Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

Note 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. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Bureau. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

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

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DD MM YY | Designation date | Site Reference Number

2. Date this sheet was completed/updated:
24.November 2003.

3. Country: Hungary

4. Name of the Ramsar site: Csongrád-Bokrosi Sós-tó

5. Map of site included:
Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps.

a) hard copy (required for inclusion of site in the Ramsar List): *yes* X -or- *no* □

b) digital (electronic) format (optional): *yes* X -or- *no* □

6. Geographical coordinates (latitude/longitude): 46 º 42' N, 20 º 1' E

7. General location:
Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

The site is located in Central Hungary, in Danube-Tisza Intersection, in the northeastern part of Bács-Kiskun and northwestern part of Csongrád Counties. The wetland is composed of two seasonal saline lakes: Nagy Sós-tó and Kis Sós-tó. The previous covering some 100 hectares belongs to village Tiszaalpár, the latter covering 10 hectares belongs to village Csongrád.

8. Elevation: (average and/or max. & min.) 87,4-95,9 m above Baltic sea **9. Area:** (in hectares) 770 ha

10. Overview:
Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The wetland comprises a wide range of unique types of Pannonic calcareous-sodic saline lake habitat types furthermore specific saline aquatic ecosystems living on the habitats. The site is part of the migration route along the valley river Tisza and plays an important role as a resting, feeding and breeding site for waterfowl. The site is a nature reserve, and a planned SPA. The wetland consists of 2 separate lakebeds with open water that vary in levels of siltation. There are saline marshes, saline meadows, and a mosaic of loess meadows on high embankments and agricultural areas of different size in between the ponds.

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11. Ramsar Criteria:
Circle or underline 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).

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8

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12. Justification for the application of each Criterion listed in 11. 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).

Crit 1: The wetland comprises a wide range of unique types of Pannonic calcareous-sodic saline lake habitat types furthermore specific saline aquatic ecosystems living on the habitats. Besides these, there are many typical species that characterize the saline grasslands ("puszta").Such saline lakes and grasslands with the representative saline communities are fairly rare in Central Europe. This also underlies the international importance of the wetland. The grasslands around the lake also support the different stages of vegetation from salt berms till closed saline swards and reedbeds along the water edges. Reedbeds form contigous units as well.
Crit 2: The site is home to rare, sensitive and threatened species and communities in the Pannonic biogeographic region, including European otter *Lutra lutra*, Ferruginous Duck *Aythya nyroca*, Glossy Ibis *Plegadis falcinellus*, Great Bustard *Otis tarda* and Souslik *Citellus citellus*.
Crit 3: Moreover due to its uniqueness, the site has an outstanding role in conservation of genetic and ecological diversity in the region. Due to the specialities of the site (chemistry, water coverage, depth of water, location) the biodiversity is high, and there are numerous rare and endemic species. At national level the site hosts priority animal and plant species. Unique species of the site include *Aster tripolium ssp. pannonicus* and *Puccinellia limosa* endemic species.

Crit 4:
The site is part of the migration route along the valley river Tisza and plays an important role as a resting, feeding and breeding site for waterfowl.The site is a natural and characteristic nesting site for significant populations of many threatened bird species (Kentish Plover, Avocet, Black-winged Stilts) in the region.

Crit 5: The site supports more than 20 000 waterfowl seasonally. Waterbirds regularly using the site include Pintail *Anas acuta,* Shoveler *Anas clypeata,* Teal *Anas crecca,* Wigeon *Anas penelope,* Mallard *Anas platyrhynchos,* Garganey *Anas querquedula,* White-fronted Goose *Anser albifrons,* Greylag Goose *Anser anser,* Bean Goose *Anser fabalis* and the globally threatened Lesser White-fronted Goose *Anser erythropus.*

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13. 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: Pannonic

b) biogeographic regionalisation scheme (include reference citation):
The biogeographic regionalisation scheme applied is the same used by the European Union (according to the Habitat Directive)

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14. 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.

Geology
The bedrock of the site is metamorph rock from Precambrium with Paleozoic granite, quartz, porfirite and mezozoic sedimentary rock type, on which nearly 1500 m thick lacustrine sediments have been deposited under the Pannonic Sea. The deposits (sand, loess) carried by watercourses and wind have also formed the recent landcape.

Soils
Meadow and saline soil types are predominant on the majority of the site.

Climate
The climate of the site is moderately warm and dry. The number of sunny hours is relatively high 2100. The annual mean temperature is 10,2-10,4°C, but the daily and yearly fluctuation is high. From April, the daily main temperature is usually over 10 °C until as long as October. The yearly rainfall is 540-560 mm of which 310-320 mm rain in spring. In the past 10-05 years temperature and the amount of rainfall was fairly unpredictable and the saline lakes became dry not only in August, but sometimes even in July.

15. Physical features of the catchment area:
Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).
No information available

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

Groundwater of the site can be characterised by high Natrium and Magnesiun content, determining the physical characteristics of the area. In the waterbodies halophyte plankton fauna is abundant providing food for other species. The two main saline water types are the "white saline lakes" and the "black saline lakes".

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17. 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.**

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18. General ecological features:
Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

Saline mud communities are represented by *Ranunculetum aquatilis-polyphylli*. The typical plant association of open water is *Bolboschoenetum maritimi*, and saline reedbeds (*Bolboschoeno-Phragmitetum*). Salt berm communities are *Lepidio crassifolii-Puccinellietum limosae* with the following species: *Puccinellia limosa, Lepidium crassifolia, Agrostis stalonifera, Juncus geraldi, Plantago maritima, Camphorosma annua, Polygonum aviculare, Matricaria chamomilla.* The *Aster tripolium ssp. pannonicus,* is a typical endemic species of the Pannonic region.
In higher elevation there are saline grasslands *Achilleo setaceae-Festucetum pseudovinae*, in which *Festuca pseudovina* are predominant as well as *Agropyron repens, Alopecurus pratensis, Bromus mollis, Achillea setacea, Plantago maritima, Inula britannica* and *Lotus angustissimus.*

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19. Noteworthy flora:
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. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Iris pumila
Orchis morio
Orchis coryophora

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20. 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.

Until now altogether 6 species of Amphibians, 84 species of birds and 4 mammal species were observed within the site. (See appendix)

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21. Social and cultural values:

Since traditonal animal husbandry was decreased this also means that former cultural values are being disappeared.

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.

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22. Land tenure/ownership:

(a) within the Ramsar site:

private 100 %

(b) in the surrounding area: mainly private

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23. Current land (including water) use:
(a) within the Ramsar site:

The hunting for waterfowl is under the control of the National Park Directorate, for water use there is no specific measures.

(b) in the surroundings/catchment:

In the region there are arable lands with intensive agriculture. Meadows and pastures are used for hay producing.

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24. 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:

The melioration measures in the catchment area decreased the extension of wetlands through lowering the groundwater table. From arable lands there is a nutrient source that may accelerate or cause eutrophication.

(b) in the surrounding area:

There is an invasion of weed species from the surrounding areas but in the past years the National Park has improved the buffer zone.

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25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

The site – being a saline lake - is an *ex lege* protected area at national level. According to the 79/409/EEC the site is a planned SPA and based on the requirements of 92/43/EEC it is a planned SCI.

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26. Conservation measures proposed but not yet implemented:
e.g. management plan in preparation; official proposal as a legally protected area, etc.

After designating the Natura 2000 network, measures of SPA, SCI

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27. Current scientific research and facilities:
e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

No information available

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28. Current conservation education:
e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.
No information available

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29. Current recreation and tourism:
State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.
No information available

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

Ministry for Environment and Water
Bureau of Nature Conservation
Directorate of Kiskunság National Park

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31. 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.

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32. Bibliographical references:
scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

Boros, E. (1999): A magyarországi szikes tavak limnoökológiai értékelése és természetvédelmi definíciója, Acta Biologica Debrecina. Acta Biol. Debr. Oecol. Hung. 1999, 9:13-80.

Boros, E., Biró, Cs. (1999): A Duna-Tisza közi szikes tavak állapotváltozásai a XVIII-XX. századok időszakában interpretált archív kataszterek alapján, Acta Biologica Debrecina. Acta Biol. Debr. Oecol. Hung. 1999, 9: 81-105.

Boros, E., Pigniczki, CS. (2001): Feltöltődött szikes tavak rekonstrukciója és a szikes mocsári vegetáció kezelése a kiskunsági szikes tavaknál. Túzok 6. évf. 2001/1. szám. 8-14.

Deák, J.Á (2001): Védelemre érdemes területek Csongrádon és Bokroson a Pilis-Alpári-homokhát és a Dél-Tisza-völgy találkozásánál, kézirat, Szegedi Egyetem Éghajlattani és Tájföldrajzi Tanszék, Szeged

Iványosi-Szabó, A. (1996): A KNP természetföldrajzi környezete. 20 éves a KNP 1975-1995 (Szerk. Dr. Tóth Károly), pp. 17-29.

Molnár, B. (1979): A nemzeti park tavainak kialakulása és vízföldtani fejlődéstörténete. Nemzeti Park a Kiskunságban (szerk. Dr. Tóth K.) Natura.155-164p.

Appendix

List of represesntative species of fauna of the Csongárd-Bokros Sós-tó

Amphibians
Triturus dobrogicus
Rana esculenta
Rana ridibunda
Bombina bombina
Emys orbicularis
Natrix natrix

Birds (the most important qualifying species):
Achrocephalus arundinaceus
Achrocephalus schoenobaenus
Achrocephalus scirpaceus
Actitis hypoleucos
Anas acuta
Anas clypeata
Anas crecca
Anas penelope
Anas platyrhynchos
Anas querquedula
Anser albifrons
Anser anser
Anser erythropus
Anser fabalis
Anthus pratensis
Anthus cervinus
Ardea cinerea
Ardea purpurea
Ardeola ralloides
Athene noctua
Aythya nyroca
Branta ruficollis
Botaurus stellaris
Burhinus oedicnemus
Calidris alpina
Calidris minuta
Calidris ferruginea
Charadrius alexandrinus
Charadrius hiaticula
Chlidonias hybrida
Chlidonias leucopterus
Chlidonias niger
Ciconia ciconia
Ciconia nigra
Circus aeruginosus
Circus cyaneus
Circus pygargus
Coracias garrulus
Egretta alba
Egretta garzetta
Emberiza scoeniclus
Falco cherrug
Falco peregrinus
Falco vespertinus
Fulica atra

Gallinago gallinago
Gallinula chloropus
Haliaeetus albicilla
Himantopus himantopus
Ixobrychus minutus
Lanius minor
Larus cacchinans
Larus canus
Larus melanocephalus
Larus minutus
Larus ridibundus
Limosa limosa
Numenius arquata
Numenius phaeopus
Nycticorax nycticorax
Otis tarda
Pandion haliaetus
Panurus biarmicus
Phalacrocorax carbo
Philomachus pugnax
Platalea leucorodia
Plegadis falcinellus
Pluvialis squatarola
Pluvialis apricaria
Porzana parva
Porzana porzana
Rallus aquaticus
Recurvirostra avosetta
Remiz pendulinus
Saxicola rubetra
Sterna caspia
Sterna hirundo
Tringa erythropus
Tringa glareola
Tringa nebularia
Tringa ochropus
Tringa stagnatilis
Tringa totanus
Vanellus vanellus

Mammals
Lutra lutra
Mustella nivalis
Mustella erminea
Citellus citellus