

Information Sheet on Ramsar Wetlands (RIS) – 2006 version

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

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

Notes for compilers:

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

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

Magyari, Máté (ecological referent),
Balatoni Nemzeti Park Igazgatóság (Balatoni National
Park Directorate) HU-8229 Csopak, Kossuth L. u. 16.

2. Date this sheet was completed/updated:

Updated: 15.09.2007

3. Country:

Hungary

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.

Kis-Balaton

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**

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Designation date

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Site Reference Number

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 was no essential change in the ecological character of the site according to the designation criteria.

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.

Site is the same as the Kis-Balaton part of the Balaton-felvidéki (Balaton Uplands) National Park.

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.

46° 35'-46° 43'N / 17° 07'-17°17' 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.

Zala & Somogy Counties, nearest town is Keszthely on the north side of the site.

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

max.: 106

average: 104,5

min.: 103 above Baltic Sea level

11. Area: (in hectares)

14 745 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.

Once the westernmost bay of Lake Balaton, the Kis-Balaton today is a water protection system consisting of two main parts (Phase I and Phase II, see description under item 16.). Phase I is characterised by open

water surfaces with relatively narrow reedbelts along the dikes, while Phase II contains vast reedbeds and sedgy marshes, and less open water. The Kis-Balaton has a crucial importance in the history of Hungarian nature conservation. This was the first area where the protection of the great white egret was organized. This species had become almost extinct, but due to its protection the population increased and nowadays about 4 000 pairs nest in Hungary. The Kis-Balaton, as a Landscape Protection Area, has been legally protected since 1976. It has been part of the Balaton Uplands National Park since 1997. It has been under the protection of the Ramsar Convention since 1979. Almost the whole area of the Kis-Balaton was designated according to the Habitats Directive and the Birds Directive.

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: The Kis-Balaton is unique within the biogeographic region by being one of the largest marshlands with reedbeds, marshy meadows and large sedges that are still in close-to-natural state. Most of the vegetation is water-logged for most of the vegetative season. The area of different types of reedbed vegetation is 2500 ha.

2: The area of different types of threatened reedbed and sedges vegetation is approximately 3500 ha (2500 ha reedbed, 1000 ha sedge vegetation). The Kis-Balaton holds the following species with international designations:

Cephalanthera damasonium EU CITES B(II)
 Cephalanthera longifolia EU CITES B(II)
 Epipactis palustris EU CITES B(II)
 Epipactis helleborine EU CITES B(II)
 Epipactis nordeniorum EU CITES B(II)
 Epipactis tallosii EU CITES B(II)
 Epipactis voethii EU CITES B(II)
 Listera ovata EU CITES B(II)
 Neottia nidus-avis EU CITES B(II)
 Ophrys sphecodes EU CITES B(II)
 Orchis coriophora EU CITES B(II)
 Orchis laxiflora ssp. elegans EU CITES B(II)
 Orchis laxiflora ssp. palustris EU CITES B(II)
 Orchis militaris EU CITES B(II)
 Orchis morio EU CITES B(II)
 Platanthera bifolia EU CITES B(II)
 Spiranthes spiralis EU CITES B(II)
 Dactylorhiza incarnata EU CITES B(II)
 Orchis laxiflora subsp. palustris EU CITES B(II)
 Epipactis palustris EU CITES B(II)
 Iris sibirica Habitats Directive Annex V
 Cirsium brachycephalum Habitats Directive Annexes II and IV
 Trapa natans Bern Convention Appendix I

Hirudo medicinalis Bern Convention Appendix III
 Lycaena dispar Bern Convention Appendix II, Habitats Directive Annexes II and IV

Anisus vorticulus Habitats Directive Annex II
 Vertigo moulinsiana Habitats Directive Annex II

Leucorrhinia pectoralis Bern Convention Appendix II

Umbra krameri Bern Convention Appendix II, Habitats Directive Annex II

Leucaspis delineatus Bern Convention Appendix III

Rhodeus sericeus Bern Convention Appendix III, Habitats Directive Annex II

Misgurnus fossilis Bern Convention Appendix III, Habitats Directive Annex II

Cobitis taenia Bern Convention Appendix III, Habitats Directive Annex II

Aspius aspius, Habitats Directive Annex II

Bombina bombina Bern Convention Appendix II, Habitats Directive Annexes II and IV

Pelobates fuscus Bern Convention Appendix II

Hyla arborea Bern Convention Appendix II, Habitats Directive Annex IV

Rana arvalis Bern Convention Appendix II, Habitats Directive Annex IV

Rana dalmatina Bern Convention Appendix II, Habitats Directive Annex IV

Rana lessonae Habitats Directive Annex IV

Rana esculenta Habitats Directive Annex V

Triturus cristatus Bern Convention Appendix II, Habitats Directive Annexes II and IV

Triturus dobrogicus Bern Convention Appendix II

Emys orbicularis Bern Convention Appendix II, Habitats Directive Annexes II and IV

Natrix tessellata Bern Convention Appendix II, Habitats Directive Annexes II and IV

Tachybaptus ruficollis Bern Convention Appendix II

Phalacrocorax pygmaeus Bern Convention Appendix II, Birds Directive Annex I

Ardea purpurea Bern Convention Appendix II, Birds Directive Annex I

Ardeola ralloides Bern Convention Appendix II, Birds Directive Annex I

Botaurus stellaris Bern Convention Appendix II, Birds Directive Annex I

Casmerodius albus (*Egretta alba*) Bern Convention Appendix II, Birds Directive Annex I

Egretta garzetta Bern Convention Appendix II, Birds Directive Annex I

Ixobrychus minutus Bern Convention Appendix II, Birds Directive Annex I

Nycticorax nycticorax Bern Convention Appendix II, Birds Directive Annex I

Platalea leucorodia EU CITES A (II) , Birds Directive Annex I

Aythya nyroca Birds Directive Annex I, European IUCN Red List: VU, Global IUCN Red List: NT

Haliaeetus albicilla EU CITES A (I) , Birds Directive Annex I

Falco subbuteo Bern Convention Appendix II

Crex crex Bern Convention Appendix II, Birds Directive Annex I

Porzana porzana Bern Convention Appendix II, Birds Directive Annex I

Porzana parva Bern Convention Appendix II, Birds Directive Annex I

Himantopus himantopus Bern Convention Appendix II, Birds Directive Annex I

Chlidonias hybridus Bern Convention Appendix II, Birds Directive Annex I

Chlidonias niger Bern Convention Appendix II, Birds Directive Annex I

Larus melanocephalus Bern Convention Appendix II, Birds Directive Annex I

Sterna hirundo Bern Convention Appendix II, Birds Directive Annex I

Microtus oeconomus mehelyi Bern Convention Appendix III, Habitats Directive Annexes II and IV

Mustela erminea Bern Convention Appendix III

Lutra lutra EU CITES A (I), Bern Convention Appendix II, Habitats Directive Annexes II and IV

Canis aureus Habitats Directive Annex V

3: The Kis-Balaton holds one of the highest concentrations of waterbirds in the migration period in Transdanubia, i.e. the western part of the Pannonic biogeographic region and supports important populations of plant and animal species for maintaining the biological diversity of the Pannonian Biogeographic region. (see points: 21 and 22).

4. The site supports more than 250 bird species in their nesting, migration and wintering season. See Supplementary Excel file. The site is a stronghold of numerous breeding bird species, including several internationally protected ones, such as *Aythya nyroca* (see international designations under justification of Criterion 2).

The Kis-Balaton is also one of the two remaining sites for the Pannonic subspecies of the Northern Vole, a glacial relict listed on the Bern Convention Appendix III and on Annexes II and IV of the Habitats Directive. This subspecies is restricted to special sedge marshes in Transdanubia.

5. In most years, the number of waterbirds is in excess of 20 000 during the autumn/early winter migration period. See Supplementary Excel file (Waterbirds) for counts in the last two seasons (Data from the Hungarian Waterfowl Monitoring Database).

6. The peak numbers of Greylag Goose as described under Criterion 5 reach 1% of the European population. Data for the European population is taken from BirdLife International (2004): Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International, while data for the Kis-Balaton population are taken from the same source as under Criterion 5.

Greylag Goose (*Anser anser*):

European wintering population: >390 000 Kis-Balaton: 11271 in December 2005, 11500 on October –November 2006.

7: several fish species, amongst which *Umbra krameri*, live and spawn in the area. For the list of internationally protected fish species, see Criterion 2.

8: The population of *Umbra krameri* in the Kis-Balaton is estimated at about 50% of the world population.

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:

Pannonic

b) biogeographic regionalisation scheme (include reference citation):

European Commission DG Environment webpage
Bern Convention/ EU Habitats Directive

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 Kis-Balaton formed formerly the westernmost bay of Lake Balaton. This bay was at the same time the mouth of River Zala, which has been the main water supplier for Lake Balaton as well. Erosion has been started by human development and intervention in the woods around the Kis-Balaton. This process had caused slow soil silting there and the area started to turn into a marshland. Afterwards, the drainage of the marshland was continued by the farmers and by state companies. In order to protect the railway lines, the River Zala was regulated and forced between dikes. Until the 1920's, the contraction of natural habitats was drastic as a result of draining and the open water surface shrank to cca. 3 ha. Owing to the fact that the incoming water couldn't flow through its natural filtering zone formed by macrophytes, the water quality of Lake Balaton began to decrease. That was the main consequence of processes caused by human activity. The different types of artificial fertilizers gave rise to accumulation of nutrients washed out from plough-fields to a critical level.

To resolve that problem, there was a decision about building and rehabilitation of Kis-Balaton as a water protection system in the 1970's. The construction started with flooding of the area in 1985 and work has been in progress ever since. The first step was the creation of a water reservoir named Phase I. This Phase of the system could be characterized as an open water surface area diversifying with small islands and with an area of 2380 ha. Owing to the locks and dike system, the turnover of the water is about two weeks and the water leaves Phase I in the former bed of River Zala and flows into Phase II. At this stage at Phase II the former dikes were cut through so that the river could water the area again. The different

types of wetlands were maintained by the river. Marshlands bordered with non-tussock beds of large sedges and wet meadows alternate with open water surface and reedbeds.

Altogether, the water stays about one month in the Kis-Balaton before it reaches Lake Balaton. Phase I and Phase II together are named as Kis-Balaton.

The trait of this water body (water protecting system for removal of nutrients) determinates the water levels and water permanence in all seasons. The average depth is about 1 meter.

The soil type is predominantly organic. The shoreline is anchored and dissipated of erosive forces.

17. Physical features of the catchment area:

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

The catchment area of the Kis-Balaton is about 2800 km². 16 watercourses join the reservoir and the marshland.

River Zala is the most significant of them.

18. Hydrological values:

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

The main function of the Kis-Balaton is removing incoming nutrition by filtering through algae, floating and emergent marshland vegetation and by sediment trapping.

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.

Tp, 6, M, Xf

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 rate of eutrophication of the reservoir is very high. Its main source has been the Zala River, generating a high density of algae. Marshlands bordered with non-tussock beds of large sedges and wet meadows alternate with open water surface and reedbeds.

The site supports many waterbirds, during nesting and migration too.

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.*

Obviously, water-dependent habitats are very diversified according to the degree of water cover. Floating associations containing white water-lily (*Nymphaea alba*), water chestnut (*Trapa natans*), water-soldier (*Stratiotes aloides*) or the water-hogweed (*Persicaria amphibia*) attract attention by their natural values. Botanical rarities - like the peat fern (*Thelypteris palustris*), the fen-nettle (*Urtica kioviensis*), the cicuta (*Cicuta virosa*) and the sweet-flag (*Acorus calamus*) - exist at the borders and openings of the large reedbeds. Other areas covered with rush and sedge are important, too. Bogs, moors and fens are located on shallow-watered and provisionally water-logged grounds. These areas are ideal for the reed-buttercup

(*Ranunculus lingua*), the marsh-pea (*Lathyrus palustris*), the feather-foil (*Hottonia palustris*), the Syberian iris (*Iris sibirica*) and numerous species of orchids. The wetlands are skirted with mesophilous hayfields, meadows and planted forests with common alder (*Alnus glutinosa*), silver poplar (*Populus alba*), English oak (*Quercus petraea*) and field maple (*Acer campestre*).

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.*

Zoological values of the Kis-Balaton are highly diverse: special habitats are designated by uncommon species. The fauna of benthonic invertebrates is very rich. Populations of rare dragonflies (*Leucorrhinia pectoralis*, *Aeschna viridis*) are principally important here. Slack waters of the wetlands are excellent for fish species – the european mud-minnow (*Umbra krameri*), the weatherfish (*Misgurnus fossilis*), the spiked loach (*Cobitis elongatoides*) and the sunbleak (*Leucaspis delineatus*) – that require specific ecological circumstances. Populations of other native fishes are notable, too. Natural stocks of asp (*Aspius aspius*), bitterling (*Rhodeus sericeus*), tench (*Tinca tinca*), carp (*Cyprinus carpio*), pike (*Esox lucius*), pikeperch (*Sander lucioperca*) and wels (*Silurus glanis*) is followed up by experts year after year. Many protected amphibians and a few reptile species exist here.

The Kis-Balaton is one of the most important areas for nesting and migrating birds in Central Europe. It has an outstanding role for waterbirds during migration periods. Most of the waterbird species that have occurred in Hungary have been recorded in the area. There are observations about 170 bird species from the Kis-Balaton and 90 species nest here, too. In the following part of our document we focus only on species that have prominent significance from the nature protection point of view.

The migration period in summer begins already in August (figure 1.). Flocks of teals (*Anas crecca*) and garganey (*Anas querquedula*) are the first arrivers with a total of more than 10 000 individuals. They are followed by mallards (*Anas platyrhynchos*), shovelers (*Anas clypeata*), wigeons (*Anas penelope*), gadwalls (*Anas strepera*) and pintails (*Anas acuta*) whose number could rise to the order of magnitude of the previous species together. During the wintering season, geese represent the bulk of waterbirds with maximum 20.000 – 30.000 individuals. The flocks consist of greylag goose (*Anser anser*), white-fronted goose (*Anser albifrons*) and bean goose (*Anser fabalis*).

The number of species and individuals decreases until the beginning of breeding period. At that time, populations of nesting birds play the main role at the Kis-Balaton and Phase II becomes dominant in terms of the breeding season due to reed-beds and its habitat structures.

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:

Land using means some controlled fish production, limited forestry and reed-harvesting in the area.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

a) within the Ramsar site:

The Kis-Balaton Water Reserve System is completely state-owned. The surrounding protected areas are mainly state-owned too, but there are some private grasslands and agricultural areas.

b) in the surrounding area:

There are mainly private agricultural areas and forests and grasslands in the surrounding area.

25. Current land (including water) use:

a) within the Ramsar site:

Main activities are some works attached to water protecting and reserving, controlled fishing and reed-harvesting, limited forestry, controlled hunting, limited guided tourism.

b) in the surroundings/catchment:

Mainly grazing, arable land cultivation, woodland management, hunting.

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:

Past: fisheries, reed harvesting, hunting and the construction of the water protection system.

Present and potential: illegal fishing, continuation of the construction of the water protection system.

b) in the surrounding area:

Past: intensive use of artificial fertilizers in agriculture; introducing outlet water into live streams; increasing load of phosphorous transported by inflows

Present and potential: illegal pollution, innovations.

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.

National Park (protected and strictly protected parts), Natura 2000 site, IBA area

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?:

There is no officially approved management plan for the Kis-Balaton.

d) Describe any other current management practices:

Fishing, forestry, hunting and reed-harvesting are under control and regulation.

Grasslands and meadows managed by the national park directorate are treated with an appropriate method according to the current vegetation period. Reed-beds are renewed partially by cutting in the winter season. Cutting of reedbeds selectively results in diverse habitats. Thus the age of the reed-beds becomes more variegated and the condition of the habitats is suited to nesting birds requiring different nesting places.

The presence of goldfish (*Carassius auratus*) that produces large biomass in the water body is an actual problem regarding the fish fauna. The goldfish expands its occurrence against that of the crucian carp

(*Carassius carassius*), which is an indigenous species in Hungary. To resolve this problem, carnivorous fish species like the pike were introduced and selective electric fishing has been used.

The population of wild boar (*Sus scrofa*) has to be controlled by regular hunting. This species puts pressure on bird populations nesting on or close to the ground.

28. Conservation measures proposed but not yet implemented:

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

There are no such conservation measures.

29. Current scientific research and facilities:

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

From the beginning of flooding in 1985, research projects and monitoring activity were started on the wetlands on behalf of the water protection and nature protection institutions. Ten years ago, when a part of Phase II was flooded, the research was focused on marshlands with more variegated habitats. Research work on topics of nature protection is being carried out in 15 themes.

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.

There is an information centre managed by BNPD and a nature trail in the area. A great number of information booklets are published and distributed not only by BNPD but also by local information centres and other organizations.

31. Current recreation and tourism:

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

BNPD institutes some kind of guided (and limited) tours and manages a buffalo reserve in the area.

32. Jurisdiction:

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

The West-Transdanubian Environmental, Nature Conservation and Water Management Authority is the first instant authority of the Ministry of Environment and Water

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.

West-Transdanubian Environmental and Water Authority
H-9700 Szombathely, Vörösmarty u. 2.

Balaton National Park Directorate
H-8229 Csopak, Kossuth L. u. 16.
Máté Magyari kis-bal@pandsl.hu

34. Bibliographical references:

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

Csupor, T. (1990): Kis-Balaton

Gondolat, Budapest, p. 22-26., 81-90.

Keve, A. (1976): Adatok a Kis-Balaton madárvilágához I.

Aquila, 82., p. 49-50.

Ligeti, L. (1974): A Balaton és szabályozása

Vízügyi történeti füzetek, Budapest, p. 13-14.

Marosi, S. - Somogyi, S. (1990): Magyarország kistájainak katasztere I.-II.

MTA Földrajztudományi Kutató Intézete, Budapest, p. 483-487.

Marosi S. (2000.): Földrajzi indoklások természetvédelmi területté nyilvánításhoz. In: Fábíán Sz. Á. - Tóth J. (szerk.): Geokronológia és domborzatminősítés. Tiszteletkötet Schweitzer F. 60. születésnapjára. Pécsi Tudományegyetem, Földrajzi Intézet, Pécs. pp. 85-100.

Futó J. (szerk.) (2001): A Kis-Balaton térsége. A Balaton-felvidék természeti értékei II. Balaton-felvidéki Nemzeti Park, Veszprém, p. 5-112.

The above is just a shortlist for the most important references. There are more than 350 research reports in many themes, for instance water quality, water ecology, algology, plants and vegetation, reed-beds, biotechnon, zooplankton, molluscs, macrozoobenton, fish fauna, amphibians, reptiles, birds, mammals, e.t.c.

Please return to: **Ramsar Convention Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
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