



Ramsar Information Sheet

Published on 29 March 2017

Update version, previously published on : 8 November 2016

Hungary

Upper Tisza (Felső-Tisza)



| | |
|------------------|-----------------------|
| Designation date | 10 January 2004 |
| Site number | 1410 |
| Coordinates | 48°10'42"N 21°56'14"E |
| Area | 26 871,00 ha |

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

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 ploughlands. This Ramsar Site has been designated as a Transboundary Ramsar Site together with "Tisa River" in Slovakia in 2003.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

| | |
|--------------------|-------------------------------------|
| Name | Csaba Bereczki |
| Institution/agency | Hortobágy National Park Directorate |
| Postal address | H-4024 Debrecen, Sumen utca 2. |
| E-mail | bereczkicsaba@hnp.hu |
| Phone | +36 52 529 920 |
| Fax | +36 52 529 940 |

2.1.2 - Period of collection of data and information used to compile the RIS

| | |
|-----------|------|
| From year | 2013 |
| To year | 2015 |

2.1.3 - Name of the Ramsar Site

| | |
|---|---------------------------|
| Official name (in English, French or Spanish) | Upper Tisza (Felső-Tisza) |
|---|---------------------------|

2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

| | |
|--|---|
| (Update) A. Changes to Site boundary | Yes <input checked="" type="radio"/> No <input type="radio"/> |
| (Update) The boundary has been delineated more accurately | <input checked="" type="checkbox"/> |
| (Update) The boundary has been extended | <input type="checkbox"/> |
| (Update) The boundary has been restricted | <input type="checkbox"/> |
| (Update) B. Changes to Site area | the area has increased |
| (Update) The Site area has been calculated more accurately | <input type="checkbox"/> |
| (Update) The Site has been delineated more accurately | <input checked="" type="checkbox"/> |
| (Update) The Site area has increased because of a boundary extension | <input type="checkbox"/> |
| (Update) The Site area has decreased because of a boundary restriction | <input type="checkbox"/> |

2.1.5 - Changes to the ecological character of the Site

| | |
|---|--|
| (Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS? | Yes (actual) |
| (Update) Are the changes | Positive <input type="radio"/> Negative <input checked="" type="radio"/> Positive & Negative <input type="radio"/> |
| (Update) No information available | <input checked="" type="checkbox"/> |
| (Update) Changes resulting from causes operating within the existing boundaries? | <input checked="" type="checkbox"/> |
| (Update) Changes resulting from causes operating beyond the site's boundaries? | <input checked="" type="checkbox"/> |
| (Update) Changes consequent upon site boundary reduction alone (e.g., the exclusion of some wetland types formerly included within the site)? | <input type="checkbox"/> |
| (Update) Changes consequent upon site boundary increase alone (e.g., the inclusion of different wetland types in the site)? | <input type="checkbox"/> |
| (Update) Please describe any changes to the ecological character of the Ramsar Site, including in the application of the Criteria, since the previous RIS for the site. | |

- Water quality decline (partly due to pollution from abroad, both industrial and communal);
 - Extreme water fluctuations (extreme floods and serious droughts), and at the same time absence of regular flood volumes that were part of the normal water regime of the site (these fluctuations are due partly to climate change);
 - Spreading of invasive alien species;
 - Reduction and deterioration of important forest habitats (softwood and hardwood gallery forests) due to inappropriate forest management (e.g. softwood forests with willow trees are replaced by homogenous poplar woods);
 - The use of grasslands has declined, due to structural changes in animal husbandry.
- The above changes affected especially criteria 1, 2 and 4, with effect to certain bird species and bat species.

(Update) Is the change in ecological character negative, human-induced AND a significant change (above the limit of acceptable change) Yes

(Update) Has an Article 3.2 report been submitted to the Secretariat? Yes

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps

Boundaries description (optional)

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.

2.2.2 - General location

a) In which large administrative region does the site lie?

b) What is the nearest town or population centre?

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes No

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

idem No

d) Transboundary Ramsar Site name:

2.2.4 - Area of the Site

Official area, in hectares (ha):

Area, in hectares (ha) as calculated from GIS boundaries

2.2.5 - Biogeography

Biogeographic regions

| Regionalisation scheme(s) | Biogeographic region |
|----------------------------------|----------------------|
| EU biogeographic regionalization | Pannonic |

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

- Criterion 1: Representative, rare or unique natural or near-natural wetland types

Other ecosystem services provided

Felső-Tisza is a representative example of a natural or near-natural middle-reach river type found within the Pannonian 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. Felső-Tisza supports vulnerable, endangered and critically endangered species and threatened ecological communities.

- Criterion 2 : Rare species and threatened ecological communities

- Criterion 3 : Biological diversity

Justification

Felső-Tisza supports populations of plant and animal species important for maintaining the biological diversity of the biogeographic region such as: Dragonfly species: Eurasian Baskettail *Epiptera bimaeculata*, Norfolk Hawker Dragonfly *Anasclia isosceles*, Willow Emerald Damselfly *Chacolestes viridis* Endemic fish species: The Carpathian brook lamprey, Carpathian brook lamprey *Eudontomyzon danfordi* is an endemic fish species to catchment of Tisza river. A subspecies of Mediterranean barbel *Barbus meridionalis*, the Southern Barbel (*B. meridionalis petényi*) is an endemic subspecies to Pannonic biogeographic region. It also occasionally supports Danube salmon, Huchen *Hucho hucho* (EN) which is endemic to the Danube river system. Amphibians: Fire-bellied Toad, *Bombina orientalis* (Bern Convention, EU Habitats Directive). Danube Crested Newt, *Triturus cristatus* (listed under EU Habitats Directive). Reptiles: European Pond Tortoise *Emys orbicularis* (Bern Convention), Grass Snake *Natrix natrix* (Bern Convention, EU Habitats Directive).

- Criterion 4 : Support during critical life cycle stage or in adverse conditions

- Criterion 7 : Significant and representative fish

Justification




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 (*Leucaspis delineatus*) should be mentioned.

- Criterion 8 : Fish spawning grounds, etc.

Justification

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*).

3.2 - Plant species whose presence relates to the international importance of the site































| Scientific name | Common name | Criterion 2 | Criterion 3 | Criterion 4 | IUCN Red List | CITES Appendix I | Other status | Justification |
|---|----------------|-------------------------------------|--------------------------|--------------------------|---|--------------------------|--------------------------------|---------------|
| <i>Salvinia natans</i>  | Floating Fern | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | LC  | <input type="checkbox"/> | Annex I of the Bern Convention | |
| <i>Trapa natans</i>  | Water Chestnut | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | LC  | <input type="checkbox"/> | Annex I of the Bern Convention | |













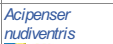

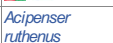
























Other noteworthy plan species:

- 57 different Orchidaceae spp. (CITES Convention //l. annex) including the Pannon endemic *Epipactis tallosii* that was discovered in the late nineties
























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, continuous 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.). Along the whole length of 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).

3.3 - Animal species whose presence relates to the international importance of the site

| Phylum | Scientific name | Common name | Species qualifies under criterion | | | | Species contributes under criterion | | | | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I | CMS Appendix I | Other Status | Justification |
|-------------------|---|------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|-----------|---------------------|-----------------|---|-------------------------------------|-------------------------------------|--|---|
| | | | 2 | 4 | 6 | 9 | 3 | 5 | 7 | 8 | | | | | | | | |
| Birds | | | | | | | | | | | | | | | | | | |
| CHORDATA/ AVES |  <i>Alcedo atthis</i> | Common Kingfisher | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | 80-150 pairs |
| CHORDATA/ AVES |  <i>Ardea cinerea</i> | Gray Heron; Grey Heron | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | | breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Ardeola ralloides</i> | Squacco Heron | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | Breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Aythya nyroca</i> | Ferruginous Duck | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | NT  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Annex I of the Birds Directive | 50-60 pairs |
| CHORDATA/ AVES |  <i>Botaurus stellaris</i> | Eurasian Bittern | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | |
| CHORDATA/ AVES |  <i>Chlidonias hybrida</i> | Whiskered Tern | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | |
| CHORDATA/ AVES |  <i>Ciconia nigra</i> | Black Stork | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | 10-15 pairs Breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Coracias garrulus</i> | European Roller | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | NT  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive ; Annex II of the Bern Convention | 4-5 pairs |
| CHORDATA/ AVES |  <i>Crex crex</i> | Corn Crake | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | 80-100 pairs breeding in the grassland habitats |
| CHORDATA/ AVES |  <i>Dendrocopos syriacus</i> | Syrian Woodpecker | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | |
| CHORDATA/ AVES |  <i>Dryocopus martius</i> | Black Woodpecker | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | 100-140 pairs Breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Egretta garzetta</i> | Little Egret | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | Breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Haliaeetus albicilla</i> | White-tailed Eagle | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Annex I of the Birds Directive | 2-3 pairs Breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Ixobrychus minutus</i> | Little Bittern | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | |
| CHORDATA/ AVES |  <i>Lanius collurio</i> | Red-backed Shrike | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | 500-800 pairs |

| Phylum | Scientific name | Common name | Species qualifies under criterion | | | | Species contributes under criterion | | | | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I | CMS Appendix I | Other Status | Justification |
|------------------------------------|---|---|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|-----------|---------------------|-----------------|---|--------------------------|--------------------------|--|---|
| | | | 2 | 4 | 6 | 9 | 3 | 5 | 7 | 8 | | | | | | | | |
| CHORDATA/ AVES |  <i>Luscinia luscinia</i> | Thrush Nightingale | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | | breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Milvus migrans</i> | Black Kite | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | 4-6 pairs Breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Nycticorax nycticorax</i> | Black-crowned Night Heron; Black-crowned Night-Heron | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | Breeding in the softwood riparian forest (<i>Salicetum albae-fragilis</i>). |
| CHORDATA/ AVES |  <i>Pernis apivorus</i> | European Honey Buzzard | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | 2-5 pairs |
| CHORDATA/ AVES |  <i>Sylvia nisoria</i> | Barred Warbler | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex I of the Birds Directive | 300-450 pairs |
| Fish, Mollusc and Crustacea | | | | | | | | | | | | | | | | | | |
| CHORDATA/ ACTINOPTERYGII |  <i>Acipenser gueldenstaedtii</i> | Russian sturgeon | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | CR  | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII |  <i>Acipenser nudiiventris</i> | Bastard Sturgeon | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | CR  | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII |  <i>Acipenser ruthenus</i> | Sterlet | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | VU  | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII |  <i>Alburnoides bipunctatus</i> | Riffle Minnow | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII |  <i>Barbus barbatus</i> | Barbel | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII |  <i>Barbus meridionalis</i> | Mediterranean Barbel | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | NT  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive ; Annex III of the Bern Convention | |
| CHORDATA/ ACTINOPTERYGII |  <i>Barbus petenyi</i> | Southern Barbel | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | | A subspecies of Mediterranean barbel <i>Barbus meridionalis</i> , the Southern Barbel (<i>B. meridionalis petényi</i>) is an endemic subspecies to Pannonic biogeographic region. |
| CHORDATA/ ACTINOPTERYGII |  <i>Chondrostoma nasus</i> | Nase | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII |  <i>Cobitis taenia</i> | Spined Loach | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | |
| CHORDATA/ ACTINOPTERYGII |  <i>Cottus gobio</i> | Bullhead | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | |
| CHORDATA/ CEPHALASPIDOMORPHI |  <i>Eudontomyzon danfordi</i> | Carpathian brook lamprey | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | | endemic fish species to catchment of Tisza river |
| CHORDATA/ ACTINOPTERYGII |  <i>Gobio gobio</i> | Gudgeon | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII |  <i>Gymnocephalus baloni</i> | Balon's Ruffe | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive | |
| CHORDATA/ ACTINOPTERYGII |  <i>Gymnocephalus schraetser</i> | Striped Ruffe | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive (Annex V of the EU Habitats Directive) | |
| CHORDATA/ ACTINOPTERYGII |  <i>Hucho hucho</i> | Huchen | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | EN  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive (Annex V of the EU Habitats Directive) | The Site occasionally supports Danube salmon, Huchen <i>Hucho hucho</i> (EN) which is endemic to the Danube river system. |

| Phylum | Scientific name | Common name | Species qualifies under criterion | | | | Species contributes under criterion | | | | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I | CMS Appendix I | Other Status | Justification |
|-----------------------------|---------------------------------|----------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-----------|---------------------|-----------------|---------------|--------------------------|--------------------------|---|---|
| | | | 2 | 4 | 6 | 9 | 3 | 5 | 7 | 8 | | | | | | | | |
| CHORDATA/ ACTINOPTERYGII | <i>Leucaspis delineatus</i> | Belica | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII | <i>Leuciscus aspiscus</i> | Asp | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive (Annex V of the EU Habitats Directive) | |
| CHORDATA/ ACTINOPTERYGII | <i>Misgurnus fossilis</i> | Weatherfish | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive ; Annex III of the Bern Convention | |
| CHORDATA/ ACTINOPTERYGII | <i>Pelecus cultratus</i> | Sichel | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II (and V) of the EU Habitats Directive ; Annex III of the Bern Convention | |
| CHORDATA/ ACTINOPTERYGII | <i>Proterorhinus marmoratus</i> | Tube-nose Goby | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex III of the Bern Convention | |
| CHORDATA/ ACTINOPTERYGII | <i>Rhodeus amarus</i> | European Bitterling | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive ; Annex III of the Bern Convention | |
| CHORDATA/ ACTINOPTERYGII | <i>Romanogobio alpinus</i> | White-finned Gudgeon | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | |
| CHORDATA/ ACTINOPTERYGII | <i>Romanogobio kessleri</i> | Kessler's Gudgeon | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | |
| CHORDATA/ ACTINOPTERYGII | <i>Romanogobio uranoscopus</i> | Danube Gudgeon | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | |
| CHORDATA/ ACTINOPTERYGII | <i>Rutilus pigus</i> | Danube Roach | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive (Annex V of the EU Habitats Directive) ; Annex III of the Bern Convention | |
| CHORDATA/ ACTINOPTERYGII | <i>Sabanejewia aurata</i> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | |
| CHORDATA/ ACTINOPTERYGII | <i>Umbra krameri</i> | European Mudminnow | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | VU | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive ; Annex II of the Bern Convention | Endemic to the Danubian river system – listed by Hungarian Red Book |
| MOLLUSCA/ BIVALVIA | <i>Unio crassus</i> | Thick shelled river mussel | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | EN | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive | |
| CHORDATA/ ACTINOPTERYGII | <i>Zingel streber</i> | Danube Streber | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ ACTINOPTERYGII | <i>Zingel zingel</i> | Zingel | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Others | | | | | | | | | | | | | | | | | | |
| CHORDATA/ AMPHIBIA | <i>Bombina orientalis</i> | Fire-bellied Toad | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the Bern Convention, Annex II of the EU Habitats Directive | |
| ARTHROPODA/ INSECTA | <i>Cerambyx cerdo</i> | Great capricorn beetle | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | VU | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive | |
| CHORDATA/ REPTILIA | <i>Emys orbicularis</i> | European Pond Tortoise | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive ; Annex II of the Bern Convention | |
| ARTHROPODA/ INSECTA | <i>Epitheca bimaculata</i> | Eurasian Baskettail | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | <input type="checkbox"/> | <input type="checkbox"/> | | |
| CHORDATA/ MAMMALIA | <i>Felis silvestris</i> | Wildcat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC | <input type="checkbox"/> | <input type="checkbox"/> | Annex IV of the EU Habitats Directive | |

| Phylum | Scientific name | Common name | Species qualifies under criterion | | | | Species contributes under criterion | | | | Pop. Size | Period of pop. Est. | % occurrence 1) | IUCN Red List | CITES Appendix I | CMS Appendix I | Other Status | Justification |
|------------------------|---|---|-------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|---|-----------|---------------------|--|-------------------------------------|--------------------------|--|--------------|---------------|
| | | | 2 | 4 | 6 | 9 | 3 | 5 | 7 | 8 | | | | | | | | |
| ARTHROPODA/ INSECTA |  <i>Graphoderus bilineatus</i> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | VU  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive | | |
| ARTHROPODA/ INSECTA |  <i>Lucanus cervus</i> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | | |
| CHORDATA/ MAMMALIA |  <i>Lutra lutra</i> | European Otter | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | NT  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive | | |
| ARTHROPODA/ INSECTA |  <i>Lycaena dispar</i> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | <input type="checkbox"/> | <input type="checkbox"/> | Annex II ; IV of the EU Habitats Directive | | |
| CHORDATA/ MAMMALIA |  <i>Myotis dasycneme</i> | Pond Myotis; pond bat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | NT  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive | | |
| CHORDATA/ REPTILIA |  <i>Natrix natrix</i> | Grass Snake | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | | |
| ARTHROPODA/ INSECTA |  <i>Ophiogomphus cecilia</i> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive | | |
| ARTHROPODA/ INSECTA |  <i>Osmoderma eremita</i> | Hermit Beetle | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | NT  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | | |
| CHORDATA/ AMPHIBIA |  <i>Pelobates fuscus</i> | European Spadefoot Toad | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive ; Annex II of the Bern Convention | | |
| CHORDATA/ AMPHIBIA |  <i>Pseudepidalea viridis</i> | European green toad | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex IV of the EU Habitats Directive ; Annex II of the Bern Convention | | |
| CHORDATA/ MAMMALIA |  <i>Spermophilus citellus</i> | European Ground Squirrel; European Souslik | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | VU  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive | | |
| CHORDATA/ AMPHIBIA |  <i>Triturus cristatus</i> | Northern Crested Newt | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | LC  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II , IV of the EU Habitats Directive ; Annex II of the Bern Convention | | |
| CHORDATA/ AMPHIBIA |  <i>Triturus dobrogicus</i> | Danube Crested Newt | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | NT  | <input type="checkbox"/> | <input type="checkbox"/> | Annex II of the EU Habitats Directive | | |

1) Percentage of the total biogeographic population at the site

Criterion 2 - Species which are not included in the Catalogue of Life:

- Carabus hampei (Annex II, IV of the EU Habitats Directive)
- Chilostoma banaticum (Annex II, IV of the EU Habitats Directive)
- Vertigo moulinsiana, Desmoulin's whorl snail (Annex II of the EU Habitats Directive)

Criterion 3 - Species which are not included in the Catalogue of Life:

- Anasciaceschna isosceles, Norfolk Hawker Dragonfly
- Chacolestes viridis, Willow Emerald Damselfly

Noteworthy species which are not included in the Catalogue of Life:

- Euphydryas maturna, Scarce Fritillary

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, continuous 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.). Along the whole length of 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).

3.4 - Ecological communities whose presence relates to the international importance of the site

| Name of ecological community | Community qualifies under Criterion 2? | Description | Justification |
|--|--|---|---------------|
| Softwood riparian forest (<i>Salicetum albae-fragilis</i>) | <input type="checkbox"/> | Consists of the species <i>Salix alba</i> , <i>Salix fragilis</i> , <i>Populus alba</i> , and <i>P. nigra</i> . 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. | |
| Willow bushes (<i>Salicetum triandrae</i>) | <input type="checkbox"/> | consists of <i>Salix triandra</i> , <i>S. purpurea</i> , <i>S. fragilis</i> , <i>S. viminalis</i> . | |
| Hardwood riverside forests (<i>Quercus-Ulmetum</i>) | <input type="checkbox"/> | Hardwood riverside forests (<i>Quercus-Ulmetum</i>), oxbow lakes, filled in meanders with rich natural flora and fauna, extensively managed or abandoned orchards. | |

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

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 habitats are listed under Section 3.4 > Ecological communities whose presence relates to the international importance of the Site.

Hydrology:

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 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.

Hydrological values:

During the river-controls the flood basin of Tisza with the opportunity of natural river bed development was reduced and constrained into barriers, dams. The current floodplain is only 5% of the original one, while the water district became extremist. In the drying landscape even the narrow floodplain has outstanding role. During floods the alluvium spreads under and settles here. Since the time of river control the water of constrained riverbed supports the water and wetland communities, the relatively sufficient soilwater and the air humidity.

4.2 - What wetland type(s) are in the site?

Inland wetlands

| Wetland types (code and name) | Local name | Ranking of extent (1: greatest - 4: least) | Area (ha) of wetland type | Justification of Criterion 1 |
|--|------------|--|---------------------------|------------------------------|
| Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks | | 2 | | Representative |
| Fresh water > Lakes and pools >> O: Permanent freshwater lakes | | 0 | | |
| Fresh water > Lakes and pools >> P: Seasonal/ intermittent freshwater lakes | | 0 | | |
| Saline, brackish or alkaline water > Lakes >> R: Seasonal/ intermittent saline/ brackish/ alkaline lakes and flats | | 4 | | |
| Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools | | | | |
| Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils | | 1 | | |
| Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands | | 3 | | |
| Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands | | 0 | | |
| Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands | | | | |

Human-made wetlands

| Wetland types (code and name) | Local name | Ranking of extent (1: greatest - 4: least) | Area (ha) of wetland type | Justification of Criterion 1 |
|--|------------|--|---------------------------|------------------------------|
| 9: Canals and drainage channels or ditches | | | | |

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

| Scientific name | Common name | Position in range / endemism / other |
|----------------------------------|--|--------------------------------------|
| <i>Acer negundo</i> | Manitoba Maple | Non-native species |
| <i>Adonis vernalis</i> | Spring Adonis | |
| <i>Amorpha fruticosa</i> | Indigobush Amorpha;Bastard Indigo;False Indigo | Non-native species |
| <i>Cirsium brachycephalum</i> | | |
| <i>Epipactis latlosii</i> | | Pannon endemic |
| <i>Fraxinus pennsylvanica</i> | Green ash | Non-native species |
| <i>Galanthus nivalis</i> | Common Snowdrop | |
| <i>Helianthus tuberosus</i> | Jerusalem artichoke | Non-native species |
| <i>Heracleum mantegazzianum</i> | Giant hogweed | Non-native species |
| <i>Iris pseudacorus</i> | Yellow Flag | |
| <i>Leucanthemella serotina</i> | | |
| <i>Leucojum aestivum</i> | Spring Snowflake | |
| <i>Nymphaea alba</i> | European White Waterlily | |
| <i>Reynoutria japonica</i> | Japanese knotweed | Non-native species |
| <i>Salix elaeagnos</i> | Olive Willow | |
| <i>Sternbergia colchiciflora</i> | | |
| <i>Vitis riparia</i> | River Bank Grape | Non-native species |

4.3.2 - Animal species

Other noteworthy animal species

| Phylum | Scientific name | Common name | Pop. size | Period of pop. est. | %occurrence | Position in range /endemism/other |
|--------------------|------------------------------|-----------------------------|-----------|---------------------|-------------|---------------------------------------|
| CHORDATA/AVES | <i>Corvus corax</i> | Common Raven;Northern Raven | | | | Breeding population: 10-20 pairs |
| CHORDATA/AVES | <i>Riparia riparia</i> | Bank Swallow;Sand Martin | | | | Breeding population: 9000-12000 pairs |
| CHORDATA/AMPHIBIA | <i>Bufo bufo</i> | Common Toad | | | | |
| CHORDATA/MAMMALIA | <i>Mustela erminea</i> | Stoat | | | | |
| CHORDATA/MAMMALIA | <i>Mustela nivalis</i> | Least Weasel | | | | |
| CHORDATA/MAMMALIA | <i>Myotis daubentonii</i> | Daubenton's Bat | | | | |
| ARTHROPODA/INSECTA | <i>Palingenia longicauda</i> | Long-tailed Mayfly | | | | |
| ARTHROPODA/INSECTA | <i>Protaetia lugubris</i> | Marbled Rose Chafer | | | | |
| ARTHROPODA/INSECTA | <i>Saperda carcharias</i> | | | | | |
| ARTHROPODA/INSECTA | <i>Saperda octopunctata</i> | | | | | |
| ARTHROPODA/INSECTA | <i>Saperda scalaris</i> | | | | | |

4.4 - Physical components

4.4.1 - Climate

| Climatic region | Subregion |
|---|--|
| D: Moist Mid-Latitude climate with cold winters | Dfa: Humid continental (Humid with severe winter, no dry season, hot summer) |

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.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

Entire river basin

RIS for Site no. 1410, Upper Tisza (Felső-Tisza), Hungary

- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

River Tisza. Floodplain of Tisza is a basin of recent subsidence, a fluvial plain.

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 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.

4.4.3 - Soil

Mineral

(Update) Changes at RIS update No change Increase Decrease Unknown

No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

Please provide further information on the soil (optional)

The soil types are the mixes of Holocene fluvial sediments as fluvial sand, gravel, flood plain mud, freshwater lime mud.

4.4.4 - Water regime

Water permanence

| Presence? | Changes at RIS update |
|---|-----------------------|
| Usually permanent water present | |
| Usually seasonal, ephemeral or intermittent water present | |

Stability of water regime

| Presence? | Changes at RIS update |
|--|-----------------------|
| Water levels fluctuating (including tidal) | No change |

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

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. 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, sometimes 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.

4.4.5 - Sediment regime

Sediment regime unknown

Please provide further information on sediment (optional):

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.

4.4.6 - Water pH

Unknown

4.4.7 - Water salinity

Fresh (<0.5 g/l)

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic

(Update) Changes at RIS update No change Increase Decrease Unknown

Mesotrophic

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the i) broadly similar ii) significantly different site itself:

Surrounding area has greater urbanisation or development

Surrounding area has higher human population density

Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

| Ecosystem service | Examples | Importance/Extent/Significance |
|---------------------------|---------------------------------|--------------------------------|
| Fresh water | Water for irrigated agriculture | Medium |
| Wetland non-food products | Livestock fodder | Medium |
| Wetland non-food products | Timber | Medium |

Regulating Services

| Ecosystem service | Examples | Importance/Extent/Significance |
|-------------------|------------------------------|--------------------------------|
| Hazard reduction | Flood control, flood storage | Medium |

Cultural Services

| Ecosystem service | Examples | Importance/Extent/Significance |
|-----------------------------|--|--------------------------------|
| Recreation and tourism | Recreational hunting and fishing | Medium |
| Recreation and tourism | Picnics, outings, touring | Medium |
| Spiritual and inspirational | Cultural heritage (historical and archaeological) | Medium |
| Scientific and educational | Educational activities and opportunities | Medium |
| Scientific and educational | Important knowledge systems, importance for research (scientific reference area or site) | Medium |
| Scientific and educational | Major scientific study site | Medium |

Other ecosystem service(s) not included above:

Oxbow ecosystems scattered along 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 behavioral 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.

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

i) the site provides 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) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

iv) 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

<no data available>

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

| Category | Within the Ramsar Site | In the surrounding area |
|--|-------------------------------------|--------------------------|
| National/Federal government | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Local authority, municipality, (sub)district, etc. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Private ownership

| Category | Within the Ramsar Site | In the surrounding area |
|--|-------------------------------------|-------------------------------------|
| Other types of private/individual owner(s) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Provide further information on the land tenure / ownership regime (optional):

a) within the Ramsar site:
State owned – roughly 40%
Local government – 30%
Private – 30%

b) in the surrounding area:
Mainly private

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

(1) Primary contact: Hortobágy National Park Directorate (responsible for protected areas)
(2) Environmental permitting authority: Upper-Tisza Regional Environment and Water Directorate (Felső-Tisza-Vidéki Környezetvédelmi és Vízügyi Igazgatóság)

Provide the name and title of the person or people with responsibility for the wetland:

Ms. Szilvia Göri, desk officer for Ramsar issues

Postal address:

(1) 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

(2) H-4400 Nyíregyháza, Széchenyi u. 19.
+36 42/502-200
felsotiszavideki@zoldhatosag.hu

E-mail address:

hnp@hnp.hu

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

| Factors adversely affecting site | Actual threat | Potential threat | Within the site | Changes | In the surrounding area | Changes |
|----------------------------------|---------------|------------------|-------------------------------------|-----------|-------------------------------------|-----------|
| Commercial and industrial areas | | Medium impact | <input checked="" type="checkbox"/> | No change | <input checked="" type="checkbox"/> | No change |
| Tourism and recreation areas | Medium impact | | <input checked="" type="checkbox"/> | No change | <input type="checkbox"/> | No change |

Agriculture and aquaculture

| Factors adversely affecting site | Actual threat | Potential threat | Within the site | Changes | In the surrounding area | Changes |
|----------------------------------|---------------|------------------|-------------------------------------|-----------|-------------------------------------|-----------|
| Wood and pulp plantations | Medium impact | | <input checked="" type="checkbox"/> | No change | <input checked="" type="checkbox"/> | No change |

Transportation and service corridors

| Factors adversely affecting site | Actual threat | Potential threat | Within the site | Changes | In the surrounding area | Changes |
|----------------------------------|---------------|------------------|-------------------------------------|-----------|-------------------------------------|-----------|
| Unspecified | | Medium impact | <input type="checkbox"/> | No change | <input checked="" type="checkbox"/> | No change |
| Shipping lanes | | Medium impact | <input checked="" type="checkbox"/> | No change | <input type="checkbox"/> | No change |

Biological resource use

| Factors adversely affecting site | Actual threat | Potential threat | Within the site | Changes | In the surrounding area | Changes |
|--|---------------|------------------|-------------------------------------|---------|-------------------------------------|---------|
| Gathering terrestrial plants | | | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | |
| Fishing and harvesting aquatic resources | | | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | |

Human intrusions and disturbance

| Factors adversely affecting site | Actual threat | Potential threat | Within the site | Changes | In the surrounding area | Changes |
|-------------------------------------|---------------|------------------|-------------------------------------|-----------|--------------------------|-----------|
| Recreational and tourism activities | Medium impact | Medium impact | <input checked="" type="checkbox"/> | No change | <input type="checkbox"/> | No change |

Natural system modifications

| Factors adversely affecting site | Actual threat | Potential threat | Within the site | Changes | In the surrounding area | Changes |
|--------------------------------------|---------------|------------------|-------------------------------------|-----------|--------------------------|-----------|
| Vegetation clearance/land conversion | Medium impact | | <input checked="" type="checkbox"/> | No change | <input type="checkbox"/> | No change |

Invasive and other problematic species and genes

| Factors adversely affecting site | Actual threat | Potential threat | Within the site | Changes | In the surrounding area | Changes |
|-----------------------------------|---------------|------------------|-------------------------------------|-----------|--------------------------|-----------|
| Invasive non-native/alien species | Medium impact | | <input checked="" type="checkbox"/> | No change | <input type="checkbox"/> | No change |

Pollution

| Factors adversely affecting site | Actual threat | Potential threat | Within the site | Changes | In the surrounding area | Changes |
|-------------------------------------|---------------|------------------|-------------------------------------|-----------|--------------------------|-----------|
| Household sewage, urban waste water | | Medium impact | <input checked="" type="checkbox"/> | No change | <input type="checkbox"/> | No change |
| Garbage and solid waste | Medium impact | | <input checked="" type="checkbox"/> | No change | <input type="checkbox"/> | No change |

Please describe any other threats (optional):

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

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.).

5.2.2 - Legal conservation status

Regional (international) legal designations

| Designation type | Name of area | Online information url | Overlap with Ramsar Site |
|------------------|---|------------------------|--------------------------|
| EU Natura 2000 | Felső-Tisza SAC (HUHN 20001), Felső-Tisza SPA (HUHN 10008) and Szatmár-Bereg SPA (HUHN 10001) | | whole |

National legal designations

| Designation type | Name of area | Online information url | Overlap with Ramsar Site |
|---------------------------|--|------------------------|--------------------------|
| Landscape Protection Area | Szatmár-Bereg Landscape Protection Area | | partly |
| Protected Area | Tiszatelek-Tiszabercel Protected Area and Tiszadob Floodplain Protected Area | | partly |

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve

Ib Wilderness Area: protected area managed mainly for wilderness protection

II National Park: protected area managed mainly for ecosystem protection and recreation

III Natural Monument: protected area managed mainly for conservation of specific natural features

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Habitat

| Measures | Status |
|----------------------------------|-------------|
| Hydrology management/restoration | Implemented |

Species

| Measures | Status |
|---|-------------|
| Threatened/rare species management programmes | Implemented |

Other:

Management plan: Nature conservation management plan of Szatmár-Bereg Landscape Protection Area and other smaller protected areas, which partly overlap with the Ramsar site. It is actively implemented during nature conservation actions, but these are not legally accepted, but used during active nature conservation actions.

Other current management practices:

- Species with national programme of species protection (like otter and beaver) are handled according to the prescriptions.
- Lot of monitoring activities are implemented on e.g. white and black stork, white-tailed eagle nestings. Restrictions and prescriptions for providing safe nesting places for sand martin European Bee-eater are implemented year by year.
- Water management activities are implemented continuously providing larger water-capacity.
- During authority processes the nature conservation management restrictions and prescriptions are provided by the Directorate.

Conservation measures proposed but not yet implemented:

The "Alföld" program of the Hungarian Government has implemented a special sub-program for 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.

5.2.5 - Management planning

Is there a site-specific management plan for the site? No

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

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. The Szatmár-Bereg Landscape Protection Area has a visitor centre in Fehérgyarmat.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

5.2.7 - Monitoring implemented or proposed

| Monitoring | Status |
|---------------------------------|-------------|
| Birds | Implemented |
| Animal species (please specify) | Implemented |

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).

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

For the full bibliography, please refer to Section 6.1.2 Additional reports and documents > vi. other published literature.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<2 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Upstream character of the Upper Tisza near the state border, with gravel shores and softwood gallery forest. (Mr. Béla Hebarics (Hortobágy NP Directorate), 2009)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Transboundary Designation letter

<1 file(s) uploaded>

Date of Designation 2004-01-10