

# Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 version

Available for download from [http://www.ramsar.org/ris/key\\_ris\\_index.htm](http://www.ramsar.org/ris/key_ris_index.htm).

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

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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

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Designation date

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Site Reference Number

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### 2. Date this sheet was completed/updated:

05 December 2012

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### 3. Country:

Belarus

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### 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.

Stary Zhaden; (Старый Жаден)

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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:**

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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 boundaries coincide with those of the projecting national hydrological reserve "Stary Zhaden"

The boundaries of the planned national hydrological reserve "Stary Zhaden" are:

In the North - from the northern corner of the quarter # 8 of Korotichie Forestry of the State Forestry Enterprise "Poleski Forestry" in an easterly direction along the northern boundaries of quarters # 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, followed by a conditional direct line connecting the extreme north-east corner of the block # 17 and the extreme north-west corner of the quarter # 18, followed by the northern borders of quarters # 18, 19, 20, 21, 22, 23, 24 of Korotichie forestry;

To the East - to the south-east on the eastern borders of quarters # 24, 85, 106, 170, 185, 213 of Korotichie forest, quarters # 1, 3, 6, 7, 9 of Bukchany forestry;

In the South - to west on the southern borders of quarters # 9, 8 of Bukchany forest in the south-west on the borders of quarters # 225, 224, 223 of Korotichie forest south on the eastern borders of the quarters # 21, 32, 43, to west on southern borders of the quarters # 43, 42, 41, 40 of Bukchy forestry;

To the West - to the north along the western boundary of quarters # 40, 29 of Bukchany forest, then in a south-westerly direction along the southern borders of quarters # 233, 232 of Korotichie forestry, thence northwards along the boundaries of quarters # 232, 218, 200, 194, 195, 190, 174, 158, 150, 145, 139, 134, 123, 107, 89, 67, 48, 28, 8 to the northern corner of the quarter # 8 of Korotichie forestry of the State forestry Enterprise "Poleski Forestry".

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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.

WGS 84 (DMX): N51°53'01" / E27°35'52"

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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.

The wetland is located in southern part of Belarus, 240 km to south from Minsk and 240 km to west from Gomel, within Zhitkovichi and Lelchitsa districts of Gomel region. The investigated area is located 30 km to southwest from Zhitkovichi (15,900 inhabitants), 11 km to south from Turov (3,100 inhabitants), 4.0 km to south from the village Berezhitsy (270 inhabitants) (Rychev village council).

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

125–140 above s.l.

**11. Area:** (in hectares)

17,048 ha

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**12. General overview of the site:**

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

Wetland "Stary Zhaden" is a typical for Belarusian Polesie complex wetland system, which is a complex of nemoral fens, combined with sphagnum transitional mires of boreal type and sphagnum bogs. It is characterized by diversity of geomorphological conditions, the specific mode of hydrology, variegated soil cover, and by relative high biological diversity. On the territory of the wetland 563 species of vascular plants, 12 fish species, 4 amphibians species, 5 reptiles species, 104 birds species, 20 species of mammals are recorded. The total number of natural ecosystems, identified within the territory of the wetland – 80.

The wetland forms a single cluster (total area is over 300 ha) with Ramsar sites «Olmany Mires Zakaznik», «Middle Pripyat» and national park "Pripyatsky" (potential Ramsar site), that the can provide the conservation of biological and landscape diversity and migration of species (including rare and protected) on the regional and global level.

This natural complex from 2005 has the status of important bird area: Criteria A1 - greater spotted eagle; B2 - serpent eagle (Treasures, 2005).

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**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

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

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

**Criterion 1** - An example of the rare to the continental biogeographic region type of wetland system, which is predominantly in its natural state.

1a – is typical wetland of the Polesie region.

1b – the complex of the West-European grass and grass-hypnum fens of the nemoral type, in combination with West-European sphagnum transition mires of the boreal type and with West-European sphagnum bogs.

1c – has significant importance for natural functioning of the river Pripyat basin

1d - is a great hydrological importance to adjacent areas:

- In dry seasons holds water supplies, providing food other water bodies
- maintains the level of groundwater;

- plays an important role in maintaining high water quality.

**Criterion 2** – the wetland supports the existence of vulnerable, endangered or threatened species and ecological communities. According to EEC Habitat Directive 20 rare and vulnerable habitats were identified within the wetland (Annex 1).

2a - ensures the preservation of threatened plant species (Annex 2).

2b - ensures the existence of rare, endangered or threatened populations of animals (Annex 3).

2c – forms united network with large specially protected areas – national reserve “ Olmany Mires” (the Ramsar site) and national park “Pripytytsky” (potential Ramsar site).

2d - includes endangered ecosystems (in accordance with the EEC Habitat Directive): 7110 Active raised bogs; 7140 Transition mires and quaking bogs; 9080 Fennoscandian deciduous swamp woods; 91D0 Bog woodland (Annex 1).

**Criterion 3** - ensures the existence of populations of plants and animals that are important for maintaining biological diversity including rare species and communities (Annex 1, 2 and 3) of given biogeographic region.

3a – the wetland supports populations of plant and animal species that are important for the conservation of biological diversity of fauna and flora of mires affected by significant drainage reclamation. The wetland contain the range of biological diversity (including habitat types) occurring in Polesie region and support particular elements of biological diversity that are rare and characteristic of the continental biogeographic region.

**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

**b) biogeographic regionalisation scheme** (include reference citation):

The Pan European Map of Biogeographical Regions 2001 (Г-Р-VS 2001/89 Appendix V)

**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.

**Geomorphology.** According to geomorphological zoning the wetland is entirely located within the area of geomorphic region of the Pripyat water-glacial alluvial plain with large mires and numerous dunes, islands of terminal moraines and kames. The area belongs to the Belarusian Polesie Zone .

Wetlands located on the wavy waterlogged lowland with extensive development of aeolian relief forms. It is an alternation of bogs, located on the large ancient, elongated flat depressions, and elevated areas of relatively dry watershed plains. Mires consist of several separate elongated mire-tracts, which extend to tens of kilometers. The largest area is Stary Zhadensk tract, located in the central part of the wetland, and the Velikoe Boloto tract, which is located in the southern part of the wetland and partly goes beyond it. Surface height comes down from 140 to 125 m in the northern and north-western direction.

**Origin.** The wetland has a natural origin. A large part of the wetland is located on the low second terrace of Pripyat river, which was formed during the time between the penultimate and recent (maximum) stages of the Valdai glaciation (about 60-18 thousand years ago). Its formation proceeded without participation of melt waters of Valdai glacier. The first Late Valdai terrace extends to the north from the border the wetland.

**Hydrology and hydrography.** The territory of the wetland is located between river Pripyat and its right tributaries – rivers Stviga and Ubort. Hydrological network of the wetland is represented by only melioration canals which are connected with the main water-ways. Rivers flowing close to the wetland borders turned into receiving waters of drainage systems. Their hydrological characteristics were the appropriately changed.

On the north and north-eastern part of the wetland few relatively large canals stretch in the northern-north-eastern direction to river Stviga. Here is the place of the drainage network, established over 120 years ago during Western expedition for survey and drainage under the direction of general I. Zhilinskisi. On the eastern boundary of the wetland, close to tracts Stary Zhadensk and Boloto Velikoe, ditch Glavnaya and canal Bychok are, respectively, originated. These linear water bodies run on heavily waterlogged territory of Pripyatski National Park, sometimes intersect, and flow into rivers Stviga and Pripyat. Canal Bychok connects to the river. Mutvitsa and prolongs it. The river Mutvitsa flows from the Tonezh finite-moraine. Canal Bychok with its sluice system is the one from two main drainage-alloy canals of the Simonovichi Polesie drainage system. At present, main canals are littered and overgrown with trees, shrubs and emophytes. Therefore adjacent areas are waterlogged. Near southern and south-western boundary of the wetland the system of canalized rivers and canals run in the direction of river Stviga. This rivers-canals system also flows from Tonezh ridge.

The hydrographic network of the wetland:

1. River Mutvitsa - the left tributary of the canal Glavnaya Ditch (Pripyat basin). Length is 13 km. The catchment area is 77 km<sup>2</sup>. The average water surface slope - 0.77%. It starts near the village Tonezh, flows through the wooded wetland, estuary is located 8 km to north from the village Tonezhskaya Rudnya; 5.5 km of the riverbed is canalized.

2. Drainage canal Bychok - right tributary of river Stviga (Pripyat basin). It was constructed in 1873-1893. Length - 24 km. Starts from river Mutvitsa, 0.8 km to north from the village Rudnya of Lelchitsy district, crosses the Pripyat National Park, flows into the river Stviga near the village Ozerany of Zhitkovichi district. The main tributaries - ditch Glavnaya (length 19 km) and Semetskaya Strelka (length 8.2 km).

3. Drainage canal Glavnaya Ditch - the left tributary of canal Bychok (Pripyat basin). Canal was built in 1873-1893, reconstructed in 1968. It starts at 8.5 km to south from the village Berezhitsy, crosses tract Stary Zhadensk and flows into the canal Krushinny.

#### ***Hydrochemical parameters of water.***

In general, are typical for all of Polesie mires, and indicate close to natural conditions of the wetland. An average pH value is 3.3-3.8 for bogs, 3.6-4.0 for transition mires, and 4.6-5.9 for fens.

***Soils.*** The main types of soils are mire soils and sod-podzols. Groundwater comes quite close to the soil surface here. This leads to significant spread of sod-podzolic soils of varying hydromorphic degrees and intensive process of mire soil development. Soils of bog type occupy large areas, confined to the central part of the wetland. Soils of transition mire adjoin them. Soils of the fens are dominated by shallow peat, peat-gley, peaty-gley, humic-gley and silty-humic soils, which underlain by unconsolidated ancient alluvial sands.

On the elevated sand ridges weakly-podzolic soils with deep level of groundwater are distributed. Strongly-podzolic sandy soils with illyuvial humus horizon and close stagnant waters are found within low watershed areas along the margins of bogs. Areas located near rivers and wide shallow depressions with flowing groundwater are covered by soddy-humic-gleyey soils, gley-sandy soils and shallow peat deposits of the fen type.

In the northern part of the wetland the soddy-semihydromorphic soil and alluvial-soddy soils of the floodplain can be found. Other types of soils are also indicated within the southern and eastern part of the wetland: undeveloped sandy soil and areas with waved sands.

***Climate.*** The average annual long-term air temperature is  $+6.9 \pm 0.1^{\circ}\text{C}$ , varying in different years from  $+4.9$  (1940) to  $+8.7^{\circ}\text{C}$  (1989, 2008). The warmest month is July ( $+18.6^{\circ}\text{C}$ ), the coldest - January ( $-5.4^{\circ}\text{C}$ ).

The duration of the period with average daily temperatures above  $0^{\circ}\text{C}$  is 256 days, vegetation period - 207 days, frost-free period - 148 days. The latest frost was recorded on 2 of May, the first - on 28 of September. The average monthly temperature in January ranges from  $0.8^{\circ}\text{C}$  (1989) to  $-15.8^{\circ}\text{C}$  (1987), in July from  $+15.3^{\circ}\text{C}$  (1979) to  $+22.7^{\circ}\text{C}$  (2010). The average monthly temperature of the soil surface is up to  $-7^{\circ}\text{C}$  in winter and up to  $+22^{\circ}\text{C}$  in July.

The average annual long-term amount of precipitation is  $671 \pm 12$  mm, varying in different years from 422 (1963) to 969 mm (1998).

During the warm period (April-September), 410 mm of precipitation falls out, in the cold season (October-March) - 260 mm. During the year a minimum of precipitation falls usually in February and March (36 mm in average), maximum - in July (91 mm). Daily maximum amount of precipitation (115 mm) was observed in June, 1991.

The average thickness of snow cover during the winter is 15-20 cm, in some years - up to 55 cm. The stable snow cover sets from 15 to 20 of December, and melts from 5 to 10 of March. The average number of days with thaws (December-February) is 40-45.

There are 108 humid days (relative humidity  $\geq 80\%$ ) in the year, dry (with the relative humidity  $\leq 30\%$ ) - 19.

The general atmospheric circulation causes the dominance of winds of western directions. The annual average wind speed is 2.6 m/s, the maximal average wind speed is observed from November to May (2.6-2.9 m/s, with western direction - up to 3.2 m/s), and the minimal - from June to October (2.2-2.5 m/s). During the day, the slowest speed is observed at night, the highest - during the day-time.

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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 wetland is located between the right tributaries of the river Pripyat (the largest tributary of the river Dnepr) - rivers Stviga and Ubort.

Stviga River springs from the tract Dobryl of Rovno region of Ukraine. It flows into the Pripyat from right side (323 km from its mouth). The total length of river Stviga is 178 km, on the territory of Belarus - 112 km. The total catchment area is 5300 km<sup>2</sup>, within Belarus - 4300 km<sup>2</sup>. The main tributaries on the territory of Belarus: stream Plav, canal Bychok (right); river Mostva (left). The basin is a pear-shaped, with a significantly developed left bank. It is located within the lowland plain of Polesie, adjacent to the Volyn-Podolsk upland in the south, and the northern part is situated on an elevated Turov plateau. Forests are mixed, dominated by deciduous trees, often waterlogged; the largest mires are concentrated in the upper part of the catchment. Fens distributed throughout the watershed. Large lakes are absent. Riverbed is freely meandering, highly sinuous, branched, with sandy islands, flooded during spring time. Upper part of the riverbed is canalized. The banks are steep, destroyed during flood. Banks are swampy, composed of peat and sand, overgrown with shrubs and forests.

Ubort River - is the right tributary of the Pripyat River. Length - 292 km. The catchment area - 5820 km<sup>2</sup>. The average water surface slope is 0.3%. Mean annual water flow at the river mouth is 24.4 m<sup>3</sup>/s. It starts at about 207.2 m above s. l. in the Zhitomir region of Ukraine, flows into the Pripyat River at a height of about 120 m above s. l. Length of river Ubort is 126 km within territory of Belarus, and catchment area - 910 km<sup>2</sup>. The flood usually begins in early March (the maximum height above mean water is 4 m, the average - 1.8-2.7 m) and ends in mid-May. Stabilization of mean water occurs in July (average duration - three months). River freezes in early December. River valley is inexpressive, sometimes merges with the surrounding area. Floodplain is two-sided, its width - 0.1-0.2 km in the upper flow and up to 1-5 km within the rest extension. The riverbed is freely meandering, sinuous, in lower flow is strongly sinuous, with low sandy islands. The width of riverbed is 10-15 m, near the river mouth - up to 60 m.

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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.

The wetland, as part of the natural hydrographic network of the Belorussian Polesie, has the great hydrological value for adjacent territories:

- keeps water during the dry season, providing it for water bodies;
- maintains the groundwater level;
- participates in the formation of underground hydrological systems, which supply with water the surface wetland complexes;
- plays an important role in maintaining the high water quality in the region.

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### 19. Wetland Types

#### a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

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

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

#### b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

Xp<sup>24.98%</sup>, U<sup>9.04%</sup>, Xf<sup>9.30%</sup>, Tp<sup>7.84%</sup>, W<sup>7.21%</sup>, Ts<sup>4.68%</sup>, 9<sup>0.07%</sup>, M<sup>0.01%</sup>, N<sup>0.01%</sup>

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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.

**General characteristics of the taxonomic and typological diversity of biota.** On the territory of wetland "Stary Zhaden" 34.4% (563 species of vascular plants) of the total species number of flora of Belarus is registered. There are about 19 plant species (bryophytes and vascular plants) per 100 m<sup>2</sup>. The most species rich habitats (26-35 species/100 m<sup>2</sup>) are concentrated in central and south-western part of the wetland. These areas are confined to forest ecotopes with fertile soils (black alder nemoral-grasses forests), or to transition mires and fens. Species rich habitats form ecological corridors and are an important element, determining the conservation of biological diversity of the wetland and adjacent territories. Bogs phytocoenoses of the eastern part of wetland are characterized by the minimal species set (10-15 species/100 m<sup>2</sup>). Low number of species is also typical for forest communities of oligotrophic-xerophilous conditions as well as for post-fire plant communities, located along the western and southern margins of the wetland.

In general, the level of  $\alpha$ -diversity of the habitats is low (16-20 species/100m<sup>2</sup>) and extremely low (<15 species/100m<sup>2</sup>). Such habitats occupy 64.2% of the territory (26.7 and 37.5%, respectively). Phytocoenoses with the highest species richness occupy ~ 7.1%. The weighted average value of the floristic diversity level of the wetland is 2.16 points.

Within the wetland "Stary Zhaden" forests cover 8583.5 ha (50.4%), mires - 3675.7 ha (21.6%), meadows - 108.6 ha (0.6%), secondary derivative vegetation, waste land - 2014.6 ha (11.8%), low forests and shrubs - 2492.8 ha (14.6%), other land - 173.2 (1.0%).

The total number of natural ecosystems is 80, including Forest - 28, Marsh - 45 of anthropogenically derived ecosystems - 7 (including the stage of recovery dynamics - 5), the average number of ecosystems - 7 per 1 km<sup>2</sup>. The level of habitat diversity has mosaic character. The minimal values of diversity are typical for south-western, north-eastern and northern parts of the wetland. These areas were formed of due to: a) environmental gradients are extended, and the conditions are generally deteriorated due to the increase of oligotrophic (or xerophytization), b) great intensity of effects of anthropogenic factors (logging, fires), which determine the depletion of biological diversity.

The most valuable areas of the wetland are the complex east-european grass and grass-hypnum fens of nemoral type in combination with east-european sphagnum bogs and transition mires. Complex is located in the central part of the wetland and forms the "core" of it.

**Flora.** On the territory of the wetland 563 species of vascular plants (including hybridogeneous taxa) are registered (303 genus, 82 families, 52 orders, 6 classes and 5 divisions):

*Lycopodiopsida* - 4 species, *Equisetophyta* - 6 species, *Polypodiophyta* - 8 species, *Pinophyta* - 2 species, *Magnoliophyta* - 542 species (*Magnoliopsida* - 407 species, *Liliopsida* - 136 species).

The most species rich families are: *Asteraceae* - 68 species, *Poaceae* - 55 species, *Cyperaceae* - 38 species, *Fabaceae* - 32 species, *Rosaceae* - 28 species, *Caryophyllaceae* - 26 species. These taxonomic relationships characterize flora of the wetland as *Cyperaceae*-type, that adequately illustrates the dominance of wetlands in the protected area. Lower species richness are typical for families: *Lamiaceae* - 23 species, *Scrophulariaceae* - 23 species, *Polygonaceae* - 20 species, *Ranunculaceae* - 16 species, *Apiaceae* - 15 species, *Salicaceae* - 15 species, *Juncaceae* - 14 species. Taxonomic capacity of other families is lower.

Minimal presence of *Brassicaceae* species and a relatively high taxonomic abundance of *Rosaceae* species characterize the high level of natural features of the wetland habitats.

The dominant life forms are perennial grasses (72%) and woods (12%). 16% - annual and biennial plants, the presence of which reflects the intensive forest management within the wetland (the network of forest roads, logging, forest cultivation).

**Fauna.** The fauna of the wetlands is diverse and representatively reflects the environmental characteristics of the all spectrum of wetland ecosystems. Within the wetland five classes of vertebrate animals registered: 12 fish species (pike, bream and roach are common), 4 amphibians species (moor frog is dominated by), 5 reptiles species, and 104 birds species (represented by 13 orders): *Ciconiiformes* - 2 species, *Anseriformes* - 3 species, *Accipitriformes* - 10 species, *Galliformes* - 3 species, *Gruiformes* - 3 species, *Charadriiformes* - 7 species, *Columbiformes* - 3 species, *Cuculiformes* - 1 species, *Strigiformes* - 3 species, *Caprimulgiformes* - 1 species, *Strigiformes* - 1 species, *Piciformes* - 8 species, *Passeriformes* - 59 species.

20 species of mammals are recorded within the wetland territory: *Canis lupus* and *Nyctereutes procyonoides* live permanently here. Step-prints of *Felis linx* were noted everywhere. *Mustela vison* and *Lutra lutra* are less abundant here -. *Martes martes*, *Mustela putorius*, *Mustela nivalis* and *Mustela erminea* can be found everywhere. *Alces alces*, *Lepus timidus* and *Lepus europaeus* are not so abundant. *Sciurus vulgaris* is common species for the wetland. Water bodies are inhabited by *Castor fiber*.

**The most important habitats.** The total number of natural ecosystems, identified within the territory of the wetland - 80 including: forest - 28, mires – 45, man-made ecosystem - 7 (including ecosystems that are on the stage of recovery dynamics - 5). The average number of ecosystems is 7 per 1 km<sup>2</sup>. According to EEC Habitat Directive 20 rare and vulnerable habitats (26.7%), were identified within the wetland.

Natura 2000 code	EUNIS habitat type name
7110 Active raised bogs	
—	D1.11 Active, relatively undamaged raised bogs
—	G5.64 Raised bog pre-woods
7140 Transition mires and quaking bogs	
—	D2.31 [ <i>Carex lasiocarpa</i> ] swards
—	D2.33 [ <i>Carex rostrata</i> ] quaking mires
—	D2.34 [ <i>Carex limosa</i> ] swards
—	D2.35 [ <i>Carex chordorrhiza</i> ] swards
—	D2.37 [ <i>Rhynchospora alba</i> ] quaking bogs
—	D2.38 [ <i>Sphagnum</i> ] and [ <i>Eriophorum</i> ] rafts
—	D2.39 [ <i>Menyanthes trifoliata</i> ] and [ <i>Potentilla palustris</i> ] rafts
—	D2.3A [ <i>Calla palustris</i> ] mires
—	D2.3B Brown moss carpets
—	D2.3C [ <i>Eriophorum vaginatum</i> ] quaking bogs
—	D2.3D [ <i>Molinia caerulea</i> ] quaking bogs
9080 Fennoscandian deciduous swamp woods	G1.52 [ <i>Alnus</i> ] swamp woods on acid peat
91D0 Bog woodland	G1.51 Sphagnum [ <i>Betula</i> ] woods
—	G3.D1 Boreal [ <i>Pinus sylvestris</i> ] bog woods
—	G3.D2 Boreal sphagnum [ <i>Pinus sylvestris</i> ] fen woods
Habitats that are not mentioned by EEC Habitat Directive	
Overgrown forests (>60 years), phytocoenotic structure is similar to Eurasian boreal birch [ <i>Betula pendula</i> ] forests (G1.918)	
Overgrown (>100 years) subtaiga forests, phytocoenotic structure is similar to Boreal pine [ <i>Pinus sylvestris</i> ] forests (код G3.4)	
Overgrown (>90 years) oak [ <i>Quercus robur</i> ] forests	

**The wetland ecosystem functions.** Ecosystems of the wetland have a number of important socio-economic and environmental functions:

- regulation of outflow
- gases exchange control (release of oxygen and carbon sequestration)

- raw materials (supplies of berries, medicinal and technical raw materials, hunting species)
  - climate
  - filtration (for groundwater)
  - peat formation (wetland is the part of the largest in southern Belarus peatland)
  - accumulation of water
  - pioneer (in areas destroyed by peat extraction)
- 

## 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.*

In flora of the wetland 16 populations of five species listed in the national Red Data Book (2005) are recorded:

- *Viola uliginosa*
- *Oxycoccus microcarpus*
- *Oxycoccus microcarpus*
- *Rhododendron luteum*
- *Pulsatilla pratensis*

3 species belongs to The European Red List, 2 - to the Annex of the Berne Convention (1979), 4 - to the Annex of the Convention CITES (1973), and 21 plant species are in need of preventive protection:

*Aquilegia vulgaris* L., *Thalictrum aquilegifolium* L., *Hepatica nobilis* Mill., *Pulsatilla patens* (L.) Mill. (= *Pulsatilla latifolia* Rupr.), *Silene lithuanica* Zapal. (= *Silene armeria*), *Salix lapponum* L., *Pyrola media* Sw., *Primula veris* L., *Daphne mezereum* L., *Polemonium caeruleum* L., *Utricularia intermedia* Hayne, *Utricularia minor* L., *Campanula persicifolia* L., *Jurinea cyanoides* (L.) Rchb., *Tragopogon bjelorusicus* Artemcz., *Anthericum ramosum* L., *Dactylorhiza incarnata* (L.) Soo, *Dactylorhiza maculata* (L.) Soo, *Epipactis palustris* (L.) Crantz, *Goodyera repens* (L.) R.Br., *Juncus bulbosus* L.

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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.*

Habitats of 18 protected in accordance with national legislation animal species are identified; localization of 28 bird species with Pan-European Environmental Significance (SPEC) is recorded within the wetland:

*Coronella austriaca* - III category (VU) of the Red Data Book of Belarus, Annex II of the Bern Convention, the Red Data Book of Latvia, Lithuania and Ukraine.

*Emys orbicularis* - III category (VU) of the Red Data Book of Belarus. IUCN Red List (LR/nt, version 2.3, 1994), Annex II of the Bern Convention, the Red Data Book of Latvia and Lithuania.

*Aquila clanga* - I category of the Red Data Book of Belarus, the European conservation status (SPEC-1), the European threat status (EN), Annex of CITES.

*Haliaeetus albicilla* - II category of the Red Book of Belarus, the European conservation status (SPEC-1), the European threat status (R), Annex of CITES.

*Strix nebulosa* - II category of the Red Data Book of Belarus, Annex of CITES.

*Circaetus gallicus* - II category of the Red Data Book of Belarus, the European conservation status (SPEC-3), the European threat status (R), Annex of CITES.

*Ciconia nigra* - III category of the Red Book of Belarus, the European European conservation status (SPEC-2), the European threat status (R), Annex of CITES.

*Crex crex* - III category of the Red Data Book of Belarus, the European conservation status (SPEC-1), the European threat status (H), Annex of CITES.

*Aquila pomarina* - III category of the Red Data Book of Belarus, the European conservation status (SPEC-2), the European threat status (D), Annex of CITES.

*Grus grus* - III category of the Red Data Book of Belarus, the European conservation status (SPEC-2), the European threat status (H), Annex of CITES.

*Tringa nebularia* - III category of the Red Data Book of Belarus, the European threat status (S).

*Numenius arquata* - III category of the Red Data Book of Belarus, the European conservation status (SPEC-2).

*Falco subbuteo* - IV category of the Red Data Book of Belarus, the European conservation status (SPEC-1), the European threat status (S), Annex of CITES.

*Dendrocopos leucotos* - IV category of the Red Data Book of Belarus, the European threat status (S).

*Picoides tridactylus* - IV category of the Red Data Book of Belarus, the European conservation status (SPEC-3).

*Muscardinus avellanarius* - IV category of the Red Data Book of Belarus. IUCN Red List (LR/nt, ver. 2.3, 1994), Annex III of the Bern Convention.

*Mustela lutreola* - I category of the Red Data Book of Belarus. IUCN Red List (EN, ver. 2.3, 1994), Annex II of the Bern Convention, the Red Data Book of Lithuania, Latvia, Poland, Russia and Ukraine. In the European Union *Mustela lutreola* is listed in Appendix 2 and 4 of "Guidelines for the Conservation of Natural Habitats and of Wild Fauna and Flora".

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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:

#### ***Historical and cultural importance.***

The wetland is swampy, difficult of access area. Within the wetland settlements are absent. Any archaeological, cultural, historical monuments are not allocated within the territory. During the Soviet time the military testing ground "Merlinskie Hutora" (the largest and second largest in the world) was located within the wetland area. Numerous abandoned buildings remaining from that time are interesting for people who study military history. Various vegetation, conventionally called the "barren", as well as secondary undergrowth and scrub vegetation is formed on the former military site. Possible danger is unexploded ordnance left over from the military ground operation.

#### ***Socio-economic potential.***

Population. On the territory of the wetland settlements are absent. Adjacent to the northern part of the wetland area have been historically densely populated. Nowadays some settlements at a distance of 2-10 km are located within this area - Berezhtsy, Rychev, Hilchitsy, Korotichi. The areas adjacent to southern, western and eastern parts of the wetland are much less populated. In the southeastern part at a distance of 0.5-1 km village Rudnya is located, 9 km - village Tonezh, from the south at a distance of 10-12 km – village Korma, 15 km - village Bukcha is located. There are many farms and small settlements within the wetland territory before the Second World War: Obzov, Zhadensk, Mlynische, Tatishche, Starye, Korno, etc. Between them there was a well-developed road network. However, in Soviet times due to the organization here (1963) the largest in Europe military testing ground "Merlinskie Hutora" all settlements were resettled.

Transport and engineering infrastructure. The territory of the wetland is heavily swamped, that's why the road network is poorly developed here. The only road runs between village Berezhtsy and Obzov (resettled farm), it passes through the western edge of the wetland. In addition to the transport infrastructure, part of the drainage network is located

here. This network was laid in the late XIX century (1873-1893) during the Western expedition for survey and drainage under the direction of general I. Zhilinskisi. Canals Bychok with its sluice system is the one from two main drainage-alloy canals of the Simonovichi Polesie drainage system.

**Industrial production and mineral resources.** Industrial enterprises are absent on the wetland territory. This area is also not a source of raw materials for industry of Zhytkovichi district. On the territory five peat extraction sites are located: Mezhch I (inventory number 825), Mezhch (partly, inventory number 826), Smolyarnya (partly, inventory number 827), Schaschits (inventory number 1267), as well as an unnamed peatland (inventory number 134H). The average depth of peat is 0.75-2.1 m, the maximal - 3.8 m.

**Agriculture.** On the territory of the wetland agricultural land of the farmer M. Shrubia is located. In the structure of land fund this land occupies 93.2 ha (0.5%). At present, land is not used for grazing and is under active transformation by developing of shrub vegetation. For the purposes of forest protection 0.4 ha of grassland is used. Agricultural lands of APC "Rychevsky" and farmland of M. Shrubia are directly adjacent to the wetland.

**Forestry.** The wetland "Stary Zhaden" is covered by forests (16955.2 ha) of the forest fund of SFI "Poleski Forestry". Forest land covers 8722.1 ha (51.4%), including productive forested land - 8583.5 ha (50.6%). The entire forest fund within the wetland belongs to group II (production forests); 6617.3 ha (75.8% of forest area) belongs to the inaccessible forest areas. Taken together, inaccessible forest areas and mires constitute 60.7% of the forest fund, which provides good conditions for conservation of rare species of plants, animals and natural ecosystems.

The total timber store in the forests of the wetland (for 01.01.2011) is 912.4 thousand m<sup>3</sup>. It is represented by pine plantations - 704.6 thousand m<sup>3</sup> (77.2%), including the pine growing on the dry land - 495.1 thousand m<sup>3</sup> (54.3%), pine of the mires - 209.5 thousand m<sup>3</sup> (22.9%). The average timber store in the forests is 122 m<sup>3</sup> per hectare of forested area.

**Fishery use.** Reservoirs are not suitable for intensive cultivating of fish.

**Hunting.** Hunting is managed by experimental forest-hunting economy "Lyaskovichi", which is included in the structure of a national park "Pripyatsky".

**Biological resources.** Collecting of berries (blueberries, cranberries) within the wetland is an important source of income for the local population. Within the wetland harvesting of biological resources carries out in following ways:

- harvesting of fruit, berries (blueberry, cranberry, raspberry) and mushrooms
- harvesting of officinal and technical plants
- commercial honey

Store of the non-timber forest resources of the wetland is 4.8 thousand tons, including actually available store - 1.24 thousand tons. Costs of the resources are 4838.7 thousand USD, including actually available resources - 1191.98 thousand USD.

**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:

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## **24. Land tenure/ownership:**

a) within the Ramsar site:

State lands leased by SFI "Polesski Forestry" and farmland of M. Shrubia.

b) in the surrounding area:

State lands leased by agricultural enterprises and forestries.

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

a) within the Ramsar site:

Land users in the territory are the State Forestry Institution "Poleski Forestry" - 16,955.21 ha (99.5%), and farmland of M. Shrubba - 93.18 ha (0.5%).

Major land uses:

### forestry

- logging,
- reforestation
- secondary forest use (berries, mushrooms, officinal and technical raw collecting)

### recreation

- hunting
- berries picking

b) in the surroundings/catchment:

Major land uses:

### forestry

- logging,
- reforestation
- secondary forest use (berries, mushrooms, officinal and technical raw collecting)

### agriculture

- perennial grasses growing
- tilled crops and grain-crops
- grazing

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## 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:

Logging. Substantial and continuing threat to natural forest ecosystems is logging, first of all - final harvesting. During the period from 2002 to 2010 2638.7 ha (30.7% of forested area) of the wetland territory was affected by logging, 28.2 thousand m<sup>3</sup> of wood were harvested. The most intensive logging was carried out in 2002-2004.

Fires. Fires belong to one of the most significant threats to functioning of natural systems. The main causes of fires: mass visiting the territory by people during the berries and mushrooms harvesting, intentional arsons, drainage reclamation, extreme summer droughts of the last years. Over the past decades fires occur regularly on the wetland. Especially disastrous fires were in July-September of 2002. As a result, 4322.8 ha (25.5%) of the forest were damaged, 2016.5 ha (18.1% of the forested area) were severely damaged. Timber stock of dead forests is up to 144.0 thousand m<sup>3</sup> (12.7%). Fire caused significant damage to the vegetation resources (berries, officinal plants). The annual minimal cost of damages only from the reduction of cranberries harvesting is about 100-250 thousand USD. The fires led to occurring of the secondary post-fire vegetation, drying out the pine on the mires, in some places - to destroying of ground cover, and consequently to biological diversity decreasing.

Drainage reclamation. The major waterways within the wetland are the network of old canals and ditches of the end of XIX. Despite the fact that nowadays the drainage network is not functioning effectively enough, it influences significantly on the wetland vegetation formation. Frequent partial drainage leads to vegetation changes (the intensive development of wood layer, increasing of stand productivity and growth of shrubs on the wetland, appearance the peripheral areas of mire with not valuable plant communities). The overgrowing process of the open areas of mires and flooded meadows are recorded within the area of about 1.7 ha, or 10.3% of the wetland.

However, these processes don't have a total character, since within the large area of the wetland there is an opposite process – rewetting of the forested and open areas of mires by reducing the effects of drainage canals functioning (they are overgrown), as well as by settlement of beavers. These trends are in large scale on the wetland territory. Mire complexes of the western and central parts gradually become inaccessible. Distinct processes of natural ecosystems transformation occur on the area of 2.6 thousand ha (15.2%).

Contamination of the environment. There is a local contamination of ecosystems by household rubbish in the vicinity of the villages located on the periphery of the wetland (Berezhtsy, Rychev, Rudnya), as well as by local organizations in the camps for pickers of berries in the western and southern parts.

Recreation. The main forms of stress on natural systems are hunting and a mass collection of mushrooms and berries by local population. The wetland intensively visited during harvesting season in summer (June-July) and autumn (September-October). In this regard, long-term path network, permanent entrances to the wetland, parking places were formed here. Berry-pickers damage berry-fields, make intentional and non-intentional arsons, damage forest roads, waste and destruct the natural systems.

Damage of the forest by pests and diseases. Centres of damages occupy 2.22 ha (0.26% of forested area) with a timber volume of 3.1 thousand m<sup>3</sup>. Status of disease does not cause a significant threat to phytocenoses.

Poaching. As a result of poaching, the number of major economically valuable animals is below of the biological capacity of the wetland. Some fear is caused by a condition of local populations of moose, wild boar, capercaillie and black grouse.

Radioactive contamination. As a result of the Chernobyl disaster the area of the wetland was subjected to insignificant contamination of <37 kBq/m<sup>2</sup> (<1 Cu/km<sup>2</sup>) with <sup>137</sup>Cs.

b) in the surrounding area:

All listed negative factors occur on the adjacent territory.

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## 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.

- In the framework of The State programme of development of specially protected natural areas for 2008-2014, approved by Decree of the President of Belarus on 6 of March, 2008 № 146, the development of Hydrological Reserve of National Importance "Stary Zhaden" is planned.
- Natural Complex "Stary Zhaden" has the status of Important Bird Area since 2005: Criteria A1 - greater spotted eagle; B2 - serpent eagle.

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  VII

c) Does an officially approved management plan exist; and is it being implemented?:

Officially approved management plan for the wetland is absent.

d) Describe any other current management practices:

There are not currently any management practices.

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

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

According to the national "Schemes of rational allocation of specially protected areas until 2015." (2006) it is planned to establish the national wetland reserve "Stary Zhaden" within the investigated area (2011). Establishment of the reserve will allow to actualize the conservation regime, to preserve the most valuable habitats for animals, plants and ecosystems. As part of these activities, it is planned to review some issues related to the forestry, hunting, within the protected area and its buffer zone.

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### 29. Current scientific research and facilities:

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

Case studies of landscape and biological diversity in the reserve were carried out to prepare the scientific justification for the establishment of the reserve of national importance "Stary Zhaden". In 2011 flora and fauna of the wetland were studied in details, the systematic list of major groups of vertebrates was also prepared; rare and endangered species were identified, and the current condition of the wetland was assessed in 2003. These works were carried out by various specialists of the Scientific and Practical Center for Bioresources of the National Academy of Sciences, and of the Institute of Experimental Botany of the National Academy of Sciences.

The status of the population *Aquila clanga* (I category of the Red Data Book of Belarus, the European conservation status (SPEC-1), the European threat status (EN), Annex of CITES) is annually monitored.

Forestry management, grading of hunting areas, counts of hunting and rare species are periodically carried out on this territory. The obtained data have the great scientific importance (Scientific and Practical Center for Bioresources of the National Academy of Sciences, RUE "Belgosohota", RUE "Belgosles", national park "Pripytsky").

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### 30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

There are no observational points and ecological trails on the wetland. Special environmental, scientific and popular publications, describing the flora, fauna, sights and uniqueness of the wetland, were not published. The most detailed description of the wetland can be found in the review «Treasures of Belarusian nature» (2005).

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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.

The wetland is remote from the large settlements; it is highly swamped and forested. That's why there is no necessary infrastructure for recreational activities. There are no rivers and lakes here, which usually attract vacationists. Recreational potential of the wetland is relatively low, and main forms of recreational pressure are hunting, picking mushrooms and berries by local population.

However, mire complexes is characterized by a high level of originality. Here are concentrated the unique natural ecosystems of plesie type with a specific composition of the biota. Considering the high scientific value, the presence of rare natural communities, as well as protected species of animals and plants, the wetland is perspective for ecological tourism.

There are no touristic and recreational facilities and objects listed in the State inventory of tourism resources of the Republic of Belarus. The development of tourist infrastructure within the wetland is also not planed by the State programme of socio-economic development and complex use of Pripyat Polesie in 2010-2015.

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### 32. Jurisdiction:

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

- Ministry of Forestry (Myasnikovich st., 39, Minsk, 220048, Belarus).
- Ministry of Natural Resources and Environment (Kollektornaya st., 10, Minsk, 220048, Belarus).

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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 wetland is located on lands of:

**1. State Forestry Institution "Poleski forestry."**

- Poleski Forestry

Address: 225 540, David-Gorodok, Kalinina st., 114

Fax: +375 (1655) 51698

e-mail: leshoz-poles@yandex.ru  
leshozpoles@gmail.com  
Director: Alexey Marinich tel.: +375 (1655) 51351  
Head Forester: Vasily Petrovets tel.: +375 (1655) 51638

The wetland is managed by departments of the Polesie Forestry:

▪ Starobukchanskoe forest area

Address: 247 856, Bukcha, Molodezhnaya st., 1

Tel: +375 (02356) 091134

Forester: Vladimir Romanovich

Forester Assistant: Petr Levkovets

e-mail: bukca@lesnoi.by

▪ Korotichskoe forest area

Address: 225 552, Korotichi, Lesnaya st., 1

Tel: +375 (1655) 92382

Forester: Vladimir Truhanovets

Forester Assistant: Yuriy Truhanovets

e-mail: korotici@lesnoi.by

State control of the protection and rational use of the wetland is carried out by the Zhitkovichi and Lelchitsy Regional Inspectorates of Natural Resources and Environment.

## **2. Farmland of Michail Shrubia**

Contact person: Olga Haritonovich

Tel.: (+375 29) 6115344, +375 (2353) 75366

Address: Naberezhnaya st., 2, Turov, Gomel Region, 247 980, Belarus

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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.

1. The Red Book of Belarus: Rare and endangered species of wild plants / Ch. Editorial Board.: L.I. Khoruzhik (preds.), L.M. Sushchenya, V.I. Parfenov and others - 2nd ed. - Minsk: BelEn, 2006. - 456.
2. Treasures of Belarusian Nature: Areas of international importance for biodiversity conservation / A.V. Kozulin [and others]. - 2nd ed. - Mn.: Belarus, 2005. - 215.

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Please return to: **Ramsar Convention Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • e-mail: [ramsar@ramsar.org](mailto:ramsar@ramsar.org)

## ANNEX 1

## THE MOST IMPORTANT HABITATS

Natura 2000 code	EUNIS habitat type name
7110 Active raised bogs	
-<-	D1.11 Active, relatively undamaged raised bogs
-<-	G5.64 Raised bog pre-woods
7140 Transition mires and quaking bogs	
-<-	D2.31 [ <i>Carex lasiocarpa</i> ] swards
-<-	D2.33 [ <i>Carex rostrata</i> ] quaking mires
-<-	D2.34 [ <i>Carex limosa</i> ] swards
-<-	D2.35 [ <i>Carex chordorrhiza</i> ] swards
-<-	D2.37 [ <i>Rhynchospora alba</i> ] quaking bogs
-<-	D2.38 [ <i>Sphagnum</i> ] and [ <i>Eriophorum</i> ] rafts
-<-	D2.39 [ <i>Menyanthes trifoliata</i> ] and [ <i>Potentilla palustris</i> ] rafts
-<-	D2.3A [ <i>Calla palustris</i> ] mires
-<-	D2.3B Brown moss carpets
-<-	D2.3C [ <i>Eriophorum vaginatum</i> ] quaking bogs
-<-	D2.3D [ <i>Molinia caerulea</i> ] quaking bogs
9080 Fennoscandian deciduous swamp woods	G1.52 [ <i>Alnus</i> ] swamp woods on acid peat
91D0 Bog woodland	G1.51 <i>Sphagnum</i> [ <i>Betula</i> ] woods
-<-	G3.D1 Boreal [ <i>Pinus sylvestris</i> ] bog woods
-<-	G3.D2 Boreal <i>sphagnum</i> [ <i>Pinus sylvestris</i> ] fen woods
Habitats that are not mentioned by EEC Habitat Directive	
Overgrown forests (>60 years), phytocoenotic structure is similar to Eurasian boreal birch [ <i>Betula pendula</i> ] forests	
(G1.918)	
Overgrown (>100 years) subtaiga forests, phytocoenotic structure is similar to Boreal pine [ <i>Pinus sylvestris</i> ] forests	
(KO <sub>A</sub> G3.4)	
Overgrown (>90 years) oak [ <i>Qercus robur</i> ] forests	

## FLORA

In flora of the wetland 16 populations of five species listed in the national Red Data Book (2005) are recorded:

*Viola uliginosa*  
*Oxyccoccus microcarpus*  
*Oxyccoccus microcarpus*  
*Rhododendron luteum*  
*Pulsatilla pratensis*

3 species belongs to The European Red List,

*Pulsatilla patens*  
*Malus sylvestris*  
*Utricularia intermedia*

2 - to the Annex of the Berne Convention (1979),

*Pulsatilla patens*  
*Jurinea cyanoides*

4 - to the Annex of the Convention CITES (1973),

*Dactylorhiza incarnata*  
*Dactylorhiza maculata*  
*Epipactis palustris*  
*Goodyera repens*

and 21 plant species are in need of preventive protection:

*Aquilegia vulgaris* L.,  
*Thalictrum aquilegifolium* L.,  
*Hepatica nobilis* Mill.,  
*Pulsatilla patens* (L.) Mill. (= *Pulsatilla latifolia* Rupr.),  
*Silene lithuanica* Zapal. (= *Silene armeria*),  
*Salix lapponum* L.,  
*Pyrola media* Sw.,  
*Primula veris* L.,  
*Daphne mezereum* L.,  
*Polemonium caeruleum* L.,  
*Utricularia intermedia* Hayne,  
*Utricularia minor* L.,  
*Campanula persicifolia* L.,  
*Jurinea cyanoides* (L.) Rechb.,  
*Tragopogon bjelorusicus* Artemcz.,  
*Anthericum ramosum* L.,  
*Dactylorhiza incarnata* (L.) Soo,  
*Dactylorhiza maculata* (L.) Soo,  
*Epipactis palustris* (L.) Crantz,  
*Goodyera repens* (L.) R.Br.,  
*Juncus bulbosus* L.

## FAUNA

Habitats of 18 protected in accordance with national legislation animal species are identified; localization of 28 bird species with Pan-European Environmental Significance (SPEC) is recorded within the wetland:

*Coronella austriaca* - III category (VU) of the Red Data Book of Belarus, Annex II of the Bern Convention, the Red Data Book of Latvia, Lithuania and Ukraine.

*Emys orbicularis* - III category (VU) of the Red Data Book of Belarus. IUCN Red List (LR/nt, version 2.3, 1994), Annex II of the Bern Convention, the Red Data Book of Latvia and Lithuania.

*Aquila clanga* - I category of the Red Data Book of Belarus, the European conservation status (SPEC-1), the European threat status (EN), Annex of CITES.

*Haliaeetus albicilla* - II category of the Red Book of Belarus, the European conservation status (SPEC-1), the European threat status (R), Annex of CITES.

*Strix nebulosa* - II category of the Red Data Book of Belarus, Annex of CITES.

*Circaetus gallicus* - II category of the Red Data Book of Belarus, the European conservation status (SPEC-3), the European threat status (R), Annex of CITES.

*Ciconia nigra* - III category of the Red Book of Belarus, the European European conservation status (SPEC-2), the European threat status (R), Annex of CITES.

*Crex crex* - III category of the Red Data Book of Belarus, the European conservation status (SPEC-1), the European threat status (H), Annex of CITES.

*Aquila pomarina* - III category of the Red Data Book of Belarus, the European conservation status (SPEC-2), the European threat status (D), Annex of CITES.

*Grus grus* - III category of the Red Data Book of Belarus, the European conservation status (SPEC-2), the European threat status (H), Annex of CITES.

*Tringa nebularia* - III category of the Red Data Book of Belarus, the European threat status (S).

*Numenius arquata* - III category of the Red Data Book of Belarus, the European conservation status (SPEC-2).

*Falco subbuteo* - IV category of the Red Data Book of Belarus, the European conservation status (SPEC-1), the European threat status (S), Annex of CITES.

*Dendrocoptes leucotos* - IV category of the Red Data Book of Belarus, the European threat status (S).

*Picooides tridactylus* - IV category of the Red Data Book of Belarus, the European conservation status (SPEC-3).

*Muscardinus avellanarius* - IV category of the Red Data Book of Belarus. IUCN Red List (LR/nt, ver. 2.3, 1994), Annex III of the Bern Convention.

*Mustela lutreola* - I category of the Red Data Book of Belarus. IUCN Red List (EN, ver. 2.3, 1994), Annex II of the Bern Convention, the Red Data Book of Lithuania, Latvia, Poland, Russia and Ukraine. In the European Union *Mustela lutreola* is listed in Appendix 2 and 4 of "Guidelines for the Conservation of Natural Habitats and of Wild Fauna and Flora".