

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

FOR OFFICE USE ONLY.

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Designation date

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Site Reference Number

2. Country:

Sweden

3. Name of wetland:

(River) Mörrumsån - Pukavik Bay

4. Geographical coordinates:

56°9'N, 014°45'E

5. Altitude: (average and/or max. & min.) 0 – 110 m

6. Area: (in hectares) 2 740 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)

The site contains areas of high national interest for nature conservation, cultural heritage and geology. It is one of the foremost areas in Sweden considering populations of salmon *Salmo salar* and brown trout *Salmo trutta*. The area is very important for commercial fishing as well as for sports fishing. The river contains a large number of taxa, among them several red-listed species. The area is rich in evidence from the last Ice Age. The Pukavik Bay harbours an interesting marine bird fauna.

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, A, H

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 representative example of a natural wetland type (permanent river and connecting shallow marine waters) in the EU Continental region
 2. >30 nationally redlisted species, mainly birds (>5 species), invertebrates (>10) and (fish 2)
 3. Supports particular elements of biological diversity that are characteristic of the EU Continental region
 7. Great fish diversity, some species nationally redlisted like *Gobio gobio*. Supports a significant proportion of several fish species including *Salmo salar*, *Salmo trutta*, that are representative of wetland benefits.
 8. Important spawning ground, nursery and feeding area and classified as nationally important for commercial fishing
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13. General location: (include the nearest large town and its administrative region)

The site consists of the lower half of the River Mörrumsån (in all some 30 km in length) and the shore surrounding the bay at the river mouth. It is situated 7 km west of the town of Karlshamn, in the County of Blekinge, south-eastern Sweden. Municipalities: Karlshamn, Olofström, Sölvesborg

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)

The River Mörrumsån is the largest watercourse in the County of Blekinge. In the northern end of the Ramsar site, the river flows calmly surrounded by pastures and wetland meadows. Gravel deposits can be found all along the river valley. Further to the south, the river runs through a very distinct fissure ravine, where rocks are common and heavy erosion occurs locally. The riverbanks are often steep and the steepest places are rich in rocks. This area is one of the least exploited and disturbed parts of the river valley. In the central parts of the site, the river is studded with isles and rocks. Towards the south, the river runs more rapidly, and drops in height above sea level fairly quickly. The shallow, coastal area outside the river mouth (Pukavik Bay) consists mainly of bare rock, meadows and pastures.

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

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

Along the river there are both grazed pastures and wetland meadows. Pastures are surrounded by beautiful stands of broad-leaved trees, and on the banks the dominating tree vegetation consists of a mixed deciduous forest. Further up on the slopes, where the terrain is more plateau-like, conifers dominate. Further south along the river, there is a lot of agricultural land. The coast along the bay contains oak *Quercus robur* forests, bushland, deciduous forests and rocky areas, forested with pine *Pinus sylvatica*. There are also a lot of meadows in the coastal zone. On the islands in the bay area, the main vegetation is grazed grassland and juniper *Juniperus communis* bushland, but there are bare rocky islands as well.

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

The cultural landscape along the river offers a rich flora and interesting environments, although few red-listed species have been noted. The deciduous forests along the river include the lime *Tilia cordata*, oak

Quercus robur, birch *Betula* sp., hornbeam *Carpinus betulus*, beech *Fagus sylvatica* and hazel *Corylus avellana*. On one of the isles in the river there is a stand of yew *Taxus baccata* (nationally redlisted). In old agricultural areas along the river, there are deciduous trees that have previously been lopped according to old traditions. There are large numbers of the royal fern *Osmunda regalis* along the river. Near the mouth, the lesser water-plantain *Baldellia repens* (nationally redlisted) has one of very few known sites in Sweden. Other noteworthy species are *Potamogeton panormitanus*, eight-stamend waterwort *Elatine hydropiper*, three-stamend waterwort *Elatine triandra* and holly-leaved naiad *Najas marina*.

The fungi flora close to the river is unique. In the nature reserve Kåringahejan as many as 15 red-listed species have been found and on small islands in the river *Hygroaster lacteus* has been found. This species is not known from any other site in the world.

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

Apart from the Emån river (also a new Ramsar site), there is no other place in Sweden where the populations of the two salmonid species salmon *Salmo salar* and brown trout *Salmo trutta* are found in greater numbers. The river's importance for commercial and sports fishing of salmonids is far greater than the size of the river may indicate. Sports fishing yield approximately three or four metric tonnes of salmon and brown trout yearly. Approximately 100 000 salmon smolt have been released in the river each year since 1981. The fishing of eel *Anguilla anguilla* is also of great importance in the river. Among other fish species, *Gobio gobio* (nationally redlisted) is worth mentioning. The benthic fauna in Mörrumsån is extremely rich in species. More than 180 taxa have been found in the river, some of them nationally redlisted. Especially noteworthy species are the freshwater pearl mussel *Margaritifera margaritifera* and *Unio crassus* (both EU Habitats directive species and nationally redlisted).

The bird life of the River Mörrumsån is of secondary importance compared to the fish and invertebrate fauna. The kingfisher *Alcedo atthis* (nationally redlisted, EU Birds directive species) sometimes breeds by the river. Around the marine bay, the long unexploited coast supports a rich bird fauna, as do the islands in the bay area. Bird fauna includes the Caspian tern *Sterna caspia*, sandwich tern *Sterna sandvicensis* (both nationally redlisted and EU Birds directive species), and great cormorant *Phalacrocorax cabro sinensis*.

19. Social and cultural values: (e.g. fisheries production, forestry, religious importance, archaeological site etc.)

The site's primary role is as an area for fish production. There are old cultural elements along the river and the whole landscape is interesting and attractive. Geological remains are frequent, and of national interest. An example is the extensive fossil tilled fields, partly unique in character, found by the southwestern part of the site. Closer to the mouth of the river are several well-developed remains from the latest Ice Age. Some soil types and geomorphologic formations have been named after places in the area where remains have been found. These places are considered very important for the understanding of the withdrawal of the ice sheet, and the development of the Baltic Ice Lake in the region.

20. Land tenure/ownership of: (a) site (b) surrounding area

(a) The main part of the River Mörrumsån is privately owned. Companies, such as power companies, are the largest landowners. In Pukavik Bay, coastal areas are privately owned. The municipality owns a small part of the site. The state is the owner of some nature reserves (fully and partly) as well as the right to fish salmon *Salmo salar* in the lower parts of River Mörrumsån.

(b) Mostly privately owned

21. Current land use: (a) site (b) surroundings/catchment

(a) Sports fishing and agriculture

(b) Commercial fishing, 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) Because of the large number of Ice Age ridges, extraction of gravel has been practised widely. In the County of Blekinge, there are five dams for controlling water flow in the River Mörrumsån. There are power stations at four of these dams. Unless measures are taken, dam constructions usually effectively prevent salmonids to move upstream. Potential factors that would have a great negative impact on the values of the site include pollutant discharges, both from land and sea.

(b) Pollutant discharges are always a potential danger in coastal areas, especially where a site is close to international fairways.

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 are four nature reserves within the site;

Åmma Nature Reserve - 62 ha, owned by the state. Protected since 1997.

Käringahejan Nature Reserve - 140 ha, owned partly by the state. Protected since 1997.

Stilleryd Nature Reserve - 69 ha. Protected since 1967.

Spraglehall Nature Reserve - 11 ha, owned by the state. Protected since 1971.

Management plans exist for all nature reserves.

There are several bird sanctuaries within the site.

Most parts of River Mörrumsån and the bay included in the Ramsar site have restrictions concerning fishing according to national fishery regulations.

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

Further protection is planned for the river valley between Härnäs and Susekull. Protection is also planned for a site with old beech and oak forests at Stensnäs-Elleholm, which will include some of the bird-rich islands and the water area west of the mouth of the River Mörrumsån. Work concerning delimitation of the areas and proposals for management plans are in progress.

There are six Natura 2000 sites (pSCI), proposed by the government, within or partly within the Ramsar area:

SE0410054 Åmma – 60 ha

SE0410066 Spraglehall – 11 ha

SE0410068 Pukaviksbukten – 8 150 ha

SE0410075 Käringahejan – 140 ha

SE0410128 Mörrumsån – 150 ha

SE0410164 Härnäs – 29 ha

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

Monitoring of salmon and trout populations in the river (Swedish Board of Fisheries).

Monitoring activity and pollution control in the bay Pukaviksbukten (The Coastal Management and Protection Association).

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

Laxens hus in Mörrum is an important information centre about the river and the fish fauna.

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

The river is of national interest not only for nature conservation, culture and science, but also for

recreation and tourism. The River Mörrumsån is Sweden's most important watercourse for sports fishing of salmon *Salmo salar* and brown trout *Salmo trutta* and is internationally well-known. The scenic beauty and the strong wilderness touch, in some parts, attract a large number of visitors at the most accessible areas. The bay area outside the river mouth is also valuable for recreation and tourism.

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

County Administrative Board of Blekinge

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

County Administrative Board of Blekinge

S-371 86 Karlskrona

Sweden

30. Bibliographical references: (scientific/technical only)

Limnodata HB. 1986. Vad händer med laxens föda i Mörrumsån? - en undersökning av bottenfaunan i Mörrumsån – rapport, juni 1986.

Länsstyrelsen Blekinge Län & Karlshamns kommun. 1998. Mörrumsån – en hotad naturresurs.

Rappe, C. (ed). 1999. Baltic Salmon Rivers – Status in the late 1990's as reported by the countries in the Baltic region. The Swedish Environmental Protection Agency.

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