

# Information Sheet on Ramsar Wetlands (RIS) – 2006 version

Available for download from [http://www.ramsar.org/ris/key\\_ris\\_index.htm](http://www.ramsar.org/ris/key_ris_index.htm).

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9<sup>th</sup> 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, 2<sup>nd</sup> edition, as amended by COP9 Resolution IX.1 Annex B). A 3<sup>rd</sup> 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:

Attila Pellinger & Dr. András Ambrus  
H-9435 Sarród Rév, Kócsagvár  
Ambrus@fhnp.kvvm.hu

FOR OFFICE USE ONLY.

DD MM YY

--	--	--

Designation date

--	--	--	--	--	--

Site Reference Number

---

### 2. Date this sheet was completed/updated:

19.09.2006

---

### 3. Country:

Hungary

---

### 4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

## Nyirkai-Hany

---

### 5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or  
b) Updated information on an existing Ramsar site

---

### 6. For RIS updates only, changes to the site since its designation or earlier update:

#### a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or  
ii) the boundary has been extended ; or  
iii) the boundary has been restricted\*\*

and/or

**If the site area has changed:**

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

\*\* 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:**

**7. Map of site:**

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) a **hard copy** (required for inclusion of site in the Ramsar List): X;
- ii) an **electronic format** (e.g. a JPEG or ArcView image) X;
- iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** X;

**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.

It follows geographical boundaries mainly: **N:** Hanság main channel, **S:** Rábca river, **NE:** Kismetszés (channel), **E** (partly) Nyirkai road, **W:** two small ditches

The site is a part of the Hanság unit of the Fertő-Hanság National Park.

**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.

47°42' 7" N, 17° 11'1" E

**9. General location:**

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

NW Hungary, Győr-Moson-Sopron county. The nearest town is Csorna

**10. Elevation:** (in metres: average and/or maximum & minimum)

111.8-115.5 m

**11. Area:** (in hectares)

460 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.

The site is a five-year-old habitat restoration area on peatland within the Hanság area. The restoration meant flooding to create open water surfaces, which are by now skirted with reedbeds and reedmace beds (*Phragmites australis*, *Typha* sp.) and tall grass dominated plant communities. The Hanság area was once a vast wetland complex (estimated at about 55,000

hectares ), which was drained in the last century. The present site is a restoration of a part of this wetland.

### 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
<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>

### 14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criterion 2: Since the restoration (flooding), the site has become an important site for numerous internationally protected and biogeographically important species.

Birds:

In addition to the species highlighted under Criterion 5, the following, less common but regular visitors are noteworthy:

*Haliaeetus albicilla* non-breeding visitor Birds Directive Annex I, Global IUCN: NT

*Aquila clanga* rare winter visitor Birds Directive Annex I European IUCN: EN, Global IUCN: VU

*Falco peregrinus* non-breeding visitor Birds Directive Annex I

*Falco cherrug* non-breeding visitor Birds Directive Annex I European IUCN: EN, Global IUCN: EN

In the migration periods a lot of waterbirds occur (listed with numbers under Criterion 5).

Rare, threatened, non-breeding waterbird species that have turned up regularly at the site in migration period:

*Phalacrocorax pygmaeus* Birds Directive Annex I, Global IUCN: NT

*Branta ruficollis* Birds Directive Annex I, European IUCN: VU, Global IUCN: VU

*Anser erythropus* Birds Directive Annex I European IUCN: EN, Global IUCN: VU

*Chlidonias leucopterus* Birds Directive Annex I

*Gallinago media* Birds Directive Annex I, Global IUCN: NT

Other vertebrates:

*Lutra lutra* (CITES: A (I), Bern Convention Appendix II, Habitats Directive Annexes II and IV) and

*Castor fiber* (Bern Convention Appendix III, Habitats Directive Annexes II and IV) have established in the area since the restoration.

Small but important population of *Emys orbicularis* (Bern Convention Appendix II, Habitats Directive Annexes II and IV) is present. *Natrix natrix* (Bern Convention Appendix III) is widespread.

The small water bodies around the flooded area are important reproduction places for amphibian species including *Triturus dobrogicus* (Bern Convention Appendix II, Habitats Directive Annexes II and IV) and *Rana arvalis woltersdorfi* (Bern Convention Appendix II, Habitats Directive Annex IV). Common species are: *Rana esculenta* (Bern Convention Appendix III, Habitats Directive Annex V), *Hyla arborea* (Bern Convention Appendix II, Habitats Directive Annex IV), *Bombina bombina* (Bern Convention Appendix II, Habitats Directive Annexes II and IV).

## Important invertebrates:

The small water bodies at the site have been occupied by the dragonfly species *Leucorrhinia pectoralis* (Bern Convention Appendix II, Habitats Directive Annexes II and IV).

Butterflies: *Zerynthia polyxena* (Bern Convention Appendix II, Habitats Directive Annex IV) breeds and *Parnassius mnemosyne* (Bern Convention Appendix II, Habitats Directive Annex IV) occurred at the site, *Lycaena dispar* (Bern Convention Appendix II, Habitats Directive Annexes II and IV) has been reported as well.

## Plant species:

The number of internationally protected plant species is relatively small.

*Cirsium brachycephalum* Habitats Directive Annexes II and IV

*Menyanthes trifolia* nationally protected, CITES EU Annex D

*Trapa natans* nationally protected, Bern Convention Appendix I

Criterion 4: The flooded area offered a nesting and feeding place of waterbirds. The site became one of the most important bird area in NW Hungary. The population size of nesting birds depends on the mosaics of the vegetation coverage.

The most important nesting species:

Species	Pairs	Species	Pairs
Podiceps ruficollis	++	Aythya ferina	++
Podiceps cristatus	40-50	Anas strepera	+
Phalacrocorax carbo	130	Anas clypeata	+
Ardea purpurea	30	Anas platyrhynchos	+++
Egretta alba	5	Netta rufina	10
Nycticorax nycticorax	20	Fulica atra	300-400
Botaurus stellaris	6	Gallinula chloropus	+
Ixobrychus minutus	+	Circus aeruginosus	6
Platalea leucorodia	11	Larus ridibundus	800
Anser anser	30	Larus melanocephalus	30
Cygnus olor	6	Sterna hirundo	20
Aythya nyroca	10-50		

Criterion 5: Migrants: Maximum numbers of waterbirds are reached in November, meeting the requirement of 20 000 waterbirds present.

Species	Ind.	Species	Ind.
Podiceps cristatus	200	Anas clypeata	80
Phalacrocorax carbo	500	Anas platyrhynchos	2000
Ardea purpurea	100	Netta rufina	100
Ardea cinerea	80	Fulica atra	3000
Egretta alba	250	Limosa limosa	100
Nycticorax nycticorax	80	Philomachus pugnax	1000
Platalea leucorodia	11	Larus ridibundus	2500
Anser albifrons	6000	Larus melanocephalus	150
Anser anser	5000	Larus canus	500

Anser fabalis	4000	Sterna hirundo	150
Cygnus olor	100	Chlidonias niger	300
Aythya nyroca	120	Chlidonias hybridus	100

Criterion 6:

Anser anser: 5000 (1% threshold for Central European population: 250) are 20 %

Anser albifrons 6000 (1% threshold for "Pannonic" population: 250) are 24 %

Criterion 8:

A characteristic fish species of the area is *Misgurnus fossilis* (Bern Convention Appendix III, Habitats Directive Annex II). *Umbra krameri* (Bern Convention Appendix II, Habitats Directive Annex II) has been successfully re-introduced (present in the Hanság area elsewhere). *Tinca tinca*, *Cyprinus carpio*, *Esox lucius*, *Lucioperca lucioperca*, *Abramis brama*, *Blicca bjoerkna*, *Carassius carassius*, *Silurus glanis* are also important. *Cyprinus carpio* and *Carassius carassius* are commercially bred in fish ponds, but here the rather rare wild forms live and breed.

---

**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 biogeographical region

**b) biogeographic regionalisation scheme** (include reference citation):

European Commission DG Environment webpage

Bern Convention/ EU Habitats Directive

---

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

*Geology and geomorphology:* surface plain, 113-114 m above sea level,

*Soil type:* peat soils,

*Sediment characteristics:* clay and gravel at the basic layers

*Origins:* Habitat restoration site

*Hydrology:* inflow and outflow are controlled by sluices

*Water quality:* fairly good, depends on the river Rába. The main threat is the nutrient load in the summertime.

*Depth, fluctuations and permanence of water:* depth 0-180 cm (with islands), the water regime is more or less regulated, so fluctuation is within limitations, approximately below 50 cm.

*Tidal range of variations:* not relevant

*Downstream of area:* not relevant

*Climate:* continental temperate cold and temperate dry. Annual precipitation is 590 mm, average temperature is 10,0 °C.

---

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

Mainly plain lowland, previously regularly flooded by the rivers Danube and Rába. The deepest sites of the bed had a reasonable peat layer. Most parts of the whole Hanság basin was canalised, the water coverage decreased in order to use the area for agricultural purposes: hay production and arable lands. Climate is temperate, continental. Main direction of wind is NW.

---

### 18. Hydrological values:

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

The site has an important role as recharge of groundwater, in some extent it can work as a reservoir in the flood control of the Rába river (Kis-Rába). The area of the site can be extended in the next stage, the neighbouring territories are also state owned and the geomorphology is similar.

---

### 19. Wetland Types

#### a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

**Marine/coastal:** A • B • C • D • E • F • G • H • I • J • K • Zk(a)

**Inland:** L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •  
Vt • W • Xf • Xp • Y • Zg • Zk(b)

**Human-made:** 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

#### b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

U remark:: the site is completely a restored, flooded area in plain peatland (the peat derived not from Sphagnum but mainly Typha and Phragmites).

---

### 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The site was dominated by Magniocaricion communities before the flooding. Dominant species: Carex acutiformis and Carex riparia, locally Phragmites communis and Glyceria maxima. The dry sites were covered by Alopecurus pratensis. Some 56 plant species are now known to occur here. Protected species include Lathyrus palustris, Cirsium brachycephalum. After the flooding the Phragmites – Typha coverage extended, the submerged vegetation became more abundant. Noteworthy species, such as Polygonum amphybium, Myriophyllum sp., Utricularia sp., Najas marina, Nuphar luteum, Nymphaoides peltata, Potamogeton sp. became common. Some of the threatened species were reintroduced (Menyanthes trifolia, Trapa natans, Stratiotes aloides). The site is still changing in shape, including the coverage of Phragmites.

---

### 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.*

Cirsium brachycephalum Habitats Directive Annexes II and IV

Lathyrus palustris nationally protected

Hottonia palustris nationally protected

Polygonum amphybium

Najas marina

Nuphar luteum

Nymphoides peltata nationally protected  
Potamogeton sp.  
Menyanthes trifolia nationally protected, CITES EU Annex D  
Trapa natans nationally protected, Bern Convention Appendix I  
Stratiotes aloides

---

## 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.*

The site is important as a feeding/wintering place for raptor birds such as: *Haliaeetus albicilla*, *Aquila clanga*, *Falco peregrinus*, *Falco cherrug*. In the migration periods a lot of waterbirds occur: grebes, herons, ducks, geese and shorebirds & gulls. Rare, threatened species: *Phalacrocorax pygmeus*, *Branta ruficollis*, *Anser erythropus*, *Chlidonias leucopterus*, *Gallinago media*, etc.

*Lutra lutra* and *Castor fiber* live in the area. Small but important population of the *Emys orbicularis* is present. *Natrix natrix* is widespread.

A characteristic fish species of the area is *Misgurnus fossilis*. *Umbra krameri* (present in the Hanság area elsewhere) was helped to resettle. *Tinca tinca*, *Cyprinus carpio*, *Esox lucius*, *Lucioperca lucioperca*, *Abramis brama*, *Blicca bjoerkna*, *Carassius carassius*, *Silurus glanis* are also important.

The small water bodies around the flooded area are important reproduction places for Amphibian species including *Triturus dobrogicus* and *Rana arvalis woltersdorfi*. Common species are: *Rana esculenta*, *Hyla arborea*, *Bombina bombina*.

Important invertebrates: the small water bodies at the site have been occupied by the dragonfly species *Leucorrhinia pectoralis* (Habitats Directive and Bern Convention annex II).

Butterflies: *Zerynthia polyxena* breeds and *Parnassius mnemosyne* occurred at the site (both butterflies are listed in Habitats Directive and Bern Convention), *Lycaena dispar* was reported as well.

---

## 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:

The deepest points of the Hanság area were not populated traditionally. The main occupation of the local population of the surrounding settlements were fishing, hunting, reed & sedge harvesting and manufacturing, handicraft, grazing, etc. After the drying up (mainly in the fifties) the neighbouring sites were cultivated mainly as arable land and/or planted poplar stands or grasslands.

Recently the site is protected and managed by the national park.

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  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:

national park directorate

- b) in the surrounding area:

National park directorate, private lands and government owned forests

---

**25. Current land (including water) use:**

- a) within the Ramsar site:

Nature conservation

- b) in the surroundings/catchment:

nature conservation, agriculture, forestry, water management use, recreational use.

---

**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:

Water management (desiccation) needs of the surrounding areas.

The flooding controls the invasive *Solidago* sp.

- b) in the surrounding area:

Intensive agricultural use, intensive poplar stands with the need of decreasing the groundwater table, recreational use, peat extraction

---

**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 site is part of the  
Hanság landscape protection area since 1976  
Fertő-Hanság National Park since 1994  
Natura 2000 site since 2004

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

Ia ; Ib ; II X; III ; IV ; V ; VI

- c)** Does an officially approved management plan exist; and is it being implemented?:

The new Management plan of the Fertő-Hanság National Park is under way

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.

Working plan of a neighbouring area, called Osli-Hany habitat reconstruction has developed and accepted, ready to accomplish if costs can be covered.

proposed MAB site extension

---

**29. Current scientific research and facilities:**

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

Complex ecological monitoring organized by the Fertő-Hanság National Park, including: vegetation mapping, bird population survey, macroinvertebrate survey

---

**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.

Information booklet was published, new version is under preparation

---

**31. Current recreation and tourism:**

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

Limited access is allowed with the guidance of the staff of the National Park.

---

**32. Jurisdiction:**

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

North-Transdanubian Environmental, Nature Conservation and Water Authority (ÉDUKTVF), Győr

---

**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.

Dr. László Kárpáti, director

Fertő-Hanság National Park Directorate

H 9435 Sarród Rév-Kócsagvár

ambrus@fhnp.kvvm.hu

---

**34. Bibliographical references:**

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

Á. Molnár & A. Ambrus (2005): Odonata and aquatic beetle records from the Hanság habitat reconstruction area. *Acta Biol. Debr. Oecol. Hung* 13: XX–XXX.

Margóczy, K., Takács, G., Pellingner, A. & Kárpáti, L. (2002): Wetland reconstruction in Hanság area (Hungary), *Restoration Newsletter* 15:14-15.

Margóczy, K., Takács, G. & Szalma, E. (2002): Vegetation survey of wetland restoration area in Hanság area (Hungary), *ECRE 2002 - Hungary*, poster

Margóczy, K., Takács, G. & Körmöczy, L. (2004): Vegetation monitoring of the wetland reconstruction area in Hanság (Hungary) (A hansági vizes élőhelyrekonstrukció növényzetének monitorozása (Magyarország)), 7th INTECOL International Wetland Conference 25 - 30 July 2004 in Utrecht, pp 196.

Margóczy K., Takács G. and Körmöczy L.(2005): Vegetation monitoring of a reconstructed fen in Hanság, Hungary. In: Middleton, B. and Grootjans A.: Fen and Fen/Sedge Meadow Management and Research Perspectives: An Overview of the Symposium. Springer

Pellinger, A. (2001): Hansági vizes élőhely rekonstrukció, Fertő-Hanság Nemzeti Park (Restoration project of the wetland habitat of the Hanság -Fertő-Hanság National Park). Wetlands International, Technical Report, Sarród.

Pellinger, A., Takács, G. & Kozma, L. (in press): A Nyirkai-Hany elárasztásának hatása vízimadárállományokra. Changes in the waterbird populations after the flooding of the Nyirkai-Hany area Orn.Hung. (Hungarian)

Takács, G. & Margóczy, K. (2002): A dél-hansági élőhelyrekonstrukciók (Fertő-Hanság Nemzeti Park) biodiverzitás monitorozása (2001), Kutatási jelentés (Hungarian)

Takács, G. (szerk) (2003): A dél-hansági élőhelyrekonstrukciók komplex ökológiai monitoringja 2003, Kutatási jelentés, pp 139. (Hungarian)

Takács, G. & Margóczy, K. (2005): Small scale and large scale monitoring of vegetation changes in a restored wetland (A vegetáció változásainak kis és nagyléptékű monitorozása helyreállított vizes élőhelyeken), W3M Conference for Wetlands: Monitoring, Modelling and Management, 22 - 25 September 2005 in Wierzba, p. 40.

Timmermann, T., Margóczy, K. Takács, G. & Vegelin, K. (in press): Restoring Peat Forming Vegetation By Rewetting Species-Poor Fen Grasslands: The Role Of Water Level For Early Succession (Tőzeglápok vegetációjának helyreállítása fajszegény mocsárrétek elárasztásával: A vízszint hatásai a szukcesszió kezdetén), Applied Vegetation Science