

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.

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DD MM YY

Designation date Site Reference Number

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

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2. Date this sheet was completed/updated:

28. 10. 2003

3. Country:

Austria

4. Name of the Ramsar site:

Mires of the Sauerfelder Wald

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*

b) digital (electronic) format (optional): *yes*

6. Geographical coordinates (latitude/longitude):

13° 53' – 13° 56' E, 47° 07' – 47° 08' N

7. General location:

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

Country: Austria, State: Salzburg, District: Tamsweg, Commune: Tamsweg (also nearest large town), Location: Sauerfelder Wald

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

1480 - 1720 m

9. Area: (in hectares)

33.588 ha (mires), 119.003 ha (whole site)

10. Overview:

The Sauerfelder Wald is a mountain range south of the Überling, which is the most outstanding mire hot spot of the Alps. Although, there are not so many mires on Sauerfelder Wald, they are very different and, thus, add an important part to the wetland diversity of the region. The bedrock is only mica shale and glacial forms are restricted to the ridge and the parts of the slope near the valley bottom. The climate is subalpine continental similar to boreal conditions and outstanding for the Alps (695 mm, 4,2° C in

1000 m). The hydrogenetic mire types occurring on the Sauerfelder Wald are percolating mires, flush fens, spring fens or bogs, and in contrast to the Überling mires in most of the cases the vegetation indicates acid conditions. Outstanding is the prevailing plant community of the bogs: the Spruce-Peatmoss Community (*Pino mugo-Sphagnetum magellanicum*, facies of *Picea abies*) is extremely rare in the Alps and only known from very few other places.

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).



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

Criterion 1: *The mires of the Sauerfelder Wald are almost natural and show the typical features of boreal and Alpine peatlands.*

Criterion 2: *The plant communities of the mires and marginal forests are endangered as almost all wetland communities in Central Europe.*

Criterion 3: *As the plant communities of the mires of the Sauerfelder Wald are typical for the nemoral and the boreal zone, they add an important part to the biodiversity of the region. Outstanding for the biogeographical region of the Alps is the occurrence of the boreal species *Betula nana* (Dwarf Birch). Examples for other plant species not growing outside peatlands are *Carex pauciflora* (Few-flowered Sedge), *Drosera anglica* (Great Sundew), *Drosera intermedia* (Oblong-leaved Sundew) and *Drosera rotundifolia* (Round-leaved Sundew), *Menyanthes trifoliata* (Bogbean), *Swertia perennis* (Bog Swertia), *Trientalis europaea* (Chickweed Wintergreen), *Vaccinium microcarpum* (a Cranberry species) and numerous moss species e.g. *Sphagnum* spp. (Peatmoss) and *Drepanocladus* spp.*

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: *Central Alps – Niedere Tauern – Murauer Berge*

b) biogeographic regionalisation scheme (include reference citation): *Steiner, G.M. (1992) Österreichischer Moorschutzkatalog. Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie Bd. 1, 509 pp, Moorkarte 1:500.000, styria medien service, Graz.*

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.

The bedrock of the Sauerfelder Wald is mica shale with some glacial deposits in the summit region and near the valley bottom. The slopes are fairly steep divided by the deep v-shaped valleys of the brooks. The development of larger mires was only possible on the summit ridge and near the valley bottom, but parts of the slope have springs or seepage

zones followed by either Grey Alder carrs or acid flush fens.

The climate is continental subalpine (695 mm, 4,2° C in an altitude of 1000 m).

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 catchment area is the same as the site.

16. Hydrological values:

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

Retention of precipitation especially after thunderstorms or heavy rainfall.

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: non-forested peatlands

18. General ecological features:

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

The mires of the Sauerfelder Wald represent a mixture of nemoral and boreal mire and vegetation types.

The typical plant communities in the different mire types are:

paludification mires - *Caricetum nigrae* (Common Sedge Community) and *Caricetum rostratae* (Bottle Sedge Community)

spring fens - *Montio-Philonotidetum fontanae* (a moss community)

percolation mires - *Campylio-Caricetum dioicae* (Campyllum-Dioecious Sedge Community), *Caricetum nigrae* (Common Sedge Community) and *Caricetum rostratae* (Bottle Sedge Community)

transitional mires - *Drepanoclado-Trichophoretum cespitosi* (*Drepanocladus*-Deergrass Community), *Caricetum limosae* (Bog Sedge Community), *Eriophoro vaginati-Trichophoretum cespitosi* (Harestail Cotton Grass-Deergrass Community) and *Sphagnetum magellanicum* (Peatmoss Community)

bogs - *Caricetum limosae* (Bog Sedge Community), *Caricetum rostratae* (Bottle Sedge Community), *Eriophoro vaginati-Trichophoretum cespitosi* (Harestail Cotton Grass-Deergrass Community), *Sphagnetum magellanicum* (Peatmoss Community), *Empetro*

hermaphroditi-Sphagnetum fusci (Crowberry-Brown Peatmoss Community) and *Pino mugo-Sphagnetum magellanicum*, facies of *Picea abies* (Spruce-Peatmoss Community). The Spruce-Peatmoss Community similar to the Mountain Pine-Peatmoss Community only the mountain pine is replaced by small (not higher than 1,5 m), but very old spruce “trees”, which are scattered loosely over the area.

Table 1: The Mires of the Sauerfelder Wald

<i>Name</i>	<i>Size ha</i>	<i>Altitude m</i>	<i>Mire type(s)</i>
<i>Stiefelmoos</i>	1,606	1480 - 1520	<i>Acid percolation mire</i>
<i>Granitzel Moos</i>	2,445	1520 -1540	<i>Acid spring fens, percolation mire and transitional mire</i>
<i>Langmoos</i>	13,598	1720 - 1740	<i>Spruce bog</i>
<i>Schobermoos</i>	1,979	1700	<i>Acid paludification mire</i>
<i>Fuchsschwanzmoos 1</i>	3,097	1680	<i>Spruce bog</i>
<i>Fuchsschwanzmoos 2</i>	0,998	1680	<i>Spruce bog only parts in the Ramsar area</i>
<i>Moor N Fuchsschwanzmoos</i>	1,673	1680	<i>Acid paludification mire</i>
<i>Moor SW Askaleitenhütte</i>	2,431	1660 - 1680	<i>Acid paludification mire</i>
<i>Unteres Latschenmoos</i>	1,284	1720	<i>Mountain pine bog</i>
<i>Moor bei den Wolfsöfen</i>	0,538	1720	<i>Acid paludification mire</i>
<i>Oberes Latschenmoos</i>	3,939	1720	<i>Mountain pine bog</i>
	33,588	1480 - 1720	

The mires of the Sauerfelder Wald are all natural, not even affected by grazing. The only use of the mires is hunting.

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.**

*Outstanding for the biogeographical region of the Alps is the occurrence of the boreal species *Betula nana* (Dwarf Birch) and *Vaccinium microcarpum* (a Cranberry species), as well as the *Empetro hermaphroditi-Sphagnetum fusci* (Crowberry-Brown Peatmoss Community) and the *Pino mugo-Sphagnetum magellanicum*, facies of *Picea abies* (Spruce-Peatmoss Community).*

See also table 2 in the supplementary information - noteworthy are all species listed in the Red Data Book.

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.**

See table 3 - noteworthy are all species listed in the Red Data Book, the Habitat's Directive or the Bird's Directive.

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. *None*

22. Land tenure/ownership:

(a) within the Ramsar site: *Austrian Federal Forestry (ÖBf AG)*

(b) in the surrounding area: *Austrian Federal Forestry (ÖBf AG), private landowners*

23. Current land (including water) use:

(a) within the Ramsar site:

Certified forestry (Pan European Forest Certification PEFC 2001/02) outside the mires and hunting

(b) in the surroundings/catchment:

Certified forestry (Pan European Forest Certification PEFC 2001/02) and hunting

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:

None

(b) in the surrounding area:

None

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.

All mires in Salzburg are ex lege protected by § 24 of the nature conservation law.

Furthermore the ÖBf AG guarantees that there will be no peat extraction, no drainage in mires, no building of forestry roads affecting them, extensive forestry in the marginal forests and, if possible, to keep the mires free of grazing and trampling. Certified forestry (Pan European Forest Certification PEFC 2001/02) and hunting in the area outside the mires will continue without any restrictions, but following the wise use principles of the Ramsar Convention.

26. Conservation measures proposed but not yet implemented:

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

The part of the Sauerfelder Wald, which lies in the county of Styria is in private ownership and not yet part of the Ramsar site. In the next few years the Ramsar site should be extended over the whole mountain range. At present other conservation measures are not necessary.

27. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.: *None*

28. Current conservation education:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.: *None*

29. Current recreation and tourism:

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

30. Jurisdiction:

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

Office of the County Government of Salzburg, Dept. 13, Nature Conservation

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.

DI Herwig Müller

Österreichische Bundesforste AG (ÖBf AG)

A-5580 Tamsweg, Austria

32. Bibliographical references:

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

Krisai, R. (1966): Pflanzensoziologische Untersuchungen in Lungauer Mooren. Verh. Zool. Bot. Ges. Wien 105/106: 94 – 136, Vienna.

Krisai, R. (1986): Untersuchungen zur Vegetation und Genese Lungauer Moore. Ein Vorbericht. Sauteria 1: 51 – 64, Salzburg.

Krisai, R., Burgstaller, B., Ehmer-Künkele, U., Schiffer, R. & Wurm, E. (1989): Die Moore des Ost-Lungaus. Sauteria 5, 240 pp., Kartenband, Salzburg.

Niklfeld, H. (1999): Rote Listen gefährdeter Pflanzen Österreichs. Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie Bd. 10: 292 pp., styria medien service, Graz.

Steiner, G.M. (1992): Österreichischer Moorschutzkatalog. Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie Bd. 1, 509 pp, Karte 1:500.000, styria medien service, Graz.

Supplementary Information on the Mires of the Sauerfelder Wald

Table 2: Plant species list of the mires of the Sauerfelder Wald

Vascular and spore plants			
<i>Andromeda polifolia</i>	3	<i>Anthoxantum odoratum</i>	<i>Avenella flexuosa</i>
<i>Betula nana</i>	2	<i>Calamagrostis villosa</i>	<i>Calluna vulgaris</i>
<i>Caltha palustris</i>		<i>Cardamine pratensis</i>	<i>Carex canescens</i>
<i>Carex echinata</i>		<i>Carex limosa</i>	3 <i>Carex nigra</i>
<i>Carex panicea</i>		<i>Carex pauciflora</i>	3 <i>Carex paupercula</i> 3
<i>Carex rostrata</i>		<i>Drosera rotundifolia</i>	3 <i>Empetrum hermaphroditum</i>
<i>Equisetum fluviatile</i>		<i>Eriophorum angustifolium</i>	<i>Eriophorum vaginatum</i>
<i>Homogyne alpina</i>		<i>Juncus filiformis</i>	<i>Juniperus communis</i>
<i>Larix decidua</i>		<i>Leontodon hispidus</i>	<i>Luzula luzuloides</i>
<i>Luzula pilosa</i>		<i>Melampyrum paludosum</i>	<i>Melampyrum sylvaticum</i>
<i>Nardus stricta</i>		<i>Oxalis acetosella</i>	<i>Picea abies</i>
<i>Pinus cembra</i>		<i>Pinus mugo</i>	<i>Potentilla aurea</i>
<i>Potentilla erecta</i>		<i>Rhododendron ferrugineum</i>	<i>Scheuchzeria palustris</i> 2
<i>Trichophorum cespitosum</i>		<i>Vaccinium microcarpum</i>	2 <i>Vaccinium myrtillus</i>
<i>Vaccinium oxycoccos</i>	3	<i>Vaccinium uliginosum</i>	3 <i>Vaccinium vitis-idaea</i>
<i>Valeriana dioica</i>		<i>Veratrum album</i>	

Mosses, liverworts and lichens			
<i>Calliergon stramineum</i>		<i>Cephalozia connivens</i>	<i>Cephalozia media</i>
<i>Cetraria islandica</i>		<i>Cladonia arbuscula</i>	<i>Cladonia rangiferina</i>
<i>Dicranella palustris</i>		<i>Dicranum bergeri</i>	<i>Dicranum polysetum</i>
<i>Dicranum scoparium</i>		<i>Drepanocladus exannulatus</i>	<i>Gymnocolea inflata</i>
<i>Hylocomium splendens</i>		<i>Mylia anomala</i>	<i>Philonotis seriata</i>
<i>Pleurozium schreberi</i>		<i>Polytrichum commune</i>	<i>Polytrichum strictum</i>
<i>Rhytidiadelphus triquetrus</i>		<i>Sphagnum capillifolium</i>	<i>Sphagnum compactum</i>
<i>Sphagnum fallax</i>		<i>Sphagnum fuscum</i>	3 <i>Sphagnum magellanicum</i>
<i>Sphagnum majus</i>	3	<i>Sphagnum quinquefarium</i>	<i>Sphagnum riparium</i> 2
<i>Sphagnum subsecundum</i>	3		

The number after the name gives the degree of endangerment from the Red Data Book (Niklfeld 1999):
 1 = endangered to become extinct, 2 = highly endangered, 3 = endangered, 4 = potentially endangered

Table 3: Birds observed at the Sauerfelder Wald (data from Dr. Susanne Stadler, DI August Wessely, DI Günter Jaritz, Werner Kommik and ÖBf Tamsweg)

Species	status	RDB	BD
<i>Tetrao tetrix</i>	BV	3	I
<i>Tetrao urogallus</i>	BV	3	I
<i>Picoides major</i>	BV		
<i>Picoides tridactylus</i>	BV		
<i>Dryocopus martius</i>	BV		I
<i>Bonasia bonasia</i>	BV	3	I
<i>Loxia curvirostra</i>	BV?		
<i>Parus cristatus</i>	BV		
<i>Parus ater</i>	BV		
<i>Certhia familiaris</i>	BV		
<i>Nucifraga caryocatactes</i>	BV?		

RDB: Red Data Book of Endangered Animals in Austria (Gepp, 1994): 1: very much endangered 2: much endangered, 3: endangered, 4: potentially endangered, B.2: endangered breeding guests

BD: Birds Directive Appendix I

FFH: Habitat and Species Directive Appendix II, IV

status: potentially breeding (BV), migration guests (DZ)