Ramsar Information Sheet

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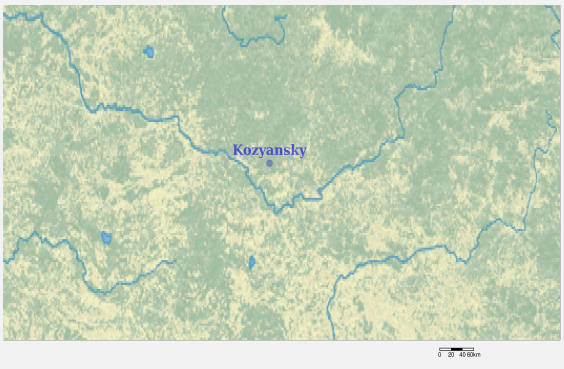
Belarus

Kozyansky



Designation date	29 March 2013
Site number	2196
Coordinates	55°27'32"N 29°21'22"E
Area	28 469,00 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

The site is a complex of raised bogs, forests, floodplain meadows, lakes and agricultural land. The site is characterized by high diversity and contrasting ecological conditions, as well as the presence of unique nature complexes: large tracts of raised bogs and transition mires, open fen mires, lakes, sandy dunes, intact forests including fragmented oak forests. There are also numerous lakes and rivers.
The core of the site is the most valuable and, at the same time, a vulnerable tract of raised bogs. They provide habitat for unique and rare plant communities and species. There are 21 plant species listed as rare and threatened in the Red data Book of Belarus. There are also many rare moss species present. The increased representation of rare bryophyte species in this territory allows us to consider the Kozyansky site as a kind of bryological refuge of the Belarusian Poozerie region for bryoflora complexes of taiga forests in Eastern Europe.
The terrain, soil and hydrological conditions and underdevelopement of the territory, allows the presence of various highly natural forests, meadows and wetland habitats, which determine the extremely high faunistic value of this territory. 3 species of mammals and 44 species of birds listed in the Red Book of the Republic of Belarus were registered within the site.
The site has an important hydrological value for the adjacent areas:
– keeps water reserves in dry seasons, supplying water for other water bodies – rivers Obol, Sosnitsa, Tsenitsa, Glybochka;
– maintains groundwater level;
– plays an important role in the maintenance of high water quality;
– participates in the formation of underground hydrological systems or streams, feeding surface wetlands.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Institution/agency	Institute of Experimental Botany of the National Academy of Science of Belarus
Postal address	220072, Minsk, Akademicheskaya st., 27

Compiler 2

Institution/agency	Institute of Experimental Botany of the National Academy of Science of Belarus
Postal address	220072, Minsk, Akademicheskaya st., 27

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

From year	2013
To year	2020

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Kozyansky
Unofficial name (optional)	Козьянский

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	☐
(Update) For secretariat only: This update is an extension	☐

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?	No

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 boundaries of the site coincide with the boundaries of the National Landscape Reserve Kozyansky. In December 2019 the border and area of the Reserve was extended: the lake-mire complex with a total area of 2409 ha located to the north of Obol mires has been joined to the Reserve. The border and the area of the Ramsar site have been changed accordingly to coincide with those of the Protected Area.

2.2.2 - General location

a) In which large administrative region does the site lie?	Vitebsk region, Polotsk and Shumilino districts

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

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): 28469

Area, in hectares (ha) as calculated from GIS boundaries: 28476.619

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Boreal

Other biogeographic regionalisation scheme

European Environmental Agency (2012)
http://www.eea.europa.eu/data-and-maps/figures/biogeographical-regions-in-europe-1

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	An example of the rare type of wetland system in the boreal biogeographic region, which is predominantly in its natural state. - an example of forest and bog complex in the southern taiga zone - boreal bog of northeast-western-European type – the site is of great hydrological importance to adjacent areas: • during the dry season holds water supplies; • provides water to other water bodies such as rivers Obol, Sosnica, Tsenitsa, and Glybochka; • maintains the groundwater level; • plays an important role in maintaining high water quality; • is involved in the formation of underground hydrological systems or springs that feed surface wetland complexes.
Other ecosystem services provided	The territory of the site is a traditional place for gathering berries and mushrooms, both for the population of adjacent villages, and for residents of Polotsk and Novopolotsk towns. The site's raised bogs are colossal reservoirs of fresh water and possess valuable cranberry reserves.
Other reasons	There are currently 17 objects protected by the state as historical and cultural values, including 15 historical monuments and 2 monuments of archeology.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification	Ensures the existence of populations of plants and animals that are important for maintaining biological diversity of the 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 raised bogs and their surrounding areas. There are 583 species of vascular plants belonging to 318 genera, 89 families, 53 orders, 6 classes and 5 divisions were registered within the site. Among them, 5 Lycopodium species, 6 - horsetail, 10 - ferns, 3 - gymnosperms and 559 species of angiosperms (423 dicotyledonous and 136 monocotyledonous). The increased representation of rare bryophyte species in this territory allows us to consider the Kozyansky site as a kind of bryological refugium of the Belarusian Poozerie region, the example of bryofloristic complexes of taiga forests in Eastern Europe. The fauna of the reserve includes 9 species of amphibians, 5 species of reptiles, 175 species of nesting birds, at least 32 species of mammals, which makes up 77.3% of the species diversity of vertebrate animals in Belarus.

☑ 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
Plantae								
Allium ursinum		☑	☑	☐		☐	Red Data Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	
Betula nana		☑	☑	☐	LC	☐	Red Data Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	
Carex magellanica irrigua		☑	☑	☐		☐	Red Data Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	
Carex pauciflora		☑	☑	☐	LC	☐	Red Data Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	
Corallorhiza trifida		☑	☑	☐		☐	Red Data Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	
Dactylorhiza viridis		☑	☑	☐		☐	Red Data Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	
Delphinium elatum		☑	☑	☐		☐	Red Data Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	
Drosera intermedia		☑	☑	☐		☐	Red Data Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	
Gymnadenia conopsea		☑	☑	☐		☐	Red Data Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	
Rubus chamaemorus		☑	☑	☐	LC	☐	Red Data Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	
Sphagnum lindbergii		☑	☑	☐		☐	Red Data Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	The site is the only habitat of this species in Belarus, located on the Southern border of its main distribution area.
Sphagnum majus		☐	☑	☐		☐		
Sphagnum tenellum		☐	☑	☐		☐		

Ther are 21 plant species (1 lichen species, 1 moss species, 19 higher vascular plant species) listed in the Red Data Book of Belarus.
108 species of bryophytes were found here. Among quite numerous Sphagnum mosses, 3 species are rare: Sphagnum tenellum (Brid.) Bozy, Sph. majus (Russ.) C. Jens., and Sph. lindbergii Schimp. ex Lindb.

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								
Others																		
CHORDATA / MAMMALIA	*Lynx lynx*	Eurasian Lynx	☑	☐	☐	☐	☐	☐	☐	☐				LC	☐	☐	Red Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	
CHORDATA / MAMMALIA	*Meles meles*	European Badger	☑	☐	☐	☐	☐	☐	☐	☐				LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	
CHORDATA / MAMMALIA	*Ursus arctos*	Brown Bear; Grizzly Bear	☑	☐	☐	☐	☐	☐	☐	☐				LC	☑	☐	Red Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	
Birds																		
CHORDATA / AVES	*Aquila chrysaetos*	Golden Eagle	☑	☑	☐	☐	☑	☐	☐	☐	2	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category I of protection (Critically Endangered, CR)	1-2 breeding pairs, irregular breeding
CHORDATA / AVES	*Aquila clanga*	Greater Spotted Eagle	☑	☑	☐	☐	☑	☐	☐	☐	2	2000-2010		VU	☐	☑	Red Book of the Republic of Belarus: Category I of protection (Critically Endangered, CR)	1-2 breeding pairs, irregular nesting
CHORDATA / AVES	*Aquila pomarina*	Lesser Spotted Eagle	☑	☑	☐	☐	☑	☐	☐	☐	24	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	8-12 breeding pairs
CHORDATA / AVES	*Asio flammeus*	Short-eared Owl	☑	☑	☐	☐	☑	☐	☐	☐	12	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category I of protection (Critically Endangered, CR)	3-6 breeding pairs
CHORDATA / AVES	*Botaurus stellaris*	Eurasian Bittern	☑	☑	☐	☐	☑	☐	☐	☐	8	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	5-8 males, on breeding
CHORDATA / AVES	*Ciconia nigra*	Black Stork	☑	☑	☐	☐	☑	☐	☐	☐	20	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	8-10 breeding pairs
CHORDATA / AVES	*Circaetus gallicus*	Short-toed Snake Eagle	☑	☑	☐	☐	☑	☐	☐	☐	6	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	3 breeding pairs
CHORDATA / AVES	*Circus cyaneus*	Northern Harrier	☑	☑	☐	☐	☑	☐	☐	☐	10	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	5 breeding pairs
CHORDATA / AVES	*Falco columbarius*	Merlin	☑	☑	☐	☐	☑	☐	☐	☐	16	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	6-8 breeding pairs
CHORDATA / AVES	*Falco tinnunculus*	Common Kestrel; Eurasian Kestrel	☑	☑	☐	☐	☑	☐	☐	☐	40	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	15-20 breeding pairs
CHORDATA / AVES	*Falco vespertinus*	Red-footed Falcon	☑	☐	☐	☐	☑	☐	☐	☐		2000-2010		NT	☐	☑	Red Book of the Republic of Belarus: Category I of protection (Critically Endangered, CR)	on passage
CHORDATA / AVES	*Gavia arctica*	Arctic Loon; Black-throated Loon	☑	☑	☐	☐	☑	☐	☐	☐	4	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	1-2 breeding pairs
CHORDATA / AVES	*Grus grus*	Common Crane	☑	☑	☐	☐	☑	☐	☐	☐	50	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	20-25 breeding pairs
CHORDATA / AVES	*Haliaeetus albicilla*	White-tailed Eagle	☑	☑	☐	☐	☑	☐	☐	☐	2	2000-2010		LC	☑	☑	Red Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	1 breeding pair

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								
CHORDATA / AVES	*Lagopus lagopus*	Willow Grouse; Willow Ptarmigan	☑	☑	☐	☐	☑	☐	☐	☐	40	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	10-20 breeding pairs
CHORDATA / AVES	*Numenius arquata*	Eurasian Curlew	☑	☑	☐	☐	☐	☐	☐	☐	40	2000-2010		NT	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	10-20 breeding pairs
CHORDATA / AVES	*Numenius phaeopus*	Whimbrel	☑	☑	☐	☐	☑	☐	☐	☐	30	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	10-15 breeding pairs
CHORDATA / AVES	*Pandion haliaetus*	Osprey; Western Osprey	☑	☑	☐	☐	☑	☐	☐	☐	6	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	on breeding, 3 pairs
CHORDATA / AVES	*Pluvialis apricaria*	European Golden Plover; European Golden-Plover	☑	☑	☐	☐	☑	☐	☐	☐	100	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	30-50 breeding pairs
CHORDATA / AVES	*Strix nebulosa*	Great Grey Owl; Great Gray Owl	☑	☑	☐	☐	☑	☐	☐	☐	2	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category II of protection (Endangered species, EN)	1 breeding pair
CHORDATA / AVES	*Strix uralensis*	Ural Owl	☑	☑	☐	☐	☑	☐	☐	☐	10	2000-2010		LC	☐	☐	Red Book of the Republic of Belarus: Category I of protection (Critically Endangered, CR)	4-5 breeding pairs
CHORDATA / AVES	*Tringa nebularia*	Common Greenshank	☑	☑	☐	☐	☑	☐	☐	☐	60			LC	☐	☐	Red Book of the Republic of Belarus: Category III of protection (Vulnerable species, VU)	20-30 breeding pairs

1) Percentage of the total biogeographic population at the site

The site supports 47 animal species (44 birds and 3 mammals) from the Red Data Book of Belarus.

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
3160 Natural dystrophic lakes and ponds	☑		Annex I of the Habitats Directive
7110* Active raised bogs	☑		Annex I of the Habitats Directive, priority habitat
9080* Fennoscandian deciduous swamp woods	☑		Annex I of the Habitats Directive, priority habitat
91D0* Bog woodland	☑		Annex I of the Habitats Directive, priority habitat
7140 Transition mires and quaking bogs	☑		Annex I of the Habitats Directive

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

4.1 - Ecological character

The core of the wetland is one of the most valuable areas of raised bogs, considered as a unique natural complex. Raised bogs occupy 533.4 ha. The Obolskoye bog is especially notable for its size with typical features of the raised bog - a convex surface, a large thickness of the peat layer (up to 5-8 m), the presence of treeless spaces, the kingdom of sphagnum mosses. The site's raised bogs represent habitat for unique and rare plant communities and species. The increased representation of rare bryophyte species in this territory allows us to consider the Kozyansky site as a kind of bryological refugium of the Belarusian Poozerie region, the example of bryofloristic complexes of taiga forests in Eastern Europe. Moreover, the bogs have enormous reserves of fresh water and valuable cranberry reserves.
On the periphery of the raised bogs there are transition mires. Transitional mires dominate among swamps on the territory of the site occupying 3070 ha, the most distributed is transitional sedge-Sphagnum type.
Fen mires are represented by small areas, usually located in former lake basins with sustainable rich water and mineral nutrition.
River floodplains are located in landscapes as narrow stripes. The site's rivers belong to the Western Dvina River catchment. The largest tributary of the Western Dvina, The Obol River flows along the eastern and southern borders of the site. Two rivers, the Tsenina and Glybochka flow into the Obol within the site. The rivers have vague floodplains and meandering channels. Lakes play an important role in the landscapes of the site. The largest lakes are Moshno, Rassolai and Krasomai. Almost all the lakes are dystrophic and shallow, with low waterlogged shores and are getting overgrown with aquatic vegetation.
Forest vegetation occupies 48.2% of the total site's area, shrubs - 8.2%, meadows - 7.3%, coastal and mire vegetation – 16.8%. Farmland and synanthropic plant groups occupy 19.4% of the site's area. The predominant types of forests are pine forests (8265 ha or 36.5%, the most distributed is pine on swapms) and birch forests (5568 ha or 24.6%). Spruce forests occupy 3662 ha or 16.2%. Significant areas are covered with black alder forests (9.3%), aspen forests (7.2%) and natural stands of grey alder (6.2%). Fragments of oak forests are rare and mostly found in the river floodplains.
The terrain, soil and hydrological conditions, poor development of the territory, the presence of various highly natural forest, meadow and wetland habitats, determine the extremely high floristic and faunistic value of this territory. 21 plant species, 3 species of mammals and 44 species of birds listed in the Red Book of the Republic of Belarus were registered within the site.
The site has an important hydrological value for the adjacent areas:
– keeps water reserves in dry seasons, supplying water for other waterbodies – rivers Obol, Sosnitsa, Tsenitsa, Glybochka;
– maintains groundwater level;
– plays an important role in maintenance of high water quality;
– participates in formation of underground hydrological systems or streams, feeding surface wetlands.

The territory of the site is a traditional place for gathering berries and mushrooms, both for the population of adjacent villages, and for residents of Polotsk and Novopolotsk towns.

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 > Flowing water >> M: Permanent rivers/ streams/ creeks		0	130.3	Rare
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		4	234.5	Rare
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		1	11258	Rare
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		3	2033	Rare
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		2	3153	Rare

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Actaea spicata		need of preventive conservation and rational use
Aquilegia vulgaris		need of preventive conservation and rational use
Arctostaphylos uva-ursi		need of preventive conservation and rational use
Botrychium lunaria		need of preventive conservation and rational use
Campanula latifolia		Red Data Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
Campanula persicifolia		need of preventive conservation and rational use

Scientific name	Common name	Position in range / endemism / other
Carex montana		need of preventive conservation and rational use
Centaurea phrygia		need of preventive conservation and rational use
Chimaphila umbellata		need of preventive conservation and rational use
Colchicum autumnale		rare relict species, in Belarus it's growing out of the main distribution area
Convallaria majalis		need of preventive conservation and rational use
Dactylorhiza fuchsii fuchsii		need of preventive conservation and rational use
Dactylorhiza incarnata		need of preventive conservation and rational use
Dactylorhiza maculata		need of preventive conservation and rational use
Digitalis grandiflora		need of preventive conservation and rational use
Gentiana pneumonanthe		need of preventive conservation and rational use
Gentianella amarella		need of preventive conservation and rational use
Gladiolus imbricatus		ed Data Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
Hepatica nobilis		need of preventive conservation and rational use
Huperzia selago		Red Data Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
Iris sibirica		Red Data Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
Lathyrus niger	Black Pea	need of preventive conservation and rational use
Linnaea borealis		ed Data Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
Lunaria rediviva		ed Data Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
Menegazzia terebrata		Red Data Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
Mentha longifolia		need of preventive conservation and rational use
Ophioglossum vulgatum		need of preventive conservation and rational use
Origanum vulgare		need of preventive conservation and rational use
Phyteuma spicatum		need of preventive conservation and rational use
Platanthera bifolia		need of preventive conservation and rational use
Polemonium caeruleum		need of preventive conservation and rational use
Polygonatum odoratum		need of preventive conservation and rational use
Primula veris		need of preventive conservation and rational use
Pulsatilla patens		need of preventive conservation and rational use

Scientific name	Common name	Position in range / endemism / other
Stachys sylvatica		need of preventive conservation and rational use
Thalictrum aquilegifolium		need of preventive conservation and rational use
Trollius europaeus		ed Data Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
Valeriana officinalis		need of preventive conservation and rational use

Optional text box to provide further information

There are 583 species of vascular plants belonging to 318 genera, 89 families, 53 orders, 6 classes and 5 divisions were registered within the site. Among them, 5 Lycopodium species, 6 - horsetail, 10 - ferns, 3 - gymnosperms and 559 species of angiosperms (423 dicotyledonous and 136 monocotyledonous).
The variety and contrast of environmental conditions, the presence of unique natural complexes caused the formation of a specific nemoral-boreal floristic complex in this territory. Its basis is composed of boreal-taiga and Central European broad-leaved forest (nemoral) plant species.

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/AVES	*Circus pygargus*	Montagu's Harrier	18		3	15-20 pairs of Montagu's Harrier (Circus pygargus), which is more than 1% of the minimum number of national population of a species - 600 pairs
CHORDATA/AVES	*Falco subbuteo*	Northern Hobby				Red Book of the Republic of Belarus: Category IV of protection (Near Threatened, NT)
CHORDATA/AVES	*Milvus migrans*	Black Kite	5		1	about 5 pairs of Black Kite (Milvus migrans), which is more than 1% of the minimum size of the national population of a species - 500 pairs
CHORDATA/AVES	*Pernis apivorus*	European Honey Buzzard	14		1.5	On the territory of the wetland around 12-15 pairs, exceed 1% of the national minimum population of a species - 900 pairs

Optional text box to provide further information

The fauna of the reserve includes 9 species of amphibians, 5 species of reptiles, 175 species of nesting birds, at least 32 species of mammals, which makes up 77.3% of the species diversity of vertebrate animals in Belarus.

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 climate of the wetland is temperate continental, formed in the interaction of marine and continental influences. The alternation of air masses of different origin creates an unstable type of weather, with mild, wet winters and relatively cool and sunny summers. Weather station "Polack" is the most representative for climate characteristics of the wetland. Long-term average annual temperature is +5.5 ± 0.1 °C, varying in different years from +3.2 (1942) to +7.5 °C (2010). The warmest month of the year is July (+17.4 °C), the coldest is January (-6.7 °C), but often the shift of heating and cooling occurs in August and February, respectively.

See additional material for further information

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 140

a) Maximum elevation above sea level (in metres): 170

- 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 river network of the wetland belongs to the basin of the river Western Dvina (Baltic Sea basin). Obol River is its greatest tributary and runs along the eastern and southern boundaries of the reserve. The river in the site covers more than 50 km.

4.4.3 - Soil

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)

According to the soil-geographical zoning, the area is situated within the Polotsk district, in the North West Region of North (Baltic). There is a patchiness and diversity of soils due to the presence in the plains of a marshy flat undulating surface and a relatively young glacial relief formed by the distribution of the last Poozerie (Valdai, Wurm) ice.

See additional material for further information

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

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

Water destination

Presence?	Changes at RIS update
Feeds groundwater	No change
To downstream catchment	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 river network of the wetland belongs to the basin of river Western Dvina and its greatest tributary Obol River. The following largest rivers are Sosnica, Tsenitsa, Glybochka. Floodplains are weakly marked. The width of the river valleys usually does not exceed a dozen of hundred of meters. Rivers are tortuous. The total water area covers 295.7 hectares (0.8% of the wetland).

4.4.5 - Sediment regime

Significant accretion or deposition of sediments occurs on the site ☑

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

Sediment regime unknown ☐

4.4.6 - Water pH

Acid (pH<5.5) ☑

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

Circumneutral (pH: 5.5-7.4) ☑

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

Alkaline (pH>7.4) ☑

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

Unknown ☐

Please provide further information on pH (optional):

Western Dvina, summer low water: pH: 7.40
Water pH in fen mires- 5.2-6.0
Water of transitional mires is mid-acid and acid.
Water of raised bogs has pH 3.1-3.5.

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

Eutrophic ☑

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

Mesotrophic ☑

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

Oligotrophic ☑

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

Dystrophic ☑

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

Unknown ☐

Please provide further information on dissolved or suspended nutrients (optional):

The lakes belong to the residual and thermokarst type. Almost all lakes are dystrophic, shallow and have a low swampy coast, and are overgrown aquatic vegetation. The largest lakes are Moshno, Rassolay and Krasomay.
Raised bogs are oligitrophic, transition mires - mesotrophic, and fen mires- eutrophic.

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 ☐

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)	Medium
Fresh water	Drinking water for humans and/or livestock	High
Wetland non-food products	Timber	Medium
Wetland non-food products	Livestock fodder	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	High
Pollution control and detoxification	Water purification/waste treatment or dilution	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Picnics, outings, touring	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Major scientific study site	Medium

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
Nutrient cycling	Carbon storage/sequestration	High

Optional text box to provide further information

The site is important for maintaining biodiversity of raised bogs.

Other ecosystem service(s) not included above:

The wetland, as part of the natural hydrographic network of the Western Dvina, has a great hydrological value for the 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.

The territory of the site is a traditional place for gathering berries and mushrooms, both for the population of adjacent villages, and for residents of Polotsk and Novopolotsk towns.

Within the site: 100

Outside the site: 3000

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

<no data available>

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	☑	☑
Provincial/region/state government	☑	☐

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

within the Ramsar site:
The site's land is in the State's ownership. The main land users in the wetland are: State Forestry Institution "Shumilino Forestry" (Kozyany, Mishnevo, Nikitin forestry), the State Forestry Institution "Polotsk Forestry" (Goryany forestry), the Municipal Unitary Agricultural Enterprise "Mishnevichi", the Unitary Enterprise "Shumilinskiy Raiagroservice" and the Open Joint Stock Company "New Goriany."

in the surrounding area:
State land rented by farms and forestry enterprises.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: The Polotsk and Shumilino Executive Committees manage the Republican Landscape Reserve "Kozyansky". Operational management of the reserve is carried out by the State Environmental Institution "National Landscape Reserve "Kozyansky""

Provide the name and/or title of the person or people with responsibility for the wetland: Vasily Vasilievich Vinokurov, director of the State Environmental Institution "National Landscape Reserve "Kozyansky""

Postal address: State Environmental Institution "National Landscape Reserve "Kozyansky""
Lunacharskogo str, Shumilino, Vitebsk region, Belarus.

E-mail address: zakaznikshum@mail.ru

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	☑	No change	☑	No change

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Livestock farming and ranching	Medium impact	Medium impact	☑	No change	☑	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	Medium impact	High 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
Fishing and harvesting aquatic resources	Medium impact	Medium impact	☑	No change	☑	No change
Logging and wood harvesting	Medium impact	High 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
Dams and water management/use	Medium impact	Medium impact	☑	No change	☑	No change
Unspecified/others	Low impact	Low impact	☑	No change	☐	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Agricultural and forestry effluents	Medium impact	Medium impact	☑	No change	☑	No change
Air-borne pollutants	Medium impact	Medium impact	☑	No change	☑	No change
Household sewage, urban waste water	Medium impact	Medium impact	☑	No change	☑	No change
Industrial and military effluents	Medium impact	Medium impact	☑	No change	☑	No change

Please describe any other threats (optional):

Water pollution is connected with ploughing of agricultural land adjacent to the site. Ploughing of lowlands in the catchment of tributaries of the Obol river leads to pollution and siltation of watercourses with solid and liquid surface runoff from the surrounding cultivated lands.
Disruption of the hydrological regime as a result of rivers canalization. About 60% of the channels of small rivers flowing through the territory of the reserve are canalized.
The main sources of pollution are:
- farms, located within and outside the reserve, especially those situated in the nearest vicinity of watercourses. Within the reserve there are 2 dairy farms in the village of Rovnoye and Krasomay. and 2 farmsteads in the village of Tokarevo.
- housing and communal services of the Obol town and a ceramic factory located in the town.
- Industrial enterprises of the cities of Polotsk and Novopolotsk are the most powerful source of air pollution in the area.
Peat extraction. There is local peat extraction for agricultural purposes in the southern part of the peatland Obol-2.
Burning of vegetation and wood residues after logging. Burning of vegetation is especially dangerous in dry weather conditions, when all the soil cover and insects get burned.
Overgrowing of open fen mires with shrubs usually occurs as a result of cessation of mowing. This leads to the loss of some rare grass communities, a decrease in the productivity of hayfields, and poses a threat to the biological diversity of open mire ecosystems.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Landscape Reserve of National Importance	Kozyansky	http://shumilino.vitebsk-region.gov.by/ru/kazjan12-ru/	whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Kaz`jany	http://iba.ptushki.org/en/iba/44	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
Habitat manipulation/enhancement	Proposed

Human Activities

Measures	Status
Regulation/management of recreational activities	Implemented
Regulation/management of wastes	Implemented
Management of water abstraction/takes	Implemented
Livestock management/exclusion (excluding fisheries)	Proposed

Other:

On the territory is forbidden:
- conducting drainage and other works related to the change of the landscape and existing hydrology, peat and sapropel extraction;
- discharge of untreated and inadequately treated sewage, industrial waste and consumption in water bodies and watercourses;
- use floating craft with motors, except floating craft of rescue and environmental services;
- the clearing of coastal and aquatic vegetation, except estuaries to traverse of fish to spawn, as well as for areas designated for recreational;
- damage and destruction of trees and shrubs, the violation of the natural soil, except for contours that are on agricultural land, as well as when it is connected with forestry activities; burning of dry vegetation (burns);
- diversion of water from reservoirs and water for industrial water supply, irrigation;
- grazing in the coastal zone watercourses and reservoirs, estuaries;
- tourist camping, fires, car parking in places not designed for that purpose; movement off-road motorized vehicles, except vehicles carrying agricultural and forestry work;
- fire cleaning harvest area; continuous felling of width cutting area of over 100 meters; also prohibited felling in specific forest compartments.

Building and construction of power lines, roads, pipelines and other utilities as well as the development of deposits of minerals in the reserve is subject to for the needs of economic development in accordance with the legislation of the Republic of Belarus and the matching with the Ministry of Natural Resources and Environmental Protection and the Ministry of Architecture and Construction of Belarus.

5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

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 ◉

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

The State environmental agency "Kozyansky" carries out in the reserve target activities aimed at environmental education of students and works with local residents and legal entities.
Promotional materials are available.

Information about the reserve and its natural value for the conservation of biological diversity has been published and communicated in the regional and national press, television, radio and internet.

Given the high value of the protected area for the conservation of biological diversity and its high recreational potential, it is of relevance to create a modern data center in the reserve.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Animal community	Implemented

Case studies of landscape and biological diversity in the reserve were carried out for the preparation of the scientific substantiation of the protected area "Kozyansky"

In 1998, experts in various fields from the Scientific and Practical Center of Bioresources of NAS and the V.F.Kuprevich Institute of Experimental Botany of NASB carried out detailed studies of the flora and fauna of the site. Systematic lists of the major groups of vertebrates were prepared, rare and vulnerable species were identified and an assessment of the status of the wetland was produced.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

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.
Scientific, technical and economic feasibility conversion of reserve "Koziyanski": Research report / BELNIIPGRADOSTROITELSTVA; N.A.Yurgenson head. - Minsk, 1998. - 83 p. - # of State Registration 19971073.
Ivanovski V, Levy S. http://iba.ptushki.org/en/iba/44/full

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<no file available>

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>

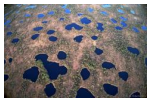
iv. relevant Article 3.2 reports
<no file available>

v. site management plan
<no file available>

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:



Central part of the bog (*Plytkevich S., 02-03-2011*)

Displaying ground of the Black Grouse on the mire (*Fedosenko V., 06-12-2016*)

The raised bog (*Kozlovsky, 15-07-2015*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation	2013-03-29