

Information Sheet on Ramsar Wetlands (RIS) – 2006 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

5th February 2008

3. Country:

Austria

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.

Rheindelta

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:

Because of natural changes at the mouth of the river Rhine and its dynamics, changes in the boundary of the nature reserve has been necessary. Due to the extension of the delta inside the Lake of Constance otherwise some parts of the nature reserve would have been outside of the jurisdiction of Vorarlberg. The status of the Lake of Constance is in this parts, according an international agreement, a sort of “condominium”. That means that at this lake the area outside a depth of 25 meters is not territory of Vorarlberg.

The new extension was exactly measured by Arc-View GIS.

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): ✓;
- ii) an electronic format (e.g. a JPEG or ArcView image) ✓;
- iii) a GIS file providing geo-referenced site boundary vectors and attribute tables ✓;

Technical information (in German):

Abbildung:

Gauss-Krüger-Projektion

Erdellipsoid von Bessel 1841

Lagerung Herrmannskogel,

Meridian 28° östlich von Ferro (10°20' östlich v. Greenwich)

Bezugshöhe:

Molo Alto Sartorio (Triest) 3,4m über Mittelwasserstand

Koordinaten:

Erster Wert = Rechtswert

zweiter Wert = Hochwert (ohne Millionenstelle)

Bsp: -57000 249000

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.

Because of natural changes at the mouth of the river Rhine and its dynamics, changes in the boundary of the nature reserve has been necessary. Due to the extension of the delta otherwise some parts of the nature reserve would have been outside of the jurisprudence of Vorarlberg.

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° 30' 03'' N 9° 38' 27''

9. General location:

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

The Ramsar site is situated in Vorarlberg, at the south western part of the Lake of Constance. It is on the border to Switzerland 5 km (west) away from Bregenz (30.000 inhabitants).

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

397 – 402 m above sea level

11. Area: (in hectares)

2065 ha

further changes of the extension seem to be supposable in future.

12. General overview of the site:

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

Roughly 2/3 of the area of the Ramsar site Rheindelta is water, most of it is part of the Lake of Constance. It contains a large flat water area, which dries out in winter. The land sites consist of fens, large sedge communities and rood beds.

The “Rheindelta” has an outstanding meaning as a breeding, resting and wintering place for wading and water birds, and it is the most important spawn place for economical important and endangered fish species.

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

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

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

Criterion 1

The Rheindelta represents in great parts of its area a nature related part of the Lake of Constance with an important range of flat water. Adjacent are flood water zones and large habitats of *Phragmitetum communis* and *Caricetum elatae*. Meadows, humid grassland and a riverine forest are still in the system of dynamic floodplain development of the Lake of Constance.

The sedimentation process of the Alpine Rhine is still in process and therefore it exists a dynamic system of succession.

See the Annex and the map which are containing the habitat types which are listed in Annex I of the EU Habitats Directive

Criterion 2

More than 100 red-listed species are living within the site. Referring to the Birds Directive 79/409/EEC, many species are listed there in Annex I, among them *Ixobrychus minutus*, *Nycticorax nycticorax*, *Ardea purpurea*, *Milvus migrans*, *Porzana parva*, *Sterna hirundo*, *Alcedo atthis*, *Aythya nyroca*, *Botaurus stellaris*, *Circus cyaneus*, *Cygnus columbianus*, *Cygnus cygnus*, *Podiceps auritus*. Moreover a large number of other birds occur in the Ramsar site.

See the three species listed in the Annex

Criterion 3

The site plays an important role in supporting a wide variety of animal and plant species. Many birds, fishes, amphibians, spiders, beetles, ants, true bugs and butterflies can be found at the Rheindelta. (See species lists in the Annex)

Criterion 4

The site has an outstanding meaning as a resting and roosting place for water- and wading birds during their migration during autumn, winter and spring. See Annex "Bird species of the EU Bird directive in the Rheindelta"

Criterion 5

The Rheindelta shelters each year between autumn and winter clearly more than 30.000 water birds and waders for an extended period. More information is given below at pt. 20

The Ramsar site is known for sheltering large numbers of waders and water birds:

Fulica atra (10000),

Anas clypeata (400),

Aythya fuligula (5000),

Aythya ferina (2500).

The following Species occur during winter and periods of migration: *Podiceps cristatus* (1000), *Mergus merganser* (500), *Cygnus cygnus* (700), *Anas strepera* (700), *Anas acuta* (100), *Netta rufina* (4000), *Numenius arquata* (1200).

See Annex "Bird species of the EU Bird directive in the Rheindelta"

Criterion 8

The habitats of the Ramsar site offer an important food source for fishes, an extraordinary spawning ground and, nursery on which fish stocks of several species within the Lake of Constance depend.

Over 30 different fish species occur within the Ramsar site, among them: *Cottus gobio*, *Rhodens sericeus amarus*, *Salmo trutta lacustris* and *Coregonus fera*. (See also the Annex)

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:

Alpine

b) biogeographic regionalisation scheme (include reference citation):

COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 on conservation of natural habitats and on wild fauna and flora, as amended by the Accession Act of Austria, Finland and Sweden (OJ L 1, 1.1.1995; p. 135)

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.

The Rhine delta lies between the original Rhine estuary in the west (Alter Rhein) and the Rhine canal in the east, which was built at the turn to the 20th century. The development of the site goes back to a sedimentation process of the Rhine, which carries annually approximately 3 million tons of sediments into the Lake of Constance. Due to the alluvial development the height differences are very small. Before the construction of a polder dam in the middle of the 20th century the annual differences of the water level of the Lake of Constance led to large scale regular floods. Today only those mire areas north of the polder dam are flooded. Due to the floods each year new terrestrial sites arise and develop in natural succession.

17. Physical features of the catchment area:

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

The catchment area includes a more than 6500 km² great region of the central alps (mainly limestone) up to a height of 3500 m. In the valleys up to a height of 600 m there is an intensive land use. Further high there is an extensive, nature near land use.

18. Hydrological values:

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

The lake of Constance is the last greater lake at the Alps, where there is a natural flood system. The altitude of the annual floods differs up to 3.5 m from winter to summer.

The terrestrial habitats of the Ramsar site are divided by a dam. While the southern mires are under the influence of the annual flood, the southern part of the nature reserve is protected from floods by the dam. Furthermore the ground water level is regulated by three pump stations. A project for a replenishment of ground water is in work.

The sedimentation of flat water zones by the river Rhine (3 million tons sediment per year) is still in process and leads to new habitats with high ecological value.

Due to this sedimentations the current within the lake changes and leads to a lost of shoreline. Several stabilization projects were made in the last 40 years. Since 3 years the shoreline stabilization is done more ecological; e.g. flat shorelines should improve reed.

Water purification in the last 30 years led to a high water quality (negative aspects due to economical fishing).

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 • Q • 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.

O – U – Ts – 9 – Xf – Tp – 4 – M – 6 – W – L – 1 – Y

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 large flood water zones are important feeding areas for water and wading birds. Because of its large areas of shallow waters, its wealth of food, and its ice-free water surfaces even in winter, the Rhine delta is the most important winter resting place for water birds in Austria.

Even though the Rhine delta has undergone significant changes in the course of the last centuries, there are still large, extensively cultivated meadows with some highly endangered species of plants in existence.

21. Noteworthy flora:

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

The Rhine delta is the only place in Austria where *Hydrocotyle vulgaris* grows. Further *Thypha minima*, *Alisma graminum*, *Carex bexbaumii*, *Gladiolus palustris*, *Liparis loeselii*, *Spiranthes aestivalis* and *Myosotis rehsteineri* can be found in the Ramsar site Rheindelta.

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.*

Birds:

The Ramsar site is known for sheltering large numbers of waders and water birds: *Fulica atra* (10000), *Anas chrypeata* (400), *Aythya fuligula* (5000), *Aythya ferina* (2500). Following Species occur during winter and periods of migration: *Podiceps cristatus* (1000), *Mergus merganser* (500), *Cygnus cygnus* (700), *Anas strepera* (700), *Anas acuta* (100), *Netta rufina* (4000), *Numenius arquata* (1200).

Additionally near the whole alpine population of *Mergus merganser* (> 1000) moults in the site.

Breeding species are: *Gallinago gallinago*, *Limosa limosa*, *Sterna hirundo*.

Fishes:

Over 30 different fish species occur within the Ramsar site, among them: *Cottus gobio*, *Rhodeus sericeus amarus*, *Salmo trutta lacustris* and *Coregonus fera*.

Other:

A large number of endangered Insects and other animals live within the Ramsar site. In addition to the birds and the fishes here only the amphibians will be mentioned: *Rana lessonae*, *Rana esculanta*, *Triturus cristatus*, *Triturus vulgaris*, *Triturus alpestris*, *Bufo bufo*, *Bombina variegata*, and *Hyla arborea*.

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 flat water zones of the Rhine delta are of international (including Germany and Switzerland) interest for commercial fishing; target species are *Perca fluviatilis*, *Coregonus wartmanni*, *Esox lucius* and the introduced *Lucioperca lucioperca*.

The area offers opportunities for research and education with respect to the conservation of nature. The use of the grassland is accomplished by mainly extensive mowing and grazing. Tourists activities increase in the area.

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:

Human settlements are known since the Romans occupied the region. Ancient boats (middle age) were found within the area.

- 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:

The land areas are owned privately, by the local communities and the country Vorarlberg. The water area is mainly owned by the Republic of Austria.

(b) in the surrounding area:

The land areas are privately owned; the water area is owned by the Republic of Austria.

25. Current land (including water) use:

(a) within the Ramsar site:

Nature conservation, protection of surroundings from floods, mowing, grazing, reed, freshwater fishery, extensive forestry, hunting, recreation, shipping traffic, tourism, research and education.
grazing, hunting

(b) in the surroundings/catchment:

Nature conservation (small scale), intensive agriculture (e.g. mowing, grazing), extensive agriculture (small scale), freshwater fishery, hunting, recreation, shipping traffic, tourism, settlements.

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:

Due to the polder dam the drying of parts of the water meadows continue.

Because of the change of land use some meadows changed into thickets.

Still there is an increasing disturbance due to recreation activities, especially by boating and fishing.

(b) in the surrounding area:

The transformation of extensive, mostly natural areas into intensive agricultural used areas has been slowed down, but has not stopped till now.

Increasing tourism.

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.

Landscape and nature conservation area "Rheindelta" since 1976.

The water zones are partly protected by multinational "Bodensee Schifffahrtsordnung"

Natura 2000 site, because of the FFH (92/43/EEC) and the Bird Protection Directive (79/409/EWG).

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 ; III ; IV ; V ; VI

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

An officially approved management plan exists; and it is implemented. As the Landscape and nature conservation area "Rheindelta" is regulated by law, a lot of management aims and needs are already realised in the current regulations.

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.

Management plan will have to be adapted in the context of Natura 2000.

Hydrological reconnection of the sites northern the polder dam to the Lake of Constance system.

Ecological shaping of the estuary of the Rhine canal.

29. Current scientific research and facilities:

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

The current scientific research and facilities are organized by the Naturschutzverein Rheindelta and the Inatura, which is the natural museum of Vorarlberg.

Also the local communities support research activities (e.g. accommodation for scientists).

The visitor centre Rheindeltahaus is also used by scientists as a field research station.

Biodiversity monitoring is made since several years, and improve, due to the Natura 2000 management plan.

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.

In 1998 the Rheindeltahaus was built as an official visitor centre. Additionally several notice boards were built along the site. Due to the polder dam along the Lake of Constance and the dams along the Rhine canal no platforms are necessary. Information booklets were created and will be actualised regularly.

Guided tours and other facilities for schools or other groups are organized by the Naturschutzverein Rheindelta.

31. Current recreation and tourism:

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

The current recreation and touristy activities remain focussed on fishery, hunting, boating, swimming and cycling.

Guided tours in the Ramsar site Rheindelta are organized by the Naturschutzverein Rheindelta.

32. Jurisdiction:

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

The province authority:

Amt der Vorarlberger Landesregierung
Abteilung IVe - Umweltschutz
Römerstrasse 15
A – 6900 Bregenz

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 Rheindelta
Rheindeltahaus
Im Böschen 25
A – 6971 Hard

Walter Niederer

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34. Bibliographical references:

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

Grabher, M. & V. Blum (1990): Ramsar – Bericht 1, Rheindelta / Marchauen. - Umweltbundesamt, Monographien Bd. 18, 198 pp.

Dvorak, M. & E. Karner (1995): Important Bird Areas in Österreich.- Umweltbundesamt, Monographien Bd. 71, 454 pp.

Grabher, M. (1995): Grundlagen für ein Entwicklungskonzept Naturschutzgebiet Rheindelta. – Schriftenreihe Lebensraum Vorarlberg, Bd. 21, 180 pp.

Grabher, M., Lutz, S. & E. Meyer (1995): Einfluß von Entwässerung auf Boden, Vegetation und Fauna im Naturschutzgebiet Rheindelta. - Schriftenreihe Lebensraum Vorarlberg, Bd. 22, 85 pp.

Der Rat der Europäischen Gemeinschaft (1979): Richtlinie 79/409/EWG des Rates vom 2. April 1979 über die Erhaltung der wildlebenden Vogelarten. Amtsblatt der Europäischen Gemeinschaft, Reihe L 103: 1-6.

Der Rat der Europäischen Gemeinschaft (1992): Richtlinie 92/43/EG des Rates vom 21. Mai 1992 zur die Erhaltung der natürlichen Lebensräume sowie der wildlebenden Tiere und Pflanzen. Amtsblatt der Europäischen Gemeinschaft, Reihe L 206: 7-50.

UMG Umweltbüro Grabher (2005): FFH-Lebensraumtypen im Natura 2000-Gebiet Rheindelta. Bestandsaufnahme und Bewertung. - Im Auftrag des Naturschutzvereins Rheindelta.

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