



Ramsar Information Sheet

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Update version, previously published on : 1 January 2009

Sweden

Svenska Högarna-Nassa



Designation date	12 June 1989
Site number	435
Coordinates	59°25'49"N 19°20'39"E
Area	15 210,00 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

The site was originally designated under the name "Stockholm, outer archipelago" of which it forms part and includes four groups of islands: Stora Nassa archipelago consists of 400 closely spaced, sparsely vegetated rocky islands and islets, separated by narrow channels. Lilla Nassa archipelago includes islands which are small, often devoid of vegetation, and more dispersed. Gillöga archipelago is composed of low, flat islands separated by shallow water. Svenska Högarna archipelago consists of low, flat islands covered with moor vegetation. Bare bedrock is dominating and the environment is very barren with few trees and bushes. Very small meadows are found close to the sea in many places. The archipelago is rich in reefs and there are also numerous small, nearly isolated bays. The avian fauna is rich, with more than 50 breeding species, and the site is very important to some migrating and breeding waterbirds and auks. Water vegetation consists mostly of Bladderwrack in shallow parts (0-6 m) and deeper down red algae dominates. Studies have shown that there's been both fresh and salt water species of fish in the area. In the outer parts of the East Coast archipelagos, however, populations of predatory fish such as pike and perch almost disappeared. The reason is probably large-scale changes such as eutrophication, overfishing and a disordered hypertrophy levels in the ecosystem. For the marine fauna should also be mentioned grey seal. The seal is highly attracted to the sites many low and flat islands.

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

From year	2009
To year	2015

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Svenska Högarna-Nassa
Unofficial name (optional)	originally designated as 'Stockholm, outer archipelago'

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 decreased
(Update) The Site area has been calculated more accurately	<input checked="" type="checkbox"/>
(Update) The Site has been delineated more accurately	<input 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?	Yes (likely)
(Update) Are the changes	Positive <input type="radio"/> Negative <input checked="" 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 checked="" 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.

Strong negative trends in the whole Stockholm outer archipelago for Common Eiders. The species formerly were the outstanding most common water-bird of the Stockholm archipelago. Predatory fish such as pike and perch have almost disappeared.

(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

The boundary is drawn in the water area to separate four neighbouring archipelagos from the surrounding islands and skerries. The boundary does not coincide with any administrative borders or any borders of protected areas.

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
Marine Ecoregions of the World (MEOW)	24. Baltic Seas
WWF Terrestrial Ecoregions	Sarmatic mixed forest PA0436
Other scheme (provide name below)	Sarmatic mixed forest
Udvardy's Biogeographical Provinces	10 Borenemoral
Bailey's Ecoregions	240 Marine division
EU biogeographic regionalization	Boreal
Other scheme (provide name below)	Boreo-nemoral zon

Other biogeographic regionalisation scheme

TEOW – Terrestrial Ecoregions of the World and DMEER 2002 (EEA) Digital Map of European Ecological Regions): Sarmatic mixed forest Nordiska ministerrådet, 1977. Naturgeografisk regionindelning av Norden. NU B 1977:34: Boreo-nemoral zone.

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

Other reasons

Svenska högarna-Nassa contains a representative example of natural wetland type found within the boreal region, including the Natura 2000 wetland habitats Reefs (1170), Boreal Baltic islets and small islands (1620) and Coastal lagoons (1150, priority habitat). The area constitutes a mixture of many islands surrounded by shallow marine water, altogether of high conservation value.

- Criterion 2 : Rare species and threatened ecological communities

- Criterion 3 : Biological diversity

Justification




The site is a highly representative and divers community in the outer archipelago, including mammals, birds, plants and fishes. The site supports populations of animal species important for maintain the biological diversity of the boreal region, including grey seals and a rich avian fauna during breeding and migration periods.

The site provides important staging areas and breeding sites for waterbirds such as sea ducks and auks and constitutes a refuge of great significance in adverse weather conditions.

The site is a representative example of a plant community in the outer archipelago. High diversity of vegetation closer to shorelines, the upper islands is very barren with few trees and bushes. Small meadows are found close to the sea in many places. The archipelago is rich in reefs and there are also numerous small, nearly isolated bays.

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

































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>Botrychium matricariifolium</i> 	Chamomile grape-fern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Swedish Red List 2015 (VU).	See textbox below the table and in section 3.1.
<i>Cardamine hirsuta</i> 	Hairy Bitter-cress	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		See textbox below the table and in section 3.1.
<i>Deschampsia cespitosa</i> 		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		See textbox below the table and in section 3.1.
<i>Silene viscosa</i> 	White sticky catchfly	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		See textbox below the table and in section 3.1.

Deschampsia bottnica "Deschampsia cespitosa cespitosa" - "a Baltic seashore species that is one of very few Scandinavian endemic plant species."
 Silene viscosa - "steppic species that have isolated occurrences on guano fertilized rocks in outer archipelagos of norther Baltic proper. "
 Cardamine hirsuta - "in Scandinavia a southern species that in the north-eastern parts of its distribution is confined to rocks in the Baltic archipelagos."

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

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>Alca torda</i>	Razorbill	<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"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>		Breeding. See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Anas acuta</i>	Northern Pintail	<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"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015 (VU).	See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Arenaria interpres</i>	Ruddy Turnstone	<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"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015 (VU).	See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Asio flammeus</i>	Short-eared Owl	<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"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I.	See text box below the table and in section 3.1.
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015 (VU).	See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Cepphus grylle</i>	Black Guillemot	<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"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>		Breeding. See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Clangula hyemalis</i>	Long-tailed Duck; Oldsquaw	<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"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>		See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Haliaeetus albicilla</i>	White-tailed Eagle	<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"/>				NT 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Many sub-adult birds. Important predator. See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Larus fuscus</i>	Lesser Black-backed Gull	<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"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>		Breeding. See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Melanitta fusca</i>	Velvet Scoter; White-winged Scoter	<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"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red-list 2015 (NT).	Very important breeding site but catastrophic decline. See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Numenius arquata</i>	Eurasian Curlew	<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"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2010 (NT).	See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Phalacrocorax carbo</i>	Great Cormorant	<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"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>		See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Podiceps auritus</i>	Horned Grebe	<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"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>		Breeding. See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Somateria mollissima</i>	Common Eider	<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"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>		Important site for moulting males and breeding site. See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Sterna paradisaea</i>	Arctic Tern	<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"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I.	Common breeder. See text box below the table and in section 3.1.
CHORDATA/AVES	 <i>Uria aalge</i>	Common Murre	<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"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>		See text box below the table in section 3.1.
Fish, Mollusc and Crustacea																		

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/ ACTINOPTERYGII	 <i>Anguilla anguilla</i>	European Eel	<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"/>	Swedish Red List 2015 (CR).	See text box below the table and in section 3.1.	
CHORDATA/ ACTINOPTERYGII	 <i>Gadus morhua</i>	Cod	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>	Swedish Red List 2015 (VU).	See text box below the table and in section 3.1.	
CHORDATA/ ACTINOPTERYGII	 <i>Zoarces viviparus</i>	Viviparous blenny	<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"/>		See text box below the table and in section 3.1.	
Others																		
CHORDATA/ MAMMALIA	 <i>Halichoerus grypus</i>	Grey Seal	<input type="checkbox"/>	<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"/>	EC Habitats Directive Annex II.	Foraging and breeding. See text box below the table and in section 3.1.	
CHORDATA/ AMPHIBIA	 <i>Triturus cristatus</i>		<input 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"/>	EC Habitats Directive Annex II.	See text box below the table and in section 3.1.	

1) Percentage of the total biogeographic population at the site

Criteria 4: The bird species are either breeding at the site, stage there during migration. The site is very important for ducks that moult at the site, especially Common Eider. There are a number of auk colonies at the site. The grey seal is in the area all year both for foraging and reproduction.

All bird data based upon the inventory: Sveriges Ornitologiska Förening, 2009. Kustfågelsbeståndets utveckling i Stockholms läns skärgård.

Criterion 2: For all Red-listed species, the Swedish red-list status and general information for that classification etc can be found at <http://artfakta.artdatabanken.se/>.

Fishspecies data in the action plan: Fiskeriverket, 2007. Åtgärdsprogram för marina fiskar och skaldjur.

We do not have the population sizes, neither for the site, nor for a suitable ecological region.

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
1150. Coastal lagoons	<input checked="" type="checkbox"/>	Expanses of shallow brackish water, wholly or partially separated from the sea. Salinity may vary depending on rainfall and evaporation and through the addition of brackish seawater from storms, temporary flooding of the sea in winter or tidal exchange.	EC Habitats Directive Annex II. The conservation status was unfavourable in the Swedish part of the EU Boreal region (2013).
1170. Reefs	<input checked="" type="checkbox"/>	Reefs are hard compact substrata on solid and soft bottoms, which arise from the sea floor in the sublittoral and littoral zone. Reefs may support a zonation of benthic communities of algae and animal species as well as concretions.	EC Habitats Directive Annex II. The conservation status was unfavourable in the Swedish part of the EU Boreal region (2013).
1620. Boreal Baltic islets and small islands	<input checked="" type="checkbox"/>	Groups of skerries, islets or single small islands. The vegetation is influenced by the brackish water and the on-going land upheaval. The vegetation is usually very sparse and consists often of mosaic-like pioneer vegetation communities.	EC Habitats Directive Annex II. The conservation status was unfavourable in the Swedish part of the EU Boreal region (2013).

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

4.1 - Ecological character

The site is a part of the outermost archipelago outside of Stockholm and includes four groups of islands. Stora Nassa archipelago consists of 400 closely spaced, sparsely vegetated rocky islands and islets, separated by narrow channels. Lilla Nassa archipelago includes islands which are small, often devoid of vegetation, and more dispersed. Gillöga archipelago is composed of low, flat islands separated by shallow water. Svenska Högarna archipelago consists of low, flat islands partly covered with heath vegetation.

For the site's land area in general bare bedrock is dominating and the environment is barren with few trees and bushes. Close to the sea there are scattered small wet grasslands. The archipelago is rich in stony reefs. There are also numerous small, nearly isolated bays. There are some small peatlands on the larger islands. In the nineteenth century the islands were barren without wooden vegetation. This probably had multiple causes including natural succession after land rise held back by human impacts. During the last hundred years those impacts has ceased. Low laying parts of the islands, including much of the peatlands, has been overgrown with woodland. In this natural succession much of the open mires will probably turn into wet groves.

The avian fauna is rich, with more than 50 breeding species, and the site is very important to some migrating and breeding waterbirds and auks. Water vegetation consists mostly of Bladderwrack in shallow parts (0-6 m) and deeper down red algae dominates. The archipelagos in the area are among the most species-rich algal communities in this part of the Baltic sea. Studies have shown that there's been both fresh and salt water species of fish in the area. In the outer parts of the East Coast archipelagos, however, populations of predatory fish such as pike and perch have almost disappeared. The reason is probably large-scale changes such as eutrophication, overfishing and a disordered hypertrophy levels in the ecosystem. For the marine fauna should also be mentioned grey seal. The seal is highly attracted to the sites many low and flat islands.

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		Representative
B: Marine subtidal aquatic beds (Underwater vegetation)		1		Representative
D: Rocky marine shores		2		Representative
H: Intertidal marshes		0		
J: Coastal brackish / saline lagoons		3		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 > Lakes and pools >> Tj: Permanent freshwater marshes/ pools		0		
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		3		
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		0		

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Parts of islets and small island that is not part of the shore	500

(EOD) Habitat connectivity

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
<i>Alnus glutinosa</i>		
<i>Betula pubescens</i>		
<i>Calluna vulgaris</i>		
<i>Carex nigra</i>		
<i>Ceratophyllum submersum</i>		
<i>Cornus suecica</i>		
<i>Dryopteris carthusiana</i>		
<i>Dryopteris filix-mas</i>		
<i>Empetrum nigrum</i>		
<i>Eriophorum vaginatum</i>		
<i>Filipendula ulmaria</i>		
<i>Juniperus communis</i>		
<i>Phalaris arundinacea</i>		
<i>Ribes alpinum</i>		
<i>Rubus idaeus</i>		
<i>Sagina maritima</i>		
<i>Sphagnum capillifolium</i>		
<i>Urticularia australis</i>		
<i>Vaccinium myrtillus</i>		
<i>Vaccinium uliginosum</i>		
<i>Vaccinium vitis-idaea</i>		

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				
CHORDATA/AVES	<i>Larus canus</i>	Mew Gull				
CHORDATA/ACTINOPTERYGII	<i>Clupea harengus</i>					
CHORDATA/ACTINOPTERYGII	<i>Gasterosteus aculeatus</i>					
MOLLUSCABIVALVIA	<i>Mytilus edulis</i>	Edible blue mussel; common mussel; blue mussel				
CHORDATA/AMPHIBIA	<i>Bufo bufo</i>	European Toad				
CHORDATA/REPTILIA	<i>Vipera berus</i>					

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfd: Subarctic (Severe, very cold winter, no dry season, cool 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.

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)

Most of the land area consists of is bare bedrock. There are a few places with a soil layer. Peat forming areas have a very small distribution. The sea-bottom is mainly hard bottoms with fine sediments in depressions and the deeper parts.

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
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.

Water levels can change slightly depending on current weather (high or low pressure).

(ECD) Connectivity of surface waters and of groundwater	Unknown
(ECD) Stratification and mixing regime	Unknown

4.4.5 - Sediment regime

Sediment regime unknown

(ECD) Water turbidity and colour	Unknown
(ECD) Light - reaching wetland	Unknown
(ECD) Water temperature	0-23 degrees Celsius in the surface water

4.4.6 - Water pH

Alkaline (pH>7.4)

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

Unknown

Please provide further information on pH (optional):

Research shows that the Baltic Sea has become about 30% more acidic the last hundred and fifty years.

4.4.7 - Water salinity

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

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

Unknown

(ECD) Dissolved gases in water	Unknown
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4.4.8 - Dissolved or suspended nutrients in water

Mesotrophic

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

Unknown

(ECD) Dissolved organic carbon	Unknown
(ECD) Redox potential of water and sediments	Unknown
(ECD) Water conductivity	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

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

The area closest to the site is only water areas. Further away to the NW-W-SW there are water areas with small archipelagos, and still further on the Swedish mainland. The closer to the mainland the larger impact. To the NE-SE-SW there is open sea for more than 100 km.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium
Scientific and educational	Major scientific study 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

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

This site is also known as BSPA (Baltic Sea Protection Area) Stora Nassa- Svenska Högarna and in the area a project of collaboration started in 2010. The project has resulted in a marine collaboration plan with concerned municipalities, property owners, organizations and other interested parties. The collaboration plan contains descriptions of the conservation values of the area and factors that can influence the values and actions to reduce this impact. For further information see 5.2.2 Legal conservation status.

- 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

(EOD) Primary production	<input type="text" value="Unknown"/>
(EOD) Nutrient cycling	<input type="text" value="Unknown"/>
(EOD) Carbon cycling	<input type="text" value="Unknown"/>
(EOD) Animal reproductive productivity	<input type="text" value="Unknown"/>
(EOD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.	<input type="text" value="Unknown"/>
(EOD) Notable species interactions, including grazing, predation, competition, diseases and pathogens	<input type="text" value="Unknown"/>
(EOD) Notable aspects concerning animal and plant dispersal	<input type="text" value="Unknown"/>
(EOD) Notable aspects concerning migration	<input type="text" value="Unknown"/>
(EOD) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity	<input type="text" value="Unknown"/>

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"/>

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

The site is predominantly privately owned. The state owns 2 668 ha, which is a Nature Reserve, in the archipelago of Svenska Högarna.

5.1.2 - Management authority

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

Länsstyrelsen Stockholms län

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

Kontaktperson Ramsarområden (naturvård)

Postal address:

Länsstyrelsen Stockholms län
Box 22067
104 22 Stockholm

E-mail address:

stockholm@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
Tourism and recreation areas	Medium impact	High impact	<input checked="" type="checkbox"/>	increase	<input checked="" type="checkbox"/>	increase

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Dredging	Low impact	High impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	increase

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Renewable energy	Low impact	High impact	<input checked="" type="checkbox"/>	increase	<input checked="" type="checkbox"/>	increase
Oil and gas drilling	Low impact	High impact	<input type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	increase

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Shipping lanes	Medium impact	High impact	<input checked="" type="checkbox"/>	increase	<input checked="" type="checkbox"/>	increase

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fishing and harvesting aquatic resources	Low impact	High impact	<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown

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	High impact	<input checked="" type="checkbox"/>	increase	<input checked="" type="checkbox"/>	increase

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified/others			<input checked="" type="checkbox"/>		<input type="checkbox"/>	

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	Low impact	High impact	<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	increase

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Industrial and military effluents	Low impact	High impact	<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown
Unspecified	Low impact	Medium impact	<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Medium impact	High impact	<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown
Habitat shifting and alteration	Low impact	High impact	<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown

Please describe any other threats (optional):

Natural system modifications: Predators like fox, mink and badger may disturb seabird colonies and pose a serious threat. A disordered hypertrophy levels in the aquatic ecosystem.

Pollution: Eutrophication of the Baltic Sea.

Climate change and severe weather: The climate change vision for the region is rising sea levels. Even small changes in sea level will threaten breeding success and habitats for birds and seal, and ultimately the ecological function of the area.

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	See two sites under national legal designations		partly
Other international designation	BSPA Stora Nassa-Svenska Högarna	http://www.lansstyrelsen.se/stockholm/SiteCollectionDocuments/Sv/publikationer/2010/rapport-2010-23.pdf	whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000 (1)	SE0110092 Stora Nassa	http://www.lansstyrelsen.se/stockholm/SiteCollectionDocuments/Sv/djur-och-natur/skyddad-natur/natura2000/Stora_Nassa.pdf	partly
EU Natura 2000 (2)	SE0110096 Svenska Högarna	http://www.lansstyrelsen.se/stockholm/SiteCollectionDocuments/Sv/djur-och-natur/skyddad-natur/natura2000/Svenska_Hogarna.pdf	partly
Nature reserve (1)	Stora Nassa NR	http://www.lansstyrelsen.se/stockholm/Sv/djur-och-natur/skyddad-natur/naturreservat/varmdo/Stora-Nassa/Pages/default.aspx	partly
Nature reserve (2)	Svenska Högarna NR	http://www.lansstyrelsen.se/stockholm/Sv/djur-och-natur/skyddad-natur/naturreservat/norrtalje/Svenska-Hogarna/Pages/default.aspx	partly
site of national importance for nature conservation	Stockholms skärgård; Yttre delen		whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Outer Stockholm archipelago	http://datazone.birdlife.org/site/factsheet/867	

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	Partially implemented

Habitat

Measures	Status
Improvement of water quality	Proposed

Species

Measures	Status
Threatened/rare species management programmes	Partially implemented

Human Activities

Measures	Status
Regulation/management of recreational activities	Partially implemented

Other:

There are plans to extend the protected area Svenska högarna and to improve the protection for the subaquatic habitats. Right now there are inventories of sea birds and the marine life taking place, among other things the data will be used for the process of improving the protection of 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:

There are information signs about protected areas and bird sanctuaries and information about the site is also included in brochures.

URL of site-related webpage (if relevant):

5.2.6 - Planning for restoration

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

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Fiskeriverket, 2007. Åtgärdsprogram för marina fiskar och skaldjur.

Gärdefors, U. 2015. (ed) Rödlistade arter i Sverige 2015 - The red list of Swedish species. Artdatabanken, SLU, Uppsala.

Kautsky, H. 1995. Dykinventering av de grunda bottenarnas vegetation i Stockholms skärgård, 1994. Underlag för regional miljöövervakning. Institutionen för Systemekologi. Technical report nr.18, 1995.

Kautsky, H., Wallin, A., Sandman, A., Qvarfordt, S. (manus) Improvement of the Baltic Sea coastal ecosystem as reflected by the distribution of *Fucus vesiculosus* (L.). Systemekologiska institutionen, Stockholms universitet.

Länsstyrelsen i Stockholms län, 2013. Beslut och skötselplan för Stora Nassa naturreservat.

Länsstyrelsen i Stockholms län, 1988. Beslut och skötselplan för Svenska Högarna naturreservat.

Länsstyrelsen i Stockholms län, 2007. Bevarandeplan för Natura 2000- området Stora Nassa, SE0110092.

Länsstyrelsen i Stockholms län, 2007. Bevarandeplan för Natura 2000- området Svenska Högarna, SE0110096.

Länsstyrelsen i Stockholms län, 2003. Skyddsvärda grundområden. Rapport 2003:05.

Länsstyrelsen i Stockholms län, 2007. Svenska Högarna. Marinbiologisk kartläggning och naturvärdesbedömning. Rapport 2007:01.

Länsstyrelsen i Stockholms län, 2008. Gillöga och Lilla Nassa - Marinbiologisk undersökning och naturvärdesbedömning av grunda bottenar. Rapport 2009:8.

Länsstyrelsen i Stockholms län, 2008. Qvarfordt, S., Borgiel, M. (2008a) Marin naturinventering av Stora Nassa. Rapport 2008:4.

Länsstyrelsen i Stockholms län, 2008. Qvarfordt, S., Borgiel, M. Båtlivets inverkan på havsbottenarna i Stora Nassa. Rapport 2008:5.

Naturvårdsverket, 2007. Skydd av marina miljöer med höga naturvärden – vägledning. Rapport 5739.

Sveriges Ornitologiska Förening, 2009. Kustfågelsbeståndets utveckling i Stockholms läns skärgård.

6.1.2 - Additional reports and documents

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

<no file available>

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

<no file available>

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

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

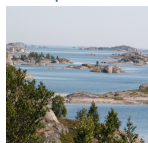
vi. other published literature

<no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

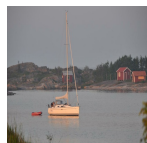
Please provide at least one photograph of the site:



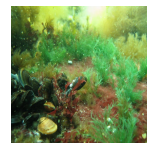
Stora Nassa, Natura 2000 and Nature Reserve (Länsstyrelsen Stockholm 07-07-2005)



Svenska Högarna, Natura 2000 and Nature Reserve (Länsstyrelsen Stockholm 24-07-2011)



Sailing boat in Lilla Nassa archipelago (Länsstyrelsen Stockholm 13-07-2010)



Marine diversity at the site (Länsstyrelsen Stockholm 22-07-2008)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 1989-06-12