

# 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:

Ann Wahlström, Swedish Environmental Protection Agency, S-106 48 Stockholm, Sweden. Tel. +46 8 698 14 51, fax +46 8 698 10 42. E-mail: [ann.wahlstrom@naturvardsverket.se](mailto:ann.wahlstrom@naturvardsverket.se)

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DD MM YY

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Designation date

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Site Reference Number

Dan Nilsson, County Administrative Board of Östergötland, SE-581 86 Linköping, Sweden

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

21 January 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.

Tåkern

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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 boundary is the same as an existing nature reserve.

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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.

58°21'N 014°49'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 site is situated in central southern Sweden about 40 km west of the town of Linköping, in the county of Östergötland (population 416 000), municipalities of Mjölby (pop. 25 326), Vadstena (pop. 7 562), and Ödeshög (pop. 5 520).

**10. Elevation:** (in metres: average and/or maximum & minimum)  
min. 93,7 m – max. 95,0 m

**11. Area:** (in hectares)  
5 650 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 Tåkern site includes a shallow lake with open water, submerged aquatic vegetation and fringing reedbeds surrounded by meadows and forest patches. Lake Tåkern is one of the most important bird-lakes in northern Europe. It is important for waterbirds throughout the year, both for breeding and migratory birds. It supports large numbers of common species as well as many rare ones. The reedbeds within the site are the largest in Northern Europe, and the *Molina*-meadows around the lake have a species-rich flora and fauna.

**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. The area includes the following Natura 2000-habitats:

3150 (Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* — type vegetation)

6410 (*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*))

6430 (Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels)

91E0 (Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*).

2. Nationally red listed species include e.g. staging bean goose (*Anser fabalis*) (VU), black tern (*Chlidonias niger*) (VU), caspian tern (*Sterna caspia*) (VU), garganey (*Anas querquedula*) (VU), hen harrier (*Circus cyaneus*) (VU), honey buzzard (*Pernis apivorus*) (EN), lesser white-fronted goose (*Anser erythropus*) (nationally listed as CR, globally listed as VU), Montagu's harrier (*Circus pygargus*) (EN), penduline tit (*Remiz pendulinus*) (VU), ruff (*Philomachus pugnax*) (VU), slavian grebe (*Podiceps auritus*) (VU) and spotted crake (*Porzana porzana*) (VU).

The area also hosts great numbers of the musk orchid (*Herminium monorchis*) (VU).

3. The site hosts a species-rich ground beetle fauna (with species like *Chlaenius tristis*) and large populations of reed-living birds.

4. The site offers suitable conditions during the migration periods for large numbers of waterbirds, including geese, ducks and cranes. ( See also point 22)

5. The site regularly supports more than 40 000 waterbirds during spring and autumn migration, making it one of the most prominent lakes for birds in northern Europe, see also point 22.

6. The site regularly supports more than 1% of the European population of bean goose (*Anser fabalis*), greylag goose (*Anser anser*) and crane (*Grus grus*).  
(See point 22 below)

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**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.

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**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.

Lake Tåkern lies east of Lake Vättern in a region dominated by Cambrio-silurian bedrock and cultivated clay plains, with alkaline soils. In order to create new pastures and fields, the water level of Lake Tåkern was permanently lowered in 1842 – 1844 by 1.7 meters to an average depth of only 0.8m. The reedbeds around the lake became more extensive and the water meadows around the shores well grazed. The lake is very eutrophic, with a bog (Dags Mosse) at the south-western end. According to a court decision on regulation, annual fluctuation should stay between 93,75 m (autumn) and 94,20 m (spring).

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**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 region is dominated by Cambrio-silurian bedrock and cultivated clay plains. The catchment area is 389 km<sup>2</sup> and consists of 50 % agricultural land, 40 % woodland and 10 % other open land, e.g. bogs. The agricultural land surrounds the lake, while the woodlands dominate the southern part of the catchment area. The average temperature is 6,5° C and the annual precipitation is ca 500 mm.

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**18. Hydrological values:**

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

After alternating droughts and floods during the first half of the 20th century, the water level was regulated by means of a sluice on Mjölnaån, the lake's outflow. The water level is allowed to fluctuate by about 45 cm annually, with a spring maximum and late summer minimum. Spring floods are an important part of the water regime affecting the wet meadows.

The limestone found north of Lake Tåkern has made the water and the surrounding soils alkaline. In spite of being nutrient-rich, the water is often clear. Most of the nutrients are absorbed by the water vegetation and small planktonic algae seldom dominate. The lake annually receives 7 tons of phosphorus and 200 tons of nitrogen, although it fluctuates between years. There are no obvious trends in the nutrient deposits. The influx origins mostly from the nearby arable land.

## 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 • O • 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.

O, Tp, 4, Xf

## 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 reedbeds*

The reedbeds around Lake Tåkern began to spread at the beginning of the 20th century and are now the largest in Northern Europe, with an area of 1 500 hectares. They are most extensive in the western part of the lake, which is more sheltered from the wind. The reeds provide protection and food for a great number of insects and birds. Some reedbeds are harvested in the winter to be used as roof-thatch.

### *The water meadows*

Lake Tåkern's water meadows comprise about 450 hectares. They were formed through grazing and mowing over a long period of time. The meadows are alkaline with a very rich flora, including bird's-eye primrose (*Primula farinosa*), yellow iris (*Iris pseudacorus*), dune gentian (*Gentianella uliginosa*) and many orchids, e.g. fly orchid (*Ophrys insectifera*), early marsh-orchid (*Dactylorhiza incarnata*) and musk orchid (*Herminium monorchis*). In many places inside the reedbed there are stretches of open water - the "Blue Border". This habitat is important for waders and ducks. In order to preserve the biodiversity of the meadows and prevent overgrowth, continued grazing and hay-cutting is vital.

### *The woodlands*

The woodlands around the lake consist of older pineforests (scots pine – *Pinus sylvestris*) and mixed deciduous forests, ca 560 ha. Parts of the stands are wet forests of high biological value, particularly for the insect life.

### *The insects*

Lake Tåkern's many habitats have a rich insect fauna. Common dragonflies are the four-spotted chaser (*Libellula quadrimaculata*) and various darters (*Sympetrum spp.*). Rove beetles are among the most common beetles in the woodlands along the shore.

### *The lake*

The vegetation on the lake bottom is dominated by whorled algae, but also includes fan-leaved water-crowfoot (*Ranunculus circinatus*) and several species of pondweed (*Potamogeton spp.*). In these "underwater forests" there is an abundance of fish fry, crustaceans and aquatic insects.

### *The ecosystem services*

The lake itself serves as a gigantic nitrogen and phosphorous trap. The meadows provide grazing for cattle and the rich biodiversity attracts tourists to the area. Fishing is popular during winter, hunting in the autumn.

## **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.*

The alkaline shore meadows offer suitable conditions for many orchids and other calcifilous plant species like *Herminium monorchis*, *Dactylorhiza incarnata*, *Ophrys insectifera* och *Primula farinosa*.

## **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.*

### *Some breeding bird species include:*

Bittern (*Botaurus stellaris*), 45 pairs  
 Garganey (*Anas querquedula*) (VU), 16 pairs  
 Shoveler (*Anas clypeata*), 20 pairs  
 Gadwall (*Anas strepera*), 40 pairs  
 Spotted crake (*Porzana porzana*) (VU), 5 pairs  
 Black tern (*Chlidonias niger*) (VU), 20 pairs (  
 Great reed warbler (*Acrocephalus arundinaceus*), 200 pairs  
 Penduline tit (*Remiz pendulinus*) (VU), 5 pairs  
 Bearded tit (*Panurus biarmicus*), ca 5 000 pairs

### *Some staging bird species in autumn:*

Bean goose (*Anser fabalis*) (VU), ca 15 000 maximum  
 Greylag goose (*Anser anser*), ca 18 000 maximum  
 Crane (*Grus grus*), ca 4 000 maximum  
 Ducks, including coot (*Fulica atra*), ca 40 000 maximum

The area is often visited by bird species that are not a regular part of the Swedish fauna, e.g. curlew sandpiper (*Calidris ferruginea*), grey plover (*Pluvialis squatarola*), little stint (*Calidris minuta*), pink-footed goose (*Anser brachyrhynchus*) and tundra swan (*Cygnus columbianus*).

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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:

*Historical/archaeological significance*

About 30 Stone Age settlements have been found around Lake Tåkern, evidence showing that the area was used for hunting and fishing. The earliest trace of human activity is represented by a bone harpoon, which could be as much as 9000 years old.

The world's longest rune stone inscription, Rökstenen, is found in the neighbourhood. Many medieval churches are still in use around the lake, among them the oldest church in Sweden, north of Skåne County.

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:

Almost the entire site is privately owned, less than one percent is state-owned.

b) in the surrounding area:

The surrounding area is privately owned.

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

a) within the Ramsar site:

The site is used for livestock grazing, recreational fishing and duck hunting. It is to some extent also used for nature conservation and research activities. Some reedbeds are harvested in the winter to be used as roof-thatch.

b) in the surroundings/catchment:

The surrounding areas are used for agriculture and peat extraction (in the southwest).

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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:

About 850 cattle graze the meadows bordering the lake. If the downward trend concerning cattle husbandry affects the site, the conservation value of the site will be reduced. Non-coordinated hunting of waterbirds during autumn migration may cause disturbances and reduce the potential value of the site as a resting place.

b) in the surrounding area:

If wind power stations are build in areas adjacent to the lake they may pose a threat, primarily to to large birds such as geese and raptors.

The site is surrounded by agricultural areas and there is a risk that leakage of nitrogen and phosphorus may affect the lake, threatening the steady-state of the water.

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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 Tåkern site is listed as being of national importance to nature conservation. The site has been designated a Biogenetic Reserve and an EU Special Protection Area (SPA). Most of the designated site is included in a nature reserve:

- Tåkern Nature Reserve – total area 5 420 ha, thereof 970 ha on land. The reserve was established in June 1975 and has a management plan since 1990. The area is managed by the Board of Tåkerns regleringsföretag along with representatives from the County Administrative Board of Östergötland and the Regional Forestry Board. Management is financed by the foundation Tåkernfonden WWF, private landowners, and the state. Public access is restricted to most of the reserve during the breeding period (1 April – 30 June), except for four visiting areas. There are several observation towers or hides within the reserve. Management practices include experimental removal of vegetation along the shores by means of amphibious vehicles.

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?:

The management plan is approved and has been implemented since 1990.

d) Describe any other current management practices:

Site management consists of cattle grazing, mowing and maintaining visitor facilities including updating of information.

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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.

The site has been included in the Natura 2000 network:

- SE0230067 Tåkern (5 399 ha) – SPA, pSCI

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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.



The County Administrative Board monitors the water chemistry annually. A local ornithological society runs Tåkern Field station near the lake, where they have their office and headquarters. Ringing of birds has been carried out for more than 40 years.

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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.

There are four visitor's areas at Lake Tåkern, with car parks, toilets, picnics tables, waste bins, information signs in three languages and bird-watching towers. Three of these areas are adapted for the disabled, two have hiking trails with observation hides and one has a small information centre with an exhibition. A new visitor centre, with an exhibition, is under construction. There is a booklet, brochures in three languages and an information sheet for the area in 11 languages. There is also a Nature school at the Mount Omberg Ecopark close to Lake Tåkern.

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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 number of visits at Lake Tåkern's four visitor's areas is estimated to be 75 000 per year. There are guided tours every weekend during the spring, summer and autumn.

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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 Östergötland, Östgötagatan 3, 581 86 Linköping. E-mail: [ostergotland@lansstyrelsen.se](mailto:ostergotland@lansstyrelsen.se), phone: +46-13-19 60 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.

County Administrative Board of Östergötland, Dan Nilsson (manager of Tåkern Nature Reserve), Östgötagatan 3, 581 86 Linköping. E-mail: [ostergotland@lansstyrelsen.se](mailto:ostergotland@lansstyrelsen.se), phone: +46-13-19 60 00.

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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.

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.

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Please return to: **Ramsar Convention Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
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