Ramsar Information Sheet

Published on 9 September 2016
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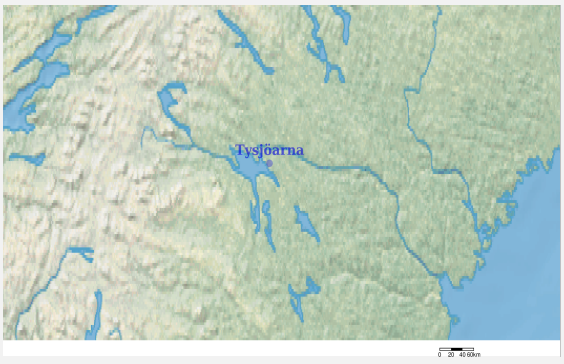
Sweden

Tysjöarna



Designation date	14 November 2001
Site number	1132
Coordinates	63°14'05"N 14°38'06"E
Area	424,00 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 is located in the cambro-silurian area with a limestone bedrock and high lime influence in the moraine. Tysjöarna is a large wetland complex as characterized by the two large lime lakes and marl fields with surrounding calcareous fens and wetland forest. These two lime lakes and marl fields are the largest and most representative of their type in the Swedish part of the EU boreal region.

The marl field accommodate an existence of a rare arctic moss-species Brym wrigthii. There are also a few lime springs and calcareous tufa with very special bryophyte flora that is strongly connected to these habitats. The calcareous fens has a rich flora which indicate a high lime influence in the fens, as e.g. Schoenus ferrugineus, Carex jemtlandica, Carex capillaris and the orchids Gymnadenia conopsea, Cyperipodium calceolus and Ophrys insectifera.
There are both open and forested mires at the site. The site has high nature values connected to the rich flora and fauna of the calcareous fens and wetland forest.

Tysjöarna also has high ornithological value and is an important area for migrating water fowl as well as breeding birds. The site is frequently visited by bird-watchers. There are three bird watch tower and three resting places in the site. From north there is a board walk which makes it possible to reach the bird tower by wheelchair.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Per-Olof Nystrand, (AA Jenny Lonnstad)
Institution/agency	Länsstyrelsen Jämtlands län, (AA Naturvårdsverket)
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2.1.2 - Period of collection of data and information used to compile the RIS

From year	2001
To year	2015

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Tysjöarna

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 ◉ No ○
(Update) The boundary has been delineated more accurately	☑
(Update) The boundary has been extended	☐
(Update) The boundary has been restricted	☐
(Update) B. Changes to Site area	the area has increased
(Update) The Site area has been calculated more accurately	☐
(Update) The Site has been delineated more accurately	☑
(Update) The Site area has increased because of a boundary extension	☐
(Update) The Site area has decreased because of a boundary restriction	☐

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 ◉ Negative ○ Positive & Negative ○
(Update) Positive %	50
(Update) No information available	☐
(Update) Changes resulting from causes operating within the existing boundaries?	☑
(Update) Changes resulting from causes operating beyond the site's boundaries?	☐
(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 protected as a nature reserve in 2013 and it has also been hydrologically restored by a Life-project.

The boundary of the site has changed so that it corresponds to the new nature reserve and where the conservation values are. In general the result is that arable land and non-wetland forests have been excluded. A lot of the changed parts of the boundary are changes returning to the original paper map boundary when the site was designated. The map used in the RIS-update between this update (2016) and the designation (2001) was based upon a digitalized boundary of bad quality.

(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: 0

Boundaries description

In general the boundary is drawn to follow the boundary of the site "Tysjöarna" in the Swedish Mire Protection Plan and to follow the boundary of the Nature Reserve. There are three exceptions that exclude areas with non-wetland or very small wetlands not being of international importance from the Ramsar site. The exemptions are the following: in the east the boundary follows the western side of the road between the villages Östersem and Kännåsen, excluding the protected area east of the road, in the south-east the boundary follows the northern side of the road not including the protected area south of the road close to Nifsåsbodarna and finally the most northern tip of the nature reserve covering only the road and the trees around it is not included in the Ramsar site.

2.2.2 - General location

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

b) What is the nearest town or population centre? Krokom,Östersund

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): 424

Area, in hectares (ha) as calculated from GIS boundaries: 424.68

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	03 West Eurasian Taiga
Bailey's Ecoregions	130 Subarctic Division
WWF Terrestrial Ecoregions	Scandinavian-Russian Taiga
Freshwater Ecoregions of the World (FEOW)	406 Northern Baltic Drainages
EU biogeographic regionalization	Boreal region

Other biogeographic regionalisation scheme

Nordiska Ministerrådet 1984. Naturgeografisk indelning av Norden. Region 31 Jämtlands kambrosiluromräde.

EEA 2002. Digital Map of the European Ecological Regions (DMEER): Scandinavian-Russian taiga

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	The site consists of two large calcareous lakes and marl fields with surrounding calcareous fens and wetland forest. The calcareous lakes with the marl fields are among the largest of their type in the Swedish part of the EU boreal region. There are also a few calcareous springs and some tufa formations with a rare bryophyte flora connected to this habitats. The flora and fauna of the calcareous fens and wetland forest is rich. The site is also an important area for migrating and breeding birds. The site supports for EU Boreal region a representative example of a wetland complex with large lime lakes and marl fields surrounding by rich and calcareous fens, open and wooded fens and wetland forest.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification	The site supports species typical for the habitats at the site (calcareous lakes, marl fields, calcareous fens, open and wooded mires and wetland forest). The site is of importance for staging migratory water fowl and for breeding birds. The site supports rare and not so common species in the EU boreal region. The site is especially important for threatened or not so common plants and birds.

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

☑ Criterion 8 : Fish spawning grounds, etc.

Justification	The calcareous lakes and the stream Semsån is an important habitat for several fish species. The site provides spawning areas, nursery habitats, and migration routes.

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
Bryum wrightii	null	☑	☑	☐		☐	The Swedish Red List 2015 (VU).	See text box below the table.
Carex capillaris	Hair Sedge	☐	☑	☐		☐		See text box below the table.
Carex capitata	null	☐	☑	☐		☐		See text box below the table.
Carex hostiana	Tawny Sedge	☐	☑	☐		☐	The Swedish Red List 2015 (NT).	See text box below the table.
Carex lepidocarpa jemtlandica	null	☐	☑	☐		☐		See text box below the table.
Carex ornithopoda	Bird's-foot Sedge	☐	☑	☐		☐		See text box below the table.
Cratoneuron filicinum	null	☐	☑	☐		☐		See text box below the table.
Cypripedium calceolus	ladys-slipper orchid	☐	☑	☐	LC	☐		See text box below the table.
Eriophorum latifolium		☐	☑	☐		☐		See text box below the table.
Gymnadenia conopsea	fragrant orchid	☐	☑	☐		☐		See text box below the table.
Ophrys insectifera	fly orchid	☐	☑	☐	LC	☐		See text box below the table.
Schoenus ferrugineus	null	☐	☑	☐		☐		See text box below the table.
Scorpidium cossonii	null	☐	☑	☐		☐		See text box below the table.
Tomentypnum nitens	null	☐	☑	☐		☐		See text box below the table.

The status for species in the Swedish Red List and general information for that classification as well as their distribution etc, can be found at http://artfakta.artdatabanken.se/. Observation of the species can be found in the Swedish database for observations http://www.artportalen.se/. For all the species observations are recorded in the wetland survey (VMI) 1992.

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	*Anas acuta*	Northern Pintail	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (VU),	Breeding and foraging. See the text box below the table.
CHORDATA/ AVES	*Anas querquedula*	Garganey	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (VU).	Breeding and foraging. See the text box below the table.
CHORDATA/ AVES	*Anthus pratensis*	Meadow Pipit	☐	☐	☐	☐	☑	☐	☐	☐				NT	☐	☐	The Swedish Red List 2015 (NT).	See the text box below the table.
CHORDATA/ AVES	*Apus apus*	Common Swift	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (VU).	See the text box below the table.
CHORDATA/ AVES	*Aythya ferina*	Common Pochard	☑	☑	☐	☐	☑	☐	☐	☐				VU	☐	☐	The Swedish Red List 2015 (VU).	Breeding and foraging. See the text box below the table.

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/ AVES	*Carpodacus erythrinus*	Common Rosefinch	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (VU).	See the text box below the table.
CHORDATA/ AVES	*Dendrocopos minor*	Lesser Spotted Woodpecker	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (NT).	See the text box below the table.
CHORDATA/ AVES	*Emberiza schoeniclus*	Common Reed Bunting; Reed Bunting; Common Reed-Bunting	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (VU).	See the text box below the table.
CHORDATA/ AVES	*Larus argentatus*	European Herring Gull; Herring Gull	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (VU).	See the text box below the table.
CHORDATA/ AVES	*Numenius arquata*	Eurasian Curlew	☐	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	The Swedish Red List 2015 (NT).	Foraging. See the text box below the table.
CHORDATA/ AVES	*Philomachus pugnax*	Ruff	☑	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (VU),	Courtship and foraging. See the text box below the table.
CHORDATA/ AVES	*Picoides tridactylus*	Eurasian Three-toed Woodpecker; Three-toed Woodpecker	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (NT).	Breeding and foraging. See the text box below the table.
CHORDATA/ AVES	*Riparia riparia*	Bank Swallow; Sand Martin	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (NT).	See the text box below the table.
CHORDATA/ AVES	*Saxicola rubetra*	Whinchat	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	The Swedish Red List 2015 (NT).	See the text box below the table.
Fish, Mollusc and Crustacea																		
CHORDATA/ ACTINOPTERYGII	*Esox lucius*	Northern pike	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		Spawning and nursery habitats. See the text box below the table.
CHORDATA/ ACTINOPTERYGII	*Lota lota*	Burbot	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		Spawning and nursery habitats. See the text box below the table.
CHORDATA/ ACTINOPTERYGII	*Perca fluviatilis*	Perch	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		Spawning and nursery habitats. See the text box below the table.
CHORDATA/ ACTINOPTERYGII	*Phoxinus phoxinus*	Eurasian minnow	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		Spawning and nursery habitats. See the text box below the table.
CHORDATA/ ACTINOPTERYGII	*Salmo trutta*	Trout	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		Migration habitats. See the text box below the table.
CHORDATA/ ACTINOPTERYGII	*Thymallus thymallus*	Grayling	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		Migration habitats. See the text box below the table.

1) Percentage of the total biogeographic population at the site

The species status in the Swedish Red List and general information for that classification as well as their distribution etc, can be found at http://artfakta.artdatabanken.se/. Observation of the species can be found in the Swedish database for observations http://www.artportalen.se/.

For criteria 8 the site is a good habitat for the lifecycle (spawning, nursery etc) for burbot, northern pike, perch and euroasian minnow. For trout and grayling the site is a good habitat for migration in the small water rills.

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
Alkaline fens (EU-code 7230)	☑	Wetland mostly or largely occupied by peat-or tufa -producing small sedge and brown moss communities. Developed on soils permanently waterlogged, with a soligenous or topogenous base rich, often calcareous water supply.	According to the latest assessment (2013) the community have an unfavourable conservation status in the Swedish part of the EU Boreal region.
Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. (EU-code 3140)	☑	Lakes and pools with waters fairly rich in dissolved bases or with mostly blue to greenish, very clear, waters poor in nutrients. The bottom is covered with charophytes. There can be deposits of marl	According to the latest assessment (2013) the community have an unfavourable conservation status in the Swedish part of the EU Boreal region.

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

4.1 - Ecological character

The site is located in the cambro-silurian area with a limestone bedrock and high lime influence in the moraine. Tysjöarna is a large wetland complex that is characterized by the two large lime lakes and marl fields with surrounding calcareous fens and wetland forest. These two lime lakes and marl fields are the largest and most representative of their type in the EU boreal region.

The marl field accommodate an existence of a rare arctic moss-species Bryum wrigthii.
There are also a few lime springs with calcareous tufa with very special moss flora that is strongly connected to these habitats.

The calcareous fens has a symptomatic rich flora which indicate a high lime influence in the fens, as e.g. Schoenus ferrugineus, Carex jemtlandica, Carex capillaris and the orchids Gymnadenia conopsea, Cyperipodium calceolus, Ophrys insectifera and Listera ovata.
There are both wooded and open mires at the site.

The site has high nature values connected to the rich flora and fauna of the calcareous fens and wetland forest. Tysjöarna has high ornithological value and is an important area for resting and breeding birds and several fish species spend parts or their whole life cycle at the site.

The site has recently been hydrologically restored and the raised water levels has enlarged the lakes.

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

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks		0		
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		4	7	Representative
Fresh water > Lakes and pools >> P: Seasonal/ intermittent freshwater lakes		1	91	Representative
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		2	54	Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		0		
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		2	54	Representative
Fresh water > Flowing water >> Y: Permanent Freshwater springs; oases		0		Rare

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
coniferous forest on dry ground	

4.3 - Biological components

4.3.1 - Plant species

<no data available>

4.3.2 - Animal species

<no data available>

4.4 - Physical components

4.4.1 - Climate

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

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 323

a) Maximum elevation above sea level (in metres): 360

- 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 in the upper part of the very small catchment area of river Semsån. Semsån is a tributary to the river Indalsälven.

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)

There are large areas with lake deposits of calcareous material at the site.

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 rainfall	☐	No change
Water inputs from groundwater	☐	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

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

In late 1800 there was a ditching project in the site which lowered the water level in the lakes.
Now has a Life project "Add mire" been used in the area by increase the water level to enlarge the water area in the lakes.

4.4.5 - Sediment regime

- Sediment regime unknown ☐

<no data available>

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 ○

Unknown ☐

4.4.8 - Dissolved or suspended nutrients in water

Oligotrophic ☑

(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 ☑

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

The site with its lakes and large deposits of calcareous material is very different from the surrounding areas. Not far away is the city of Östersund.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	
Recreation and tourism	Picnics, outings, touring	

Within the site: 10000

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
Local authority, municipality, (sub)district, etc.	☐	☑
National/Federal government	☑	☑

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	☑	☑

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: Länsstyrelsen Jämtlands län (County administration board of Jämtland)

Provide the name and title of the person or people with responsibility for the wetland: Ramsar contact person, Nature conservation administrator

Postal address: S-831 86 Östersund, Sweden

E-mail address: jamtland@lansstyrelsen.se

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			☑		☐	

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Wood and pulp plantations			☑		☐	

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Mining and quarrying			☑		☐	

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Roads and railroads	Low impact		☑	No change	☑	No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Logging and wood harvesting			☑		☐	

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fire and fire suppression			☑		☐	

Please describe any other threats (optional):

There was a small quarry where material for brick production was extracted in the beginning of the 20th century. There hasn't been any extraction for long time now. It's unlikely that anyone will get a permit to do any extraction at the site in the future.

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	Tysjöarna SE0720362	http://www.lansstyrelsen.se/jamtland/SiteCollectionDocuments/sv/ djur-och-natur/skyddad-natur/natura-2000/Tysjoarna_SE0720362_bp4 .pdf	partly

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Bird Sanctuary	Tysjöarna fågelskyddsområde		whole
Nature Reserve	Tysjöarna	http://www.lansstyrelsen.se/jamtland/Sv/djur-och-natur/skyddad-natur/naturreservat/krokom/tysjoarna/Pages/default.aspx	whole

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☑

Ib Wilderness Area: protected area managed mainly for wilderness protection ☐

II National Park: protected area managed mainly for ecosystem protection and recreation ☐

III Natural Monument: protected area managed mainly for conservation of specific natural features ☐

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☐

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Hydrology management/restoration	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? No

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 three bird watch tower and three resting places in the site. From north there is a board walk which makes it possible to reach the bird tower by wheelchair. There are also other foot paths at the site.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant species	Implemented
Birds	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Johansson, R. County administration board of Jämtland. 1981. Compilation of sites with high nature values
Swedish environmental protection agency. 1994. Mire Protection Plan of Sweden.
County administration board of Jämtland. 2000. Wetlands i Jämtland county (report 2002:2).
County administration board of Jämtland. 2002. Marl sites in Jämtland (report 2002:3).
County administration board of Jämtland. 2004. Rich fens in Jämtland cambro-silurian area. (report 2004:2)
Swedish environmental protection agency. 2007. Mire Protection Plan of Sweden (report 5669).

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:

Calcareous tufa in the site Tysjöarna (*P-O Nystrand, County administration board of Jämtland, 20-07-1992*)

Orchids in The site Tysjöarna (*P-O Nystrand, County administration board Jämtland, 20-07-1992*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation: 2001-11-14