

Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

NOTE: It is important that you read the accompanying *Explanatory Note and Guidelines* document before completing this form.

1. Date this sheet was completed/updated:

Completed: 07.06.1992, updated: 23.11. 1998.

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DD	MM	YY

Designation date

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Site Reference Number

2. Country:

Hungary

3. Name of wetland: Hortobágy/ Angyalháza-puszta

4. Geographical coordinates: 47° 30' N, 21° 10' E

5. Altitude: (average and/or max. & min.)

Between 86 and 89 m over Baltic Sea level.

6. Area: (in hectares) 3566,69 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)

One of those three "pusztas" of the national park which has the most beautiful landscape feature. An astatic-semistatic alkaline marsh system surrounded with seasonally wet meadows, alkaline short grasslands and a mosaic of bare surface habitats. Wetlands (all type) covers altogether approximately 50 % of the area, in wet years it can exceed 70 %.

8. Wetland Type (please circle the applicable codes for wetland types as listed in Annex I of the *Explanatory Note and Guidelines* document.)

marine-coastal: A . B . C . D . E . F . G . H . I . J . K

inland: L . M . N . O . P . Q . R . Sp . Ss . Tp . Ts
. U . Va . Vt . W . Xf . Xp . Y . Zg . Zk

man-made: 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9

Please now rank these wetland types by listing them from the most to the least dominant: Ss, alkaline temporary marshes and grasslands

9. Ramsar Criteria: (please circle the applicable criteria; see point 12, next page.)

1a . 1b . 1c . 1d | 2a . 2b . 2c . 2d | 3a . 3b . 3c | 4a . 4b

Please specify the most significant criterion applicable to the site: 1a, 2b, 3a

10. Map of site included? Please tick yes -or- no

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits).

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

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Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):

12. Justification of the criteria selected under point 9, on previous page. (Please refer to Annex II in the *Explanatory Note and Guidelines* document).

1a: typical astatic-semistatic natural marsh system with marshy meadows.

2a: feeding Spoonbill, Glossy Ibis, Saker, breeding Bittern, Montagu's Harrier, Great Bustard, regularly migrating Lesser White-fronted Goose, Cranes are overnighing here in autumn, Dotterel, White-winged Tern. Individual numbers see in point 18.

2b: see point 17 and 18.

3a: see point 18.

13. General location: (include the nearest large town and its administrative region)

County of Hajdú-Bihar, East, south-east from Hortobágy village.

14. Physical features: (e.g. geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth; water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

The flat surface is diversified with some small burail hills, so called "kurgans". Marshes were probably beds of ancient water courses. Soils in this area are largely solonetz with an A hoziron of approximately 5-25 cm of silt/clay texture with vertic properties. The B-hoziron of these soils has been formed due to the accumulation of mainly sodic salts. This process led to the formation of impermeable subsoils and in general to a decreased infiltration making overland-flow the most important hydrological path-way. Solonetz soil covers approximately 90 % of the area, at some parts very nice surface erosion forms of the alkaline soils. Larger loess ridges can be found in the eastern and north-eastern part the of the area. Marshes are collecting water from the surrounding grasslands. The "Nagyág-ér" marsh collects the highest water quantity, which flows into the River Hortobágy on the south. Marshes are normally drying out after mid-summer at latest. The waterdepth changes between 20 and 80 cm. Many channels constructed for irrigation and melioration purposes or rice-fields can be found on the area. Open water surfaces can be found only in "Nagyág-ér".

In 1989 one of the irrigation channels was transformed into water supply system to flood the two largest marshes.

15. Hydrological values: (groundwater recharge, flood control, sediment trapping, shoreline stabilisation etc)

One of most valuable shallow water covered (ephemeral) area. With its abandoned rice-systems will create a very suitable basis for bare surfaced biotope reconstructions. In the same time the marsh part has a sediment trapping role as well as a water quality improving role.

16. Ecological features: (main habitats and vegetation types)

Main habitats are the open water bodies within the marsh, huge bulrush and reedbed, the surrounding wet meadows with *Alopecurus pratensis* and *Beckmannia eruciformis* and the short alkaline grassland (*Artemisio-Festucetum pseudovinae*). Due to lack of water supply the extension of open water surfaces of some marshes have decreased. Characteristic habitats are the bare or nearly bare soil surfaces with some succulent and lying cauline plants.

17. Noteworthy flora: (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc)

In the marshy parts the *Utricularia vulgaris* can be found . In 1990 was found the *Orchis morio*, in 1991

the *Orchis palustris*. Alkaline grasslands: *Spergularia marginata*. Hungarian Red Data Book species are: *Heliotropium supinum*, *Plantago major* and *Salsola soda*. Loess grasslands: *Phlomis tuberosa*, *Salvia austriaca*, *Salvia nemorosa*.

18. Noteworthy fauna: (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

Usual nesting species is the Grey-lag Goose (*Anser anser*), 10-20 pairs. In wet years breeds the White-Winged Black Tern (*Chlidonias leucopterus*), in colonies of 20-50 pairs. From herons only a few pairs of Bittern (*Botaurus stellaris*) and Little Bittern (*Ixobrychus minutus*) nests here. As breeding species was observed the Short-eared Owl (*Asio Flammeus*), 5-10 of them more often occurs in winter. Quite a lot Spotted Crake (*Porzana porzana*) also breeds. Common breeding species are Lapwing (*Vanellus vanellus*), Godwit (*Limosa limosa*), Redshank (*Tringa totanus*), Snipe (*Gallinago gallinago*). Since 1989 few pairs of Aquatic Warblers (*Acrocephalus paludicola*) breed here, the increase of their number is expected. The breeding population of (*Locustella naevia*) rapidly increases nowadays.

For other herons, Spoonbills (*Platalea leucorodia*) and Glossy Ibis (*Plegadis falcinellus*) the site provides a very good feeding-area. Sometimes 100 White Storks (*Ciconia ciconia*) feed here in summer. In autumn Black Stork (*Ciconia nigra*) occurs in groups of 30-40 birds. Since 1985 the number of Common Cranes (*Grus grus*) during autumn migration has increased to 20-30 000, in wet years some of them overnights (in 1998 about 10 000) on the area. Some smaller groups are overwintering in the area.

Important for geese migration, their number exceeded 100.000 in spring 1992. In autumn 1996 some ten thousands of White-fronted Geese (*Anser albifrons*) and Bean Geese (*Anser fabalis*) appeared. Occasionally but relatively often occurs Lesser White-fronted Goose (*Anser erythropus*), recent data is 50-70. Red-breasted Goose (*Branta ruficollis*) was also observed. Also important for duck migration, in wet years their number can reach 20-25 000 birds, mainly Mallard (*Anas platyrhynchos*) and Teal (*Anas crecca*), together with several other duck species. Also important for wader migration: 3-400 Golden Plovers (*Pluvialis apricaria*), the most stable roosting place for the Dotterel (*Charadrius morinellus*) staying from mid-august until november, 200-220 maximum number was recorded. Huge masses of Ruff (*Philomachus pugnax*) in spring, not rare 100 000 of them.

Important feeding area for birds of prey of large open grasslands: in summer Long-legged Bussard (*Buteo rufinus*), Short-toed Eagle (*Circaetus gallicus*), sometimes Imperial Eagle (*Aquila heliaca*), Lesser Spotted Eagle (*Aquila pomarina*), Saker (*Falco cherrug*), mainly in spring and autumn 1-2 Pallid Harrier (*Circus macrorus*). Breeding: 20-25 pairs of Marsh Harrier (*Circus aeruginosus*), since the 80ies 1-4 pairs of Montagu's Harrier (*Circus pygargus*), Red-footed Falcon (*Falco vespertinus*).

19. Social and cultural values: (e.g. fisheries production, forestry, religious importance, archaeological site etc.)

The old traditional farm buildings have to be preserved. There are two traditional draw-wells which has to be renovated.

20. Land tenure/ownership of:

(a) site Hungarian State: Hortobágy National Park Directorate 3554, 79 ha, Water Management Authority 38,06 ha.

(b) surrounding area Cooperative Farms.

21. Current land use:

(a) site grazing of cattle and sheep, some parts are mowed.

(b) surroundings/catchment plough lands, hay production and not too far there are fishponds.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:

(a) at the site The long lasting draught decreased the extension of wet parts, also some bare biotopes have disappeared. Since two years started a reconstruction work to assure watersupply and to create erosion basis for bare surfaces.

(b) around the site non known

23. Conservation measures taken: (national category and legal status of protected areas - including any boundary changes which have been made: management practices; whether an officially approved management plan exists and whether it has been implemented)
The area is part of Hortobágy N.P. It is registered as Man and Biosphere Reserve. Also is registered as Ramsar site. In the last two years the National Park Directorate became the legal owner of the area. Wetland restoration was implemented in 1989. There exists a management plan prepared in 1998, as well as feasibility studies for wetland and grassland rehabilitation.

24. Conservation measures proposed but not yet implemented: (e.g. management plan in preparation; officially proposed as a protected area etc.)
Planned management measures: further wetland and grassland restorations, elimination of structures of abandoned rice-fields and irrigation channels and transformation them into alkaline bare surfaces and alkaline lakes, increase of number of grazing cattle. Feasibility studies were prepared to propose solutions and implementation for these measures.

25. Current scientific research and facilities: (e.g. details of current projects; existence of field station etc.)
Angyalháza-puszta is target area of the National Biomonitoring Programme, the field research has started this year.

26. Current conservation education: (e.g. visitors centre, hides, information booklet, facilities for school visits etc.)
The area is strictly protected, the entering to the site is possible only with permission and guide.

27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)
There is no use in this sense.

28. Jurisdiction: (territorial e.g. state/region and functional e.g. Dept of Agriculture/Dept. of Environment etc.)
The Directorate is the first instant authority of Ministry for Environment.

29. Management authority: (name and address of local body directly responsible for managing the wetland)
Hortobágy National Park Directorate
H-4024 Debrecen, Sumen u. 2.

30. Bibliographical references: (scientific/technical only)
At HNP directorate a lot.

Please return to: **Ramsar Convention Bureau, Rue Mauverney 28, CH-1196 GLAND, Switzerland**
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