Information Sheet on Ramsar Wetlands (RIS) – 2009 - 2012 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:
 FOR OFFICE USE ONLY.

 Béla Habarics – head of Landscape Protection Area
 DD MM YY

 Dr. Sarolta Ebesfalvi – nature conservation ranger
 DD MM YY

 Hortobágy National Park Directorate
 Directorate

 4024 Debrecen, Sumen u. 2.
 Designation date

 Tel.: +36 52/529 920, fax.: +36 52/529 940, e-mail:
 Designation date

 Anp@hnp.hu
 Site Reference Number

2. Date this sheet was completed/updated: April 2012 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.

Felső-Tisza (Upper Tisza)

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 \Box ; 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 \Box ; or i) the boundary has been extended \Box ; or iii) the boundary has been restricted** \Box

and/or

If the site area has changed:

i) the area has been measured more accurately • or ii) the area has been extended \Box ; or iii) the area has been reduced** \Box

** 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:

There was not any major change in the ecological character of the Ramsar 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): \square ;

ii) an electronic format (e.g. a JPEG or ArcView image)

iii) a GIS file providing geo-referenced site boundary vectors and attribute tables \Box ;

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.

Felső-Tisza is a typical flood plain area between the dikes of River Tisza, the Ramsar site was outlined following the dikes of these floodplain areas from the Hungarian - Ukrainian border (744.8 km of river) till the village of Tiszadada in Szabolcs-Szatmár-Bereg County.

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.

48°02' 08"N, 21° 17' 13"E (westernmost location) 48°25'17"N 22°12'28" E (northernmost location) = Central coordinate 48° 05' 05" N, 22° 50' 16" E (easternmost location)

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 North-Eastern Hungary in the floodplain along the river Tisza from the Hungarian - Ukrainian border (744.8 km of river) till the village of Tiszadada in Szabolcs-Szatmár-Bereg County. The largest town close to the site is Nyíregyháza, other important towns are Tokaj, Mátészalka, Fehérgyarmat and Vásárosnamény.

10. Elevation: (in metres: average and/or maximum & minimum) 108 m - 120 m above Baltic Sea

11. Area: (in hectares)

Total: 22 310.7 ha

12. General overview of the site:

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

Felső-Tisza is a typical flood plain between dikes constructed during the end of the 19th and in first half of the 20th centuries. The highly natural and near natural habitats consist of large patches of softwood riverside forests (Salicetum albae-fragilis) and hardwood riverside forests (Querco-Ulmetum), oxbow lakes, filled in meanders with rich natural flora and fauna, extensively managed or abandoned orchards and plough-lands. This Ramsar Site has been designated as a Transboundary Ramsar Site together with "Tisa River" in Slovakia in 2003.

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
\mathbf{N}	$\mathbf{\Lambda}$	\mathbf{N}	$\mathbf{\nabla}$			$\mathbf{\nabla}$	

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).

Criterion 1:Felső-Tisza is a representative example of a natural or near-natural middle-reach river type found within the biogeographic region. The wetland is natural, without significant disturbance by human activities and it has an important ecological role in the movement and migration of many plant and animal species in the region.

Criterion 2: Felső-Tisza supports vulnerable, endangered and critically endangered species and threatened ecological communities.

Species listed in IUCN Red List of threatened species and/or in EU Habitats Directive or Birds Directive are listed under Point 22.

For protected plant species see point 21.

Criterion 3: Felső-Tisza supports populations of plant and animal species important for maintaining the biological diversity of the biogeographic region such as <u>Dragonfly species:</u> *Epitheca bimaculata Anasciaceschna isosceles Chacolestes viridis*

Endemic fish species:

The Carpathian brook lamprey, *Eudontomyzon danfordi* is an endemic fish species to the Tisza river catchment. A subspecies of *Barbus meridionalis*, the Southern Barbel (*B. meridionalis petényi*) is an endemic subspecies to the Pannonic biogeographic region.

It also occasionally supports Danube salmon, *Hucho hucho* (EN) which is endemic to the Danube river system.

Amphibians

Fire-bellied Toad, *Bombina bombina* (Bern Convention, EU Habitats Directive). Danube Crested Newt, *Triturus dobrogicus* (listed under EU Habitats Directive)

Reptiles

European Pond Tortoise *Emys orbicularis* (Bern Convention), Grass Snake *Natrix natrix* (Bern Convention, EU Habitats Directive).

See also point 22.

Criterion 4: Felső-Tisza supports plant and animal species at a critical stage in their life cycles and provides refuge during adverse conditions.

Being a large, continous natural area, Felső-Tisza is breeding area for numerous invertebrate and vertebrate species. The river also plays an important role as a migration route for several species (invertebrates, birds, bats, etc.)

Criterion 7: Felső-Tisza supports a significant proportion of indigenous fish subspecies, species and populations that are representative of wetland benefits and thereby contributes to global biological diversity.

All Gudgeon species *Gobio spp.* are found in this wetland site, namely Gudgeon (*G.gobio*), Danubian Gudgeon (*G. uranoscopus*), Kessler's Gudgeon (*G. kesslerii*), and White-finned Gudgeon (*G. albipinnatus*). Furthermore Riffle Minnow (*Alburnoides bipunctatus*), Zingel (*Zingel zingel*), Danube Streber (*Z. streber*), Bullhead (*Cottus gobio*) Belica (*Leucaspius delineatus*) should be mentioned.

Criterion 8: Felső-Tisza is an important source of food for fishes, spawning ground, nursery and migration path on which fish stocks, either within the wetland or elsewhere, depend.

The most important species in this regard include Nase (*Chondrostoma nasus*), Barbel (*Barbus barbus*), and Sterlet (*Acipenser ruthenus*).

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 biogeographic region.

b) biogeographic regionalisation scheme (include reference citation): European Commission DG Environment webpage 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

Floodplain of Tisza is a basin of recent subsidence, a fluvial plain. The soil types are the mixes of Holocene fluvial sediments as fluvial sand, gravel, flood plain mud, freshwater lime mud. The river carries small gravel with sand in section between settlements of Tiszabecs and Tivadar. The river has a strong meandering and incision characteristic with a large number of undercut steep banks. The average difference between the high and low water level of the river is 8 m. The most intensive floods happen in April (because of snow melting), in June (the so called 'green flood' caused by strong spring rainfall) and between December and January. The lowest water level is between August and September.

Climate

Climate is moderately warm continental with insufficient precipitation in the growing season. Winters are moderately dry and cold.

Average hours of sunlight are 1920-1940 hours/year, the average temperature is 9.5-10 °C, and the average yearly rainfall is 550-580 mm.

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 catchment area is fairly varied: from high mountains to hilly areas. General land uses include forestry, mining and to a lower extent agriculture.

The total area of the catchment of the Felső-Tisza is estimated at 157.186 km².

The largest part of the catchment is shared between Romania and Ukraine. Hungary has 27% of it covering 42.286 km² while Slovakia has a smaller part.

18. Hydrological values:

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

The wetland site covers the entire active floodplain of the river. The region is the richest part of the country in watercourses. Until now the network of watercourses has been dynamic and permanently formed.

The Tisza has typical characters of a lowland river and has three types of floods. The first occurs mainly in April, following the snow melt in the catchment area. Heavy floods may happen frequently caused by intensive precipitation in June and July, somtimes in late autumn. Difference between high and low water level is 485 cm with 930 cm at maximum. For flood prevention purposes, the river was regulated during the 19th and 20th centuries.

Frequency and intensity of floods have an important impact on the condition of oxbows in the floodplain. During the past few decades there have been dry periods when the water level has been lower than the average, the "washing out" function of the flood has not worked properly in the oxbows and the eutrophication became more intense.

Along the whole length of the river Tisza in Hungary there are 116 oxbows (larger than 4 hectares), among these 31 are located in Felső-Tisza. They perform extremely important ecological functions (spawning, rearing, feeding, resting and staging, aquifer recharge, aquatic

species "banks", and habitat connectivity). The ecological quality of the oxbows varies from those that are still relatively undisturbed to some that have been heavily modified, have high production of algae and are likely to take substantial time to regenerate. Oxbows can be as long as 8–10 km, their average length is 1.3 km.

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: ABCDEFGHIJKZk(a)Inland:L \underbrace{M}_{Vt} N \underbrace{O}_{Vt} \underbrace{P}_{Vt} Q \underbrace{R}_{Vt} SpSsTpTsUVaVt \underbrace{W}_{Vt} \underbrace{Xf}_{Vt} \underbrace{Xp}_{Vt} YZgZk(b)TpTsUVaHuman-made:12345678 $\underbrace{9}_{Vt}$ 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.

Ts, M, W, R, O, Xf, Xp, P, Ss, 9

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.

Types of habitats and vegetation are closely related to the typical riparian ecosystems. Because of the regulation of the river, the size and distribution of these habitats have decreased significantly during the last hundred years. However, in the present situation the remaining fragments of these habitats are able to hold their basic features. These are as follows:

- Soft wood riparian forest (Salicetum albae-fragilis): consists of the species Salix alba, Salix fragilis, Populus alba, and P. nigra. This habitat is common in this wetland and the number, size and distribution of this habitat has an important role in the general ecological function of the wetland. The following internationally and nationally important typical bird species are breeding in this habitat: Egretta garzetta, Ardeola ralloides, Nycticorax nycticorax, Ardea cinerea, Ciconia nigra, Milvus migrans, Luscinia luscinia, Haliaeetus albicilla, Dryocopus martius

Willow bushes (*Salicetum triandrae*): consists of *Salix triandra, S. purpurea, S. fragilis, S. viminalis.*Hardwood riverside forests (*Querco-Ulmetum*), oxbow lakes, filled in meanders with rich natural flora and fauna, extensively managed or abandoned orchards.

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 most important values in the flora are natural soft-wood forests (*Salicetum albae-fragilis*) and hard-wood (*Querceto Fraxineto-Ulmetum*) riparian forests, which size and number provide ample opportunity to keep its original flora and fauna and to naturally recolonize the surrounding artificially altered areas in the flood zone.

Protected plant species in the area: Trapa natans (Bern Convention /I. Annex /), Nymphaea alba Salvinia natans (Bern Convention /I. annex /), 57 different Orchidaceae spp. (CITES Convention /II. annex/) including the Pannon endemic Epipactis tallosii that was discovered in the late nineties Galanthus nivalis (CITES Convention /II. annex/), Sternbergia colchiciflora (CITES Convention /II. annex/), Adonis vernalis (CITES Convention /II. annex/), Salix elaegnos listed by Hungarian Red Book Iris pseudocorus listed by Hungarian Red Book Leucojum aestivum listed by Hungarian Red Book

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*.

Invertebrates

Long-tailed Mayfly *Palingenia longicauda* listed by Hungarian Red Book Hermit Beetle *Osmoderma eremita* IUCN NT, Habitats Directive Annex II Marbled Rose Chafer *Liocola lugubris* listed by Hungarian Red Book Borer species *Saperda carcharias, S. scalaris, S. octopunctata* listed by Hungarian Red Book

Fish

Danube salmon, *Hucho hucho* (EN, Annex II, V, EU Hab. Directive)– Endemic to the Danube river system

Zingel, Zingel zingel (LC, Ann. V of EU Hab. Directive)

Danube streber, Zingel streber (LC, Ann. II, EU Hab. Direct.)

Sterlet, Acipenser ruthenus (VU, Ann. V, EU Hab. Dir.)

Russian sturgeon, Acipenser gueldenstaedtii(CR, Ann. V EU Hab. Directive)

Bastard Sturgeon Acipenser nudiventris (CITES Convention /II. annex/), IUCN EN A1acde+2d

White-finned Gudgeon, Romanogobio albipinnatus (LC)

Spined Loach, Cobitis taenia (LC, Ann. II EU Hab. Directive)

Kessler's Gudgeon, Romanogobio kesslerii (LC, Annex II of EU Habitats Directive)

Danube Gudgeon, Romanogobio uranoscopus (LC, Annex II of EU Habitats Directive)

Striped Ruffe, Gymnocephalus schraetzer (LC, Ann. II and V, EU Hab. Directive)

Danube Roach, Rutilus pigus (LC, Ann. II and V, EU Hab. Directive)

Aspius aspius (Asp) (LC, Ann. II and V, EU Hab. Directive)

Balon's Ruffe, Gymnocephalus baloni (Ann. II and IV, EU Hab. Directive)

European Mudminnow Umbra krameri (Bern convention - Endemic to the Danubian river

system - listed by Hungarian Red Book, Habitats Directive Annex II)

Weatherfish Misgurnus fossilis (Bern Convention, EU Habitats Directive / II. annex /),

Cobitis taenia (Bern Convention, Annex II EU Habitats Directive),

Rhodeus sericeus amarus (Bern Convention, Annex II EU Habitats Directive),

Proterorhinus marmoratus (Bern Convention, Annex II EU habitats Directive).

Amphibians

Fire-bellied Toad, Bombina bombina (LC, Ann. II and IV of EU Hab. Directive)

Northern Crested Newt, *Triturus cristatus* (LC, Ann. IV, Hab. Directive) *Pelobates fuscus* (Ann. IV of EU Habitats Directive) *Bufo bufo* B. viridis (Ann. IV of EU Habitats Directive)

<u>Reptiles</u> Natrix natrix

<u>Birds</u>

(numbers refer to the size of breeding population)

Squacco Heron, Ardeola ralloides (LC, Ann. I Birds Dir); Night Heron, Nycticorax nycticorax (LC, Ann. I Birds Dir); Great Bittern, Botaurus stellaris (LC, Ann. I Birds Dir), Little Bittern, Ixobrychus minutus (LC, Ann. I Birds Dir), Little Egret, Egretta garzetta (LC, Ann. I Birds Dir.) Black Stork, Ciconia nigra, 10-15 pairs (LC, Ann. I, EU Birds Directive) Ferruginous Duck, Aythya nyroca (NT, Ann. I Birds Dir), 50-60 pairs Honey Buzzard Pernis apivorus, 2-5 pairs Bern Convention II., EU Wild Birds Directive I. Black Kite, Milvus migrans 4-6 pairs (LC, Ann. I, EU Birds Directive) White-tailed Eagle, *Haliaeetus albicilla* 2-3 pairs (LC, Ann. I, EU Birds Directive) Corncrake, Crex crex, 80-100 pairs breeding in the grassland habitats (LC, Ann. I, EU Birds Directive) Whiskered Tern, Chlidonias hybrida (LC, Ann. I Birds Dir), Kingfisher, Alcedo atthis, 80-150 pairs (LC, Ann. I, EU Birds Directive) European Roller Coracias garrulus, 4-5 pairs Bern Convention II., EU Wild Birds DirectiveI. Black Woodpecker, Dryocopus martius 100-140 pairs (LC, Ann. I, EU Birds Directive) Syrian Woodpecker Dendrocopos syriacus(LC, Ann. I Birds Dir), Sand Martin, *Riparia riparia*, 9000-12000 pairs (LC) Barred Warbler, Sylvia nisoria 300-450 pairs (LC, Ann. I, EU Birds Directive) Red-backed Shrike, Lanius collurio 500-800 pairs (LC, Ann. I, EU Birds Directive) Corvus corax, 10-20 pairs

Mammals

Mustella nivalis Mustella erminea

Common otter, *Lutra lutra* (NT, Ann. II and IV of EU Habitats Directive) European Souslik (*Spermophilus citellus*) IUCN VU A1c (Ann. II and IV of EU Habitats Directive) *Felis silvestris* (CITES Convention /II. annex/) Ann. IV of EU Habitats Directive) *Myotis daubentoni* (Bern Convention), Ann. IV of EU Habitats Directive) Pond Bat *Myotis dasycneme* IUCN NT (Ann. II and IV of EU Habitats Directive)

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:

Oxbow ecosystems scattered along the river Tisza provide numerous social and economic goods and services, including irrigation for agricultural lands, small-scale fisheries, recreation and flood control or mitigation.

The fish fauna is rich, providing opportunity for traditional fishery. Because of the natural conditions, the area provides a unique opportunity to study both the structure and function of a riverside ecosystem and the ecological and behavior characteristics of both the populations and the community of animal and plant species in an undisturbed condition.

The area has great importance for environmental education. Because of the large and diverse habitats, there are many options for hands-on presentation of the structure and function of the ecosystems both to the students and others, without causing significant damage, by utilizing proper methodology.

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 **D** 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: State owned – roughly 40% Local government – 30% Private – 30%

b) in the surrounding area: mainly private

25. Current land (including water) use:

a) within the Ramsar site:

- Forestry, unfortunately with extended plantation of hybrid poplar;
- Inappropriate grazing and harvesting of hay;
- Tourism, canoeing along the river, beaches and related business, development of guest-house areas;
- Hunting, mainly for wild boar, pheasant, waterfowl;
- Fishing.

b) in the surroundings/catchment:

- Intensive forestry.

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:

- intensive and unfortunately uncontrolled canoe tourism during the summer period;
- uncontrolled mass tourism in Tivadar, Vásárosnamény and increasing tourism in various villages;
- intensity of forestry has increased since 1990. As a result, the fragmentation of the riverside forest habitats is getting close to the dangerous level for the species living in that habitat;
- increasing volume of treated sewage water and the nutrients it carries poses a potential risk for the river, streams and oxbows;
- uncontrolled fishing activities in the oxbows, introduction of non-native fish species, overloading, littering and disturbance by anglers;
- growing and uncontrolled tourism along the river and on the beaches produce significant littering and disturbance;
- potential threatening factor: intensifying of shipping with vehicles of high engine power (tourism, industrial).

b) in the surrounding area:

- intensive forestry;
- plans for large-scale developments (industry, traffic, etc.).

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 Szatmár-Bereg Landscape Protection Area, which covers some parts of the wetland between Nagyar and Olcsvaapáti was designated in 1982. Now it is evident that the size and distribution of the areas presently protected are not adequate for the effective conservation of riverside habitats. Another two smaller protected areas are also included in the Ramsar Site (Tiszatelek-Tiszabercel Protected Area and Tiszadob Floodplain Protected Area).

Current protection presents little opportunity for limiting and regulating agricultural, forestry and development activity. The Landscape Protection Area and the other protected areas are supervised by the Hortobágy National Park Directorate.

The Ramsar Site is partly designated as NATURA 2000 site, it includes the Felső-Tisza SCI (HUHN 20001), the Felső-Tisza SPA (HUHN 10008) and the Szatmár-Bereg SPA (HUHN 10001).

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia \Box ; Ib \Box ; II \Box ; III \Box ; IV \Box ; V \blacksquare ; VI \Box

It applies for the Szatmár-Bereg Landscape Protection Area.

c) Does an officially approved management plan exist; and is it being implemented?: Nature conservation management plan of the Szatmár-Bereg Landscape Protection Area, which partly overlaps with the Ramsar site. 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.

The "Alföld" program of the Hungarian Government has implemented a special subprogram for the river Tisza. This comes from recognition of the essential role of the river in the structure and function of the Hungarian Lowland and from an understanding of the high ecological values of the river and habitats along it. This program has identified the most important sites along the river with the aim to control further developments.

29. Current scientific research and facilities:

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

A pilot project area of the Hungarian Biodiversity Monitoring Program is found at village Gávavencsellő within the wetland site where selected methods and techniques of biodiversity monitoring are carried out (e.g. habitat mapping, monitoring of several taxa etc.) Moreover there are specific scientific investigations in progress for example "Environmental changes and evolutionary responses of the migrating birds". Other studies include surveys and researches on dragonflies conducted by NGOs (Debrecen University, Debrecen).

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.

Szabolcs-Szatmár-Bereg County plays a leading role in nature protection education in Hungary. However, in this part of the county there are no significant activities on environmental education. Szatmár-Bereg Landscape Protection Area has a visitor center in Fehérgyarmat.

31. Current recreation and tourism:

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

Tourism related to water and countryside village is increasing that may have a potential for threatening the riverside ecosystem.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc. The Felső-Tisza-vidéki Authority for Environmental Protection, Nature Conservation and Water Management is the first instant authority of the Ministry of Rural Development. The Deputy State Secretariat for Nature Conservation and Environment Protection is part of the Ministry of Rural Development.

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.

Primary contact: Hortobágy National Park Directorate (responsible for protected areas) H-4024 Debrecen, Sumen u. 2. Phone: + 36/ 52 529-922 Fax: + 36/ 52 529-940 E-mail: hnp@hnp.hu or szilvi@hnp.hu, Ms. Szilvia Gőri desk officer for Ramsar issues

Environmental permitting authority: Upper-Tisza Regional Environment and Water Directorate (Felső-Tisza-Vidéki Környezetvédelmi és Vízügyi Igazgatóság) H-4400 Nyíregyháza, Széchenyi u. 19. +36 42/502-200 felsotiszavideki@zoldhatosag.hu

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

- BORHIDI A.– SÁNTA A. eds. (1999): Vörös könyv Magyarország növénytársulásairól. A *KÖM Természetvédelmi Hivatalának Tanulmánykötetei* 6. Red Book on plant associations of Hungary. TermészetBÚVÁR Alapítvány Kiadó, Budapest
- CSATÁRI B. (2001): A Tisza-vidék problémái és fejlesztési lehetőségei. Problems and development potential of Region Tisza. In Hungarian MTA RKK Alföldi Tudományos Kutatóintézete.
- DOBROSI, D.–HARASZTHY.L,–SZABÓ, G. (1993): Magyarországi árterek természetvédelmi problémái. Conservation problems of floodpalins in Hungary. In Hungarian *WWF Füzetek* 3.
- HAMAR, J.& A. SÁRKÁNY-KISS EDS. 1999: The Upper Tisa Valley Preparatory proposal for Ramsar site Designation and an ecological background Hungarian, Romanian, Slovakian and Ukrainian co-operation *TISCIA Monograph Series*, Szeged
- HARASZTHY, L. (2000): A Tisza-völgy természeti értékeinek megőrzése Conservation of natural values of Valley Tisza In Hungarian *WWF Füzetek* 17.
- HARKA, Á. (1997): Halaink. Képes határozó és elterjedési mutató. Fishes An identification guide and the distribution of fish species. In Hungarian Természet- és Környezetvédő Tanárok Egyesülete, Budapest.
- HORVÁTH, R. EBESFALVI, S. –FINTHA, I. HABARICS, B. HOMOKI, KELEMEN A. (2003): Szatmár-Beregi Tájvédelmi Körzet kezelési terve Management plan of Szatmár-Bereg Landcape Protection Area – manuscript (In Hungarian)
- HORVÁTH, R. HERCEGH, F. (2002): Tiszatelek-Tiszabercel Ártér Természetvédelmi Terület Kezelési terve Management Plan of Tiszatelek-Tiszabercel Floodplain Nature Reserve manuscript (In Hungarian)
- KORMÁNY GY. (2008): A Bereg-Szatmári-sikság természeti, társadalmi-gazdasági erőforrásai, fejlesztési lehetőségei. Nyíregyházi Főiskola Turizmus és Földrajztudományi Intézete.
- LEGÁNY, A., KÓNYA, J., VÉRTES, I. (1977): Date on the Avifauna of the Tisza region in Szatmár-Bereg. *Tiscia*, 12:131-139.
- LOVÁSZ, GY. MAJOROS, GY (1997): Magyarország természeti földrajza I. Physical geography of Hungary I. (In Hungarian) University Press, Pécs.
- MARTONNÉ ERDŐS, K. (2001): Magyarország tájföldrajza. Landscape geography of Hungary, in Hungarian) Debreceni Egyetem Kossuth Egyetemi Kiadó, Debrecen
- Rakonczay, Z. (ed.) 1990: Vörös könyv. A Magyarországon kipusztult és veszélyeztetett növény- és állatfajok – Hungarian Red Book. Extinct and threatened plant and animal species of Hungary. In Hungarian with English summary. Akadémiai Kiadó, Budapest.
- Szatmár-Beregi Tájvédelmi Körzet és térsége regionális és tájrendezési terve Vizsgálatok (1989). Keletterv- Regional and Landscape management plan of Szatmár-Bereg Landcape Protection Area, manuscript (In Hungarian) Debrecen
- SZÉP, T. (1991). A Tisza magyarországi szakaszán fészkelő partifecske (Riparia riparia (L.), 1758) állomány eloszlása és egyedszáma. (Number and Distribution of the Hungarian Sand Martin Population Breeding along the Hungarian Reaches of the River Tisza) Aquila, 98: 111-124.
- Please return to: Ramsar Convention Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • e-mail: ramsar@ramsar.org