

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

Hörfeld-Moor

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DD MM YY

Designation date Site Reference Number

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

State of Carinthia:

Mag. Klaus Krainer

Arge NATURSCHUTZ

Gasometergasse 10

A-9020 Klagenfurt

Tel.: 0463/329666

Fax: 0463/329666-4

E-Mail: office@arge-naturschutz.at

State of Styria

Dr. Reinhold Turk

Amt der Steiermärkischen Landesregierung

Fachabteilung 13C-Naturschutz

Karmeliterplatz 2

A-8010 Graz

Tel.: 0316/877-3707

Fax: 0316/877-4314

E-Mail: reinhold.turk@stmk.gv.at

2. Date this sheet was completed/updated:

05.06.2004

3. Country:

Republic of Austria

4. Name of the Ramsar site:

Hörfeld-Moor

5. Map of site included:

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

a) hard copy (required for inclusion of site in the Ramsar List): **yes -or- no**

b) digital (electronic) format (optional): **yes -or- no**

6. Geographical coordinates (latitude/longitude):

47°01'N, 14°31'E

7. General location:

State of Carinthia: District of St. Veit/Glan (district capital), ca. 60 km north of Klagenfurt (provincial capital).

State of Styria: District of Murau, ca. 28 km southeast of Murau (district capital).

8. Elevation: (average and/or max. & min.)

930 m NN

9. Area: (in hectares)

136,82 (Carinthia: 89,34; Styria: 47,48)

10. Overview:

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

The Hörfeld mire is a calcareous mesotrophic freshwater marsh fed by streams with patches of trees and shrubs, springs, areas of dystrophic-oligotrophic raised bog and damp meadows.

The Hörfeld is a very important biotope for many rare floristic and faunistic species, some of which are relics of the ice age.

11. Ramsar Criteria:

Circle or underline 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).

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | <u>8</u> |
|----------|----------|----------|----------|----------|----------|----------|----------|

12. Justification for the application of each Criterion listed in 11. above:

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

Criterion 1

Bordering the main stream more than 8 % of the vegetation is a quagmire, a special and rare biotope in the region of the Central alps.

Criterion 2

In the Hörfeld there are 36 different types of mires and 8 types of meadows such as the endangered *Caricetum davallianae*, *Menyanthes*-quagmire, *Caricetum limosae* and raised bog with *Sphagnum magellanicum*.

More than 50 endangered plant species, e.g.: Strauch-Birke (*Betula humilis*), Großblättrige Glockenblume (*Campanula latifolia*), Krainers Tollkraut (*Scopolia carniolica*), Quellgras (*Catabrosa aquatica*), Silber-Rohrkolben (*Typha shuttleworthii*), Österreichische Wolfsmilch (*Euphorbia villosa*), Sibirische Schwertlilie (*Iris sibirica*).

Endangered animal species, e.g.: *Bombina variegata*, *Cottus gobio*, *Phoxinus phoxinus*, *Paradromius longiceps*, *Pycnoglypta lurida*, *Nonagria nexa*, *Eudonia pallida*, *Procllossiana eunomia*.

Criterion 3

The vegetation mainly consists of fen plant communities such as *Caricetum paniculatae*, *Caricetum elatae*, *Caricetum rostratae*, *Caricetum acutiformis*, *Caricetum davallianae*, *Molinietum*, *Menyanthes*-quagmire and - less important but endangered – *Caricetum limosae* and raised bog with *Sphagnum magellanicum*.

Criterion 4

In the Hörfeld more than 130 bird species are recorded, e.g.: Wachtelkönig (*Crex crex*, was not recorded since 3 years), Schwarzstorch (*Ciconia nigra*, only 1 breeding-pair), Braunkehlchen (*Saxicola rubetra*, important breeding-habitat), Karmingimpel (*Carpodacus erythrinus*, first recording in Carinthia, very important breeding-habitat).

13. 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:

Alpine biogeographic region, according to the EU classification system.

b) biogeographic regionalisation scheme (include reference citation):

Eastern Alps: high-altitude valley between the Gurktaler and Seetaler Alps

14. 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.

Glacial activities in the Würm-ice age (10.000 years B.C.) formed the present trough that was originally filled by a postglacial lake. Subsequent sedimentation created an extensive layer of peat reaching 8,5 m in depth with deposits of sand, silt and gravel laid down by tributary streams. The peat layer is composed mainly of reed and sedges and contains extensive pockets of water. A number of pools are created by strong upwelling springs.

15. Physical features of the catchment area:

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

The Hörfeld lies in the middle east alpine Saualpen-Kristallin, the Görtschitztal Hauptstörung runs through the mire, which was responsible for the shaping of this valley.

The site belongs to the alpine climatic region and is characterized by a low quantity of precipitation (850 – 900 mm/year), caused by the highest mountain of Seetaler Alps (Zirbitzkogel, 2.396 m) to the east, and the forested Waldkogel (1.562 m) to the west, holding back precipitation.

16. Hydrological values:

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

The site receives its water supply from streams and groundwater springs (“Quelltöpfe”, “Kelchtöpfe”). One of the streams, the so called “Steirerbach” (=“Hörfeldbach”) runs through the length of the site and feeds much of the central swamp area. From both sides (east and west) many smaller and bigger streams flow into the “Steirerbach” and the swamp. The whole site serves as a vast natural water storage system for the village of Hüttenberg and the Görtschitz Valley. The movements of the water table are monitored by three water gauges, in the south, the middle and the north of the Hörfeld respectively.

17. 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 (52 %) Xf (20,3 %), W (4,9 %), Xp (2,7 %), M (2 %), Tp (0,1 %), Ts (0,01 %)

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

Extensive wet and boggy valley bottom with large areas of Phragmitetum and various Caricetum (ca. 32 % of the site). Many areas have not been cultivated for more than 50 years and this allowed for the growth of tall perennial herbs and bushes with *Alnus* and *Salix* sp..

Two tributary streams create wide open water spaces, other springs provide additional open groundwater pools that do not freeze over in winter (“Quelltopf”, “Kelchtopf”). Limited access and a variety of ecological structures created large undisturbed biotopes. Some peripheral areas (inside the Ramsar site) are cultivated as grassland and extensive wet meadows.

19. Noteworthy flora:

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. **Do not include here taxonomic lists of species present - these may be supplied as supplementary information to the RIS.**

Typhetum latifoliae with the very rare *Typha shuttleworthii*.

Rumex aquaticus – Filipendulion with the rare *Rumex aquaticus*.

Caricetum davallianae with rare species like *Epipactis palustris*, *Triglochin palustre* and *Dactylorhiza* sp.

Menyanthes-Phragmitetalia, more than 8 % of the vegetation is a quagmire with rare species:

Menyanthes trifoliata, *Ranunculus lingua*, *Potentilla palustris* and *Equisetum fluviatile*

Caricetum limosae and *Sphagnum magellanicum* with *Andromeda polifolia*, *Eriophorum vaginatum* and *Drosera rotundifolia*

20. 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.**

In the Ramsar site a large number of different insects are found: more than 500 butterfly-species (some recorded for the first time in Carinthia and Austria), more than 120 bird species (*Carpodacus erythrinus* was recorded 1972 for the first time in Carinthia), most of which are birds of passage. Of the amphibians, *Bombina variegata* uses the small ponds for reproduction. *Phoxinus phoxinus* lives in the ice-free “Kelchtöpfe”. More than 50 species (of the 700 middle European species) of the flightless beetles are found in the Hörfeld, amongst these are very rare species such as *Paradromius longiceps* (first proof for Carinthia) with special habitat requirements. A remarkable discovery is *Pycnoglypta lurida*, a 3 mm small beetle; and relic of the ice age. Bugs and cicadas are represented with many specialised species as are more than 110 species of spiders (19 species recorded for the first time in Carinthia).

21. Social and 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 site is of considerable local historical interest with traces of early settlements. In a small mire a pin from the Bronze Age (500 B.C.) was discovered. In this area, near the village of Noreia the historical battle between Romans and Germanic tribes is said to have taken place in 113 B.C. In the middle ages important trade routes led alongside and crossed each other at the Hörfeld. The remains of castles in the immediate surroundings stand witness to the historical importance of the area, as do historical iron ore mines.

22. Land tenure/ownership:

(a) within the Ramsar site:

Naturschutzverein Hörfeld-Moor (32 %), Private owners (29 %), local authority of Hüttenberg (24 %), State of Styria (11 %), State of Carinthia (2 %), Naturschutzbund Steiermark (1 %), Österreichische Naturschutzjugend (0,7 %), local authority of Mühlen (0,3).

(b) in the surrounding area:

Private owners.

23. Current land (including water) use:

(a) within the Ramsar site:

Intensive and extensive farming. Hunting. Fishing in one very small man-made pond. Extensive forestry for firewood production. The Ramsar site is not inhabited. Carefully planned guided tours into the site are provided to visitors.

(b) in the surroundings/catchment:

Intensive farming (grassland, horse and cow pasture), forestry (timber production), hunting, tourism, sport (football in summer, ice hockey and cross country skiing in winter). Many solitary farms, small villages, archaeological site (Noreia).

24. 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:

For more than 50 years ago the extensive farming of the whole mire stopped and large areas of the litter meadows turned into shrub or were afforested. Most of the afforested areas are now owned by the Naturschutzverein Hörfeld - Moor, the trees have been removed and an area of open water was recreated instead. Drainage has been stopped through legal measures. The more intensively managed farmlands bordering the Ramsar site caused an influx of nutrients.

(b) in the surrounding area:

25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

The core zone is legally protected according to the nature conservation laws of Carinthia (Landesgesetzblatt für Kärnten, 10.7.1984, LGBl. 25/1984) and Styria (Landesgesetzblatt für die Steiermark, 25.5.1987, LGBl. 11/Nr. 53). In Carinthia the nature reserve was nominated as NATURA 2000-site in 1995 (79/409/EEC and 92/43/EEC) and in Styria in 1997 (79/409/EEC and 92/43/EEC).

On the 15. December 1994 the local NGO "Naturschutzverein Hörfeld-Moor" was founded. It is responsible for the management of the site in cooperation with the nature conservation authorities of Carinthia and Styria, other NGOs (Arge NATURSCHUTZ, Naturschutzbund Steiermark), farmers and the local authorities of Hüttenberg and Mühlen.

The surrounding area is not protected. In the LIFE Nature Project "Hörfeld-Moor" (1997-2000) a management plan was developed. In 2003 the management plan was updated by the Arge NATURSCHUTZ.

26. Conservation measures proposed but not yet implemented:

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

Within the context of the Natura 2000-management the updated plan will be in accordance with the Natura 2000 aims. Further land purchases within the site are prepared by the "Naturschutzverein Hörfeld-Moor" and the nature conservation authorities.

27. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc. The monitoring, which started during the LIFE-project will be continued. Special research on ground beetles in relation to the management of moist meadows is carried out..

28. Current conservation education:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

A nature trail in the northern part with a wooden footbridge was built for visitors. Two local persons carry out special excursions for schools and other visitor groups in summer. An observation telescope was placed in the centre of the mire. Next year illustrated charts of animals, plants and habitats will on display at specific points.

The Naturschutzverein Hörfeld Moor has published the book "Hörfeld Moor, Naturjuwel in der Norischen Region".

29. Current recreation and tourism:

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

The Ramsar site is not used for recreation and tourism. Ca. 1 km north of the mire, in Mühlen, a small lake with camping facilities exists.

30. Jurisdiction:

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

Carinthia: Amt der Kärntner Landesregierung, Abt. 8W (Naturschutz), 9020 Klagenfurt

Styria: Amt der Steiermärkischen Landesregierung, Fachabteilung 13C-Naturschutz, 8010 Graz

31. 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.

Naturschutzverein Hörfeld-Moor

Reiftanzplatz 1

A-9573 Hüttenberg

32. Bibliographical references:

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

The book „Hörfeld-Moor. Naturjuwel in der Norischen Region“ contains a substantial bibliography.

ARGE NATURSCHUTZ (2003): Natura 2000-Management Hörfeld-Moor und Umgebung. Unveröff. Bericht im Rahmen des Kulturlandschaftsprojektes Kärnten. Klagenfurt.

HABLE, E. & S. PRÄSENT (1995) : Zur Vogelwelt des oberen Görtschitztales und des Hörfeldes in Kärnten und Steiermark. – Carinthia II, 185/105:9-42. Klagenfurt.

HAMBORG, D. (1995): Bestandserhebung von Großschmetterlingen, Glasflüglern und Köcherfliegen in ausgewählten Naturschutzgebieten der Steiermark. Unveröff. Karteirung im Auftrag der Steiermärkischen Landesregierung.

NATURSCHUTZVEREIN HÖRFELD-MOOR (Hrsg.) (2000): Hörfeld-Moor. Naturjuwel in der Norischen Region. Kärntner Druck- und Verlagsgesellschaft. Klagenfurt, Hüttenberg, Mühlen.

ÖKOTEAM (2002): Kulturlandschaftsprojekts Kärnten: Feuchtgebietsmanagement im Waldkogelzug. Laufkäfer als Indikatoren. Unveröff. Endbericht im Auftrag der Arge NATURSCHUTZ. Klagenfurt, Graz.

ÖKOTEAM (2003): Kulturlandschaftsprojekt Kärnten: Der Moor-Flinkläufer im Hörfeld. Unveröff. Zwischenbericht im Auftrag der Arge NATURSCHUTZ. Klagenfurt, Graz.

REIF, R. (1991): Zur Gefäßpflanzenflora des oberen Görtschitztales in Kärnten. – Carinthia II, 50. Sonderheft. Klagenfurt.

SCHROM, A. (1981): Das Hörfeld soll geschützt werden. Kärntner Naturschutzblätter, 20:75-80. Klagenfurt.