

Information Sheet on Ramsar Wetlands (RIS) – 2006 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th 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 for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd 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.

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

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

30 May 2006

3. Country:

Hungary

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.

Lake Kolon at Izsák

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

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**

The area size on the RIS follows the officially (nationally) designated site size (which is based on the land registration data). Unfortunately the map submitted previously was rather sketchy and the outlines did not follow precisely the land parcel boundaries. So only the map was improved and the officially designated area size did not change.

** 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:

No major change since the previous RIS for the site.

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): X;
- ii) an electronic format (e.g. a JPEG or ArcView image) X;
- 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.

Follows the boundary of the Lake Kolon unit of the Kiskunság NP.

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.

46°45'N 019°21'E

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 located in middle part of Hungary in the middle Hungarian reach of the River-Danube basin. Belongs to county Bács-Kiskun of Hungary, close to the village of Izsák. The nearest large town is the capital of county Bács-Kiskun, Kecskemét.

10. Elevation: (in metres: average and/or maximum & minimum)
average 95 m above Baltic sea level

11. Area: (in hectares) 2962 ha

(3059 ha on an earlier RIS may have been a different calculation from GIS; 2962 ha is the area officially designated by national law).

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland. Lake Kolon is a typical example of a freshwater fen and marshy area in a former river branch, characteristic of the Danube floodplain. The main habitat types at Lake Kolon are reedbeds with patches of sedge. Noteworthy plant species are *Utricularia vulgaris* and *Urtica kioviensis*. The site hosts a regionally large population of the globally threatened indigenous fish species *Umbra krameri*. All eight heron species occurring in Hungary breed at Lake Kolon. In general, the site is an important breeding place for waterfowl such as *Aythya nyroca*, and one of the most important breeding places for *Acrocephalus melanopogon* in Hungary.

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.

<u>1</u>	•	<u>2</u>	•	<u>3</u>	•	<u>4</u>	•	5	•	6	•	<u>7</u>	•	8	•	9
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

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. It contains a representative and unique example of natural sodic-alkaline type wetlands within the Pannonic biogeographic region.

Habitat types listed on Annex I of the Habitats Directive:

3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition type

3160 Natural dystrophic lakes and ponds

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

6440 Alluvial meadows of river valleys of the *Cnidion dubii*

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

91F0 Riparian mixed forest of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia* along the great rivers (*Ulmenion minoris*)

2. It supports vulnerable, endangered species and threatened ecological communities.

Cirsium brachycephalum – including in 92/43/EGK directive Annex II

Anisus vorticulus - including in 92/43/EGK directive Annex II

Leucorhina pectoralis - including in 92/43/EGK directive Annex II

Misgurnus fossilis LR/nt IUCN Red list + 92/43/EGK directive Annex II

Umbra krameri VU IUCN Red list + 92/43/EGK directive Annex II + Berne Convention Annex II

Bombina orientalis LC IUCN Red list + 92/43/EGK directive Annex II

Triturus cristatus NT IUCN Red list + 92/43/EGK directive Annex II

Emys orbicularis LR/nt IUCN Red list + 92/43/EGK directive Annex II

Lutra lutra NT IUCN Red list + 92/43/EGK directive Annex II

Acrocephalus melanopogon LC IUCN Red list + Bird Directive Annex II

Alcedo atthis LC IUCN Red list + Annex I Bird Directive

Anthus campestris LC IUCN Red list + Annex I Bird Directive

Ardea purpurea LC IUCN Red list + Annex I Bird Directive

Ardeola ralloides LC IUCN Red list + Annex I Bird Directive

Aythya nyroca NT IUCN Red list + Annex I Bird Directive

Botaurus stellaris LC IUCN Red list + Annex I Bird Directive

Caprimulgus europaeus LC IUCN Red list + Annex I Bird Directive

Ciconia ciconia LC IUCN Red list + Annex I Bird Directive
Ciconia nigra LC IUCN Red list + Annex I Bird Directive
Circaetus gallicus LC IUCN Red list + Annex I Bird Directive
Circus aeruginosus LC IUCN Red list + Annex I Bird Directive
Circus cyaneus LC IUCN Red list + Annex I Bird Directive
Coracias garrulus LC IUCN Red list + Annex I Bird Directive
Crex crex NT IUCN Red list + Annex I Bird Directive
Dendrocopos syriacus LC IUCN Red list + Annex I Bird Directive
Dryocopus martius LC IUCN Red list + Annex I Bird Directive
Egretta alba Annex I Bird Directive
Egretta garzetta LC IUCN Red list + Annex I Bird Directive
Falco cherrug EN IUCN Red list
Falco vespertinus LC IUCN Red list
Haliaeetus albicilla NT IUCN Red list + Annex I Bird Directive
Ixobrychus minutus LC IUCN Red list + Annex I Bird Directive
Lanius collurio LC IUCN Red list + Annex I Bird Directive
Lanius minor LC IUCN Red list + Annex I Bird Directive
Lullula arborea LC IUCN Red list + Annex I Bird Directive
Luscinia svecica LC IUCN Red list + Annex I Bird Directive
Nycticorax nycticorax LC IUCN Red list + Annex I Bird Directive
Otis tarda VU IUCN Red list + Annex I Bird Directive
Pernis apivorus LC IUCN Red list + Annex I Bird Directive
Platalea leucorodia LC IUCN Red list + Annex I Bird Directive
Porzana parva LC IUCN Red list + Annex I Bird Directive
Porzana porzana LC IUCN Red list + Annex I Bird Directive
Sylvia nisoria LC IUCN Red list + Annex I Bird Directive
Tringa glareola LC IUCN Red list + Annex I Bird Directive

3. It supports populations of plant and animal species important for maintaining the biological diversity of Pannonic biogeographic region, such as *Sedum hillebrandtii* - Pannonic endemic and *Dianthus serotinus* - Pannonic endemic.

4. Notable breeding, migrating, wintering and resident birds including in 79/409/EGK Annex I.:
Acrocephalus melanopogon, Alcedo atthis, Anthus campestris, Ardea purpurea, Ardeola ralloides, Aythya nyroca, Botaurus stellaris, Caprimulgus europaeus, Ciconia ciconia, Ciconia nigra, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Coracias garrulus, Crex crex, Dendrocopos syriacus, Dryocopus martius, Egretta alba, Egretta garzetta, Falco cherrug, Falco vespertinus, Haliaeetus albicilla, Ixobrychus minutus, Lanius collurio, Lanius minor, Lullula arborea, Luscinia svecica, Nycticorax nycticorax, Otis tarda, Pernis apivorus, Platalea leucorodia, Porzana parva, Porzana porzana, Sylvia nisoria, Tringa glareola

7. It supports a significant population of indigenous Umbra kramerii fish species.

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:** Pannonic

b) **biogeographic regionalisation scheme** (include reference citation): European Commission DG Environment webpage
Bern Convention/ EU Habitats Directive

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.

Geology, hydrogeology, pedology

Following the withdrawal and the sedimentation of the last lake, the so-called Late Miocene Lake Pannon in this region on the Great Plain, approximately 4.5 million years ago, the ancestor structures of the Danube, the ancient Tisza and the tributaries of the latter appeared. From this point on the previous lake sediment supply was replaced by river sedimentation (primarily by the Danube). Until the Günz-Minden Interglacial Episode in the Pleistocene Ice Age following Pliocene Epoch the Danube ran southeast-bound towards Szeged, cutting the region in half, and supplied river sedimentation in a width of some 1000 metres. In the Günz-Minden Interglacial Episode of the Ice Age a major change occurred: with the development of the region's southwestern depression (Kalocsa depression) the Danube gradually started to drift westward by leaving its previous diagonal flow direction and took over its present north-south position. The Danube had already filled up the previous areas. River sedimentation ceased on the alluvial fan replacing these, situated east of the region, which remained higher than the Trans-Tisza region, and a thick eolic sedimentary layer were deposited on it (in the areas undisturbed by water).

This sedimentary layer consists of sand blown out of the Danube valley in the ice-free periods of the Ice Age, which was structured as a series of sand piles in the north-south direction according the dominant wind direction, as well as loess developed during the ice formation periods, their transformed (e.g. soil) varieties and sediments washed out by local precipitation.

The sediment pattern delivered by the Danube-Tisza interfluvial winds protrudes slightly east of the current Tisza route, between the river layers of the Tisza. Therefore a geological situation developed in the smaller eastern section of the region where the Tisza, through its westbound movement, entered the alluvial fan of Danubian origin and in certain locations cut up and destroyed the surface of Danubian origin from the late Pleistocene period and enriched it with its own sediments (occasionally in an astonishing width of several hundred metres).

Based on geological evolution, the geological structures covering the surface and the morphological conditions the region can be divided into three major geological units:

- Danube Valley (a tectonic and erosional depression along the Danube river in a width of some 20-30 km) with an average height of 90-100 m above sea level,
- Danube-Tisza Interfluvial Ridge. An area with a varied surface protruding some 30 m above the Danube Valley and almost 40 m above the Tisza sedimentary layer smoothing into the loess Bácska plain in the SW direction. Due to its position and surface features this is also the natural divide of the region, which is roughly sketched going from north to south by a line between the communities of Ladánybene, Fülöpháza, Helvécia, Bócsa, Tázlár, Kéleshalom and Bácsalmás. Its average height above sea level is 110-135 m.

Typical calcareous swamp plains, fens and marshes, intertwined in a chain-like pattern, have developed in a width of 8-10 km and in a length of some 120 km along the periphery of the old Danube floodplain, the Danube Valley sodic plains and the Ridge sand regions. Danube floodwaters entering the sand dune series, preserved in the depressions, and the Danube tributaries that developed provided a foundation for the formation of swamps and marshlands in the late Pleistocene period. Following the Danube river control in the 19th century the connection of these regions was cut off from the river, however, the ground water movement towards the Danube Valley from the Ridge provided an adequate and continuous supply of water reserves for the marshland subsequently, as well. By today most of the natural connections to the specific swamp and marsh areas have ceased, but this region still belongs to the wettest regions of the country even in its current condition.

Pedology

The following soil types are the most common based on the past and current water conditions of the specific areas, the chemical composition of the soil and the surface water, the rock bed conditions and the soil-forming vegetation: carbonated shifting sand shallow soils, carbonated humous sand soils, chernozem type sand soils, meadow chernozems, swamp soils, muskeg soils, carbonated meadow soils, deep saline meadow soils, solonetz meadow soils, solonchak-solonetz soils.

Climate

The climate variations are limited in the region of the Carpathian Basin. The macroclimate can be considered a homogenous basic feature in terms of surface and fauna evolution, as well. The region has a temperate continental climate. Its unique features are limited cloudiness, a relatively high number of sunshine hours, high daily and annual temperature variation, relative dryness and very low humidity values.

This region is the area with the least cloudiness in Hungary. The annual average cloudiness is 52-57%. The annual average number of sunshine hours is approx. 2050. At the same time this is one of the warmest areas in the country. No significant variations exist in this region. The annual average temperature is between 10-11°C. The mean temperature of the coldest month (January) is between minus 1.5 and minus 2°C, while that of the warmest month (July) is 21-22°C. Characteristically of areas with a continental climate, the annual average temperature variance is quite significant (23-24°C). The region can be classified within Hungary as one with a short winter and a long summer. The number of winter days is only 26-31, however, major frosts are common. Spring comes early, and the average temperature rises above 10°C in the whole region between 7-12 March. The number of summer days is 81-84. In the fall the daily average temperature falls below 10°C again generally between 17-21 October.

The region is one of the parts of the country having the least precipitation. Under normal conditions the annual precipitation is between 500-600 mm in the region. The rainfall of the summer semester (April-September), the so-called breeding period, is around 300-350 mm. The winter precipitation occurs mainly in the form of snow. The number of snow-cover days is 30-40. The precipitation conditions therefore are relatively disadvantageous. This is further intensified by low humidity values, with an annual average of many years at 71-74%. Based on this data we may declare that the balance of precipitation and evaporation is negative in the region. The wetlands that have developed and exist can thank their subsistence to supplementary water influences (e.g. ground water).

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 sodic plain belongs to River Danube catchment area. The general physical features of the site is characteristic for almost whole catchment area of the site, but have to put emphasis on this wetlands have an extensive groundwater catchment area. The local wetland catchment area has two main part, on the major part is the lowland ancient River Danube branch, and on the eastern part of it is the plain sandy ridge plateau.

Prior to the river control of the Danube the Danube Valley used to be the river's normal floodplain, then it was an area covered with inland waters on a regular basis subsequently, as well. Also, as a result of its pedological (mainly calcareous-sodic plains developed on a fine granule rock bed) and geological structure (the significant presence of a fine waterproof clay layer) precipitation filter downwards with difficulty and may remain permanently in the depressions. It is generally true that due to the winter precipitation and the high ground water level in the spring significant water volumes appear in the depressed areas (in the isolated depressions of lake beds and old water flows).

18. Hydrological values:

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

Lake Kolon was formed in an ancient branch of the river Danube. Beginnings of the former century the site was a shallow freshwater lake with peat sediments, but currently it is filling up with sediment deposits almost completely. Complete drainage also contributed to the decrease of open water area and reedbed colonization. In the 1980s, the last open water bodies disappeared. The water levels at Lake Kolon are controlled by a sluice. The main soil type at the lake is peat soil. The site has a beneficial effect on the groundwater regime of the surrounding area.

The water quality is very good. The concentrations of phosphorus (0,05 mg/l) and nitrogen components (ammonium 0,85 -1,05 mg/l, nitrate 0,8 -1,2 mg/l) are very low (date for May and July 1991). Calcium and magnesium concentration are relatively high as is the pH (7,7-8,2). Chlorophyll-a is very low at 3 -15 mg/ms. Risks of algae bloom in open water areas are therefore small. Oxygen saturation is low in summer; data for July 1991 indicate 46X O₂- saturation and 3.9 mg O₂/l. These data are for 16.00 h and

02-concentration may be even lower in the early morning. Fish dying occasionally occurs in summer and has recently been observed in the southern compartment. One may therefore presume that the lake is sensitive to an increase in oxygen demanding components. Also ammonium concentrations are high with respect to quality standards for fish species.

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.

Tp, U, Ts, Xp, 9, Agricultural lands, Other non-wetland

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 complex of habitats include a large reed bed, wet meadows, fen woods, pastures, hay meadows, sand dunes. The lake itself (cc. 900 ha), which suffered from drainage, is now nearly completely grown by vegetation. Only small parts, where peat-extraction was done remained open. The Lake Kolon is divided by a dam into two major parts, which are different in ecological aspects. The southern part is a well-wooded marshy area with wet meadows, bushes (*Salicetum cinereae*), forests (*Fraxinus angustifolia*, *Alnus glutinosa*, etc.). The northern half of the lake have more water, with extended reed beds (*Phragmitetum*), bushy areas (*Salicetum cinereae*) and some tree groups (*Salix fragilis*, *Populus canescens*, etc.). Many reed/ bulrush plants grow on tussocks, which makes the marsh nearly inaccessible to machines with the exception of vehicles with balloon-wheels or those moving on caterpillars. Due to its size, the limited number of inlets and the presence of groundwater upward seepage, isolated sites may be present with more oligotrophic, or even lithotrophic vegetation.

The change of the state of this isolated lake without an inlet and outlet has accelerated since the last century. To date, it has no natural areas without vegetation, only a 6 hectares excavated restoration open water body. After having been protected, minor management works have been carried out such as levee reinforcement and engineering works aiming at water retention so as to maintain this large fresh water marshland and to improve its ecological conditions. At the moment the ecological state of the marsh is better than it was before 1975. However, ecological studies show that further steps are required to restore part of the former open water biotopes and to slow down the succession towards a dense reed marsh. Inflow of fertilizers from the grasslands at the eastern side of the lake is to be feared and risks of eutrophication may increase in the future. It has good quality and great importance. It is one of the most important wetland areas between Duna and Tisza rivers in the Great Hungarian Plain. Great wetlands characterize the site with high biodiversity both on species and habitat levels. By today most of the natural connections to the specific swamp and marsh areas have ceased, but this region still belongs to the wettest regions of the country even in its current condition. Iszáki Kolon Lake is greatly expansive swamp and marsh area even in national terms. The complex of habitats includes a large reed bed; species rich wet meadows, fen woods, pastures, and hay meadows, sand dunes. The lake itself, which suffered from drainage, is now nearly completely grown by vegetation gives breeding and feeding habitats for large variety of insect, fish, amphibian, and bird species. For the long-term the aim is to restore and maintain lake Kolon as a wetland of great biodiversity with open water, reedbeds and fenwoods. Biodiversity will be improved through habitat restoration with the dual objective to restore previous natural conditions and

to foment the recovery of rare species. In addition to the planned excavation of open water areas, it is hoped that in the future a more flexible water management will be possible that also allows higher water levels in support of different species of water fowl.

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.*

Sedum hillebrandtii - Pannonic endemic

Dianthus serotinus - Pannonic endemic

Cirsium brachycephalum – included in 92/43/EGK directive Annex II

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.*

Anisus vorticulus - including in 92/43/EGK directive Annex II

Leucorrhinia pectoralis - including in 92/43/EGK directive Annex II

Misgurnus fossilis – Pannonic endemic, and including in 92/43/EGK directive Annex II

Umbra krameri – Pannonic endemic, and including in 92/43/EGK directive Annex II

Bombina bombina – including in 92/43/EGK directive Annex II

Triturus dobrogicus – including in 92/43/EGK directive Annex II

Emys orbicularis – including in 92/43/EGK directive Annex II

Lutra lutra – including in 92/43/EGK directive Annex II

Notable breeding, migrating, wintering and resident birds including in 79/409/EGK Annex I:

Acrocephalus melanopogon, Alcedo atthis, Anthus campestris, Ardea purpurea, Ardeola ralloides, Aythya nyroca, Botaurus stellaris, Caprimulgus europaeus, Ciconia ciconia, Ciconia nigra, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Coracias garrulus, Crex crex, Dendrocopos syriacus, Dryocopus martius, Egretta alba, Egretta garzetta, Falco cherrug, Falco vespertinus, Haliaeetus albicilla, Ixobrychus minutus, Lanius collurio, Lanius minor, Lullula arborea, Luscinia svecica, Nycticorax nycticorax, Otis tarda, Pernis apivorus, Platalea leucorodia, Porzana parva, Porzana porzana, Sylvia nisoria, Tringa glareola

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: No fisheries, religious importance, archaeological sites corresponding with the wetlands.

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? No.

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:

24. Land tenure/ownership:

- a) within the Ramsar site: 81 % of the site is state owned by Kiskunság National Park Directorate, others are in private ownership
- b) in the surrounding area: mostly privately owned

25. Current land (including water) use:

- a) within the Ramsar site: reedbed cutting, the extensive grassland, mowing, forest and a little agricultural using are involved.
- b) in the surroundings/catchment: mainly the extensive agricultural, grassland and planted forest using are involved.

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: groundwater decreasing, water regulation, extensive agricultural pollution and disturbing factors, drying out, eutrophication and filling up, invasion by alien species (e.g. *Solidago* sp., *Asclepias syriaca*), illegal fishing, spreading of tree and bush species, Inflow of fertilizers from the grasslands at the eastern side of the lake is to be feared and risks of eutrophication may increase in the future. The lake itself, which suffered from drainage, is now nearly completely overgrown by vegetation and gives breeding and feeding habitats for large variety of insect, fish, amphibian, and bird species.
- b) in the surrounding area: groundwater decreasing, water regulation, intensive agricultural pollution and disturbing factors, artificial forest planting, drying out, eutrophication, low or high grazing pressure, invasion by a alien species (e.g. *Eleagnus angustifolia*), waterfowl hunting.

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 whole site is protected by Hungarian nature conservation law as a national park, and as a part of the Natura 2000 network as a Special Protection Area (SPA), and the whole site has been proposed as a Site of Community Importance (pSCI). The site belongs to Kiskunsági National Park, and it is a UNESCO Biosphere Reserve (it is a part of the Kiskunság Biosphere Reserve). There are 84 ha of strictly protected area. The whole site is a Biogenetic Reserve.
 - 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 nature conservation management plan is in place, although not officially approved. A site specific management plan is need to be improved and implemented.
 - d) Describe any other current management practices:
-

28. Conservation measures proposed but not yet implemented:

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

There are planned further habitat restoration programmes to create more open water bodies.

29. Current scientific research and facilities:

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

General Hungarian biodiversity and bird monitoring program is running on the site. There is a permanent working ringing station on the site where is ringed and measured ca. 20000 birds per a year, especially including reed warblers. A reedbed conservation and monitoring research programme is also running here.

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.

Observation hides, nature educational trails, information tables, booklets and special ornithological education, and volunteer fieldwork facility on ringing station are available on the site.

31. Current recreation and tourism:

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

Generally negligible, some ecotourism and birdwatching tourism are involved.

32. Jurisdiction:

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

The Alsó-Duna-völgyi Authority for Environmental Protection, Nature Conservation and Water Management is the first instant authority of the Ministry for Environment and Water.

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.

Kiskunsági Nemzeti Park Directorate
Hungary
H-6000 Kecskemét, Liszt F. u.19.
borose@knp.hu

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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.

Mahunka, S. [eds.] 1986: The fauna of the Kiskunság National Park, Vol I. Akadémia Kiadó, Budapest 1986.

Mahunka, S. [eds.] 1987: The fauna of the Kiskunság National Park, Vol II. Akadémia Kiadó, Budapest 1987.

Szujkó-Lacza, J. & Kováts, D. (eds.) 1993: The Flora of the Kiskunság National Park. In the Danube-Tisza Mid-Region of Hungary. Vol. I. Magyar Természettudományi Múzeum, Budapest 1993. 469pp.

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