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).

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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:

21.03.2007

3. Country:

Poland

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.

Łuknajno Lake Nature Reserve (Rezerwat przyrody „Jezioro Łuknajno")

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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 ☒

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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:

No major changes in the ecological character occurred, however, if earlier at least 19 bird species listed by the Birds Directive Annex I were found, recently five of that number could not be traced any more (including little bittern *Ixobrychus minutus*, Montague's harrier *Circus pygargus*, black grouse *Tetrao tetrix*, middle spotted woodpecker *Dendrocopos medius* and bunting *Emberiza hortulana)*. Since mid nineties a successive decline is observed in breeding populations of many species, above all of grebes *Podiceps* spp. ducks *Anatidae*, coot *Fulica atra*, terns *Sterna* spp. what most probably is due to brood damage made by *Mustela vison* and/or *Procyon lotor*.

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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.

The wetland boundary is the same as that of existing nature reserve "Luknajno Lake" („Jezioro Łuknajno").

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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.

53°48' - 53°50'N, 21°36'- 21°40'E approx. centre 53°49' N, 21°38'E

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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.

Warmińsko-Mazurskie Voivodeship, the site is located near the town of Mikołajki, nearest large town – Olsztyn.

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

115.8 m above sea level

11. Area: (in hectares) 1189 ha

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12. General of the site:

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

Situated at the hart of the Great Masurian Lake Region, north-eastern Poland, the lake Łuknajno is very shallow and moderately eutrophic (the average depth 0.6 m, maximal 3.0 m). The wetland embraces adjacent reed and sedge beds, willow (*Salix* spp.) shrubs and groups of *Alnus glutinosa*. The lake has oval shape, mostly flat banks and a weakly developed shoreline covered with abundant vegetation. The lake has a connection with Śniardwy, the largest Masurian lake. Since 1947, the Lake is an ornithological reserve established to protect breeding site of numerous waterfowl, but especially of mute swan *Cygnus olor*, which gathers there in large colonies. The lake waters support abundant aquatic vegetation of stoneworts *Chara* spp. and pondweeds *Potamogeton* spp. providing food for water birds.

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).

2. The wetland is important as it supports populations of at least 14 species of birds listed in the Birds Directive Annex I as endangered at continental scale including white stork *Ciconia ciconia*, Whooper swan *Cygnus cygnus*, honey buzzard *Pernis apivorus*, black kite *Milvus migrans*, red kite *Milvus milvus*, white – tailed eagle *Haliaeetus albicilla*, lesser spotted eagle *Aquila pomarina*, osprey *Pandion haliaetus*, marsh harrier *Circus aeruginosus*, hen harrier *Circus cyaneus*, bittern *Botaurus stellaris*, corn crake *Crex crex* spotted crake *Porzana porzana* and little crake *Porzana parva*. It also supports 7 bird species listed in the Polish Red Data Book of Animals. During the breeding season the wetland shelters 1% of national population of such birds as bittern *Botaurus stellaris*, osprey *Pandion haliaetus*, little crake *Porzana parva*, red-crested pochard *Netta rufina*, great crested grebe *Podiceps cristatus*, pintail *Anas acuta* and spotted crake *Porzana porzana*. The lake is one of the 10 most important in Poland refuges of little crake *Porzana parva* and an important refuge of bittern *Botaurus stellaris*.

Łuknajno is a site of rare and endangered at continental scale plants and habitats, including Natura 2000 habitat (3140) of hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.

It also supports vulnerable plant species such as *Nymphaea candida* (Polish Red Data Book of Plants).

The site supports large populations of animals of European importance listed by Annex II of Habitat Directive: beaver *Castor fiber* and otter *Lutra lutra* and important populations of amphibians *Triturus cristatus* and *Bombina bombina*.

4. The site supports bird species in the critical stage of their life cycles, it is of special importance for *Cygnus olor* at the time of its moulting and breeding. The birds also use to rest on the lake in large numbers during their spring and autumn migrations. The lake is a nesting place for 96 of birds including waterfowl such as e.g.: coot *Fulica atra*, water rail *Rallus aquaticus*, tufted duck *Aythya fuligula*, marsh harrier *Circus aeruginosus*, red-crested pochard *Netta rufina*, goldeneye *Bucephala clangula*, little grebe *Tachybaptus ruficollis*, black tern *Chlidonias niger* and others. The area adjacent to the lake is a foraging site of rare and vulnerable to extinction in Europe birds of prey (listed in Annex I to Birds Directive) – osprey *Pandion haliaetus*, white-tailed eagle *Haliaeetus albicilla* and lesser spotted eagle *Aquila pomarina*.

Relatively large concentrations have such endangered bird species as little bittern *Ixobrychus minutus*, pintail *Anas acuta*, spotted crake *Porzana porzana*, water rail *Rallus aquaticus* and bearded tit *Panurus biarmicus* (Polish Red Data Book of Animals). The site provides support for large flocks, up to 1000 individuals, of coot *Fulica atra* and mute swan *Cygnus olor*, especially in winter.

6. The site provides regular support for more than 1% of the Eastern Europe migratory population of red-crested pochard *Netta rufina* - 900 individuals (Polish Red Data Book of Animals)

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:

continental - according to EEA,

geobotanical region of deciduous forests - according to Kondracki,

Eastern Europe – according to regionalisation used by Waterbird Population Estimates 2004, Fourth Edition Global Series.

b) biogeographic regionalisation scheme (include reference citation):

Geobotanical region of deciduous forests of Central Europe at the edge of the East-European region of mixed forests (boreal) – according to the Polish regionalisation by Jerzy Kondracki, 2001: Regional geography of Poland. The region embraces eastern part of Denmark, southernmost Sweden, central and north-eastern Germany and most of the territory of Poland except for its two mountain ranges (Alpine region) and the north-eastern edge of the country, belonging to sub-boreal or East-European mixed forest biogeographic region.

According to EEA – the region is identified as "continental" (EEA publication 2002: Europe's biodiversity – biogeographical regions and seas).

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 Łuknajno lake origins go back to late Glacial Period when melt waters filled in the depression of ground moraine left by the continental glacier. The lake is shallow and its bottom covered with a several meter thick layer of gyttia. The shores except for the eastern one are flat and covered by sedge overgrown fens. Agriculturally used land (outside the reserve) is located close to the eastern part of the lake surrounding. Łuknajno lies in the Lakeland climatic zone with arctic influences. The annual average temperature is + 6°C. Winters are long while spring and summers are short what is conditioned by cold air masses incoming from the north. Annual sum of precipitation is low, attaining about 550-650 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).

The pression of catchment on the lake is relatively significant – the relationship of catchment surface to the lake surface was estimated to be 8 so that the lake is largely dependent on the catchment. The catchment is built of sands and clays with a high contribution of peat soils. Local morphometric conditions largely facilitate the runoff; insignificant number of no-outflow hollows and a dense network of surface streams favour the transport of matter. On the other hand, the pasture-agricultural character of the catchment does not facilitate the runoff so in general the catchment has little possibility for matter delivery to the lake.

18. Hydrological values:

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

The lake accumulates waters carried in by draining ditches from the neighbouring mires and drains the area of a surface of 55.2 km^2. It is separated from the Śniardwy lake by a strip of moraine hills interrupted by a waterlogged depression. In that way the lake participates in local recharge giving away, on the average, about 6.9 million m^3 of water annually (data of 1989).

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.

O, Tp, U, W, Xp

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 lake is moderately eutrophic with benthic vegetation of *Chara* spp. Aquatic vegetation is rich and build by great algae and by diverse pondweeds *Potamogeton* spp., smaller surfaces are occupied by partly submerged vegetation of small waterlily *Nymphea candida*. The lake is contoured with a wide belt of dense aggregations of *Phragmites australis* and great sedge beds of tall sedges *Magnocaricion* which provide excellent nesting sites for waterfowl. Along the eastern border of the lake and to the north and south there occur patches of alder carr (*Alnus glutinosa*). The animal communities consist mainly of bird assemblages. Large concentrations of birds coot *Fulica atra*, whooper swan *Cygnus cygnus* and various duck species feed on dense aquatic vegetation during migrations and in winter.

21. Noteworthy flora:

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

The vegetation cover is typical the Masurian Lakeland with 160 species of plants. Most of taxa are aquatic and mire plants. One species *Nymphea candida* is a red listed plant in Poland while *Daphne mezerum*, *Dactylorhiza majalis* and *Menyanthes trifoliata* are subject to strict protection nationally.

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.*

Noteworthy fauna embrace numerous avians vulnerable and protected in Poland and in Europe including, in addition to those mentioned under Par 14: red-necked grebe *Podiceps grisegena*, black-necked grebe *P. nigricollis*, common tern *Sterna hirundo*, white stork *Ciconia ciconia*, shoveler *Anas clypeata*, spotted crake *Porzana porzana*, corncrake *Crex crex*, lesser black-backed gull *Larus fuscus*, great black-backed gull *L. marinus*, bearded tit *Panurus biarmicus*, honey buzzard *Pernis apivorus*, black kite *Milvus migrans*, red kite *M. milvus* and marsh harrier *Circus aeruginosus*.

The wetland abounds in fishes, in particular of species harvested, such as: *Anguilla anguilla*, *Carassius carassius, Abramis brama, Tinca tinca* and *Esox lucius.*

The site supports animal populations, in addition to beaver *Castor fiber* and otter *Lutra lutra* already mentioned (Par. 14), of such species as small mammals: *Sorex araneus* and *S. minutus* (protected by the Polish law) and numerous internationally protected amphibians, including: *Bufo bufo, B. viridis, Hyla arborea, Pelobates fuscus, Rana arvalis* and *Triturus vulgaris* (of Annex IV to Habitat Directive) as well as *R. esculenta, R. lessonae, R. ridibunda* and *R. temporaria* Among reptiles - *Lacerta agilis* and *Natrix natrix* are endangered and protected under the Polish law.

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 lake may be used for fishing during the autumn-winter season strictly regulated by law.

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?

No

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 State Treasury

b) in the surrounding area: The State Treasury and private property

25. Current land (including water) use:

a) within the Ramsar site:

Walking tourism, angling and fishing restricted in terms of time and type of catch.

b) in the surroundings/catchment:

Recreation, agriculture, fishery.

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 major threats to the reserve include overfishing both by legal fishers and poachers, predations of Mustela vison on broods of waterbirds.

b) in the surrounding area:

Anthropopression of various kinds resulting from recreation and tourism.

27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

Nature Reserve since 1947 (710 ha, extended in 2004 to 1189.11 ha), in the Masurian Landscape Park since 1977,

Biosphere Reserve "Łuknajno Lake" since 1977,

Ramsar Site "Łuknajno Lake" since 1977,

Natura 2000 Site "Jezioro Łuknajno" (PLB280003 - 1254.4 ha),

Important Bird Area "Jezioro Łuknajno" (PL040 - 1252 ha).

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?:

No information.

d) Describe any other current management practices:

28. Conservation measures proposed but not yet implemented:

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

The management plan is in preparation by the Warmińsko-Mazurski University in Olsztyn.

29. Current scientific research and facilities:

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

In the close vicinity of the lake in the village Urwitałt, there is the Professor Kazimierz Dobrowolski Field Station of the Warsaw University managed by the Department of Ecology.

The main directions of research include study on fauna and ecology (element cycles in ecosystems), air pollution, population dynamics. Study is also carried out by the Hydrological Station at Mikołajki and by the Warmińsko-Mazurski University in Olsztyn.

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.

The main activity of the Station is training for University students, gathering and preparing materials for research work, organization of national and international meetings and ecological training for school students. One educational trail was marked in the reserve and two viewing towers were installed.

31. Current recreation and tourism:

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

The area is used for recreation, walking tourism. In view of the necessity to safeguard peace to birds visitors are not allowed to enter the waters of the lakes. Owing to the close neighbourhood of the town of Mikołajki and of other recreationally used lakes, the pression of visitor movement is significant.

32. Jurisdiction:

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

Warmińsko-Mazurskie Voivodeship

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.

Voivode of the Warmińsko-Mazurskie Voivodeship

Office of the Warmińsko-Mazurskie Voivodeship, Al. Marszałka Józefa Piłsudskiego 7/9

10-575 Olsztyn, Poland.

34. Bibliographical references:

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

- Breymeyer A. (red.) 1997. Rezerwaty Biosfery w Polsce. Polski Narodowy Komitet MaB, Warszawa (Biosphere Reserves in Poland).
- Gromadzki M., Dyrcz A., Głowaciński Z., Wieloch M. (red.). 1994. Ostoje ptaków w Polsce. Ogólnopolskie Towarzystwo Ochrony Ptaków, Bibl. Monitor. Środ., Gdańsk. (Bird sites in Poland – in Polish).
- Gromadzki M. (red.) 2004. Ptaki. Poradnik ochrony siedlisk i gatunków Natura 2000 - podręcznik metodyczny. Ministerstwo Środowiska, Warszawa. Tom 7 (część I), Tom 8 (część II).(Birds. Manual of site and species conservation – in Polish).
- Hillbricht-Ilkowska A. (red.) Jeziora Mazurskiego Parku Krajobrazowego. Stan eutrofizacji, kierunki ochrony. 1989. Zakł. Nar. Im. Ossolińskich, Wydawnictwo PAN, Wrocław – Warszawa – Kraków – Gdańsk – Łódź. Zeszyty Naukowe 1. (Lakes of Mazurski Landscape Park – eutrophication, directions of conservation – in Polish).
- Jankowski W. 1997. Zasady monitoringu bioróżnorodności na przykładzie rezerwatów przyrody. Bibl. Monitor. Środ., PIOŚ-WIOŚ w Suwałkach.

- Osojca G., Górecki G., Krupa R. 2004. Jezioro Łuknajno. W: Ostoje ptaków o randze europejskiej w Polsce. Ogólnopolskie Towarzystwo Ochrony Ptaków, Warszawa, str. 219-221.(Luknajno Lake in Bird sites of European importance in Poland – in Polish).
- Polska Czerwona Księga Roślin. 2001. Instytut Ochrony Przyrody im W. Szafera. Kraków 2001. (Polish Red Data Book of Plants - in Polish).
- Rąkowski G., Wójcik J., Walczak M., Smogorzewska M., Brodowska M. 2005. Rezerwaty przyrody w Polsce Północnej. Monografia pod redakcją G. Rąkowskiego. Instytut Ochrony Środowiska, Warszawa. (Nature reserves in northern Poland - in Polish).
- Siodło P.O., Błaszkowska B., Chylarecki P. (red.) 2004. Ostoje ptaków o randze europejskiej w Polsce. Ogólnopolskie Towarzystwo Ochrony Ptaków, Warszawa. (Bird sites of European importance in Poland – in Polish).
- Waterbird Population Estimates Fourth Edition Wetland International 2006.
- http://natura2000.mos.gov.pl/natura2000/pl/
- http://www.ramsar.org/

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