Information Sheet on Ramsar Wetlands (RIS) – 2006-2008 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 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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DD MM YY

Designation date | Site Reference Number

2. Date this sheet was completed/updated:

13 November 2007

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.

Mokrady dolního Podyjí

part of the Trilateral Ramsar Site Floodplains of the Morava-Dyje-Danube Confluence

(Austria, the Czech Republic, the Slovak Republic)

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:

There are no major changes in ecological character of RS since the last RIS filling.

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** ❑.

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.

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.
centre: 48˚50´ N; 16˚45´ 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.
The site is located towards the NW and SE of the town of Breclav, in the south-eastern part of the Czech Republic. The site partly forms the international border with Austria and Slovakia.

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

152 – 180 m asl.

11. Area: (in hectares)
11.525 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.

Largest remaining fragments of hardwood floodplain forest (including various wetland habitats) to be found in central Europe. The site is extremely important for biodiversity, water storage and water regime.

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 area represents the largest remaining hardwood floodplain forest complex in central Europe. Habitats types: 91B0, 91F0, 3130, 3150, 3270, 6410, 6430, 6440, from Annex I of the EU Habitat Directive.

Criterion 2: The site supports enormous number of species listed both in Habitat Directive and in the Czech Red List. The list of this species include (among others):

Habitat Directive, Annex II:
Mammals: *Rhinolophus hipposideros, Myotis bechsteinii, M. dasycneme, M. emarginatus, M. myotis, Castor fiber* (the most numerous population in CR), *Lutra lutra*
Amphibians: *Bombina bombina*
Fish: *Aspius aspius, Gobio albipinnatus, Rutilus pigus, Cobitis taenia, Misgurnus fossilis, Gymnocephalus schraetzer, Zingel streber*
Invertebrates: *Cerambyx cerdo, Lucanus cervus, Cucujus cinnaberinus, Osmoderma eremita, Maculinea nausithous, M. teleius*

Habitat Directive, Annex IV (only those not included under Annex II listed above):
Mammals: *Eptesicus serotinus, Myotis brandtii, M. daubentonii, M. mystacinus, M. nattereri, Nyctalus leisleri, N. noctula, Pipistrellus nathusii, P. pygmeus (both very numerous), Plecotus auritus, P. austriacus.*
Reptiles: *Lacerta agilis, Coronella austriaca,*
Amphibians: *Triturus cristatus, Rana arvalis, R. dalmatina, R. lessonae, Pelobates fuscus, Hyla arborea* (very numerous).
Invertebrates: *Unio crassus*.

Birds Directive, Annex I: *Ixobrychus minutus, Nycticorax nycticorax, Egretta alba, Ciconia ciconia* (the most numerous breeding area in the CR), *C. nigra, Mergus albellus* (the most numerous wintering area in CR), *Pernis apivorus, Milvus milvus, M. migrans* (bot the most numerous population in CR), *Haliaeetus albicilla, Circus aeruginosus, Aquila heliaca* (the only breeding area in CR), *Pandion haliaeetus, Porzana porzana, P. parva, Crex crex, Sterna*

hirundo (the most numerous breeding area in the CR), *Alcedo atthis, Picus canus, Dryocopus martius, Dendrocopus medius, Ficedula albicollis* (the most numerous breeding area in the CR), *Lanius collurio*.

Czech Red List (only critically endangered /CR/, endangered /EN/ and vulnerable /VU/ species are listed here):
Verterbates (see Plesník & al. 2003):
Mammals: *Myotis dasycneme* (CR), *Rhinolophus hipposideros* (EN), *Myotis myotis, M. emarginatus, Castor fiber, Lutra lutra* (all VU).
Birds: *Ixobrychus minutus, Anas querquedula, Milvus milvus, M. migrans, Haliaeetus albicilla, Aquila heliaca, Falco cherrus, Porzana parva, Tringa totanus* (all CR), *Nycticorax nycticorax, Pernis apivorus, Falco subbuteo, Porzana porzana, Galinago gallinago, Actitis hypoleucos, Larus melanocephalus, Sterna hirundo, Locustella luscinioides* (all EN), *Phalacrocorax carbo, Ciconia nigra, Circus aeruginosus, Accipiter gentilis, Rallus aquaticus, Crex crex, Vanellus vanellus, Larus ridibundus, L. canus, L. cachinnans, Columba oenas, Alcedo atthis, Jynx torquilla, Picus canuss, Dendrocopos medius, D. minor, Motacilla flava, Saxicola torquata, Acrocephalus arundinaceus, Lanius excubitor, Miliaria calandra* (all VU).
Reptiles: *Coronella austrica* (VU).
Amphibians: *Triturus dobrogicus* (CR*), Triturus cristatus, Rana arvalis, Bombina bombina* (all EN*), Rana lessonae (*VU*).*
Fish: *Gymnoceplahus baloni, G. schraetser, Zingel zingel, Z. streber* (all CR), *Rhodeus sericeus, Misgurnus fissilis, Cobitis elongatoides* (all EN), *Gobio albipinnatus, Carassius carassius, Vimba vimba, Abramis ballerus, Lota lota* (all VU).

Invertebrates (see Farkač & al. 2005):
Hirudo medicinalis, Anisus vorticulus, Bithynia leachii, Theodoxus danubialis, Micaria sociabilis, Argenna patula, Entelecara omissa, Hahnia picta, Marpissa canestrinii, Pseudicius epiblemoides, Branchipus schaefferi, Eubranchipus/Siphonophanes grubii, Lepidurus apus, Chamaesphecia palustris, Culicoides semimaculatus, Liometopum microcephalum,Carabus clathratus, Osmoderma eremite, Anthaxia tuerki, A, deaurata, A. hackeri, Eurythyrea quercus, Ovalisia mirifica, Phaenops formaneki, Akimerus schaefferi, (all CR)
Pisidium moitessierianium, Planorbis carinatus, Pseudanodonta complanata, Unis crassus, Baryphyma pratense, Panamomops latifrons, Tmarus stellio, Diplocephalus dentatus, Hemidiaptomus amblyodon, Gomphus flavipes, Onychogomphus forcipatus, Sympetrum fonscolombii, S. meridionale, S. pedemontanum, Sisyra terminalis, Chamaesphecia hungarica, Epirrhoe pupillata, Lasioptera arundinis, Agrilus kubani, A. viscivorus, Cucujus cinnaberinus, Acmaeodera degener, Agrilus ater, A. auricollis, A. guerini, A. hastulifer, A. litura, Anthaxia manca, A. semicuprea, A. suzannae, Coraebus undatus, Cylindromorphus bifrons, Dicerca alni, D. moesta, Nalanda fulgidicollis, Paracylindromorphus subuliformis, Trachypteris picta, Cerambyx cerdo (all EN),
Allolobopora moravica, Anodonta cygnaea, Clubiona juvenis, Haplodrassus moderatus, Lestes barbarus, L. virens, L. sponsa, Aeshna affinis, A. isosceles, Anax parthenope, Gomphus vulgatissimus, Tricholeiochiton fagesii, Zerynthia polyxena, Agrilus roscidus, Anthaxia candens, A. podolica, Dicerca berolinensis, (all VU).

Plants (see Holub & Procházka 2000): Czech Red List: *Cardamine parviflora, Dichostylis micheliana, Eryngium planum, Leucojum aestivum, Najas minor, Viola elatior* (all CR), *Carex melanostachya, C. strigosa, Cnidium dubium, Epipactis albensis, Gentiana pneumonanthe, Lythrunm virgatum, NAjas marina, Scilla drunensis, Scutellaria hastifolia, Tithynalus lucidus, T. palustris* (all EN), *Corydalis pumila, Hottonia palustris, Iris sibirica* (All VU).

Criterion 3: The site support species important for maintaining the biological diversity of the Pannonian Biogeographic region. For the e.g. crustaceans *Lepidurus apus, Siphonophanes grubii*, spider *Micaria sociabilis*, the whole group of buprestid beetles, amphibians *Triturus dobrogicus*, *Rana arvalis, Bombina bombina*, birds *Falco cherrug, Milvus milvus, Milvus migrans, Ciconia ciconia*,(all these birds here have their largest populations within the Czech Republic). There are a lot of species which have here their north-west boundary within their distribution (i.e. ant *Liometopum microcephalum*).
Plant species: *Leucojum aestivum, Scilla vindobonensis, Iris sibirica, Hottonia palustris, Cardamine parviflora, Carex melanostachya, C. strigosa, Euphorbia lucida, E. palustris, Lycopus exaltatus*.

There are many invertebrate species described from the region as being new to science: e.g. earthworm *Allolobophora moravica*; springtails *Anurida balatovae, Micranurida hydrophila, Lanzhotia brachycera, Folsomia hrabei, Pseudosinella noseki, P. horaki*; mosquito *Ceratoculicoides moravicus*; flies *Psychomora vanhari, Anagnota major, Leptocera moravica, Heteronychia lednicensis*; eight species of Hymenoptera; and the beetles *Dorcatoma minor* and *Oberea moravica*.

Criterion 4:
The Middle reservoir of Nove Mlyny hosts particularly important numbers of waterfowl during the critical stage of the wintering period, namely *Anser fabalis, A. albifrons* and *Haliaeetus albicilla*.
The Nové Mlýny reservoirs represent the most important wintering site for northern species of geese (*Anser fabalis* up to 30,000 individuals, *A. albifrons* minimum of 5,000 indiv., up to 25,000), and a summer gathering site for *Anser anser* (up to 10,000 indiv.). It is an important route for many aquatic and wetland birds on migration; a wintering site of 20–50 indiv. of *Haliaeetus albicilla*.

Criterion 5:
The numbers of wintering *Anser fabalis* and *A. albifrons* are between 20-40,000 in the latest winters: 2002/03: 30,000; 2003/04: 34,000; 2004/05: 20,000; 2005/06: 12,200; 2006/07: 20,200.

Criterion 6:

The numbers of wintering *A. albifrons* are any time more than 10% of Central Europe non-breeding population, sometimes even more than 50 %.
Latest winters (maximum numbers): 2002/03: 10,000; 2003/04: 30,000; 2004/05: 18,000; 2005/06: 8,000; 2006/07: 15,000

The 1 percent threshold is at 250 individuals.

Cf: WI Waterbird Population Estimates, 4rd. edition 2006.

Criterions 7: The lower reaches of Morava and Dyje rivers host the most important fish community within the Czech Republic, representing the Black sea/Danube catchment. This area supports a significant proportion of indigenous fish species, their interactions and populations are representative of wetland values and thereby contributes to global biological diversity. Those species are particularly those who occur only here within the Czech Republic in a good numbers (e.g. *Gobio albipinnatus, Abramis sapa, Gymnocephalus schraetser, G. baloni, Pelecus cultratus*). There are more examples of widespreading of native fish species from lower reaches of Danube and Morava rivers upstream of these (Morava, Dyje) rivers (*Acipenser ruthenus, Sander volgensis, Proterorhinus marmoratus*). See also Criterion 8.

Criterion 8:
The lower reaches of the Morava and Dyje rivers are the richest fish habitats in the Czech Republic, supporting a typical Danube catchment fish stock. The lower part of the Soutok area is their most important spawning ground and nursery in the country, both rivers being an important migration route.(*Gymnoceplahus baloni, G. schraetser, Zingel streber* (all CR), *Rhodeus sericeus, Misgurnus fissilis, Cobitis elongatoides* (all EN), *Gobio albipinnatus, Carassius carassius, Abramis ballerus, A. sapa* (all VU).)

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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:

Pannonian
b) biogeographic regionalisation scheme (include reference citation):
Habitat types according to Habitat Directive of Natura 2000

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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.
The area includes predominantly floodplain forests, meadows, pools, two artificial water reservoirs and a system of small fishponds. It lies in the alluvium of two rivers, the Dyje (Thaya) and Morava (March). The alluvium is wide and flat. A highly typical phenomenon, the spring floods that naturally flooded parts of the floodplain forest, was nearly eliminated by the construction of the Nove Mlyny reservoir (late 1980s) on the lower Dyje river. The dam caused, amongst other things, the lowering of the watertable by 0.5 – 1 m. The water quality is acceptable, and in the last 15 years has been steadily improving. A significant part of the whole area is officially designated as a natural storage area for drinking water ('Quarter of Morava River' – Quatenary deposits of the Morava River), because of massive gravel and sand/gravel deposits from the Holocene. Typical soils are fluvisols, which are loamy to loamy-clay; gleying occurs on waterlogged sites. General climate is dry and warm: with the annual precipitation between 500-650 mm, and an average temperature of about 9˚C.

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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 total area of the Morava river catchment is 9.975 km^2 (without including it´s right tributary Dyje). The river Dyje has a catchment of 11.144 sq. km^2. The bedrock consists mainly of granite, and typical geomorphological features are small-scale mountains (up to 1450 m. asl – the source of the River Morava) and a mainly highland landscape. The most general land use is agriculture: various cereal grains, and less of potatoes, and in lowland areas, maize and sugar beet. The climate is moderate, with mild winters; the precipitation can have large annual variations, between 700-1200 mm.

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18. Hydrological values:

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

Hydrological value is very important: The 'Quarter of the Morava River' is one of the most important groundwater sources in the Czech Republic, with good quality water. The main reason for constructing the Nove Mlyny reservoirs was to eliminate flooding, but achieving this objective caused huge problems in the floodplain forests and associated habitats: ironically, nowadays, the water from Nove Mlyny reservoirs is used for artificial flooding downstream of the reservoir! The importance of the site in flood control became readily apparent during the catastrophic floods of July 1997: the dry polder of the Soutok was capable of retaining ca. 50 million m^3 of water, i.e. more than all the human-made reservoirs within the catchment, and thus saving many areas from much worse flood damage. A significant part of the whole area is officially designated as a natural storage area for drinking water

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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 • 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.

Xf (ca 60%), 6 (ca 15%), O (ca 1%), Tp (ca 2%), M (ca 2%), Ts (ca 7%), 1, 2, 3, 4, 7, 9

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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 most important parts are floodplain forests. Hardwood forest prevails, with dominant oak (*Quercus robur*), ash (*Fraxinus angustifolia, F. excelsior*), elm (*Ulmus laevis*, less U. *minor*). Wetter areas have soft-wood floodplain forest with poplar (mainly *Populus alba*, but also *P. x canadensis*), and willow (mainly *Salix alba*). Nearly all these forests are harvested, only very

small parts are reserves. The most important part of the core area of the Soutok ('confluence') area is a game reserve (fenced, limited entrance) for breeding red deer (*Cervus elaphus*) and fallow deer (*Dama dama*). Two water reservoirs exist on the River Dyje: one is a Nature Reserve (Vestonicka reservoir NR, 1,080 ha, with average water depth 2 m), the lower reservoir is mainly used for water storage and as a recreational area (1,680 ha, average water depth 5m). Floodplain meadows lie mainly in the southern part of Soutok, with a total area of about 700 ha. Macrophyte vegetation exists along with pools, fishponds, and running waters/river channels, but also present in the RS area are arable fields with mainly cereals and maize.

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.*

Oak and ash are very important economically, their hardwood is much requested on wood markets. Summer snow flake (*Leucojum aestivum*) symbolizes the success of conservation activities: more than 100,000 plants were saved from the bottom of the lower reservoir of Nove Mlyny before flooding during 1980-1988, and successfully transferred to non-flooded localities. A complete evaluation of the flora (both lower and higher plants) and vegetation of the Soutok area has been published in an extensive study (Vicherek et al 2000). The authors comment on the occurrence of 833 macroscopic fungi, among these *Rhodotus palmatus* and *Omphalina discorosea* being the most important from a conservation viewpoint, and many species were described here new to science (e.g. *Botryobasidium robustior, Diplococcium insolitum* and *Hypoxylon moravicum*). In addition, 90 species of lichens were found here, and 121 species of bryophytes. In total, 873 taxa of vascular plants were found. An important group of species found here are those which have their northwest boundaries of distribution: these species belong mainly to pontic-pannonic or south-Siberian elements (*Cardamine parviflora, Cruciata pedemontana, Deraba nemorosa, Fraxinus angustifolia, Lycopus exaltatus* and *Stipa borysthenica*).

Phytogeographically notable are populations of some sub-montane meadow and fen species (*Achillea ptarmica, Carex hartmanii, C. elata, C. panicea, Cisrsium oleraceum, Petasites hybridus, Trifolium medium,* and *Verbascum nigrum*). Many endangered species have their most viable populations within the Czech Republic occurring here: e.g. *Arabis gerardii, Carex melanostachya, Dichostylis micheliana, Filago vulgaris, Gratiola officinalis, Heleochloa schoenoides, Juncus atratus, Mentha pulegium, Najas marina, Lathyrus palustris, Viola pumila, V. elatior* and *Wolffia arrhiza.* The vegetation of the area is represented by a series of communities: differentiated by their geomorphology and by various edaphic and hydrological factors. The specific hydrological regime permits the occurrence of diverse types of vegetation, often with quite different ecological demands. Agriculture activities support the existence of species-rich alluvial meadows and dry grassland non-forest vegetation on hrud (gravel and sand deposits on higher elevations). For the plant species listed in Czech Red List see Section 12, Criterion 2.

In forests, the most widespread is the association *Fraxino pannonicae-Ulmetum*. *Arrhenatherum* meadows occur on 'hruds' (see above), while the most common meadows alliance is *Cnidion venosi*, and the most hydrophilous alliance is *Caricion gracilis*. Other alliances occur in those places with more stagnant water throughout the year, e.g. *Phragmition communis*, with the most common assoc. *Glycerietum maximae*. Other alliances present at the area, covering smaller areas: *Lemnion minoris, Nymphaeion albae* and

Batrachion aquatilis. Kutnar Nature Monument (NM) is the most important locality within the Czech Republic for the occurrence of algae and diatoms.

The most important alien species are *Impatiens glandulifera*, which occur mainly on the banks of streams (large expansions have been noted after big floods!), and in the last few years mainly *Aster lanceolatus* s.l., which covers mainly clearings very quickly.

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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.*

Enormous numbers of invertebrates have been found in the area. Starting with crustaceans, the critically-endangered *Lepidurus apus* and *Siphonophanes grubii* , depending on temporary spring pools, occur here, together with *Hemidiaptomus amblyodon* (all these species are listed in the Czech Red List as critically endangered – see aso Criterion 2). Many other invertebrates, here having their largest populations within the Czech Republic (e.g. *Hirudo medicinalis*), live in the same habitat. Among the butterflies and moths, the floodplain forest hosts these important species: *Ectoedemia preisseckeri, Phyllonycter muelleriellus, P. acaciellus, Gastropacha populifolia, Drepana curvatula* and *Archiearis puella*.

Important species of floodplain meadows are *Maculinea nausithous, M. teleius* (both included in the EU Directive on Habitats, Annex II), *Diachrysia zosimi, Lycaena hippothoe,* and of wetland habitats, *Phragmatoecia castaneae, Elophila nymphaeata, Cataclysta lemnata, Schoenobius giganteus, Ostrinia palustralis, Anticollis sparsata. Mythimna straminea,* etc. Among spiders, noteworthy species are *Pelecopsis mengei, Marpissa canestrinii* and *Micaria sociabilis* – all have here their only locality in the Czech Republic, and/or are important species with their most numerous population in this area. The latter, *Micaria sociabilis,* a sub-Mediterranean species, depends on colonies of the ant *Liometopum microcephalum,* and has here probably its largest population in the world. Other important species are the flatworm *Dendrocoleum album,* earthworm *Allolobophora moravica* (south Moravian endemic!) and leech *Batracobdella paludosa*. The area is the most important Czech locality for water molluscs; noteworthy species are *Theodoxus danubialis, Viviparus acerosus, Lithoglyphus naticoides, Bithynia leachii, Planorbis carinatus, Anisus vorticulus, Unio crassus, Pseudanodonta complanata, Spherium rivicola* and *Pisidium moitessieranium*. Fish, see (12), amphibians – *Hyla arborea, Rana arvalis* (both numerous), *Rana ridibunda, Triturus vulgaris, T. dobrogicus* – the latter was found here in 1993 as a new species for the country.

Important breeding bird species occurring here are, e.g.: *Phalacrocorax carbo, Ciconia ciconia* (35 pairs, mainly in solitary oak trees in meadows), *C. nigra, Ardea cinerea* (a colony of 150 pairs), *Anser anser* (on the Middle reservoir up to 150 pairs used to be found, nowadays only 20-30), *Haliaeetus albicilla* (2-4 pairs), *Milvus migrans* (15 pairs), *M. milvus* (about 10 pairs), *Sterna hirundo* (on the Middle reservoir regularly more than 200 pairs, i.e. largest colony in CZ), *Larus melanocephalus* (5–15 pairs; one of three regular breeding sites in CZ). Mammals: evidence of recent occurrence of *Lutra lutra*, regular occurrence of *Castor fiber* at all suitable sites. Many species of bats, including *Pipistrellus nathusii, P.pygmeus, Myotis daubentonii, M. emarginatus,* and also *M. dasycneme.*

See also section (12).

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 most important economic uses of the area are timber production, tourism and agriculture. Nearly all the forests are economically used, however the timing of tree felling in the central part of the Soutok area is prolonged to 160 years (better situation for tree hole breeders and many invertebrate species). The largest part of the Soutok area is game reserve for breeding of red deer (*Cervus elaphus*; spring stock 300 specimens) and fallow deer (*Dama dama;* ca 170 specimens). Water reservoirs are important as water storage (ca 55 million m^3), and for recreation. As a place where many international nominations meet (World Heritage Site, Biosphere Reserve, Important Bird Area), the area invites many visitors; among them, cycling is very popular nowadays. For greater self-sufficiency of food production in former socialist Czechoslovakia, nearly all previous meadows in the floodplain were ploughed and changed to arable fields. The most important crops are cereals, maize and sunflower. The area is extremely important archaeologically: hunters of mammoths had settlements here, and a huge mammoth cemetery has been discovered here. Relics from Roman legions and from the oldest times of Slavs (e.g. the bases of church from 9^{th} century in Pohansko) should also be mentioned.

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:

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: very complicated and partly unclear. Breclav district belongs to the borderland where, following the expulsion of previous German-speaking majority after World War II, there started a complex completion of re-settlement. After the political changes in 1989, an enormous disorder in land/property tenure has been discovered, the reparation of which remains incomplete. The big majority of the whole area belongs to the state, under the managership of The Forests of the Czech Republic (Forest Enterprise Zidlochovice). The area around Lednice, Podivin and Rakvice is owned by the entrepreneur

Jan Fabicovic, who plans to establish a private game reserve in this area; this idea continues to be under discussion.

(b) in the surrounding area: The same situation as under (a), but a higher proportion of land belongs to private owners and municipalities.

25. Current land (including water) use:

(a) within the Ramsar site: forestry, agriculture, water storage, fishery, recreation, nature conservation. Exceptional importance of the area for ground water storage has been mentioned in 14.

(b) in the surroundings/catchment: in the surroundings - the same as under (a). The catchment has many various uses, but important is agriculture in the highlands; this changed heavily during 1960s and 1970s, mainly from previous meadows and pastures to ploughed fields, quite often causing floods downstream.

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: the most important action, heavily affecting the whole floodplain, was the large-scale project "Water management arrangements in South Moravia". Amongst other things, the channelization of previous riverbed, including cutting of many meanders, was the most important. Between 1976-1989, the construction of the Nove Mlyny reservoirs on the River Dyje changed the character of the river below the Nove Mlyny dams, eliminating spring floods amongst other changes. Since 1989, further projects have been realized to improve the water regime in the area. In the Middle reservoir of Nove Mlyny, two artificial islands were created to ensure an improved connection between floodplain habitats upstream and downstream of the Dyje, Svratka and Jihlava rivers. During this time, i.e. 1996-2000, the water level was lowered some 85 cm, creating better conditions for waterfowl (both breeding and in migration) and plant communities. Unfortunately, nowadays the water level is back to 170.00 m asl, and discussions between the Ministries of Environment and of Agriculture dealing with the water level continues. The ploughing up of nearly all previous meadows in the floodplain was another very negative factor. See also sections 14 and 17.

The ideas involving megalomaniac plans to construct a Danube-Odra-Labe canal are again alive today. Even the realisation of the first phase, a canal between the Danube and the River Morava at Breclav, would cause irreversible changes throughout the whole floodplain. It is also for this reason that the Ramsar sites Poodri, Litovelske Pomoravi, as well as the Floodplain of lower Dyje River, are going to be included in the Montreux Record.

(b) in the surrounding area: Very similar factors as under (a).

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.

There are three National Nature Reserves (Krive jezero NNR: 123.9 ha; Ranspurk NNR: 19.2 ha; Cahnov-Soutok NNR: 13.4 ha), one National Nature Monument (Pastvisko NNM: 30.5 ha), four Nature Reserves (Vestonicka nadrz NR: 1.080 ha; Dolni Musovsky luh NR: 48.6 ha; Plackuv les a ricka Satava NR: 113 ha; Frantiskuv fishpond NR) and three Nature Monuments (Kutnar NM: 0.56 ha; Kvetne jezero NM: 1.6 ha; Betlem NM: 10.8 ha), within

the Ramsar site. All these specifically protected areas have their own management plans, according to Czech nature conservation legislation, and these have all been implemented. Krive jezero NNR is a part of the Palava Protected Landscape Area (PLA). The RS borders in its middle part with another RS, Lednice fishponds. The majority of the area (southwards of the Krive jezero NNR) lies within newly enlarged Biosphere reserve Lower Morava.

The site is partly within the Biosphere Reserve Lower Morava, partly within the UNESCO World Heritage Site Lednice-Valtice Area, an IBA and Natura 2000 (both SPA and SCI) 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 ❑ Could you please fill this in with the appropriate category. Thanks

c) Does an officially approved management plan exist; and is it being implemented?:
Management plans exist for all particularly protected areas within the territory of RS, and they are implemented by appropriate nature conservation bodies.

d) Describe any other current management practices:

The main conservation aim has been to restore the flooding regime in the floodplain forests with the help of artificial canals and ditches; this objective is now functioning over almost the entire area. A programme for the re-introduction of several species of aquatic plants and animals into the Dyje River floodplain is being implemented by several NGOs (see also section 28). The Management Plan for the entire Lower Dyje floodplain is being prepared in cooperation with Slovakia. A very close cooperation, starting in this region in the late 1990s, exists amongst Austria, Slovakia and Czech Republic, which finally led in the receipt of a Ramsar Conservation Award at the 2002 Ramsar conference of Contracting Parties in Valencia.
Hunting of waterfowl has been reduced over the territory of the Věstonická nádrž NR, and new wetland habitats are being created, together with the lowering of water levels, in order to improve the biodiversity of the site.

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28. Conservation measures proposed but not yet implemented:
e.g. management plan in preparation; official proposal as a legally protected area, etc.

The whole area is the only Ramsar site in the Czech Republic without an appropriate legislative status. There is a long-time proposal to include this area into the Palava PLA. This proposal has been formally accepted by the Government, in their document of 1998 (Mlcoch et al 1998). There are two suggestions for new Nature Reserves: Krumpava, and Sekulska Morava; in the Soutok area, both are dead river arms (oxbows) with well-developed floodplain forest in their surroundings. A common Management Plan for the three Ramsar sites - in Austria (Donau-March-Auen), Slovakia (Morava floodplains) and Czech Republic (this RS) - is under preparation: the first step (a literature survey) has been completed.

The Soutok area is suggested as one of the 13 Important Plant Areas (IPA) in the Czech Republic.

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29. Current scientific research and facilities:
e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

The field station of the Faculty of Forestry of the Mendel University of Agriculture and Forestry in Brno is located in the floodplain forest close to Lednice. It was established in the early 1970s, mainly to cover research activities within the International Biological

Programme (IBP); Mendel University was responsible for the floodplain forest project. The basic results are published in Penka et al. (1985, 1991). Biodiversity monitoring have been running in various fields: among others, birds of prey are well monitored in the area (see, e.g., Horak 1998, 2000, 2002), and the whole bird community (Zuna-Kratky et al. 2000). An exceptional project has been monitoring continuously for 8 years the development of ground invertebrate communities in connection with water levels and humidity in 1994-2001 (Fojtova, Chytil 2001). Long-term monitoring has dealt with plant communities in the Soutok area (see Vicherek et al. 2001). Since the filling of the Nove Mlyny reservoirs, bird count monitoring has run monthly, with a more detailed focus on breeding and wintering birds (e.g. Chytil, Machacek 2000).

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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.

Two tourist information centres (Breclav, Lednice); two observation hides (Pastvisko, Pohansko); many information booklets, produced mainly by Forest Enterprise Zidlochovice (Floodplain forests of South Moravia, Floods and floodplain, Mosquitoes in floodplains, Revitalization of floodplains, etc.); five video cassettes ("Floodplain forests at the Confluence" /i.e. Soutok/ - Forest Ent. Zidlochovice, "In the landscape under the Lednice minaret" – Lednice Authority, "The renewal of the wetlands under Palava hill" – Ministry of Environment, "Mosquito paradise" – Ministry of Agriculture, "Thirst of a forest" – General Directorate of the Forests of the Czech Republic). Two nature trails: Kanci obora – floodplain forest, and Pohansko. Excursions for school pupils, concerning floodplain habitats, have been coordinated by the Centre for Ecological Education, Palava, in Krive jezero NNR for the last 3 years (2-hour programme).
It would be very kind, if you please could write the information more in sentences. Thanks

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31. Current recreation and tourism:

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

Activities are various. The Soutok area has become very popular, partly because of its inaccessability during socialist times (military border area). Cycling is the most popular way for visitors – cars are prohibited. The remaining parts of the floodplain are visited more sparsely. There are increasing numbers of visitors to the Lower Reservoir of Nove Mlyny – sunbathing, windsurfing, and also as one of the few suitable reservoirs in CZ for yachting.

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32. Jurisdiction:

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

Very complicated. Partly under the district councils of Breclav, Hustopece and Mikulov, supervised by Regional Council in Brno. This administration unit is responsible, for example, for Nature Reserves, while National Nature Reserves and National Nature Monuments belong under the jurisdiction of the Ministry of Environment. Nowadays, some innovation in Nature and Landscape Conservation Law is under discussion in Parliament; among other things, the jurisdiction of all Special Protection Areas (according to Birds Directive of EU) will be under the Administrations of Protected Landscape Areas.

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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.

Two main authorities:

A. Forest Enterprise Zidlochovice, Tyršova 1, CZ-667 01 Zidlochovice; for majority of floodplain forests and meadows; e-mail: lz4@lesycr.cz

B. The Morava River Catchment Authority in Brno; address: Povodi Moravy s.p., Drevarska 11, CZ-601 75 Brno; e.mail: sekretariat@povodi.cz

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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.

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