Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

NOTE: It is important that you read the accompanying *Explanatory Note and Guidelines* document before completing this form.

1. Date this sheet was completed/updated:
April 2002

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DD MM YY

Designation date

Site Reference Number

2. Country:
Sweden

3. Name of wetland:
(River) Emån

4. Geographical coordinates:
57°9'N, 016°22'E

5. Altitude: (average and/or max. & min.) 0 - 24 m

6. Area: (in hectares) 1 580 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)
Emån river is one of Sweden's most important rivers from conservation point of view, with unique natural and cultural values. Its lower parts are diverse and contain many well-developed and representative wetland types. The fauna and flora is rich, with several species included in the Swedish Red List.

8. Wetland Type (please circle the applicable codes for wetland types as listed in Annex I of the *Explanatory Note and Guidelines* document.)

marine-coastal: **A · B · C · D · E · F · G · H · I · J · K**

inland: **L · M · N · O · P · Q · R · Sp · Ss · Tp · Ts**
· U · Va · Vt · W · Xf · Xp · Y · Zg · Zk

man-made: **1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9**

Please now rank these wetland types by listing them from the most to the least dominant: M, W, O, L

9. Ramsar Criteria: (please circle the applicable criteria; see point 12, next page.)

1 · 2 · 3 · 4 · 5 · 6 · 7 · 8

Please specify the most significant criterion applicable to the site: **3**

10. Map of site included? Please tick *yes* ☒ -or- *no* ☐
(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits).

11. Name and address of the compiler of this form:
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***Please provide additional information on each of the following categories by attaching extra pages* (please limit extra pages to no more than 10):**

12. Justification of the criteria selected under point 9, on previous page. (Please refer to Annex II in the *Explanatory Note and Guidelines* document).

1. A rare example of a natural wetland type (river system) in the EU Boreal region
2. >15 nationally redlisted species, included 6 cryptogam and 3 fish species
3. Contains particular elements of biological diversity that are rare of the EU Boreal region
7. Great fish diversity (30 species). Supports a significant proportion of several fish species including *Salmo salar, Salmo trutta* and *Siluris glanis,* that are representative of wetland benefits.

13. General location: (include the nearest large town and its administrative region)

The site consists of the lower part and the mouth of Emån river, on the coast of the Baltic Sea. It is situated approximately 13 km south of the town of Oskarshamn, in the County of Kalmar, south-eastern Sweden. Municipalities: Mönsterås, Oskarshamn.

14. Physical features: (e.g. geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

Since there are no reservoirs in the lower parts of the catchment area, variation in waterflow is relatively large. This leads to large seasonal variations in water levels, and large areas along the river are flooded every year. These variations are mostly natural and probably a prerequisite for the large biodiversity in and along the river. The river itself is usually broad and calm, but upon entering the site it picks up speed. In several places it branches into smaller rivulets, where the water rushes through narrow passages. These often display a rich flora and fauna, as a result of the richness in water. The bedrock is Småland-Värmland granite, some 1750 million years old. Soils are commonly low in nutrients.

15. Hydrological values: (groundwater recharge, flood control, sediment trapping, shoreline stabilisation etc)

Its original course is relatively little effected and the river is important in terms of flood control.

16. Ecological features: (main habitats and vegetation types)

The site constitutes one of the largest continuous wetland areas in the county. It contains many well-developed and representative wetland types, which makes it especially valuable. Vast areas of reeds, marsh meadow, waterlogged marshland and meadows border the river. Belts of common alder A*lnus glutinosa* are frequently found along the river. On the shores by the rivulets, vegetation is mainly deciduous forest. In the surrounding landscape there are unexploited fen forests, mires and pine bogs with a strong wilderness touch. Surrounding the wetland area there are valuable environments with deciduous forests and pastures.

17. Noteworthy flora: (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc)

The flora is rich and more continental than in the upper part of the catchment area. The alpine bastard toadflax *Thesium alpinum* is a plant species characteristic for the area and included in the Swedish Redlist. Other characteristic species are the royal fern *Osmunda regalis*, wood fescue *Festuca altissima* (nationally redlisted) and great yellow-cress *Rorippa amphibia.* The area supports many cryptogams, for example; *Usnea florida, Leptogium cyanescens, Dimerella lutea, Schismatomma pericleum, Opegrapha sorediifera and Dichelyma capillaceum (*EU Habitats directive species*),* all included in the national redlist.

18. Noteworthy fauna: (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

The entire river harbours over 30 species of fish, several uncommon. Three species included in the national Redlist occur; the wels catfish *Silurus glanis,* wild salmon *Salmo salar* (EU habitats directive species) and asp *Aspius aspius* (globally redlisted). The wels catfish live here probably in more numbers

than any other site in Sweden and the wild salmon occurs in large numbers. Emån river is one of two remaining watercourses in southern Sweden feeding the Baltic Sea with a significant stock of salmon. The river harbours all five Swedish fish species listed in the habitat directive and Emån is world famous for its large and fast growing sea trout *Salmo trutta.* Several species of insect's worthy of protection occur in the site. The beetle *Sehirus dubius* (= *Canthophorus impressus)* is nationally redlisted and directly dependent on the plant alpine bastard toadflax *Thesium alpinum (*nationally redlisted), since the plant is its only possible host. Several areas within the river's catchment area are extremely important for bird life, including some that are typical for river valleys. The wet meadows and the river itself are important for resting and breeding birds, such as the whooper swan *Cygnus cygnus,* common crane *Grus grus* and osprey *Pandion haliaetus*, all included in the EU Birds directive

19. Social and cultural values: (e.g. fisheries production, forestry, religious importance, archaeological site etc.)
The river valley has been used for a wide variety of purposes from the Stone Age to present time. For centuries the Emå valley has been used for agriculture and since the Middle Ages the catchment area has been one of the richest areas of pastureland in Sweden. River- and lake-meadows, which are cut or grazed, still occur at the site. Several sites in the river's catchment area are of national interest for their cultural history, like the Em-Vånevik area at the mouth of the river. There, the remains of a river barrage, once probably intended to protect the fishing of *Salmonide* species can be found. To protect the wild salmon population today, commercial fishing in the river and estuaries is not allowed.

20. Land tenure/ownership of: (a) site (b) surrounding area
(a) The whole site is privately owned.
(b) The surrounding area is mainly privately owned.

21. Current land use: (a) site (b) surroundings/catchment
(a) Limited agriculture and forestry
(b) Agriculture and forestry

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects: (a) at the site (b) around the site
(a) Since the beginning of the century, the lower reaches of the river have been affected by the release of cadmium, nickel and lead from a battery factory at Fliseryd, approximately 5 km upstream the site. Towards the end of the 1970's measures were taken to reduce pollution levels. They are now much lower, although cadmium levels are still too high. There are three existing power stations and dams within the site. Since 1992, however, establishment of new hydroelectric power stations, water controls or water extraction for power production purposes is not permitted. Sport fishing is encouraged, but a substantial percentage of the fish caught is returned to the river. Canoeing may locally disturb birdlife during nesting.
(b) Upstream the site lakes have been lowered, adjacent areas have been drained through ditching, watercourses have been exploded in order to facilitate log driving and banks have been built to gain more farmland. Water from the whole river system is being extracted by a number of industries, several municipalities and farmers. Industries have contributed in polluting different parts of the water system. PCB has contaminated the upper reaches of the drainage basin. Although some factories have been closed for more than 20 years, and local restoration projects have been carried out, metal levels are locally still high in river sediments.

23. Conservation measures taken: (national category and legal status of protected areas - including any boundary changes which have been made: management practices; whether an officially approved management plan exists and whether it has been implemented)
There is one Natural monument within the site;
Idegransholmarna - two isles in the river, 0.5 ha together. No management plan exists. The whole river is subject to an extensive co-operation project, which includes all municipalities concerned as well as other interests. The main purpose is to identify the need for protection and conservation, while also allowing for a wise use of the natural resources.

The main part of the area is included in the National Mire Protection Plan.

24. Conservation measures proposed but not yet implemented: (e.g. management plan in preparation; officially proposed as a protected area etc.)

A nature conservation contract is planned for the area between the mouth of the river and the highway. The County Forestry Board and the landowner will be the parties of the contract.

River Emån, within the County of Kalmar, is included in the Natura 2000 network (SE0330160 Emåns vattensystem, SE0330173 Våtmarker längs Emåns nedre lopp).

25. Current scientific research and facilities: (e.g. details of current projects; existence of field station etc.)

None known

26. Current conservation education: (e.g. visitors centre, hides, information booklet, facilities for school visits etc.)

None known

27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

The conditions for recreation and tourism, including sports fishing, are very good. The landscape is highly attractive at several places and the site is of national interest for outdoor recreation. Hiking and canoeing are popular activities, although the most well-known recreation activity is fishing at Em Manor at the river mouth. There, sports fishing has taken place since the 1920's.

28. Jurisdiction: (territorial e.g. state/region and functional e.g. Dept of Agriculture/Dept. of Environment etc.)

County Administrative Board of Kalmar

29. Management authority: (name and address of local body directly responsible for managing the wetland)

County Administrative Board of Kalmar
Malmbrogatan 6
S-391 86 Kalmar
Sweden

30. Bibliographical references: (scientific/technical only)

Fasth, T. & Larsson, A. 1997. Pro Natura: Naturinventering i Emåns dalgång. Emåprojektet, Meddelande 1997: 1.