

Designation date: 13/02/12 Ramsar Site no. 2075

Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 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 and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.
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:

Přemysl Tájek
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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

13. 1. 2011

3. Country:

Czech Republic

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.

Springs and Mires of the Slavkov Forest (Pramenné vývěry a rašeliniště Slavkovského lesa)

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): ; *an overview map is provided, spatial delineation is provided using shapefile*

- ii) an **electronic format** (e.g. a JPEG or ArcView image) ; *an overview map is provided, spatial delineation is provided using shapefile*

- iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** , *projection used: S-JTSK_Krovak_East_North.*

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.

Boundary follows well recognisable boundaries, e.g. roads, waterbodies etc. Wetlands in the area is well visible both in terrain and map, therefore boundary usually follows wetland boundary in the Teplá River catchment area. Agricultural land surrounding wetlands were not included into RS. This results in irregular shape. Boundaries of protected areas (including Natura 2000 site) were not necessarily used because their protection aims does not fully correspond with the wetlands in the area.

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.

Western part:

50° 02' 18" N 12° 40' 17" E

Eastern part:

50° 1' 31" N 12° 45' 35"E (central coordinate) **[50°01'31"N 012°45'35"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.

Western Bohemia, Karlovy Vary Region (Karlovarský kraj), Karlovy Vary (14.5 km SW – 31 km SSW of Karlovy Vary) and Mariánské Lázně (16.5 km NE – 8 km SE of Mariánské Lázně)

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

average 777 m (western part 842 m, eastern part 752 m), maximum: 961 m, minimum: 631 m

11. Area: (in hectares)

3,222.7 ha (western part: 906.78 ha; eastern part: 2,315.92 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.

Western part:

Raised bogs and forest peat-bogs, transition mires and wet meadows in central and in the highest part of the Slavkovský les Highland. Well preserved vegetation of *Pinus rotundata* bog forests and bog spruce forests.

Eastern part:

Non-forest fens, transition mires and wet meadows with wild mineral springs (above all ferrous mineral springs) with unique mineral composition. Wet flat depressions in the plateau of the Tepelská vrchovina Highlands and back-to-back central part of the Slavkovský les Highlands. Well preserved (though for decades abandoned) vegetation with numerous and abundant nationally endangered vascular plant species typical for 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

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).

1 – Wetland contains highly representative alkaline rich fens on serpentinite (of internationally importance), acidic fens, wet meadows vegetation of mineral springs, transition mires and mire forests. Fens on serpentinite are very rare and restricted to only few selected areas (serpentinite areas themselves are very rare and most of them are dry, without wetland habitats). The density and quality of these biotopes is rare in the Czech Republic. Most of the vegetation types are secondary and were influenced by human activity since the Middle Ages – that's the next factor contributing to the exceptionality of these habitats (European phenomenon).

Western part of the RS is one of the largest and well preserved complex of peat-bogs in the Czech Republic dominated by *Pinus rotundata* (this taxon is considered to be endemic in Central Europe by some authors).

Habitat types listed under EU Habitats Directive (92/43/EEC):

(* indicates Priority habitats)

- Active raised bogs (7110*)
- Bog woodland (91D0*)
- Transition mires and quaking bogs (7140)
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (6140)
- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430)

- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* (3130)

2 – Wetland communities on fens and wet meadows belong to the most threatened communities in Central Europe. They are endangered by abandonment, eutrophication, drainage and habitat fragmentation. There are many endangered species of vascular plants native in the area (five of them critically endangered¹: *Carex dioica*, *Eleocharis quinqueflora*, *Dianthus superbus*, *Salix myrtilloides*, *Salix repens*). Another critically endangered species – *Cerastium alsinifolium* - grows in wet glades in coniferous (*Pinus sylvestris* and *Picea abies*) forests on serpentines soils. This taxa is endemic and grows only in serpentines area of the Slavkovský les and it is listed under Annex I of the Berne Convention as well as Annex II of the EU Habitats Directive. Moreover, this wetland community is a refugium of Marsh Fritillary *Euphydryas aurinia* (Lepidoptera) – one of the most threatened butterfly species in Europe (Annex II of the Bern Convention and the EU Habitats Directive) as well as bird species listed under Annex I of the EU Birds Directive (see also justification of criterion 3) and fish species *Cottus gobio*, listed under Annex II of the EU Habitats Directive.

3 – Wetland is a refugium of the most valuable invertebrate species of the biogeographical region – Marsh Fritillary *Euphydryas aurinia* (Lepidoptera) – one of the most threatened butterfly species in Europe (Annex II of the Berne Convention and the EU Habitats Directive), and *Colias palaeno* (Lepidoptera). Important are also rare species of wetland birds – especially *Gallinago gallinago*, *Crex crex**, *Rallus aquaticus* and the last remnants of *Tetrao tetrix** population (*species listed under EU Birds Directive, Annex I) *Cerastium alsinifolium* - grows in wet clear-cutting within coniferous forests (*Pinus sylvestris* and *Picea abies*) on serpentinite. This taxa is endemic and grows only in serpentines area of the Slavkovský les.

4 – Presence of abandoned grassland vegetation with foodplant species (*Succisa pratensis*, *Vaccinium uliginosum*) allows surviving and dispersion of *Euphydryas aurinia* and *Colias palaeno* to other localities. Wetland is also a safe site for nidification (and mating) of threatened species of wetland birds (*Gallinago gallinago*, *Crex crex*, *Rallus aquaticus*, *Tetrao tetrix*).

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:

- 1) Continental
- 2) Province: Central European deciduous forests, sub-province: hercynical, region: hornoslavkovský

b) biogeographic regionalisation scheme (include reference citation):

- 1) Biogeographical regions, Europe 2005, European Environment Agency
 - 2) Culek M., Grulich V., Povolný D. (1996): Biogeografické členění České republiky [*Biogeographical Regions of the Czech Republic*]. Praha: Enigma. 347 p. (in Czech)
Culek M., Buček A., Grulich V., Hartl P., Hrabica P., Kocian J., Kyjovský Š., Lacina J. (2005): Biogeografické členění České republiky. II [*Biogeographical regions of the Czech Republic II*]. Praha, Agentura ochrany přírody a krajiny ČR. 589 p. (in Czech)
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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.

Western part:

Geology: granite, amphibolite, quarternary sediments and peat

¹ categories follow the categories in national Red Lists

Geomorphology: mainly flat plateau in the highest part of the Slavkovský les with several large and shallow depressions filled with peat

Vegetation: primary *Pinus rotundata* bog forests, bog spruce forest, transitional mires, raised bogs and secondary spruce forests

Hydrology: source area for several smaller brooks and important infiltration area for related mineral springs

Soil type: quarternary sediments, peats, cambisols

Water quality: acid peat waters with high amount of humic acids

Climate: relatively cold climatic region with long winter and relatively persistent snow cover and wet summer: average annual temperature: 4-5°C, average annual precipitation: ca 900 mm

Eastern part:

Geology: southern part: amphibolite, serpentinite (Mariánskolázeňský metabazitový komplex)
northern part: granites and gneisses

Geomorphology: complex of shallow terrain depressions and backswamps in the flat highland plateau of the Tepelska vrchovina Highlands (SE part) and the Slavkovský les Highlands (NW part).

Vegetation: secondary non-forest vegetation (wet grassland, marshes, peatbogs, mesic grassland), except raised bogs in the Smrad'och Natural Reserve and northern part of the Krásenské rašeliníště.

Hydrology: average annual precipitation is 600-800 mm (with wet summer - 60-80 mm per month, and dry autumn and winter - 30-50 mm per month)

Plenty of smaller wet depressions, shallow valleys and spring fields connected with the upper Teplá River (southern part) with tributaries, Pramenský potok Brook (central part) and Dlouhá stoka Brook and Lobežský potok Brook (northern part).

Many mineral springs with unique mineral composition, some of them bottled and world known (Magnesia), water-supply reservoir connected with world famous spa towns – Karlovy Vary and Mariánské Lázně

Soil type: quarternary sediments, peats, fens, gley-soils

Water quality: high, source of potable mineral waters, source of potable water (Podhorní nádrž Reservoir is source of potable water for Mariánské Lázně), protected water-supply areas, Pramenský potok Brook is part of the Site of Community Importance (SCI) CZ043195 Teplá s přítoky a Otročinský potok designated for *Cottus gobio* species

Climate: Average annual temperature: 5-6°C, average annual precipitation: 650-950 mm

17. Physical features of the catchment area:

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

Surface area: 3,222.7 ha (western part: 906.78 ha; eastern part: 2315.92 ha).

General geology and geomorphological features: amphibolite, granites and gneisses. Very important are serpentinite regions influencing vegetation and mineral composition of mineral springs. Mainly shallow terrain depressions and backswamps in the flat highland plateau of the Tepelská vrchovina Highland (eastern part) and raised bogs in old flat depressions (western part).

General soil types: quarternary sediments, peats, fens, gley-soils, cambisols.

Climate: Average annual temperatures 4-6°C (highest parts around 4°C), average precipitation around 700 mm (highest parts over 900 mm). Vegetation season is 120-140 days long (average daily temperature higher than 10°C). Average precipitation in vegetation season is about 500-400 mm.

18. Hydrological values:

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

Important groundwater recharge and resource of mineral water that rise from many natural springs in the area. The most important complex of natural habitats with high retention capability of water in the area. Spring area of many regional important watercourses. Countryside that ideally combines biological value and water retention (related to flood risk in cultural landscape).

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.

U, W, Tp, M, Xf, Xp, 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.

Western part:

Vegetation in the eastern part of the Ramsar site belongs to the raised bogs, primary *Pinus rotundata* bog forests, bog spruce forest, transitional mires and secondary spruce forests.

Dicrano-Pinion (Vaccinio uliginosi-Pinetum rotundatae)

Piceion excelsae (Sphagno-Piceetum, Mastigobryo-Piceetum)

Sphagno recurvi-Caricion canescentis

Sphagnion medii (Pino rotundatae-Sphagnetum)

Cardamino-Montion

Eastern part:

Vegetation in the eastern part of the Ramsar Site belongs to the alkaline rich fens on serpentinite (of international importance), acidic fens, wet meadows, vegetation of mineral springs, transition mires and fragments of mire forests and shrubs:

Sphagno warnstorffiani-Tomenthypnion (Amblystegio stellati-Caricetum dioicae)

Caricion fuscae (Caricetum goodenovii, Sphagno-Caricetum appropinquatae, Caricetum rostratae, Caricetum diandrae)

Sphagno recurvi-Caricion canescentis

Sphagnion medii

Nardo-Juncion squarrosi (Nardo-Juncetum squarrosi)

Calthion (Polygono-Trollietum altissimi, Polygono-Cirsietum heterophylli, Polygono-Cirsietum palustris, Angelico-Cirsietum palustris, Chaerophyllo hirsuti-Filipenduletum)

Molinion (Junco effusi-Molinietum caeruleae)

Cardamino-Montion

Sphagno recurvi-Caricion canescentis

Piceion excelsae (Sphagno-Piceetum, Mastigobryo-Piceetum)

Alnion incanae (Alnenion glutinoso-incanae)

Salicion cinereae

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.*

Status of threat for species mentioned below according to the National Red List (Holub et Procházka 2000) unless indicated otherwise.

Western part:

- Andromeda polifolia* – strongly threatened species, abundantly in suitable habitats
Arnica montana – threatened and biogeographically important species of drier margins of wetland
Carex appropinquata – strongly threatened, one locality
Carex diandra – strongly threatened species present at two localities
Coleanthus subtilis – strongly threatened, extremely rare species with world distribution centre in Czech Republic, 1 locality (found in 2011)
Dactylorhiza fuchsii – rare or scattered taxa, in this forested part quite rare
Dactylorhiza majalis – threatened species, in this forested part relatively rare
Drosera rotundifolia – threatened species, straggled mainly in more open sites
Empetrum nigrum – rare or scattered taxa, abundantly in suitable habitats
Erica tetralix – critically threatened species, extremely rare species of open raised bogs; 1 locality (found in 2011)
Lathyrus linifolius – biogeographically important species of non-forested sites
Menyanthes trifoliata – threatened species, rare
Montia ballii – strongly threatened species, one locality
Oxyccoccus palustris – threatened species, abundantly in suitable habitats, foodplant species of species *Boloria aquilonaris*
Pinus rotundata – threatened species (considered to be endemic in Central Europe by some authors), in western part of wetland major tree species (together with *Picea abies*)
Pinus x pseudopumilio – rare or scattered taxa, at Lysina peatbog major tree species
Potentilla palustris – rare or scattered taxa, still quite common species in suitable habitats
Vaccinium uliginosum – characteristic species of peat-bogs, foodplant species of species *Colias palaeno*

Eastern part:

- Aconitum variegatum* – threatened species, several localities in alluvial forests
Aconitum lycoctonum – rare or scattered taxa, one locality in alluvial forest
Andromeda polifolia – strongly threatened species, two localities
Arnica montana – threatened and biogeographically important species in drier margins of wetland, intermittently wet meadows and fens
Botrychium lunaria – strongly threatened species of drier margins of wetland
Carex appropinquata – strongly threatened species, two localities
Carex cespitosa – rare or scattered taxa species, one locality
Carex davalliana – strongly threatened and very rare species present at over ten localities
Carex diandra – strongly threatened and very rare species present at several localities
Carex dioica – critically threatened species, two localities
Carex pulicaris – rare or scattered taxa, rare species present at several tens of localities (only in the southern part)
Carex umbrosa - threatened and rare species straggled in the central part
Cerastium alsinifolium – critically threatened, endemic species (only on serpentinite in the Slavkovsky les Highland), abundant populations in wet forests in the central part (Annex II, EU Habitats Directive)
Corallorhiza trifida – strongly threatened , three known localities
Dactylorhiza majalis – threatened but still quite common species in the area
Dactylorhiza fuchsii – rare or scattered taxa present straggled in the central part
Dianthus superbus – strongly threatened, only three recently known localities (*Molinion*)
Dianthus sylvaticus – strongly threatened and biogeographically important species present scattered in the central and northern part
Drosera rotundifolia – threatened species present in peaty areas, several localities, one of them very abundant (Krásenské rašeliniště)
Eleocharis quinqueflora – critically threatened, extremely rare and endangered species, three localities
Empetrum nigrum – rare or scattered taxa, three localities
Epipactis palustris – strongly threatened, three recently known localities
Eriophorum latifolium – strongly threatened, three known localities in the area
Iris sibirica – threatened species with several abundant populations

- Lathyrus linifolius* – biogeographically important species present scattered in the central part
- Lilium bulbiferum* - strongly threatened, only one known locality, drier margin of wetland
- Menyanthes trifoliata* – threatened species, but still quite common species in the area, many abundant localities (e. g. Rašeliniště u myslivny Nature Reserve)
- Moneses uniflora* – critically threatened, very rare species, one locality
- Montia hallii* – strongly threatened species of meadow springs, over ten localities
- Orchis mascula* ssp. *signifera* - threatened species, only one known locality (out of two in the region), *Molinion*
- Oxycoccus palustris* – threatened, rare species present in several peat habitats in the area, foodplant species for *Boloria aquilonaris*
- Parnassia palustris* – strongly threatened, disappearing, rare and endangered species, several localities in non-abundant populations
- Pedicularis palustris* – strongly threatened species present at five recently known localities
- Pedicularis sylvatica* – threatened, rare species with several localities concentrated in the central part
- Pinguicula vulgaris* – strongly threatened, rare and endangered species of fens and peats
- Potentilla palustris* – rare or scattered taxa, but still common species in the area
- Salix myrtilloides* – critically threatened, extremely rare and endangered species, which was considered to be extinct in the Czech Republic, one locality
- Salix repens* – critically threatened, several localities
- Salix rosmarinifolia* – threatened, in the area still relatively frequent
- Scorzonera humilis* – threatened, species of fens and wet meadows, more than ten localities
- Serratula tinctoria* – rare or scattered taxa, in the region very rare species, only one known locality
- Trifolium spadiceum* – threatened, but relatively common species in the area
- Triglochin palustre* – strongly threatened, typical species, several tens of localities in the area
- Trollius altissimus* – threatened, rare species typical for the central part of wet meadows, several localities, some of them very abundant (e.g. Úpolínová louka pod Křížky National Nature Reserve)
- Valeriana dioica* – rare or scattered taxa, but relatively common species in the area

Another endangered, rare or important plant species present in the area in non-wetland habitats: *Asplenium adnigrum*, *Asplenium cuneifolium*, *Galium sudeticum*, *Erica carnea*, and *Polygala chamaebuxus*.

22. Noteworthy fauna:

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., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

- Euphydryas aurinia* (Cranberry Fritillary) – one of the most endangered butterfly in Europe. Centre of distribution of this species is situated in the Slavkovský les Highlands and neighbouring northern area near Bochov and Karlovy Vary. *Euphydryas aurinia* is strictly dependent on wetland meadows and fens with *Succisa pratensis*, which is a typical species in wet meadows and fens in the Slavkovský les Highlands.
- Colias palaeno* (Moorland Clouded Yellow) – very rare species, in Czech Republic only in the western part (Šumava Mts., Krušné hory Mts., and Slavkovský les Highlands). *Colias palaeno* is strictly dependent on mires with *Vaccinium uliginosum*, which is typical species in peat bogs and wet meadows in the Slavkovský les Highlands.
- Leucorrhinia albifrons* (Eastern White-faced Darter) – endangered species in Europe (Annex IV, EU Habitats Directive). Eurosiberian species, which is very rare in the Czech Republic occurring mainly in north Bohemia (Českolipsko). This dragonfly prefers stagnant oligotrophic or mesotrophic as well dystrophic bog waters – especially sunny forest ponds, fens and lakes with low abundance of fish. Stable isolated population of 2,000-5,000 of individuals in the Komáří rybníky Ponds.
- Gallinago gallinago* (Common Snipe) – endangered species in whole Europe (Annex I, EU Birds Directive) with recent population decline (24-32% of original population). Typical habitat of Common Snipe are wet meadows and fens. Population in the Slavkovský les Highlands is about 15 breeding pairs situated mainly in the eastern part.

Crex crex (Corncrake) – the European endangered species (Annex I, EU Birds Directive), after drastic decline 1950-1980, its numbers started to increase. The population is concentrated in upland wet meadows, mainly in the eastern and northern part of the Slavkovský les Highlands.

23. Social and cultural values:

a) The site is a source of important mineral springs, some of them are bottled and traded, and the area is considered to be important spa region in Central Europe.

24. Land tenure/ownership:

a) within the Ramsar site: state household (managed by the Lesy České republiky (*Forest of the Czech Republic*) Company, Land Fund of Czech Republic, Agency of Nature Conservation and Landscape Protection of the Czech Republic), municipalities (Město Loket and others), private household

b) within the surrounding: state household (managed by the Lesy České republiky (*Forest of the Czech Republic*) Company, Land Fund of Czech Republic), municipalities (Město Loket and others), private household

25. Current land (including water) use:

a) within the Ramsar Site:

1/ non-forest vegetation: i) abandoned areas, mowed in the past

ii) mowed wetlands

iii) ponds

2/ forests: i) areas without management within the protected areas

ii) forest plantations

iii) early successional woods without considerable silvicultural importance

b) in the surroundings/catchment: i) extensive pastures and meadows

ii) forest plantations

Present human land-use does not harm the site and the settlement is very low in comparison to other Central European areas and there are no inhabitants within the Ramsar Site. However, some negative influences might be listed:

- abandonment of the wetlands leading in decrease in biodiversity and successional changes
- melioration in the second half of the 20th century

Water is used only for population drinking-water supply – present outcome does not succeed the source. Some wetlands are used for hay-making or grazed in less wet parts. Forest management is in accordance with an aim of nature protection.

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:

Western part: changes in tree species composition of forest caused by forest management, drainage channels.

Eastern part: drainage channels, cattle grazing, peat digging was applied in some parts in past, invasion of alien species, abandonment of secondary grassland and changes in species composition of forests, changes in land-use – especially reallocation of land.

b) in the surrounding area: changes in tree species composition of forest caused by forest management, drainage channels, abandonment, changes in land-use – especially reallocation of land.

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.

Western part:

Protected Landscape Area (PLA):

Slavkovský les: The area of the Ramsar Site is completely included in the PLA.

Sites of Community Importance:

CZ0410414 Kladské rašeliny: The Ramsar Site is part of the SCI.

National Nature Monument:

Kladské rašeliny (5 parts – Lysina, Tajga, Husi les, Malé rašeliniště, Paterák)

Eastern part:

Protected Landscape Area: Slavkovský les: The area of the Ramsar Site is completely included in the PLA.

Sites of Community Importance: Parts of the following SCIs overlap with the Ramsar Site.

CZ0413080 Horní Kramolín - Ovesné

CZ0410401 Krásenské rašeliniště

CZ0413179 Podhorní louky

CZ0413008 Prameny Teplé

CZ0412070 Rausenbasská lada

CZ0413195 Teplá s přítoky a Otročinsky potok

CZ0413182 U bunkru

CZ0414024 Úpolínova louka – Křížky

National Nature Reserve:

Pluhův bor (partly overlaps with the Ramsar Site)

National Nature Monument

Úpolínová louka pod Křížky (completely included in the Ramsar Site)

Nature Reserves:

Mokřady pod Vlčkem (completely included in the Ramsar Site)

Prameniště Teplé (completely included in the Ramsar Site)

Rašeliniště u myslivny (completely included in the Ramsar Site)

Smraďoch (partly overlap with the Ramsar Site)

Vlček (partly overlap with the Ramsar Site)

Nature Monuments:

Podhorní slatě (completely included in the Ramsar Site)

Sirňák (completely included in the Ramsar Site)

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?:

All protected areas according to national system (i.e., Protected Landscape Area, National Nature Reserve, National Nature Monument, Nature Reserve, and Nature Monument) have approved management plans (for 10 year period) which should be implemented. Management plans for the SCIs (so-called Set of Conservation Measures) will be prepared during the 2011-2015 period.

d) Describe any other current management practices:

Management Plan for Protected Landscape area Slavkovský les.

Forest Management Plan for Loket Forests (valid from 1st January 2002 to 31st December 2011).

Forest Management Plan for Kladská Forests (valid from 1st January 2004 to 31st December 2013).

Forest Management Plan for Teplá (valid from 1st January 2008 to 31st December 2017).

28. Conservation measures proposed but not yet implemented:

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

Amendment to the Kladské rašeliny National Nature Reserve designation decree
Preparation of management plans for amended Kladské rašeliny National Nature Reserve

29. Current scientific research and facilities:

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

Systematic and long-term floristic and faunistic survey held by the Slavkovský les Protected Landscape Area Administration.
Monitoring of habitats in selected protected areas held by the Agency for Nature Conservation and Landscape Protection of the Czech Republic.
Monitoring of endemic species *Cerastium alsinifolium* and its habitats held by the Agency for Nature Conservation and Landscape Protection of the Czech Republic.
Monitoring of *Dianthus superbus* held by the Agency for Nature Conservation and Landscape Protection of the Czech Republic.
Survey of amphibians (in the whole Protected Landscape area Slavkovský les, since 2007) held by the Agency for Nature Conservation and Landscape Protection of the Czech Republic.
Monitoring of populations of *Euphydryas aurinia* held by the Agency for Nature Conservation and Landscape Protection of the Czech Republic.
Monitoring of *Leucorhina albifrons* (at Nový rybník Fishpond, Krásno) held by the Agency for Nature Conservation and Landscape Protection of the Czech Republic.

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.

Nature trail Kladská (nearby Kladské rašeliny – Tajga peatbog) – since 1977
Nature trail Smraďoch
Information tables nearby Úpolínová louka pod Křížky, Kyselé jezírko and Vlček
Information booklet Úpolínová louka – Krizky
Information centre in Kladská – “Dům přírody” (The Agency for Nature Conservation and Landscape Protection of the Czech Republic, in preparation)
Information booklet “Úpolínová louka – Křížky”
Information concerning SCIs available on www.natura2000.cz

31. Current recreation and tourism:

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

Wetland is visited mainly through the nature trails (Kladská, Smraďoch). Due to relatively difficult access and passing through other parts, the valuable habitats are little visited. Some ponds are popular for bathing (Kladský rybník, Nový rybník by Krásno, Mýtský rybník by Prameny).

32. Jurisdiction:

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

a) territorial jurisdiction over the wetland:

Local Authorities:

Město Krásno, Radniční 1, 357 31 Krásno

Město Lázně Kynžvart, nám. Republiky 1, 354 91 Lázně Kynžvart

Město Mariánské Lázně, Ruská 155, 353 01 Mariánské Lázně

Město Teplá, Masarykovo náměstí 143, 364 61 Teplá

Obec Mnichov, Mnichov 1, 353 01 Mariánské Lázně

Obec Nova Ves u Sokolova, Nova Ves 199, 364 64 Bečov nad Teplou

Obec Ovesné Kladruby, Ovesné Kladruby 16, 353 01 Mariánské Lázně
 Obec Prameny, Prameny 24, 353 01 Mariánské Lázně
 Obec Rovná, Rovná 40, 357 65 Rovná

b) functional jurisdiction over the wetland:

Slavkovský les Protected Landscape Area Administration, Hlavní 504, 353 01, Mariánské Lázně

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.

Mgr. Přemysl Tájek
 Správa Chráněné krajinné oblasti Slavkovský les
 Hlavní 504
 353 01 Mariánské Lázně
 Czech Republic
premysl.tajek@nature.cz

34. Bibliographical references:

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

- Benedikt S. (2006): Entomologický průzkum (Coleoptera) v území PR Pramenisté Teple [*Entomological survey (Coleoptera) in the Pramenisté Teple Nature Reserve*]. Ms., 8 pp. [dep. Slavkovský les Protected Landscape Area Administration, Mariánské Lázně]. (in Czech)
- Bucharová A. (2005): Botanický inventarizační průzkum NPP Upolínova louka pod Krizky [*Botanical inventory of Upolínova louka pod Krizky National Nature Monument*]. Ms., 11 pp. [dep. Správa CHKO Slavkovský les]. (in Czech)
- Cihlar V. (2007): Inventarizační průzkum PP Pramenisté Teple, PP Sírňák a EVL Prameny Teple, Lepidoptera [*Inventory of the Pramenisté Teple Nature Monument, Sírňák Nature Monument, Prameny Teple SCI, Lepidoptera*]. Ms., 8 pp. [dep. Slavkovský les Protected Landscape Area Administration, Mariánské Lázně]. (in Czech)
- Culek M., Bucek A., Grulich V., Hartl P., Hrabica P., Kocian J., Kyjovský S., Lacina J. (2005): Biogeografické členění České republiky. II. [*Biogeographical regions of the Czech Republic II*] Praha : Agentura ochrany přírody a krajiny ČR. 589 pp. (in Czech)
- Culek M., Grulich V., Povolný D. (1996): Biogeografické členění České republiky [*Biogeographical Regions of the Czech Republic*]. Praha: Enigma. 347 pp. (in Czech)
- Doležal Z. (2004): Přírodní památka Nove nivy. Entomologický inventarizační průzkum [*Nove nivy Nature Monument. Entomological inventory*]. – Ms., 6 pp. [dep. Slavkovský les Protected Landscape Area Administration, Mariánské Lázně]. (in Czech)
- Doležal Z. (2005): Entomologický inventarizační průzkum navrhované PP Horní Kramolín. Coleoptera, Heteroptera, Diptera – Syrphidae [*Entomological inventory of the suggested Horní Kramolín Nature Monument. Coleoptera, Heteroptera, Diptera - Syrphidae*]. – Ms., 11 pp. [dep. Slavkovský les Protected Landscape Area Administration, Mariánské Lázně]. (in Czech)
- Doležal Z. (2005): NPP Upolínova louka pod Krizky, Entomologický inventarizační průzkum - Coleoptera, Heteroptera, Diptera – Syrphidae [*Upolínova louky pod Krizky, Entomological inventory – Coleoptera, Heteroptera, Diptera - Syrphidae*]. Ms. 9 pp. [dep. in Slavkovský les Protected Landscape Area Administration, Mariánské Lázně]. (in Czech)
- Doležal Z. (2006): Inventarizační průzkum EVL Krasenská rašelinisté, Coleoptera, Heteroptera, Diptera – Syrphidae [*Inventory of the SCI Krasenská rašelinisté, Coleoptera, Heteroptera, Diptera - Syrphidae*]. Ms. 8 pp. [dep. in Slavkovský les Protected Landscape Area Administration, Mariánské Lázně]. (in Czech)
- Doležal Z. (2006): Inventarizační průzkum navrhované PR Rašelinisté u myslivny – Coleoptera, Heteroptera, Diptera – Syrphidae [*Inventory of the suggested Rašelinisté u myslivny Nature Reserve – Coleoptera, Heteroptera, Diptera - Syrphidae*]. Ms. 8 pp. [dep. in Slavkovský les Protected Landscape Area Administration, Mariánské Lázně]. (in Czech)

- Fenclova I. (2005): Arachnologicky inventarizacni pruzkum PR Smradoch [*Arachnological inventory of the Smradoch Nature Reserve*]. Ms. 5 pp. [dep. in Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Fenclova I. (2005): Pavouci (Araneida) NPP Upolinova louka, inventarizacni seznam [*Spiders (Araneida) in the Upolinova louka National Nature Monument – list of species*]. Ms. 7 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Holub J. et Prochazka F. (2000): Red List of vascular plants of the Czech Republic. – Preslia, Praha, 72: 187–230.
- Konvicka M. (2005): Inventarizacni pruzkum NPP Upolinova louka pod Krizky z oboru zoologie, denni motyli (Lepidoptera) [*Upolinova louka pod Krizky National Nature Monument zoological inventory, butterflies*]. Ms. 9 pp. [dep. in Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Melichar V. et Masopustova A. (2005): Inventarizacni pruzkum NPR "Kladske raseliny – cast Tajga a Husi les" z oboru floristiky a rostlinnych spolecenstev [*Kladske raseliny National Nature Reserve- Tajga peatbog and Husi les botanical and vegetation survey*]. Ms. 39 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Mudrova R. (2005): Bryologicky pruzkum NPP Upolinova louka pod Krizky [*Bryological survey in the Upolinova louka pod Krizky National Nature Monument*]. Ms. 4 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Neveceral P. (1994): NPP Upolinova louka pod Krizky. Inventarizacni pruzkum (botanicka cast) [*Inventory of the Upolinova louka pod Krizky National Nature Monument - botany*]. Ms. 4 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Repa P. (2007): Inventarizacni pruzkum z oboru zoologie – ornitologie. Prirodni rezervace Mokrady pod Vlckem [*Mokrady pod Vlckem Nature Reserve – ornithological survey*]. Ms. 15 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Strejcek J. (2006): CHKO Slavkovsky les – vysledky jednosezonnihho informativnihho pruzkumu fytofagnich brouku celedi Chrysomelidae (mandelinkoviti) s. lato, Bruchidae (luskokazoviti), Anthibidae (vetevnickoviti) a Curculionidae (nosatcoviti) s. lato, provedenem v roce 2006 v prirodni rezervaci „Mokrady pod Vlckem“ (cca 41 ha) – faunisticky ctverec 5942c [*Slavkovsky les Protected Landscape Area – phytofagous species survey of the Chrysomelidae s. lato, Bruchidae, Anthibidae, and Curculionidae s. lato held in 2006 in the Mokrady pod Vlckem Nature Reserve (ca 41 ha) – plot number 5942c*]. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Strejcek J. (2007): CHKO Slavkovsky les - vysledky jednosezonnihho informativnihho pruzkumu fytofagnich brouku celedi CHRYSOMELIDAE (mandelinkoviti) s.lato, BRUCHIDAE (luskokazoviti), URODONTIDAE (rezedackoviti), ANTHRIBIDAE (vetevnickoviti) a CURCULIONIDAE (nosatcoviti) s.lato, provedenem v r. 2007 v prirodni rezervaci "Prameniste Teple" a v navrhu jejího rozsireni po silnici M.Lazne - Mnichov (ve smyslu dokumentace ke smlouve PPK 84a/41/07) - faunisticke ctverce 6042a-b - (= areal A) [*Slavkovsky les Protected Landscape Area – phytofagous species survey of the Chrysomelidae s.lato, Bruchidae, Anthibidae, and Curculionidae s. lato held in 2007 in the Prameniste Teple Nature Reserve and in area suggested for enlargement of the reserve – plot number 6042a-b*]. Ms., 7 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Tajek P. (2004): Bezverovske mokrady – floristicky pruzkum [*Botanical survey of the Bezverovske mokrady*]. – Ms., 5 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Tajek P. (2004): Lokalita Certkus – floristicky pruzkum [*Certkus Site – botanical survey*]. – Ms., 5 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Tajek P. (2006): Flora a vegetace lokality Podhorni slate [*Flora and vegetation in Podhorni slate Peatbog*]. – Sbornik chebskeho muzea, 236 – 251. (in Czech)
- Tajek P. (2006): Inventarizacni pruzkum PP Sirnak z oboru botanika [*Sirnak Nature Monument botanical survey*]. – Ms., 11 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)
- Tajek P. (2006): Inventarizacni pruzkum PR Prameniste Teple z oboru botanika [*Prameniste Teple Nature Reserve botanical survey*]. – Ms., 34 pp. [dep. Slavkovsky les Protected Landscape Area Administration, Marianske Lazne]. (in Czech)

- Tajek P. (2007): Flora a vegetace pripravovane prirodni rezervace Raseliniste u myslivny [*Flora and vegetation in the suggested Raseliniste u myslivny Nature Reserve*]. – Erica 14: 39-56. (in Czech)
- Tajek P. (2010): Flora a vegetace Evropsky vyznamne lokality Podhorni louky. Flora and vegetation of the Podhorni louky – an important botanical locality of the Tepelske vrchy region. – Sbornik muzea Karlovarskeho kraje 18 (2010): 173-210. (in Czech with English summary)
- Zahradnický J., Mackovcín P. et al. (2004): Plzensko a Karlovarsko [*Plzensko and Karlovarsko Regions*]. - In Mackovcín P. et Sedlacek M. (eds.): Chranena uzemi CR, svazek XI. [*Protected Areas in the Czech Republic, Volume XI*] – Agentura ochrany prirody a krajiny CR a EkoCentrum Brno. Praha. 588 pp. (in Czech)
- Zimmermann K., Blazkova P., Cizek O., Fric Z., Hula V., Kepka P., Novotny D., Slamova I. & Konvicka M. (2011a): Adult demography in the Marsh fritillary butterfly, *Euphydryas aurinia* Rottenburg, 1775) in the Czech Republic: patterns cross sites and seasons. - European Journal of Entomology 108: 243–254.
- Zimmermann K., Fric Z., Jiskra P., Kopeckova M., Vlasanek P., Zapletal M., Konvicka M. (2011b) Mark-recapture on large spatial scale reveals long distance dispersal in the Marsh Fritillary, *Euphydryas aurinia*. - Ecological Entomology 36: 499-510.

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