mail address:

natur.ostergotland@lansstyrelsen.se

5.2 - Ecological character threats and responses (Management)

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

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Housing and urban areas	Low impact	Low impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Commercial and industrial areas	Low impact	Low impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Canalisation and river regulation	Medium impact	High impact	<input checked="" 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
Unspecified			<input type="checkbox"/>		<input checked="" type="checkbox"/>	

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	Low 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
Dams and water management/use	Medium impact	High impact	<input type="checkbox"/>	No change	<input checked="" 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	High 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 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
Habitat shifting and alteration	Low impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change
Storms and flooding	Low impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change

Please describe any other threats (optional):

Grazing and haymaking are very important for the site's rich flora and fauna. If such management would stop several species will undoubtedly be lost. Haymaking and grazing ceased temporarily during the 1950's - 1980's, which had a negative impact on the flora and birdlife. Today, the area is properly managed again. The modernisation of agriculture, with cessation of traditional management of pastureland may pose a problem in the future. The threats concerning the biological resource use may be the use of pesticides in the surrounding areas.

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	Kungsbro SCI & SPA	http://www.lansstyrelsen.se/Ostergotland/SiteCollectionDocuments/Sv/djur-och-natur/skyddad-natur/natura-2000/bevarandeplaner-kommunis/Linköping/Kungsbro_SE0230124_050815_2.pdf	partly
EU Natura 2000	Svartåmynningen SCI & SPA	http://www.lansstyrelsen.se/Ostergotland/SiteCollectionDocuments/Sv/djur-och-natur/skyddad-natur/natura-2000/bevarandeplaner-kommunis/Linköping/Svartamynningen_bevplan_050815.pdf	partly
EU Natura 2000	Västra Roxen SPA	http://www.lansstyrelsen.se/Ostergotland/SiteCollectionDocuments/Sv/djur-och-natur/skyddad-natur/natura-2000/bevarandeplaner-kommunis/Linköping/Västra_Roxen_SE0230388_141202.pdf	partly

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Nature Reserve 1	Svartåmynningen	http://www.lansstyrelsen.se/ostergotland/Sv/djur-och-natur/skyddad-natur/naturreservat/linkoping/svartamynningen/Pages/index.aspx	partly
Nature Reserve 2	Kungsbro	http://www.lansstyrelsen.se/ostergotland/Sv/djur-och-natur/skyddad-natur/naturreservat/linkoping/kungsbro/Pages/index.aspx	partly

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
Catchment management initiatives/controls	Proposed
Habitat manipulation/enhancement	Implemented
Hydrology management/restoration	Proposed
Faunal corridors/passage	Proposed

Species

Measures	Status
Threatened/rare species management programmes	Implemented

Human Activities

Measures	Status
Regulation/management of recreational activities	Implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented
Livestock management/exclusion (excluding fisheries)	Implemented

Other:

Hay-making is also an important conservation measure for the site.

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 area is included in the guiding programme of the County Administrative Board.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, the site has already been restored

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Implemented
Water quality	Implemented
Plant community	Implemented
Animal community	Implemented
Birds	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Hjelm, O., Molin, M., Nilsson, D., Nilsson, P. & Wester, J. 1996. Inventering av häckande fåglar på Västra Roxens strandängar 1996. Vingspegeln 15: 118-137 (in Swedish).

Tranesjö, J. 1980. Svartåmynningens naturreservat. Ornitologisk delinventering. Länsstyrelsen i Östergötlands län (in Swedish).

Tranesjö, J. 1992. Inventering av häckande fåglar inom Svartåmynningens naturreservat 1992.

Länsstyrelsen/Skogsvårdsstyrelsen i Östergötlands län (in Swedish).

6.1.2 - Additional reports and documents

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

<no file available>

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

<no file available>

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

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<1 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

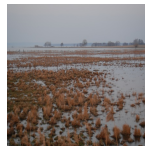
Please provide at least one photograph of the site:



Wet meadows (Länsstyrelsen Östergötland, 15-08-2007)



Wet meadows (Länsstyrelsen Östergötland, 15-08-2007)



Wet meadows (Länsstyrelsen Östergötland, 01-01-2007)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation | 2001-11-14