Ramsar Information Sheet

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Belarus

Morochno

Designation date	7 September 2012
Site number	2139
Coordinates	51°51'08"N 26°38'03"E
Area	6 444,39 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

A cross-border Belorusian-Ukrainian complex mire system, located near the major floodplain of river Horyn, with a predominance of Belarusian Polesie ridge-hollow sphagnum bogs. One of the few mires in the region remained after a large-scale reclamation. It is important for the phytocenotic and landscape diversity conservation at the national and international level.

The wetland is characterized by following features (Treasures…, 2005):
• One of the three largest bogs remained in Belarusian Polesie;
• Important Bird Areas of International Importance (2005);
• The wetland is listed as especially significant cross-border territory by National Strategy for Biodiversity Conservation of the Dnieper Basin;
• Is one of the most promising objects forming a network of cross-border and border Belarusian-Ukrainian environmental facilities;
• Due to the cross-border location with Ukraine, the wetland has a high water-protecting and water-regulating value on the both sides of the border;
• Located near a major floodplain of river Horyn, which is an important ecological corridor for many species of animals, including rare, threatened or endangered species;
• Integrated into the system of protected areas established to protect the natural complex of the river Pripyat.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Natallia Zeliankevich, Dmitry Grummo, Ekaterina Maiseichyk
Institution/agency	V.F. Kuprevich Institiute of Experimental Botany of National Academy of Science of Belarus
Postal address	220072, Minsk, Akademicheskaya st., 27
E-mail	zm.hrumo@gmail.com
Phone	+375172842013
Fax	+375172842013

Compiler 2

Name	Zeliankevich Natallia & Broska Tatsiana
Institution/agency	Institute of Experimental Botany of the National Academy of Science of Belarus
Postal address	220072, Minsk, Akademicheskaya st., 27 e-mail: bronibroska@mail.ru
E-mail	zeliankevich_nat@mail.ru
Phone	+375 17 2842514
Fax	+375 17 2841853

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2008
To year	2016

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Morochno
Unofficial name (optional)	Морочно

2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary	Yes ◉ No ○
(Update) The boundary has been delineated more accurately	☐
(Update) The boundary has been extended	☑
(Update) The boundary has been restricted	☐
(Update) B. Changes to Site area	the area has increased
(Update) The Site area has been calculated more accurately	☐
(Update) The Site has been delineated more accurately	☐
(Update) The Site area has increased because of a boundary extension	☑
(Update) The Site area has decreased because of a boundary restriction	☐

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?	Yes (actual)
(Update) Are the changes	Positive ◉ Negative ○ Positive & Negative ○
(Update) No information available	☐

(Update) Optional text box to provide further information

Due to realization of special measures on prevention of disturbance of the hydrological regime, water levels and mire ecosystems on natural part of the mire, adjacent to peat extraction plots, are gradually recovering.

(Update) Changes resulting from causes operating within the existing boundaries? ☐

(Update) Changes resulting from causes operating beyond the site's boundaries? ☑

(Update) Changes consequent upon site boundary reduction alone (e.g., the exclusion of some wetland types formerly included within the site)? ☐

(Update) Changes consequent upon site boundary increase alone (e.g., the inclusion of different wetland types in the site)? ☐

(Update) Please describe any changes to the ecological character of the Ramsar Site, including in the application of the Criteria, since the previous RIS for the site.

Recovery of natural state of the mire, adjacent to the peat extraction plots.

(Update) Is the change in ecological character negative, human-induced AND a significant change (above the limit of acceptable change) Yes ○

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

Former maps: 0

Boundaries description

The Ramsar site Morochno was established in 2013 with borders coincided with borders of planned protected area and its area comprised 5845 ha. The national protected area – zakaznik – was established in 2015 and during preparation of documentation for its creation the planned borders and area were slightly changed. The new area of established national protected area is 6444.39 ha.
Thus, the need has arisen to change borders and area of the Ramsar site so that they coincide with those of the national protected area. The new area of the Ramsar site is 6444.39 ha which is 599.39 ha more than the initial one.
Description of the borders of the national protected area and Ramsar site Morochno: on the North - Starting from north-western angle of the forestry quarter 134 of the Kolodnianskoe division of the Stolinsky Forestry to the eastern direction, following the edges of agricultural lands, forestry quarters and ameliorative canals; on the East - from the north-eastern angle of the 27 quarter of Terebezskoe forestryto the south-eastern direction following borders of forestry quarters; on the South - from the south-easterm angle of the quarter 65 of the Terebezskoe forestryto the south-western direction following the edges of forestry quarters till the forestry quarter 70, then to the west along the State border Belarus-Ukraine and again along forestry quarters; on the West - from the south-western angle of the 76 quarter of Kolodnianskoe forestryto the north following the forestry quarters.

2.2.2 - General location

a) In which large administrative region does the site lie? Brest

b) What is the nearest town or population centre? Stolin

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes ○ No ◉

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha): 6444.39

Area, in hectares (ha) as calculated from GIS boundaries: 6420.93

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Continental

Other biogeographic regionalisation scheme

The Pan European Map of Biogeographical Regions 2001(T-PVS 2001/89 Appendix V)

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided	The wetland is a complex mire system with predominance of rare ridge-hollow sphagnum bogs in the Belarusian Polesie region. One of the few mires in the region remaining after a large-scale land reclamation. The site plays an important hydrological role for adjacent areas: - during dry season stores water, and provides other water bodies with water; - maintains the groundwater level; - plays an important role in maintaining of good water quality in the region.
Other ecosystem services provided	Ecosystems of the wetland have a number of important socio-economic and environmental functions: - regulation of water outflow; - gases exchange control (release of oxygen and carbon sequestration); - raw materials (supplies of berries, medicinal and technical raw materials, hunting species); - improvement of local climate; - filtration (for groundwater); - peat formation (part of the largest peatland in southern Belarus); - storage of water; - pioneer territory (in areas destroyed by peat extraction). The site is an important ecological corridor for many nationally threatened and endangered species.
Other reasons	The wetland is an example of rare natural wetland type for given biogeographic region. The wetland is a complex mire system with predominance of rare ridge-hollow sphagnum bogs in the Belarusian Polesie region - bogs of East European type, with some peculiar feature in the Taiga zone. One of the few mires in the region remaining after a large-scale land reclamation.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification	3a – the wetland supports populations of plant and animal species that are important for the conservation of biological diversity of fauna and flora of bogs disturbed by total drainage reclamation. The wetland is a refugium for the boreal floristic complex.

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Campanula persicifolia		☐	☑	☐		☐	National Red List - LC	Found across the territory, not infrequently. Typical species of nemoral pine-oak forests.
Carex pauciflora		☑	☑	☐	LC	☐	National Red List - VU	Rare circumpolar boreal relict species, found in Belarus in small localities in the southern border of distribution area.

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Drosera anglica		☐	☑	☐		☐	National Red List - LC	Distributed in sphagnum bogs, rare.
Drosera intermedia		☑	☑	☐		☐	National Red List - VU	Relict species, found in Belarus in isolated localities of the eastern boundary of distribution area. Most locations are concentrated within Belarusian Polesie, especially in its central part.
Genista germanica		☐	☑	☐		☐	National Red List - NT	Relict, by origin nemoral Central European plant species, located in Belarus in isolated localities and island location on the northern border of distribution area.
Hammarbya paludosa		☑	☑	☐		☐	National Red List - EN	Boreal taiga relict species, found in Belarus in some localities and island locations of growth near the southern and south-eastern border of distribution area.
Juncus bulbosus	bulbous rush	☐	☑	☐	LC	☐	National Red List - DD	In the center and south of the country, rare.
Lycopodiella inundata		☐	☑	☐	LC	☐	National Red List - NT	Relict, by origin boreal Atlantic-European plant species in Belarus is in some localities and island areas of growth within the general disjunctive distribution area.
Melittis melissophyllum carpatica		☑	☑	☐		☐	National Red List - VU	Ancient-Mediterranean origin, relict nemoral plant species, occurring in Belarus in the localities at the northeastern border of distribution area.
Polypodium vulgare		☐	☑	☐		☐	National Red List - NT	Relict, by origin boreal mountain-forest plant species. In Belarus is located on the eastern border of the European fragment of distribution area.
Pulsatilla patens		☐	☑	☐		☐	National Red List - NT	Forest-steppe, pinewood mainly European species. In Belarus found rare throughout the territory, in southwestern is sporadically.
Salix lapponum		☐	☑	☐		☐	National Red List - NT	Relict arctic-boreal species, located in Belarus near the southern border of distribution area. Typical species of transition mires.
Salix myrtilloides		☑	☑	☐		☐	National Red List - VU	Relict boreal species, located in some localities near the southern border of distribution area.
Thesium ebracteatum		☐	☑	☐		☐	National Red List - NT	In Belarus found sporadically throughout the territory, at the northern part is very rare.
Utricularia intermedia		☐	☑	☐	LC	☐	National Red List - LC	Typical species of dystrophic waterbodies. Found in the southern regions of Belarus, rare.
Vaccinium microcarpum		☑	☑	☐		☐	National Red List - VU	Rare tundra and taiga plant species, located in Belarus near the southern border of distribution area.

According to the floristic studies, 584 species of vascular plants (30% of the total Belarus flora) belonging to 292 genera and 86 families are recorded within the wetland area. The distinctive and relatively undisturbed flora of the wetland is characterized by number of unique species, listed in the national Red Data Book (2015).

The core of the wetland is sphagnum bog with the features of typical East European sphagnum mires. Dominants and codominants there are Sphagnum magellanicum, S.rubellum, and Sphagnum cuspidatum in hollows. The most abundant shrubs and grasses are Ledum palustre, Calluna vulgaris, Eriophorum vaginatum, Rhynchospora alba; rich in Scheuchzeria palustris hollows can be also found here. At the same time this wetland system has a number of specific local features: some species can be found near (or beyond) of the southern border of their distribution areas (Chamaedaphne calyculata, Empetrum nigrum, Carex pauciflora, Carex limosa, Scheuchzeria palustris); Sphagnum fuscum is the dominant and the indicator of the north- western boreal bogs, and still abundant here.

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA / AVES	*Ciconia nigra*	Black Stork	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - VU	On breeding and during migrations
CHORDATA / AVES	*Circaetus gallicus*	Short-toed Snake Eagle	☑	☐	☐	☐	☑	☐	☐	☐	5	2010-2011		LC	☐	☐	National Red List - EN	4-6 breeding pairs, on breeding and during migrations
CHORDATA / AVES	*Circus cyaneus*	Northern Harrier	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - VU	On breeding and during migrations
CHORDATA / AVES	*Dendrocopos leucotos*	White-backed Woodpecker	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - NT	
CHORDATA / AVES	*Falco columbarius*	Merlin	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - VU	Territory is on the southern edge of the breeding range. On breeding and during migrations.
CHORDATA / AVES	*Falco tinnunculus*	Common Kestrel; Eurasian Kestrel	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - VU	On breeding and during migrations
CHORDATA / AVES	*Grus grus*	Common Crane	☑	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - VU	On breeding and during migration. Cranes inhabit periphery of the bog massif. Aggregations of a few dozen birds occupy open parts of the bog during post breeding migrations.
CHORDATA / AVES	*Lanius excubitor*	Great Grey Shrike; Northern Shrike	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		
CHORDATA / AVES	*Limosa limosa*	Black-tailed Godwit	☑	☐	☐	☐	☑	☐	☐	☐	4	2010		NT	☐	☐	National Red List - VU	2-5 breeding pairs, on breeding and during migrations
CHORDATA / AVES	*Numenius arquata*	Eurasian Curlew	☑	☑	☐	☐	☑	☐	☐	☐	4	2010-2011		NT	☐	☐	National Red List - EN	2-5 breeding pairs, open parts of the bog support the species on breeding and during migrations
CHORDATA / AVES	*Picoides tridactylus*	Three-toed Woodpecker	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - NT	On breeding
Others																		
ARTHROPODA / INSECTA	*Bombus muscorum*	Moss Carder-bee; Large Carder-bee	☑	☐	☐	☐	☑	☐	☐	☐					☐	☐	National Red List - VU	
ARTHROPODA / INSECTA	*Bombus schrencki*		☑	☐	☐	☐	☑	☐	☐	☐					☐	☐	National Red List - VU	
CHORDATA / REPTILIA	*Coronella austriaca*		☑	☐	☐	☐	☑	☐	☐	☐					☐	☐	National Red List - VU	
CHORDATA / REPTILIA	*Emys orbicularis*		☑	☐	☐	☐	☑	☐	☐	☐					☐	☐	National Red List - VU	The species is at the northern edge of its distribution area in Belarus.
CHORDATA / MAMMALIA	*Lynx lynx*	Eurasian Lynx	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - EN	The site is at the southern edge of the distribution area of the species.
CHORDATA / MAMMALIA	*Meles meles*	European Badger	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - EN	

1) Percentage of the total biogeographic population at the site

The vertebrate fauna has diverse composition and community structure, and reflects the full range of ecosystems ecological features. In total 160 species of terrestrial vertebrates (30 species of mammals, 113 bird species, 7 reptiles and 10 amphibians) are recorded within the area. Fauna of the wetland is characterized by number of unique species, listed in the national Red Data Book (2015).

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
7110* Active raised bogs	☑	D1.1 Raised bogs D1.11 Active, relatively undamaged raised bogs G5.6 Early-stage natural and semi-natural woodlands and regrowth G5.64 Raised bog pre-woods	Annex I of the Habitats Directive, priority habitat
7120 Degraded raised bogs still capable of natural regeneration	☑		Annex I of the Habitats Directive
7140 Transition mires and quaking bogs	☑	Transition mires and quaking bogs, Carex lasiocarpa swards, C. rostrata mires, C. limosa swards, C. chordorrhiza swards, Rhynchospora alba bogs, Sphagnum and Eriophorum rafts, Menyanthes trifoliata and Potentilla palustris rafts, Calla palustris.	Annex I of the Habitats Directive
9080* Fennoscandian deciduous swamp woods	☑	G1.51 Sphagnum [Betula] woods G1.52 [Alnus] swamp woods on acid peat	Annex I of the Habitats Directive, priority habitat
91D0* Bog woodland	☑	G1.51 Sphagnum [Betula] woods G3.D1 Boreal [Pinus sylvestris] bog woods G3.D2 Boreal sphagnum [Pinus sylvestris] fen woods	Annex I of the Habitats Directive, priority habitat
7230 Alkaline fens	☑	D4.1C [Carex rostrata] alkaline fens	Annex I of the Habitats Directive

Optional text box to provide further information

According to the Council Directive 92/43/EEC Directive on the conservation of natural habitats, wild flora and fauna (EU Habitats Directive), 66.4% of the wetlands total area are rare and unique ecosystems.

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

Vegetation of the wetland is a complex combination of forest and mire phytocenosis of bogs, transitional mires and fens. They are characterized by alternation of open ridge-hollow complexes with areas forested by bog pine and mineral sandy ridges-islands. About 51 types of plant communities are recorded in the overall structure of vegetation. The core of the wetland is the complex of transitional mires and bogs. This complex is rare for the Belorussian Polesie and has the particular value for the wetland.
Area of non-forest wetlands is 23.9% of the total site's area. It is including (% of non-forest wetlands): 80.0% of raised bogs, 14.5% of transitional mires, and 5.5% of fens. Forests occupy 72.6% of the total site's area. It is dominated by pine forests (89.5% of the forested area, including 57.0% bog pine forests).
Approximately 25 species of vascular plants and mosses per 100 m2 can be found within investigated area. The biodiversity-rich habitats (28-34 species/100 m2) are concentrated along the periphery of the wetland borders. Such habitats are confined to forest ecotopes with fertile soils (black alder-nemoral grasses forests) or to the rich fens and transitional mires. These areas form ecological corridors and are important for conservation of biological diversity of the wetland. Phytocoenoses of oligotrophic bog, located in the centre, is characterized by minimal set of species (9-12 species/100 m2).
mushrooms and herbs and medicinal plants). The main factors affecting the ecological character of the site are land reclamation and drainage, fires, poaching and peat extraction.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		4	25.6	Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		3	139.4	Representative
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		1	1513.8	Representative
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands		3	55.4	Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		2	583.5	Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		1	3116.9	Representative

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
9: Canals and drainage channels or ditches		4	25.9	

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Forests on the soils of normal or insufficient humidifying	955.3

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Carex limosa		A very important feature of the wetland "Morochno" - it is a refugium for boreal floristic complex
Carex pilulifera		Not common in Belarus
Dactylorhiza incarnata		National Red List - LC
Dactylorhiza maculata		National Red List - LC
Dryopteris cristata		Not common in Belarus
Dryopteris expansa		Not common in Belarus
Jurinea cyanoides		National Red List - LC
Platanthera bifolia		National Red List - LC
Rhynchospora alba		A very important feature of the wetland
Scheuchzeria palustris		A very important feature of the wetland
Senecio leucanthemifolius vernalis		Not common in Belarus
Silene borysthenica		Not common in Belarus

Invasive alien plant species

Scientific name	Common name	Impacts	Changes at RIS update
Acer negundo		No impacts	No change
Bidens frondosa		No impacts	No change
Elodea canadensis		Potentially	No change
Euphorbia cyparissias		No impacts	No change
Galinsoga parviflora		No impacts	No change
Galinsoga quadriradiata		No impacts	No change
Impatiens parviflora		No impacts	No change
Lupinus polyphyllus	Russell Lupin;Garden Lupin;Large-leaved Lupine;Blue Pod;Meadow Lupine	No impacts	No change

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/MAMMALIA	Alces alces					Game species
CHORDATA/AMPHIBIA	Bombina bombina					National Red List - LC
CHORDATA/MAMMALIA	Canis lupus	Wolf				
CHORDATA/MAMMALIA	Capreolus capreolus	western roe deer				Game species
CHORDATA/MAMMALIA	Castor fiber	Eurasian Beaver				Game species
CHORDATA/AVES	Dendrocopos medius	Middle Spotted Woodpecker				National Red List - LC
CHORDATA/AVES	Falco subbuteo	Northern Hobby				National Red List - NT
CHORDATA/MAMMALIA	Lepus europaeus	European Hare				Game species
CHORDATA/MAMMALIA	Lepus timidus	Mountain Hare				The site is one of the most Southern territories where this species occurs.
CHORDATA/MAMMALIA	Sus scrofa	wild boar				Game species
CHORDATA/AMPHIBIA	Triturus cristatus					National Red List - NT
CHORDATA/REPTILIA	Vipera berus					National Red List - LC

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	Changes at RIS update
CHORDATA/MAMMALIA	Neovison vison	American Mink	Potentially	No change
CHORDATA/MAMMALIA	Nyctereutes procyonoides	Raccoon dog	No impacts	No change

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfb: Humid continental (Humid with severe winter, no dry season, warm summer)

The mean annual long-term (1966-2011) air temperature is +6.9 ± 0.1°C, varies in different years from +4.5 (1987) to +8.7°C (1989, 2008). The warmest month is July (+18.8°C), coldest is January (-5.4°C). The duration of the period with average daily temperatures above 0°C is 256 days, the growing season is 207 days, frost-free period is 148 days. The latest frost in the air is recorded on 2nd of May, the first on 28th of September. The mean monthly temperature in January ranges from 0.5°C (1989) to -15.6°C (1987), in July - from +14.2°C (1979) to +22.9°C (2010). The mean monthly temperature of the soil surface is to -7°C in winter and up to 22°C in July.

The mean annual precipitation in the study area is 658 mm. Number of days with precipitation is 160-165. Precipitation for the cold period ranges from 175 to 200 mm, in a warm period - from 400 to 450 mm. The average thickness of snow cover in winter is 20 cm. Number of days with snow cover doesn't exceed 85-90.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 137

a) Maximum elevation above sea level (in metres): 143

- Entire river basin ☐
- Upper part of river basin ☐
- Middle part of river basin ☐
- Lower part of river basin ☐
- More than one river basin ☑
- Not in river basin ☐
- Coastal ☐

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

The wetland - a typical bog, located in the watershed of two rivers: Goryn and Styr (right Pripyat tributaries, the Pripyat river is right tributary of Dnieper River, Black sea basin).

4.4.3 - Soil

- Mineral ☑
  - (Update) Changes at RIS update: No change ◉ Increase ○ Decrease ○ Unknown ○
- Organic ☑
  - (Update) Changes at RIS update: No change ◉ Increase ○ Decrease ○ Unknown ○
- No available information ☐

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ○ No ◉

Please provide further information on the soil (optional)

The structure of the soil cover is dominated by peat soils. The bog peat deposits are the most abundant. Magellanicum peat prevails; in the central part of the bog the upper layer of deposits forms a complex peat. Layers of highly decomposed cotton grass-sphagnum and sphagnum-cotton grass peat are well defined. In the deepest points of peat deposits, at the mineral bottom, sapropel or sedge-hypnum peat can be found. The average thickness of peat deposition is 2.5 m and maximal - 5.7 m. Thick layer of sapropel (0.1-1.0 m) often occurs under the peat deposition. Presence of sapropel is evidence of the mires formation on the place of overgrown ponds and adjacent waterlogged dry valleys.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	
Usually seasonal, ephemeral or intermittent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from rainfall	☑	No change
Water inputs from groundwater	☐	No change

Water destination

Presence?	Changes at RIS update
To downstream catchment	No change
Feeds groundwater	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels largely stable	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

The wetland is a typical bog, located in the watershed of two rivers: Goryn and Styr (Pripyat tributaries). There are no river flowing into the wetland. Mire is predominantly fed by precipitation, and partly by groundwater from the surrounding catchment area. The territory is jagged by a numerous inland uplands, formed by coarse-grained sands and sandy loams, and sandy clays. Peat deposits underlain by the sandy soils and sandy loam as well.

Hydrographic objects, first of all reclamation canals, appeared on this territory in the early 20th century. That time two main canals were dug through the mire from the north to south and from the east to west: Mogilniy canal (6.3 km; now almost not functioning) and Duboyskoy canal (4 km).

The water level in undisturbed parts of wetland, beyond the zone of drainage influence, is near the soil surface during the years with moderate waterlogging conditions. Water level fluctuations are -20 +20 cm. On the marginal zone of wetlands, as well as on the periphery of the islands, water covers the soil surface during the whole vegetation period, and in some areas in western part of wetland large hollows are remained throughout the season.

4.4.5 - Sediment regime

Sediment regime unknown ☑

4.4.6 - Water pH

Acid (pH<5.5) ☑

(Update) Changes at RIS update: No change ◉ Increase ○ Decrease ○ Unknown ○

Unknown ☐

Please provide further information on pH (optional):

In general, are typical for all of Polesie bogs, and indicate close to natural conditions there. pH value is 4.5 ± 0.1 (with limits 3.70-6.50).

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☑

(Update) Changes at RIS update: No change ◉ Increase ○ Decrease ○ Unknown ○

Unknown ☐

4.4.8 - Dissolved or suspended nutrients in water

Oligotrophic ☑

(Update) Changes at RIS update: No change ◉ Increase ○ Decrease ○ Unknown ○

Unknown ☐

(ECD) Water conductivity: electrical conductivity - 69 ± 4 (with limits 33-276) µS/cm

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ○ ii) significantly different ◉

Surrounding area has greater urbanisation or development ☐

Surrounding area has higher human population density ☐

Surrounding area has more intensive agricultural use ☐

Surrounding area has significantly different land cover or habitat types ☑

Please describe other ways in which the surrounding area is different:

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
- peat extraction

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	High
Fresh water	Drinking water for humans and/or livestock	Low
Wetland non-food products	Timber	Medium
Wetland non-food products	Fuel wood/fibre	Low
Wetland non-food products	Peat	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	High
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Pollution control and detoxification	Water purification/waste treatment or dilution	High
Climate regulation	Local climate regulation/buffering of change	High
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	High
Hazard reduction	Flood control, flood storage	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Low
Recreation and tourism	Nature observation and nature-based tourism	Low
Scientific and educational	Long-term monitoring site	Medium
Scientific and educational	Major scientific study site	High
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Carbon storage/sequestration	High

Other ecosystem service(s) not included above:

The wetland, as part of the natural hydrographical network of Belorussian Polesie, is very important for hydrology of adjacent territory:
- during dry season stores water, and provides with it other water bodies;
- maintains the groundwater level;
- participates in formation of underground hydrological systems, which supplies with water surface wetland complexes;
- plays an important role in maintaining of high water quality in the region.

See additional material for further information

Outside the site: 10000

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ○ No ○ Unknown ◉

4.5.2 - Social and cultural values

i) the site provides 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) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☐

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☐

iv) 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 ☐

<no data available>

4.6 - Ecological processes

(ECD) Carbon cycling: Being a large complex of raised bogs, the site considerably influences the climate and geo-chemical processes in the biosphere through carbon sequestration.

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	☑	☑

Provide further information on the land tenure / ownership regime (optional):

within the Ramsar site:
State Forestry Institution "Stolin Forestry"

in the surrounding area:
State lands leased by agricultural enterprises, forestry, peat enterprise.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

1. Ministry of Natural Resources and Environmental Protection of Republic of Belarus
2. Stolin Regional Executive Committees
3. State Forestry Agency "Stolin Forestry"
4. Stolin District Inspection of Natural Resources and Environmental Protection

Provide the name and title of the person or people with responsibility for the wetland:

1. Andrei Kuzmich, Deputy Head of Biological and Landscape Diversity Department, 2.Grigory Protosovitsky, Chairman of the District Executive Committee 3. Gennady Kuharev, Director of Forestry 4.Alexander Litvinko, Head of Inspection

Postal address:

1. st. Kollektornaya 10, Minsk, Belarus, 220048
2. st. Sovetskaia 69, Stolin, Belarus, 225510
3. st. Tereshkova, 62, Stolin, Belarus, 225510
4. st. Sovetskaia 77, Stolin, Belarus, 225510

E-mail address: a.kuzmich.belarus@gmail.com

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	Medium impact	High impact	☑	decrease	☑	No change

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Mining and quarrying	High impact	High impact	☐	No change	☑	No change

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Roads and railroads	Low impact	Low impact	☑	No change	☐	No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Hunting and collecting terrestrial animals	Low impact	Low impact	☑	No change	☑	No change
Logging and wood harvesting	Low impact	Low impact	☐	No change	☑	No change
Gathering terrestrial plants	Low impact	Low impact	☑	No change	☐	No change

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fire and fire suppression	High impact	High impact	☑	No change	☑	No change
Dams and water management/use	Medium impact	High impact	☑	decrease	☑	decrease

Please describe any other threats (optional):

a) within the Ramsar site and the surrounding area:
The main factors affecting the ecological character of the site are land reclamation and drainage, fires, poaching and peat extraction.

Drainage reclamation. The oldest canals draining the western and central part of the wetland were dug in the 20s of the last century. At the present time, their drainage function is reduced due to overgrowing by vegetation. The most important hydrological network is those of peat enterprise "Glinka". Gross canals 3-3.5 m deep, and 4.0-5.0 m wide. Spring out- flow (late April - May) is intense, the water level is 2.5 m below the soil surface. The total extension of the canals within the wetland area is about 25 km. Currently, 10.8% of the area show a significant degradation processes related to the drainage reclamation.

Fires. Lowering of the water level substantially increased frequency of fires. Implemented researches (scientific justification, 2003) showed that over the last decade the wetland was affected by fires quite regularly. Fire covered several hundred hectares in the northern and southern part of the wetland. The fires led to drying up of pine, in some places to soil destruction, and consequently to biological diversity decreasing.

Peat extraction. The northern part of the wetland is substantially violated by the peat extraction. In addition to the complete destruction of vegetation within the extraction site, this area has a significant negative impact on the surrounding area ecosystems.
Special studies show that the zone of influence on the vegetation of the peat extraction enterprise is 1,000 m. This zone is divided into two sub-zones: 1) near (of severe exposure) - 0-250 m from the peat extraction sites; 2) distant (of mod- erate and low impact) - 250-1000 m. The total area damaged by peat extraction is about 1000 ha, including 62 ha of the area with highly damaged ecosystems. Worked-out peat extraction sites pose a significant hazard to environment. The secondary waste vegetation was formed within these areas. Such vegetation has a low fire resistance.
By the decision of the Council of Ministers of Belarus (№ 794 from 17.06.2011) it is planned to transfer part of the wetland under the peat extraction in 2012-2015.
In 2015 during establishment of the Protected Area of National Importance its borders were reconsidered taking into account the state of mire ecosystems. The part of totally degraded peatland in the Northern-eastern part of the site (200 ha) was allocated for peat extraction, the rest of the mire was included in the Protected Area.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Wetland Reserve of Republican Importance	Morochno	http://www.minpriroda.gov.by/ru/ news-ru/view/ob-objjavlenii-resp ublikanskogo-vodno-bolotnogo-zak aznika-morochno-1728/	whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Balota Marocna	http://iba.ptushki.org/en/iba/27 /full	partly

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☐

Ib Wilderness Area: protected area managed mainly for wilderness protection ☐

II National Park: protected area managed mainly for ecosystem protection and recreation ☐

III Natural Monument: protected area managed mainly for conservation of specific natural features ☐

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☑

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Hydrology management/restoration	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Proposed

Human Activities

Measures	Status
Harvest controls/poaching enforcement	Proposed
Research	Partially implemented

Other:

Measures for hydrologic regime restoration (rewetting of extracted parts) were implemented on the wetland (2007-2009). Rewetting was conducted on extracted plots (after peat extraction), adjacent to the Ramsar site from the North.

Implemented Conservation Measures:
In 2015 The Republican Wetland Reserve was established on the territory of the Ramsar site, with slightly changed borders and area. This entailed changes of the borders and area of the Ramsar site to coincide with the protected area.

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes ○ No ◉

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ○ No ◉

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Yes, there is a plan

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Implemented
Animal community	Implemented
Water regime monitoring	Proposed
Birds	Proposed

Case studies of landscape and biological diversity in the reserve were carried out to prepare the scientific justification for the specially protected territory establishment. 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.

In 2007-2009 within the framework of the UNDP-GEF project "Renaturalization and Sustainable Management of Peatlands to Combat Land Degradation, Climate Change and the conservation of globally significant biological diversity", the scientific justification for peatland rewetting located within the wetland was prepared. A system of the complex monitoring of wetland ecosystems and theirs dynamics after rewetting is created. The first series of observations have already conducted (Scientific and Practical Center for Bioresources of the National Academy of Sciences, Institute of Experimental Botany of the National Academy of Sciences).

The influence of peat extraction sites on adjacent territories was investigated in the framework of the state programme "Peat" in 2009-2011. A system of stationary observation points (17 in total) for vegetation and hydrology monitoring was placed here (Institute of Experimental Botany of the National Academy of Sciences).

The large-scaled map of vegetation of the wetland was created in the framework of the state programme "Space exploration" in 2008-2010 (Institute of Experimental Botany of the National Academy of Sciences).

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").

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

1.The Red Book of the Republic of Belarus. Plants: Rare and endangered species of wild plants / Ed. I.M. Kachanovskii [et al.]. - 4th ed. - Minsk: Belaruskaya Entsyklapedya named P. Broŭka, 2015. - 448 p.
2.The Red Book of the Republic of Belarus. Animals: Rare and endangered species of wild animals / Ed. I.M. Kachanovskii [et al.]. - 4th ed. - Minsk: Belaruskaya Entsyklapedya named P. Broŭka, 2015. - 320 p.
3.Invasive alien species of wild animals and plants on the territory of the Republic of Belarus. - Minsk, 2008. - 38 p.
4.Treasures of Belarusian Nature: Areas of international importance for biodiversity conservation / A.V. Kozulin [et al.]. - 2nd ed. - Mn.: Belarus, 2005. - 215.
5.Preparation submission of declaring the Republican Wetland Reserve "Morochno", including determining the coordinates of the turning points : research report (final) / Institute of Experimental Botany; head of D.G. Grummo. - Minsk, 2013. - 225 p. - State registration number 20130723.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<2 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>

iii. a description of the site in a national or regional wetland inventory
<no file available>

iv. relevant Article 3.2 reports
<no file available>

v. site management plan
<1 file(s) uploaded>

vi. other published literature
<1 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

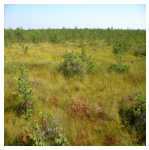

Morochno Ramsar Site (*Natallia Zeliankevich, 13-08-2008*)


Morochno Ramsar Site (*Natallia Zeliankevich, 21-07-2010*)


Morochno Ramsar Site (*Natallia Zeliankevich, 23-07-2010*)


Morochno Ramsar Site (*Natallia Zeliankevich, 12-08-2008*)


Morochno Ramsar Site (*Natallia Zeliankevich, 13-08-2008*)


Morochno Ramsar Site (*Natallia Zeliankevich, 13-08-2008*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation: 2012-09-07