# 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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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.

**Biebrzański National Park, (Biebrzański Park Narodowy)**

**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:**

The general ecological character of the site remains to a great extent unchanged, however, natural vegetation succession has been observed in the river valley over the last 30-40 years so that in the beginning of the years 2000', about 15 thousand ha of abandoned wet meadows were found to be overgrown by shrub and forest communities in the Biebrza River valley. The pattern of encroachment of shrub vegetation is patchy and subject to fluctuations depending on general moisture conditions, and seasonal return of traditional meadow management methods.

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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:**

The boundary is the same as the one of the existing Biebrzański National Park, and follows mainly a line of lowest terraces of the Biebrza river together with its tributaries such as Netta, Kopytkówka, Jegrznia, Dybła, Ełk, Klimaszewnica, Wissa, Brzozówka, Sidra, Biebła and Kosódka rivers.

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**8. Geographical coordinates** (latitude/longitude, in degrees and minutes):

53°13' – 53°44'N; 22°25' – 23°29'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.

Northeastern Poland, administrative region: Podlaskie Voivodeship, nearest large towns: Białystok and Łomża.

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

102 – 125 m above sea level

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**11. Area:** 59 223 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.

The Biebrzański National Park (BNP) covers about one fourth of the Biebrza River Valley, which constitutes one of the largest (more than 200 000 ha) and best preserved in Europe tract of natural swamps and peatlands. The wetlands developed in a hydrographically unique system of a lowland river valley and display a great variety of mire ecosystems. The river itself has been preserved in almost 100% natural state. Historically, due to low declines of the river bed and local relief conditions halting the outflow (sinuous bed), the inflowing waters have been retained in the valley what led to the accretion of thick layers of peat, mud and silt soils. The horizontal and vertical profiles of mires in the valley have largely been preserved as they were shaped throughout alternating dry and wet climatic periods in the Holocene. Unique hydrographical and relief conditions provided for the preservation of flora and fauna that become extinct elsewhere. The Biebrza River Valley in the Park is divided into three hydrologically and physiographically different Basins – Upper (Northern), Central and Lower (Southern), each of them having specific vegetation cover. The hydrographical axis of the site is the Biebrza River bed with an average vertical decline of 0.36 %. Biebrza meanders on the underlying thick peat layers, among mires, meadows and pastures as well as wet conifer and deciduous forests. In the Central Basin, Biebrza flows across an up to 30 km wide valley between large surfaces of fens. Most of the transitory and raised mires are also situated in this Basin. Large portions of the Valley are covered by sedge beds and extensive tracts of natural birch forests and swampy pine and spruce forests. In the Lower Basin, between the Białystok and Kolno Uplands, the river flows on shallow peats, across about 10-15 km wide valley, creating a highly sinuous system of meanders and oxbows linked to the mainstream permanently or only during spring flooding. High diversity of habitats is one of the reason for richness of the avifauna and ichtiofauna. Inaccessible swamps and forests provide excellent shelter for many species of wetland related flora and fauna including such rare taxa as beaver, otter and musk rat, but also wolf and elk, as well as for numerous water birds that use the wetland as an important feeding, resting, moulting and breeding place during migrations from Northern and Central Europe to Africa and Asia, especially in the spring.

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**13. Ramsar Criteria:**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| ☒ | ☒ | ☒ | ☒ | ☒ | ☑ | ☒ | ❑ | ❑ |

**14. Justification for the application of each Criterion listed in 13 above:**

**1.** The BNP constitutes a well preserved example of a lowland river and mire system unique at larger scale of the European continent not only of the continental region. The site supports a variety of natural hydrogenic habitats including all wetland types typical of the country. Of special significance is the well preserved two-dimensional (transversal and longitudinal) ecological gradient of water, soil and vegetation features in the river valley. The transversal gradient embraces five zones varying in hydrological conditions, from immersed vegetation in the river (permanent flooding) to emersed vegetation outside the reach of inundation. The longitudinal gradient of the valley embraces several zones of hydrogenic sites shaped by varying properties of the catchment and types of flooding; sites having ecological character of that type are already very rare in the continental region.

**2.** The site supports at least 30 vulnerable, threatened and endangered hydrogenic habitats/communities which take almost 40% of the Park area; among them of special importance (community code according to Annex 1 of Habitat Directive 92/43/EEC) are: (3150) natural eutrophic oxbows and lakes with *Hydrocharition*-type vegetation – 160 ha, (3270) rivers with muddy banks with vegetation of *Chenopodion rubri* and *Bidention* Alliances - 2 ha, semi-natural tall-herb humid meadows including (6410) *Molinia* meadows on peaty and silt-laden soils (Alliance of *Molinion caeruleae*) – about 2 500 ha, and (65) mesophile grasslands including (6510) lowland hay meadows (*Alopecurion, Arrhenatherion, Calthion* Alliances) - about 160 ha.

The group of critically endangered mire habitats is well represented among the Park habitats including (7110) active raised bogs – 6 ha, (7120) degraded raised bogs still capable of natural regeneration, (7140) transition mires and quaking bogs – 5 270 ha, (7150) depressions on peat substrates, sedge-moss and moss communities of *Rhynchosporion* Alliance – 47 ha, (91E0) alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alliances *Alno-Padion*, *Alnion incanae* and *Salicion albae*) - 91 ha, (91D0) swampy forests with pine and birch, boreal spruce forests - 4 141 ha. All the sites above are considered as endangered at European scale (EU Habitat Directive Annex I). In addition, several habitats on mineral soils are also vulnerable and listed including (170) *Tilio-Carpinetum* oak-hornbeam forests – 1 315 ha, (2320), (91T0) *Cladonia* type dry coniferous forest – 284 ha, dry sand heathlands with *Calluna (Nardetalia*) and (2330) inland dunes with open grasslands with *Corynephorus canescens* – 260 ha.

The sedge-moss and moss peatland habitats shelter many rare and critically endangered species of vascular plants as e.g.: *Pedicularis sceptrum-carolinum*, *Corallorhiza trifida, Betula humilis, Polemonium caeruleum* and *Sweertia perennis*. Local woodlands provide refuge for such mammals of European importance as wolf *Canis lupus* and lynx *Lynx lynx*, 11 species of bats in addition to numeorus populations of elk and cervids. Some endangered and rare forests lichens such as *Bryoria subcana* and *Usnea laricina* are also encountered in the site

**3.** The site supports the richest in Poland population of most known and largest orchid species - *Cypripedium calceolus*. The orchid is listed as threatened in Europe in Annex II to Habitat Directive. The site is important since it supports the largest in Poland populations of such globally threatened birds as: aquatic warbler *Acrocephalus paludicola* (more than 2 000 of singing males – single largest in the region and 10-15% of the world population), spotted eagle *Aquila clanga* (unique national nesting site of the species, 13-15 ranges, 100% of the Polish nesting population), great snipe *Gallinago media* (about 400 males – 60% of the Polish population, 0.2% of European population). The Park is a unique breeding site in Poland of ruff *Philomachus pugnax* (about 50 breeding females) and one of the largest for black grouse *Tetrao tetrix* (about 130 -140 males). All the abovementioned species are listed by Birds Directive Annex I. The BNP is highly important for maintaining their populations in Europe.

**4**. BNP is of international importance for it supports populations of 45 plant species listed in the "Red List of Plants and Fungi in Poland" and populations of other rare and protected plants including 90 species protected nationally. Populations of these plants are elsewhere seriously reduced in range and numbers. To the rarest plants whose numerous populations are found in the Park belong: *Asplenium viride, Equisetum variegatum, Pinguicula vulgaris, Drosera longifolia, Pulicaria vulgaris, Orobanche purpurea, Fritillaria meleagris* and *Iris aphylla* in addition to 20 species of orchids.

The site provides resting and feeding grounds for at least 13 species of birds listed by the Polish and European Red Lists, to mention: white-tailed eagle *Haliaeetus albicilla*, booted eagle *Hieraaetus pennatus*, Montague's harrier *Circus pygargus*, hen harrier *Circus cyaneus*, short-toed eagle *Circaetus gallicus*, spotted eagle *Aquila clanga*, dunlin *Calidris alpina* (listed in Annex I to Birds Directive) and curlew *Numenius arquata,* wigeon *Anas penelope*, pintail *Anas acuta*, shoveler *Anas clypeata* and white-winged black tern *Chlidonias leucopterus* (species of Annex II to Birds Directive) as well as marsh sandpiper *Tringa stagnatilis* exceptionally rare and seen only during migrations. Curlew and pintail are threatened by extinction on European scale. The site has special importance as resting and feeding place during migration for about 60 bird species as it is one of the largest European gathering sites, especially in the spring.

**5**. During spring and autumn migrations the site supports regularly over 20 000 individuals of water birds with most numerous populations attaining the following maximal figures: wigeon *Anas penelope* – 16 660, ruff *Philomachus pugnax* – 9 190, black-headed gull *Larus ridibundus* – 2 970, mallard *Anas platyrhynchos* – 1 930, white-fronted goose *Anser albifrons* - 2 800, lapwing *Vanellus vanellus* – 1 900, black tern *Chlidonias niger* – 1190, and many less numerous populations of other species.

6. The site is of international importance as it supports 16660 individuals of wigeon *Anas penelope* on regular basis during migration every year (more than 1% threshold level for Central and Eastern European populations) Based on Waterbird Population Estimates Fourth Edition.

**7.** Owing to a great degree of water naturalness and its relative cleanness, the wetland supports a rich ichtiofauna. The fish stock of Biebrza river basin includes 37 indigenous and introduced species of fishes with a rare Ukrainian lamprey *Eudontomyzon mariae*. The fish biomass and population numbers are here much higher than in other lowland rivers in Poland. Several fish species which are considered rare and endangered at European scale find refuge in waters of the BNP. The site supports numerous populations of

such taxa as: *Eudontomyzon mariae, Misgurnus fossilis, Rhodeus sericeus*, *Cobitis taenia* (listed in Annex II to Habitat Directive) thus contributing to the preservation of fish diversity in the region. Among 36 fish species noteworthy is the occurrence of *Barbatula barbatula* and *Phoxinus phoxinus* (species of mountain rivers). Biebrza and its tributaries have been used as fishery by local people and visitors.

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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):

**a) biogeographic region:**

continental - according to EEA,

geobotanical region of deciduous forests - according to Kondracki,

**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).

Eastern Europe – Waterbird Population Estimates, Wetland International 2006.

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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 BNP lies in the bottom of a huge post-glacial depression of a length of more than 100 km, oriented north-east to south west. Its origins date back to the last Glaciation of the Vistula Stage (14.5 thous years ago). The valley is surrounded by uplands with local denivelations attaining from 10 to 30 m. Further to north the valley merges with large outwash plains of Vistulian Glaciation. During the Late Glacial Period the valley was covered with shallow lakes which disappeared over the subsequent 10 thous years leaving thick layers of gyttia, later covered with peats during paludification of the Valley in the Neoholocene. In this period (starting about 5 thus years ago) climate cooling and moistening episodes led to increased supply of both ground and runoff water thus enabling the formation of the present shape of the valley with meandering river, channels, oxbows and lakes. Periodical flooding resulted in the accumulation of rich deposits of peats in the bottom of the three basins in the valley. The whole length of the river in the Park is close to 160 km. In the Upper (Northern) Basin, Biebrza has its 40 km intercept and is a shallow and narrow stream (5m wide) winding among peatlands the surface of which was estimated at 14 thous ha. A conspicuous feature of local landscape are here relic moraine hills protruding among flat mire surfaces. In the Central Basin the river is wider (15 m) and deeper (2-3 m). The valley becomes locally wide up to 30 km and is interspersed with irregular sand dunes of elevations of about 20 m, scattered among fens (45 thous ha), birch and alder forests. In the lower Basin, Biebrza widens up to 30 m, and has the depth of about 6 m. In the Lower (Southern) Basin, between the Białystok and Kolno Uplands, the river flows over 30 km on a shallow peat (less than 2m) layer, across about 10-15 km wide valley, creating a highly sinuous system of meanders and oxbows linked to the mainstream permanently or only during spring flooding. Mires with peat layers of 1-2 m in depth cover a surface of about 21 thous ha in this Basin. Along the river bed there extends a silty zone of a width of 1-2 km. Water level in the river depends on the season with maximum during spring flooding and minimum in late summer - early autumn. The average decline of river bed is 0.36 promille and the average flow in the river (at the Burzyn gauge) is 27.5 $m^3/s$. The BNP has relatively clean waters since the region is not industrialized and sparsely populated.

Building of canals in the 19$^{th}$ century and drainage in the 20$^{th}$ century led to drying of some mires and started the peat decay processes in the Biebrza Valley, but at present no drainage is allowed within the Park.

The climate of the region has distinct features of continental climate with some traits of subboreal climate, to which testify prolong winters, short early spring and vegetation season and the lowest annual average air temperature in the Lowlands in Poland. The annual precipitation sum is fluctuating within the limits of 550 – 650 mm.

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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 Biebrza catchment covers 7051.2 $km^2$ with a markedly better developed right side portion – 75.5% with such rivers as: Lebiedzianka, Netta, Kopytkówka, Jegrznia, Dybła, Ełk, Klimaszewnica and Wissa) and the left side portion taking only 24.5% with such tributaries as Sidra, Brzozówka, Biebła, Czarna Struga and Kosódka. The Biebrza Valley occupies a depression filled with peats, silts and gyttia and is surrounded by moraine uplands build of sands and clays.

General soils types of the catchment include hydrogenic soils such as peats, silts, and muds, in addition to mineral, sandy and sandy-clayey soils (podsol and rusty podsol soils) on mineral elevations within the valley and at its margins.

Climate: The Biebrza catchment is situated in north-eastern Poland, in the region regarded as the coldest in Poland with elements of subboreal climate. February is a coolest month (-4.5° to -5.5°C). During a year there occur 57 – 66 days with frost (with a maximal temperature below 0°C). The winter season (with average daily temperature below 0°C) takes 107 to 117 days. Typical is the occurrence of heavy drops in night temperature over the mire area in May or even in June. The duration of summer season is about 77 to 85 days. Above the mire surface, quite frequent are flushes of cool air (ground frosts) and condensation of water vapour (ground fogs). In the valley days with fog occur twice as frequently as i

n the surrounding uplands what is a source of additional amount of horizontal precipitation to mires. South-western winds prevail in the Valley during winters while winds from all western directions are most frequent in summer.

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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.

Despite the seasonal character of local hydrology, the site remains permanently waterlogged due to a high groundwater table (lateral feeding) and is regarded, due to a huge accumulation of peats, as a natural system having the highest retention capacity at country scale – comparable with that of the largest artificial water reservoir in Poland. The mires of Biebrza Valley are fed by lateral inflow of groundwater and seeping waters from the edges of the Valley, especially in the Upper and Lower Basins

In the 19th century a large scale hydrotechnical works were conducted in the Valley, among other things, a 100 km long Augustów Canal (8 km within the site) was build to enable water communication between the Biebrza river system and the Nemunas river further north-east. This resulted in changes in both the water network and groundwater recharge.

At present the river system within the Park is left unmanaged and the hydrological regime is close to natural.

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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.

**Inland:** **L • <u>M</u> • N • O• P• Q • R • Sp • Ss • <u>Tp</u> • Ts • <u>U</u> • Va •**
**Vt • <u>W</u> • Xf • <u>Xp</u> • Y • Zg • Zk(b) • Zk(c)**

**Human–made:1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9**

**b) dominance:**

**M, Tp, U, W, Xp, 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 outstanding value of Biebrza Valley vegetation consists in the preserved natural zonal distribution of habitats and plant communities, varying from the immersed vegetation in the stream *(Sagittarietum*) to reed beds and to deciduous and conifer forests at the Valley edges. Until now (2007) altogether 87 plant community types have been identified in the BNP. Open, non-forest habitats – mires and meadows take 74% of the area while the rest is woodland. Mire habitats are dominated by tall sedge communities (Allliance *Magnocaricion*) occupy more than 20% of the area. Sedge moss communities of *Caricion lasiocarpae* Alliance take about the same area, while oligotrophic and mesotrophic meadows of *Molinietalia* order occupy 13 % of the open surface. The emmersive low sedge–moss communities which become very rare elsewhere in Europe, play important role in the Park vegetation cover, taking 7% of open surfaces. They support many plant species – relics of the past boreal climate (e.g. *Scorpidium scorpioides, Pedicularis sceptrum-carolinum, Baeothryon alpinum, Liparis loeselii, Betula humilis* and *Saxifraga hirculus*). Among forest communities there dominate swampy alder carrs and swampy mixed deciduous woodlands with birches (*Betula pendula* and *B. pubescens*). Particular diversity of plants can also be found on small mineral island elevations protruding like natural dikes among mires.

Animal communities belong to Eurosiberian element but fauna of the BNP is less recognized than its flora. The best documented groups are mammals and birds while many groups of invertebrates needs further study.

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**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.

Wetland supports the rich flora of almost 1000 species of vascular plants including 20 species of orchids. 90 species out of the number are embraced by strict protection under the Polish law, while 17 species are under partial protection. 45 species are listed in the Red Book of Plants Threatened and Endangered in Poland (2006). To the species considered as most rare and most valuable for biodiversity preservation (due to their shrinking biotopes in the country and in the region) belong: *Asplenium viride, Equisetum variegatum, Huperzia selago, Drosera longifolia, Hydrocotyle vulgaris, Pinguicula vulgaris, Sweertsia perennis, Fritillaria meleagris, Iris aphylla, Orobanche purpurea, Coeloglossum viride, Liparis loeselii, Gymnadenia conopsea* and *Dactylorhiza fuchsii*.

**The glacial relics preserved within the site include:** *Betula humilis, Salix lapponum, S. myrtilloides, Ledum palustre, Saxifraga hirculus, Dianthus superbus, Trollius europaeus, Polemonium caeruleum, Pedicularis sceptrum-carolinum, Pinguicula vulgaris, Viola epipsila, Eriophorum gracilis, Baeothryon alpinum, Carex loliacea* and *C. chordorrhiza*.

**Rare species of aquatic and mire vegetation, rarely found elsewhere, include:** *Batrachium aquatile, B. fluitans, Utricularia intermedia, U. minor, U. vulgaris, Drosera anglica, D. rotundifolia, Gentianella uliginosa, Pedicularis palustris, Scheuchzeria palustris, Schoenus ferrugineus, Sch. nigricans, Viola stagnina, Carex limosa, Botrychium lunaria, B. multifidum, B. matricariifolium, Ophioglossum vulgatum, Gladiolus imbricatus, Iris sibirica, Gentiana pneumonanthe, Succisella inflexa* and *Orobanche purpurea*.

**The flora of BNP contains at least five species of European importance (Annex II to Habitat Directive)** – *Thesium ebracteatum, Liparis loeselii, Cypripedium calceolus, Saxifraga hirculus* and *Pulsatilla patens.*

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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 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.*

The fauna of the site has numerous species listed by the Annex II to Habitat Directive thus is of importance for the biodiversity preservation of the continental region. Among larger butterflies *Macrolepidoptera* these species include: *Apatura ilia, Parnassius mnemosyne, Papilio machaon, Euphydryas maturna, Lycaena helle* and *Lycaena dispar*. The diversity of butterflies is close to 1000 taxa. In addition there are 500 species of bees and 80 species of spiders known so far in the Park.

Among 37 species of fishes and lampreys of the wetland at least 7 species are listed by the Annex II Habitat Directive including: *Eudontomyzon mariae, Aspius aspius, Cottus gobio, Rhodeus sericeus, Cobitis taenia*, *Misgurnus fossilis* and *Salmo salar*. Single specimens of the latter species have been observed in the Biebrza river basin over the last few years.

Among 12 amphibians found in BNP one species is listed on the European continent i.e. *Bombina bombina.*

Biebrza Marshes are known as a site, most important in Poland and one of the most important in Europe, providing refuge for assemblages of breeding and water birds. 278 bird species were recorded in the Park including 191 breeding birds. 28 bird species are listed the "Polish Red Book of Animals". For many rare avifauna the marshes of Biebrza are the most numerous living and gathering places, both in Poland and in Europe, thus the site is of basic significance for their survival (crane *Grus grus*, corncrake *Crex crex*, bittern *Botaurus stellaris*, white-winged black tern *Chlidonias leucopterus*, curlew *Numenius arquata*, eagle owl *Bubo bubo*, lesser spotted eagle *Aquila pomarina* and short-eared owl *Asio flammeus* to mention some of the most valuable species). The importance of Biebrza Valley for globally endangered aquatic warbler *Acrocephalus paludicola* was described under Par. 14 Criteria. Globally endangered is also spotted eagle *Aquila clanga* whose only larger population in the whole western and central Europe is suported by the BNP. Population of black grouse *Tetrao tetrix* was estimated at 140 males in 2003 thus the site represents the most important refuge of the species in Poland (the total Polish population was estimated to be around 700-800 males).

The marshes in Biebrza Valley are important for migrating plovers, ducks, geese and cranes, and are also known to host rare and exotic species such black-winged stilt *Himantopus himantopus*, oystercatcher *Haematopus ostralegus*, black-throated diver *Gavia arctica*, night heron *Nycticorax nycticorax*, purple heron *Ardea purpurea*, shelduck *Tadorna tadorna*, saker falcon *Falco cherrug*, peregrine falcon *F. peregrinus*, white pelican *Pelecanus onocrotalus*, Squacco heron *Ardeola ralloides*, little egret *Egretta garzetta*, glossy ibis *Plegadis falcinellus*, spoonbill *Platalea leucorodia*, Bewick's swan *Cygnus columbianus*, snow goose *Anser (Anas) caerulescens*, Baikal teal *Anas formosa*, long-tailed duck *Clangula hyemalis*, eider *Somateria mollissima*, velvet scoter *Melanitta fusca*, pallid harrier *Circus macrourus*, long-legged buzzard *Buteo rufinus*, imperial eagle *Aquila heliaca*, white-tailed plover (or lapwing) *Chettusia leucura*, bar-tailed godwit *Limosa lapponica* and whimbrel *Numenius phaeopus*.

For several from among 48 mammal species, the BNP constitutes a most important refuge at the country scale, as it is the case with *Alces alces* (400 individuals). The site provides shelter for populations of 6 mammal species listed by Annex II to Habitat Directive, i.e. beaver *Castor fiber*,otter *Lutra lutra* - both very numerous at the site, wolf *Canis lupus* (15–25 individuals), lynx *Lynx lynx* migrating from adjacent Augustow Forest as well as bats *Myotis dasycneme* and *Barbastella barbastellus* (species of Annex II to Habitat Directive). The chiropterofauna of the site counts 11 species with rare bat species such as: *Myotis brandtii, M. nattereri* and *Pipistrellus nathusii*. The bats have their largest in northeastern Poland winter gathering site in the Osowiec Military Fortress located in the Park.

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**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 Park is known for its archeological importance – 1 919 described archeological sites, mainly ancient settlements, were found, the origin of which goes back to from Palaeolith to Middle Ages. The most interesting sites are located close to localities such as: Wizna, Góra Strękowa, Grądy Woniecko, Niewiarów, Sośnia and Woźna Wieś.

The most important historical monuments of the site involve: Augustow Canal build in the years 1824 – 1839 and still being a high quality monument of hydrotechnical architecture, and the Osowiec Military Fortress, formerly a stronghold in the system of fortification defending western borders of the Russian Empire (19th century). At present it shelters the Museum of the Osowiec Fortress, open to guided tours.

The most important religious objects are gothic churches – in Wizna (built in 1525) and in Krasnybór (a gothic-rennaissance church built in1584-89).

**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? Yes.

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:

The site is of international importance as a model of wertland wise use since traditional management of wetland has been applied here to maintain the ecological character of the site. In order to check the shrub and forest succession and to maintain the valuable open mire ecosystems, the Park Management applies and recommends to private owners the application of traditional management methods consisting in meadow mowing and shrub elimination (cutting with biomass removal) and cattle grazing as an aiding activity. These basic measures imitate management methods used formerly in extensive agriculture that were the main driving force for the establishment of open mire communities in the Biebrza river valley over the last two-three centuries.

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:

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**24. Land tenure/ownership:**

a) within the Ramsar site:

The State Treasury – 55%, private owners - 45%.

b) in the surrounding area:

All types of ownership as above plus community and cooperative ownership.

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**25. Current land (including water) use:**

a) within the Ramsar site:

The area of the BNP is extensively for agriculture, tourism and recreation. Local farmland, i.e. more or less drained meadows are mostly managed for haymaking and grazing of horses and cattle. While as for the forests outside the strictly protected area in BNP, the forest management is conducted under the supervision of the local Forest Service.

b) in the surroundings/catchment:

As described above.

**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 threat to the natural assets of the Park include: land draining and abandonment of traditional extensive use of wet meadows and withdrawal of cattle grazing by the local society; the drainage results in overdrying of peat layers what leads to mineralization of peat soils, retreat of typical swampy vegetation and encroachment of species characteristic of dry sites. The abandonment of mowing of oligotrophic sedge and sedge-moss meadows results in the expansion of shrub and wood vegetation. In some cases the owners try illegally to burn mires in order to hasten the drying process but this activity is strongly prohibited both in and outside the Park.

b) in the surrounding area:

The same as above and introduction of non-traditional, ugly buildings which devastate the landscape.

**27. Conservation measures taken:**

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

- "Biebrzański Park Narodowy" – Biebrzański National Park established in 1993; (59 223 ha),
- Ramsar Site: „Biebrzański National Park" since 1995; (59 223 ha),
- Natura 2000 Site "Biebrza River Valley" PLC200001; (124 105 ha),
- Important Bird Area – "Biebrza River Valley" PL044; (136 900 ha).

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.

**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?:

In 1997-2001 draft Management Plan of BNP for 20 years has been prepared, but all the management plans for national parks have lost their validity in the light of a regulation of the Minister of Environment of 2002.

**d)** Describe any other current management practices:

Currently the Park is managed according to the so called "Annual Tasks of the National Park" regulated yearly by the Minister of Environment.

**28. Conservation measures proposed but not yet implemented:**

There is a plan to extend the Park in its northern part - by adding the area between Lipsk and Nowy Lipsk and in its southern part - by adding the area in the vicinity of Mścich.

The Park has done necessary preparations to be included in the List of the UNESCO World Heritage.

**29. Current scientific research and facilities:**

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

Scientific research belongs to statutory activity of the national park, and in BNP the Division for Research was established in 1999, which now (since 2006) functions as Research and Education Laboratory. The main tasks of the laboratory include research work, organisation and participation in activities of nature and

environmental monitoring in the Park and collaboration with other scientific institutions. Major tasks of the Laboratory focus on changes in non-forest communities, vascular flora, butterfly assemblages, population of *Parnassius mnemosyne*, impact of plant succession and protective activities on bird assemblages and species composition of plant communities.

The great majority of research works in the Park have been conducted by numerous representatives of scientific institutions and academic centres both in the country and abroad. The study fields range from such aspects of the Park nature as biology and ecology of selected species (e.g. aquatic warbler *Acrocephalus paludicola*, spotted eagle *Aquila clanga*, black grouse *Tetrao tetrix* etc); populations of elk *Alces alces* and other representatives of big game, big predators, small mammals e.g. northern vole *Microtus oeconomus*, rare species growing on mineral dikes within mires, inventory of various groups of flora and fauna; changes in hydrological regime of the Biebrza valley, water balance and modelling of hydrology, application of remote sensing for evaluating succession encroachment over the mires, habitat waterlogging degree and ways of Park management.

Among the many institutions which contributed largely to the recognition of the Park nature, the longest and widest cooperation is to be acknowledged for such institution as:

- Szkoła Główna Gospodarstwa Wiejskiego - School of Agriculture in Warsaw
- Uniwersytet w Białymstoku - University in Białystok
- University in Utrecht, Alterra Institute, Wageningen
- Institute of Grassland and Melioration, Experimental Laboratory „Biebrza"
- Forest Research Institute
- Agricultural Academy in Poznań
- University in Wrocław.

The most important task of monitoring implemented in the Park is to survey changes in ecosystems and effects of the protective activities conducted in the Park. The monitoring activity is carried out by workers of the Research and Education Laboratory with the help of other Park staff and support of external institutions.

**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.

Educational activity is carried on by:

- Field Education Centre in Osowiec-Twierdza,
- Educational Centre in Grzędy,
- Educational Centre in Trzyrzeczki.

Educational tasks are implemented by the Education and Management Centre, often with a great help of other Park staff field services. Five full time employees work in the sphere of ecological education with a strong support from other specialists.

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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.

It has been evaluated that the BNP receives annually about 100000 of visitors (including about 30000 buying the entrance cards to the Park). About 1/4 of that number are foreign tourists – mainly birdwatchers and bird lovers and students of primary and secondary schools. The guide team of the Park are ready to receive groups of students and foreign tourists. Tourists information and service is provided by the Office of Tourism at the BNP Management.

Within the Park area the trails were routed and marked for canoeing, cycling - 3 routes of a length of 148 km, 18 tourist trails of the total length of 504 km as well as 12 educational paths equipped with hides, viewing

towers, platforms, foot bridges etc. A Field Visitor Education Centre is located next to the railway station in Osowiec where there is also an establishment renting boats and canoes.

Tourist services are provided by:

- Biuro Obsługi Ruchu Turystycznego przy Biebrzańskim Parku Narodowym - Field Visitor Education Centre in Osowiec-Twierdza
- Biebrza Eco-Travel at the Biebrzański National Park, Osowiec-Twierdza
- Biebrzański Park Narodowy – Boat and Canoe Renting Office in Osowiec-Twierdza - Zespół udostępniania BPN i wypożyczanie kajaków w Osowcu-Twierdzy,
- Tourist Information Centre: "Agroturystyka nad Biebrzą" in Sztabin
- Local Tourist Organisation: "Brama na Bagna" ("Gate to Marshes") in Strękowa Góra.

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**32. Jurisdiction:**

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

The site is located in the Podlaskie Voivodeship and is subject to the Minister of Environment in Warsaw.

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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.

The Park is managed by the Director of the Biebrzański National Park

The Park Management is located at Osowiec - Twierdza 8,

19-110 Goniądz, Poland.

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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.


- Red list of plants and fungi in Poland. Czerwona lista roślin i grzybów Polski. 2006 Zbigniew Mirek, Kazimierz Zarzycki, Władysław Wojewoda, Zbigniew Szeląg Instytut Botaniki PAN (in Polish).
- Czerwona lista zwierząt ginących i zagrożonych w Polsce. 1992. Red. Głowaciński Z. PAN, raków. (Polish Red List of Endangered and Threatened Animals).
- Dobrowolski K, Lewandowski K. 1998. Ochrona środowisk wodnych i błotnych w Polsce, Instytut Ekologii PAN. (Conservation of wetlands in Poland).
- Dyrcz A., C. Werpachowski C. (red.). 2005. Przyroda Biebrzańskiego Parku Narodowego. Biebrzański Park Narodowy. Osowiec - Twierdza 2005.(Nature in Biebrzański National Park in Polish).
- 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).
- Pałczyński A. 1988. Bagna Biebrzańskie, LOP Warszawa. (Biebrza Marshes - 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. 1983. Bagna Biebrzańskie. Wydawnictwo PTTK "Kraj". (Biebrza Marshes - in Polish).
- Siodło P.O., Błaszkowska B., Chylarecki P. 2004. Ostoje ptaków o znaczeniu europejskim w Polsce. OTOP 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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