

# Information Sheet on Ramsar Wetlands (RIS) – 2006-2008 version

Available for download from [http://www.ramsar.org/ris/key\\_ris\\_index.htm](http://www.ramsar.org/ris/key_ris_index.htm).

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2<sup>nd</sup> edition, as amended by COP9 Resolution IX.1 Annex B). A 3<sup>rd</sup> edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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### 1. Name and address of the compiler of this form:

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FOR OFFICE USE ONLY.

DD MM YY							

Designation date

Site Reference Number

Johan Rova, Jönköping County Administrative Board, S-551 86 Jönköping, Sweden

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### 2. Date this sheet was completed/updated:

February 2009

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### 3. Country:

Sweden

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### 4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Store Mosse and Kävsjön

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### 5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or  
b) Updated information on an existing Ramsar site

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### 6. For RIS updates only, changes to the site since its designation or earlier update:

- a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

**If the site boundary has changed:**

- i) the boundary has been delineated more accurately ; or
- ii) the boundary has been extended ; or
- iii) the boundary has been restricted\*\*

and/or

**If the site area has changed:**

- i) the area has been measured more accurately ; or
- ii) the area has been extended ; or
- iii) the area has been reduced\*\*

**\*\* Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

**b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:**

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**7. Map of site:**

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) a **hard copy** (required for inclusion of site in the Ramsar List): ;
- ii) an **electronic format** (e.g. a JPEG or ArcView image) ;
- iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** .

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The borderline to a large extent follows the border of the existing National Park.

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**8. Geographical coordinates** (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

57°18'N 013°57'E

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**9. General location:**

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

The Store Mosse-Kävsjön site is located in southern Sweden, about 70 km south of the town of Jönköping, in the county of Jönköping (population 333 610), municipalities of Gnosjö (pop. 9 9 657), Vaggeryd (pop. 12 939) and Värnamo (pop. 32 930).

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**10. Elevation:** (in metres: average and/or maximum & minimum)

Average 172 metres

**11. Area:** (in hectares)

7 580 hectares

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland. The site is a vast mire landscape, the largest in southern Sweden. It is comprised of a mosaic of raised bogs, fen, deciduous swamp woods and oligotrophic lakes. Store Mosse is the largest active raised bog in Sweden. The area is important for its diverse bird community, having a remarkable mix of northern and southern bird species. The mire area is the breeding ground for southern Sweden's possibly densest population of Crane *Grus grus*. The site contains typical mire and wet meadow vegetation interspersed with patches of *Pinus sylvestris*, dry grasslands, and treeless areas of dwarf scrub. The flora includes a number of *Orchidaceae*.

**13. Ramsar Criteria:**

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

1. Store Mosse and Kävsjön contains a representative example of natural wetland types found within the boreal region (mosaic of raised bogs, fen, deciduous swamp woods and oligotrophic lakes), including the Natura 2000 priority habitats *Active raised bogs* (7110) and *Bog woodland* (91D0).

2. The site supports populations of nationally threatened species including Montagu's harrier *Circus pygargus* (EN, rare), Garganey *Anas querquedula* (VU), White-tailed eagle *Haliaeetus albicilla* (NT), and Geyer's whorl snail *Vertigo geyeri* (NT), as well as a number of other near threatened (NT) species. The site also supports species included in Annex 1 of the EU Birds Directive (see item 22).

3. The site supports populations of animal species important for maintaining the biological diversity of the boreal region, including rich avian fauna with a number of nationally red-listed species and species of Annex 1 of the EU Birds Directive (see item 22).

4. The site provides important staging areas and breeding localities for birds (see item 22), including the breeding ground for southern Sweden's possibly densest population of Crane *Grus grus*.

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Boreal

**b) biogeographic regionalisation scheme** (include reference citation):

European Environment Agency. 2003. Europe's environment: the third assessment, p 231. Environmental assessment report No 10. Luxembourg: Office for Official Publications of the European Communities.

#### 16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil is mainly peat, sand and moraine. Peat, in the form of raised bogs, covers more than 90 % of the area. About 5 % of the area is affected by peat extraction (which ended in the 1960s). The fens are partly natural but also formed by artificial lowering of the lakes in the 1840s and 1870s. Most of the surrounding lagg fens have been drained by man. The lakes are dystrophic. Nowadays only Kävsjön, Kalvasjön, and Häradsösjön have open water at high-water periods (usually in spring time). Most lake areas are very shallow, only 1-2 m. There are also a number of smaller lagoons within the mires. Across the raised bogs, fossilized sand dunes wind over the surrounding peatland. These areas are covered by relatively young *Pinus sylvestris* gallery forests.

The climate is humid with a yearly mean annual rainfall (1961-1991) of 864 mm. Annual average temperature is 6,2 C°.

#### 17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

The catchment area which includes the Store Mosse and Kävsjön Ramsar site comprises about 300 square kilometers. To the largest part, the site is situated in the upper parts of the catchment area. However, Kävsjön is partly fed by water originating outside the area. This water passes close to grazed lands and small roads, but it is barely affected by this.

The site, as well as the surrounding catchment area, is rather flat. Granite, gneiss, and metabasite form the bedrock in the catchment area. Sand, peat, and till are the predominating soil types. Land use is mainly forestry and to a small extent farming, mostly grazing by cattle.

#### 18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

As all peatlands, Store Mosse is an important reservoir for fresh water. The mires could to some extent prevent flooding in downstream areas, but this has not been verified.

Man-made ditches are only maintained along the roads crossing the area. This will eventually regenerate most fens bordering the raised bogs, but the abandoned management of the ditches also causes flooding of areas surrounding the protected area (most of the Ramsar site is protected as a national park). This has led to conflicts with surrounding landowners.

#### 19. Wetland Types

##### a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • Q • P • Q • R • Sp • Ss • Tp • Ts • U • Va • Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

**b) dominance:**

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

U, Xp, O, Tp, M, 4, Ts, P

**20. General ecological features:**

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The site comprises a mosaic of raised bog, fen and oligotrophic lakes and lagoons. The site contains typical mire vegetation interspersed with patches of *Pinus sylvestris* and treeless areas of dwarf scrubs. The flora includes a number of *Orchidaceae*. Large parts of the lakes are covered with quagmires of Horsetails *Equisetum* spp. and Bottle sedge *Carex rostrata*, and are otherwise characterised by Common club-rush *Scirpus lacustris*. The site is important for migrating and breeding birds.

The area includes the following Natura 2000 habitats (with approximate areas): 3160 (240 ha), 6270 (2 ha), 6410 (44 ha), 7110 (4870 ha), 7120 (400 ha), 7140 (1170 ha), 7230 (25 ha), 9010 (340 ha), 9070 (30 ha), and 91D0 (470 ha).

**21. Noteworthy flora:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Species	Reason	Status
Fragrant orchid <i>Gymnadenia conopsea</i>	protected	increasing
Marsh helleborine <i>Epipactis palustris</i>	protected	increasing
Narrow-leaved marsh-orchid <i>Dactylorhiza traunsteineri</i>	protected	increasing
Sundews <i>Drosera</i> spp.	typical, interesting to public	common
Bog asphodel <i>Narthecium ossifragum</i>	typical	common
Grass-of-Parnassus <i>Parnassia palustris</i>	decreasing in southern Sweden	unknown

**22. Noteworthy fauna:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Species	Reason	Status
Geyer's whorl snail <i>Vertigo geyeri</i>	Habitats Directive, Annex 2	
Golden plover <i>Pluvialis apricaria</i>	Birds Directive, Annex 1	breeding
Crane <i>Grus grus</i>	Birds Directive, Annex 1	breeding
Red-throated diver <i>Gavia stellata</i>	Birds Directive, Annex 1	breeding
Black grouse <i>Tetrao tetrix</i>	Birds Directive, Annex 1	breeding
Montagu's harrier <i>Circus pygargus</i>	Birds Directive, Annex 1	breeding (rare)
Wood sandpiper <i>Tringa glareola</i>	Birds Directive, Annex 1	breeding
Jack snipe <i>Lymnocyptes minimus</i>	Rare in southern Sweden	migrating through
Broad-billed sandpiper	Rare in southern Sweden	migrating through

<i>Limicola falcinellus</i>		(rare)
Redshank <i>Tringa totanus</i>	Typical	breeding
Lapwing <i>Vanellus vanellus</i>	Typical	breeding
Yellow wagtail <i>Motacilla flava flava</i>	Typical	breeding
Black-throated diver <i>Gavia arctica</i>	Typical, Birds Directive, annex 1	breeding
Shoveler <i>Anas clypeata</i>	Typical	breeding
Garganey <i>Anas querquedula</i>	Typical	breeding
Little stint <i>Calidris minuta</i>		migrating through
Great snipe <i>Gallinago media</i>	Birds Directive, Annex 1	migrating through
Golden eagle <i>Aquila chrysaetos</i>	Birds Directive, Annex 1	wintering, occasionally breeding
White-tailed eagle <i>Haliaeetus albicilla</i>	Birds Directive, Annex 1	wintering

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### 23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

Several current social relations: education, scientific research, tourism and outdoor recreation, and grazing. Some historical associations connected to the former peat industry and to the old villages in the area (Södra Svänö and Lövö).

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box  and describe this importance under one or more of the following categories:

- i) sites which provide 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) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where 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:

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### 24. Land tenure/ownership:

a) within the Ramsar site:

The site is state-owned.

b) in the surrounding area:

Private ownership.

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### 25. Current land (including water) use:

a) within the Ramsar site:

The principal human use at the site is nature conservation, education and recreation. Peat extraction is permitted in small area on the Eastern border of the site.

b) in the surroundings/catchment:

The surroundings consist of extensive woodland, which are used for forestry purposes, some small patches of arable land, and wetlands.

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**26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:**

a) within the Ramsar site:

There has been invasion by scrub in areas where hay is no longer cut, or where cattle no longer graze. This has decreased the value of these areas for bird life. Restoration has recently been performed to regenerate large parts of these areas.

b) in the surrounding area:

Ditches are only maintained along roads in the Ramsar area and along the border to the peat extraction area. This will eventually regenerate most fens bordering the raised bogs, but the abandoned management of the ditches also causes flooding of areas surrounding the protected area (most of the Ramsar site is protected as a national park). This has led to conflicts with surrounding land owners. Along the maintained ditches, drainage has generated *Betula* and *Pinus* scrub forests, which decrease the possible breeding areas for wader birds.

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**27. Conservation measures taken:**

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

The site is listed as being of national importance for nature conservation and the whole area is a national park.

- Store Mosse National Park - total area 7 580 hectares, thereof 7 500 hectares on land. The park was established in May 1982. Before that, since 1971, the area was protected as a nature reserve. Access is restricted to parts of the park during the bird breeding season.

The site has been included in the Natura 2000 network:

- SE0310020 Store Mosse National Park (7 621 ha) – SPA, SCI

The site holds an European Diploma category A since 1988. This means that the Council of Europe revises the management of the area every five years.

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?

A new management plan was approved in 2002. The plan is implemented. There is also a management plan specifically for the Natura 2000 values; in the future these two management plans will be merged. Since 1999, the park is managed by the County Administrative Board of Jönköping.

d) Describe any other current management practices:

The area is allowed to develop naturally. Restoration measures, including rotary cultivation of some areas, have been undertaken locally. In areas where grazing has been resumed, the number of waders and Yellow wagtail *Motacilla flava* have increased.

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**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

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**29. Current scientific research and facilities:**

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Several universities perform research in the area, e.g. inventories of insects and plants.

Visiting scientists have the possibility to use field equipment and literature in the Visitors Centre. The National Park also provides housing for visiting scientists (at Kittlakull).

As being a part of the Natura 2000 network, a baseline inventory of the site will be conducted and the site is monitored for “favourable conservation status”.

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**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

A visitors' centre was opened in 2003. There are nature trails for children, booklets, maps, and guiding available to visitors. The visitors' centre works mainly towards three categories of visitors: schools, general public, and foreign visitors.

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**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

The site is used for tourism and outdoor recreation, and visited by approximately 70,000-100,000 visitors each year. About half of the number s foreign visitors coming in July-August from Germany. During autumn, winter, and spring the area is well visited by locals for recreation and birdwatching.

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**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

County Administrative Board of Jönköping

S-551 86 Jönköping, Sweden

Tel. +46 36 39 50 00

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**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Jönköping County Administrative Board

Dr. Johan Rova, Protected Areas Manager

S-551 86 Jönköping, Sweden

Tel. +46 36 39 50 00

Email: [jonkoping@lansstyrelsen.se](mailto:jonkoping@lansstyrelsen.se)

Store Mosse National Park

Mr. Arne Andersson, National Park Manager

S-330 33 Hillerstorp, Sweden

Email: [jonkoping@lansstyrelsen.se](mailto:jonkoping@lansstyrelsen.se)

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**34. Bibliographical references:**



Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Blank, Henrick. 2004. Fågellivet på skyddade myrmarker i Jönköpings län. Länsstyrelsen i Jönköpings län, rapport 2004:42. [http://www.f.lst.se/jonkoping/Publikationer/2004/2004\\_42.htm](http://www.f.lst.se/jonkoping/Publikationer/2004/2004_42.htm)

Eriksson, Astrid. 2001. Kulturlandskapet i Södra Svänö, Store Mosse nationalpark. Länsstyrelsen i Jönköpings län, rapport 2001:24.

Gärdenfors, U. (ed.) 2005. *Rödlistade arter I Sverige 2005 – The 2005 Red List of Swedish Species*. ArtDatabanken, SLU; Uppsala.

Länsstyrelsen i Jönköpings län. 2005. Nätprovfiske i Store Mosse Nationalpark 2002-2004. Länsstyrelsen i Jönköpings län, Rapport 2004:54. [http://www.f.lst.se/jonkoping/Publikationer/2004/2004\\_54.htm](http://www.f.lst.se/jonkoping/Publikationer/2004/2004_54.htm)

Länsstyrelsen i Jönköpings län. 2006. Bevarandeplan för Natura2000-område Store mosse, SE0310020.

Naturvårdsverket och SGU. 1996. Berggrund, jordarter och geomorfologi Store Mosse nationalpark. Naturvårdsverkets rapport 4465.

Naturvårdsverket. 2002. Skötselplan för Store Mosse nationalpark.

Svensson, Göran. 2007. Vegetationsundersökningar inom Kävsjöområdet - Vegetationsutveckling och vegetationsförändringar från 1964 till 2004. Länsstyrelsen i Jönköpings län, rapport 2007:14. [http://www.f.lst.se/jonkoping/Publikationer/2007/2007\\_14.htm](http://www.f.lst.se/jonkoping/Publikationer/2007/2007_14.htm)

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