Ramsar Information Sheet

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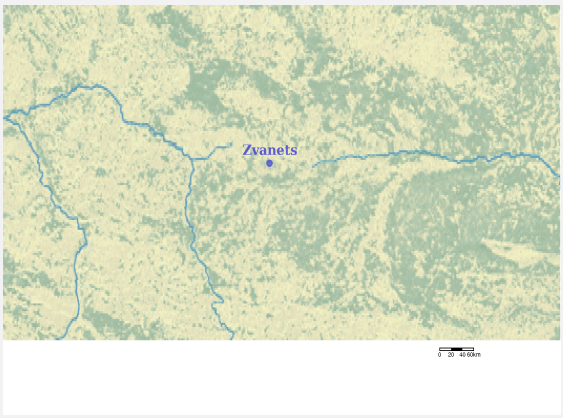
Update version, previously published on 21 October 2002

Belarus

Zvanets



Designation date	21 October 2002
Site number	1219
Coordinates	52°2'51"N 24°52'24"E
Area	16 227,40 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 described site is the largest European mesotrophic fen mire. It is a particularly good representative example of sedge-Hypnum fen mires typical of the Polesie biogeographic district. Proliferation of carbonate soils defines unique characteristics of the site's landscapes, flora and fauna.

Due to its location on the watershed, the mire's hydrological regime and water quality on the major part of the territory is close to the natural, despite the significant negative impact of adjacent melioration systems.

The site supports the largest European population of the globally threatened Aquatic Warbler Acrocephalus paludicola (2149-4459 singing males – 20-24% of the European population)" , at least 2 pairs of the Spotted Eagle Aquilla clanga. Large groups of other globally threatened and rare for Belarus animal and plant species occur on the site. Moreover, the site is a "hotspot" for conservation of biological diversity of Northeastern Europe biogeographic region. It supports particular elements of biological diversity (species, habitat types) of fen mires. The Zvanets mire contains a significant proportion of species adapted to special environmental condition (mesotrophic open fen mire). 29 plant species were discovered to be rare and disappearing within the district in question (Polesie).

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Kozulin Alexander Vasilievich, Maximenkov Michail Viktorovich, Beliatskaya Olga Sergeevna
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2.1.2 - Period of collection of data and information used to compile the RIS

From year	2002
To year	2010

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Zvanets
Unofficial name (optional)	Званец

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) B. Changes to Site area	the area has increased
(Update) The Site area has been calculated more accurately	☑

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) Negative %	20
(Update) Changes resulting from causes operating within the existing boundaries?	☑

(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.

The open fen mire is overgrowing with reeds. In 1990s the reed occupied minimal areas and the total area of Aquatic Warbler habitat was about 8000 ha and the species number was about 7000 males. In 2000s the reed began to spread rapidly and now (2012) it covers about 6310 ha, which resulted in number decline of Aquatic Warbler till 2500-3500 males. The reasons of overgrowing with reeds:
The increased water level during the vegetation period;
Violation of the water quality, coming from melioration systems.
Absence of burning of old vegetation

(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>

Boundaries description (optional)

The site borders on the Dnieper-Bug Canal (DBC) in the North, Belooziorsk Canal in the East, bypass canals of the Orekhov and Krasny Partizan collective farms' drainage systems in the South, Orekhov Canal in the West.
The National Biological Reserve Zvanets was established in 1996 with the total area 10460 ha. The Ramsar site was created in 2002 with the total area of 15873 ha, including the whole territory of the reserve and natural areas adjoing the reserve on the West. In 2010 the National Biological Reserve was transformed into National Landscape Reserve with extension of its border to coincide with the Ramsar site. The area of the new established reserve, and accordingly, the area of the Ramsar site, was calculated more accurately and is 16227 ha.

2.2.2 - General location

a) In which large administrative region does the site lie? Brest Oblast, Drogichin and Kobrin Districts

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

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): 16227.4

Area, in hectares (ha) as calculated from GIS boundaries: 16231.86

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Continental

Other biogeographic regionalisation scheme

Polesie Lowland - Dementiev, 1959

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 Zvanets mire is a typical example of a watershed-located sedge-Hypnum moss fen mire of the Belarusian Polesie, still remaining in a close-to-natural state. After 1960-80 drainage campaigns most fens were transformed into agrophytocenoses. Only six large fens were left in natural state in Europe. Zvanets is the largest of them. Site Zvanets, located on the watershed of two river basins, has high water conservation and hydrology-regulating value for the region. It serves as a water source and storage place: the area of the mire is also used as a large reservoir to store water pumped out of the ameliorated (poldered) areas in rainy periods and supply water for drained tracts during dry periods. Thus, the mire provides flood control and plays important role in hazard prevention.
Other ecosystem services provided	Biodiversity support - the site supports particular elements of biological diversity (species, habitat types) of fen mires. The Zvanets mire contains a significant proportion of plant and animal species adapted to special environmental condition (mesotrophic open fen mire). Traditional economic activity - wild-hive beekeeping, which is a part of a culture, is still practiced within the site. Bee-houses are mounted on large ancient oaks, the latter presenting significant historic, esthetic, and scientific value.
Other reasons	Open sedge fen parts of the mire are natural habitats for many species under minimal anthropogenic load. They can serve as reference mires in planning for management of fens, as well as for rehabilitation of wetlands.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification	The site is a "hotspot" for conservation of biological diversity of the biogeographic region. It supports particular elements of biological diversity (species, habitat types) of fen mires. The Zvanets mire contains a significant proportion of species adapted to special environmental condition (mesotrophic open fen mire). 29 plant species were discovered to be rare and disappearing within the district in question (Polesie). 10 vegetation communities formerly widespread across Polesian fen mires, now rare for Belarus and Europe, are found here. Bird species composition of Zvanets is not very rich but includes some typical fen mire species.

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

☑ Criterion 6 : >1% waterbird population

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
Allium ursinum		☑	☑	☐		☐	National Red List - VU	
Arctium nemorosum		☑	☑	☐		☐	National Red List - VU	
Carex davalliana		☑	☑	☐	LC	☐	National Red List - CR	
Cephalanthera rubra		☑	☑	☐		☐	National Red List - VU	
Cypripedium calceolus		☑	☑	☐	LC	☐	National Red List - VU	
Dactylorhiza majalis		☑	☑	☐		☐	National Red List - VU	
Gentiana cruciata		☑	☑	☐		☐	National Red List - CR	
Gymnadenia conopsea		☑	☑	☐		☐	National Red List - VU	
Hypericum quadrangulum quadrangulum		☑	☑	☐		☐	National Red List - CR	
Lithospermum officinale		☑	☑	☐		☐	National Red List - VU	
Nymphaea alba		☑	☑	☐	LC	☐	National Red List - VU	
Pedicularis sceptrum-carolinum		☑	☑	☐		☐	National Red List - EN	
Salix myrtilloides		☑	☑	☐		☐	National Red List - VU	
Saxifraga hirculus		☑	☑	☐		☐	National Red List - CR	
Tofieldia calyculata		☑	☑	☐		☐	National Red List - CR	

Out of 644 plant species occurring on the site, only 39 are synanthropic. Thus, the rate of synanthropisation of the mire's vegetation cover is very low, the synanthropisation index is 5.9%.
There are 6 unique and rare vegetation communities of regional and national importance: Carex davalliana, Caricetum distichae, Caricetum omskianae, Corynephoretum canescentis, Leymetum arenarii, Molinietum coeruleae; and 4 plant communities of international importance: Brizetum mediae, Caricetum elatae, Caricetum juncellae, Helictotrichonetum pubescentis.
21 plant species included in the Red Data Book of Belarus are found within the site.

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	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Acrocephalus paludicola*	Aquatic Warbler	☑	☑	☑	☐	☑	☐	☐	☐	2149	2013	20	VU	☐	☑	National Red List - EN	2149-4459 males, key breeding site European population estimate: 11000 – 16000 males (BirdLife).
ARTHROPODA / INSECTA	*Agabus clypealis*		☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐		
CHORDATA / AVES	*Aquila clanga*	Greater Spotted Eagle	☑	☑	☐	☐	☐	☐	☐	☐	3	2010			☐	☑	National Red List - CR	pairs, important foraging area
CHORDATA / AVES	*Aquila pomarina*	Lesser Spotted Eagle	☑	☐	☐	☐	☑	☐	☐	☐	3	2000-2004			☐	☐	National Red List - VU	pairs, breeding
CHORDATA / AVES	*Ardea alba*	Great Egret	☑	☐	☐	☐	☑	☐	☐	☐	10	2011		LC	☐	☐	National Red List - VU	breeding pairs
CHORDATA / AVES	*Asio flammeus*	Short-eared Owl	☑	☐	☐	☐	☑	☐	☐	☐	5	2010		LC	☐	☐	National Red List - CR	breeding pairs
CHORDATA / AVES	*Botaurus stellaris*	Eurasian Bittern	☑	☐	☐	☐	☑	☐	☐	☐	15	2011		LC	☐	☐	National Red List - VU	males
CHORDATA / AVES	*Bubo bubo*	Eurasian Eagle-Owl	☑	☐	☐	☐	☑	☐	☐	☐	2	2011		LC	☐	☐	National Red List - EN	breeding pairs
CHORDATA / AVES	*Circaetus gallicus*	Short-toed Snake Eagle	☑	☐	☐	☐	☑	☐	☐	☐	2	2000-2004		LC	☐	☐	National Red List - EN	breeding pairs
CHORDATA / AVES	*Circus cyaneus*	Northern Harrier	☑	☐	☐	☐	☑	☐	☐	☐	3	2000-2004		LC	☐	☐	National Red List - VU	breeding pairs
CHORDATA / AVES	*Crex crex*	Corn Crake	☑	☐	☐	☐	☑	☐	☐	☐	40	2010		LC	☐	☐	National Red List - VU	males
ARTHROPODA / INSECTA	*Dytiscus latissimus*		☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		
CHORDATA / AVES	*Gallinago media*	Great Snipe	☑	☑	☐	☐	☑	☐	☐	☐	2	2010		NT	☐	☐	National Red List - EN	males, on breeding
ARTHROPODA / INSECTA	*Graphoderus bilineatus*		☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		
CHORDATA / AVES	*Grus grus*	Common Crane	☑	☐	☐	☐	☑	☐	☐	☐	25	2011		LC	☐	☐	National Red List - VU	breeding pairs
CHORDATA / AVES	*Haliaeetus albicilla*	White-tailed Eagle	☑	☐	☐	☐	☑	☐	☐	☐	2	2011		LC	☑	☑	National Red List - EN	breeding pairs
CHORDATA / MAMMALIA	*Lynx lynx*	Eurasian Lynx	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - EN	
CHORDATA / MAMMALIA	*Meles meles*	European Badger	☑	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Red List - VU	
CHORDATA / AVES	*Numenius arquata*	Eurasian Curlew	☑	☐	☐	☐	☑	☐	☐	☐	15	2010		NT	☐	☐	National Red List - VU	breeding pairs

The fauna of vertebrates of the teritory is quite diverse and includes 29 mammal species, 125 bird species, 4 reptiles and 9 amphibia species. 39 animal species are listed in the Red Data Book of Belarus: 2 mammal species, 17 bird species, 1 reptile and 1 amphibia species, 15 species of invertebrates and 3 species of aquatic invertebrates.

The Zvanets mire supports the largest in Europe population of globally threatened Aquatic Warbler (20% of European population of this species breeds here). The 2013 monitoring counts are available through the following link: http://www.aquaticwarbler.net/download/Monitoring_reports/Belarus_2013_AW_monitoring_report_final.pd f

Moreover, the site is of great value as reference site for conservation of fauna of water invertebrates of mires of Belarussian Polesie region.

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
6410 Molinia meadows on calcareous, peaty or clayey-sit-laden soils (Molinion coeruleae)	☑		Annex I of the Habitat Directive
2330 Inland dunes with open Corynephorus and Agrostis grasslands	☑		Annex I of the Habitat Directive
7210 Calcareous fens with Cladium mariscus and species of the Caricion davallianae	☑	Rare vegetation communities are found here: Caricetum davalliana, C. distichae, C. omskianae, Corynephoretum canescentis, Leymetum arenarii, Molinietum coeruleae; Brizetum mediae, C. elatae, C.juncellae, Helictotrichonetum pubescentis.	Annex I of the Habitat Directive, priority habitat. It is a habitat for Aquatic Warbler and other rare species. Comparison of aerial photos dated 1950s and 1990s shows shrinkage of the open fen area and encroachment of shrubs and forests.
6230* Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Cont. Europe)	☑	In Belarus - on podzolic soils	Annex I of the Habitat Directive, priority habitat.

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

4.1 - Ecological character

The site is the largest European mesotrophic fen mire with numerous mineral islands, it is a typical example of a watershed-located sedge-Hypnum moss fen mire of the Belarusian Polesie, still remaining in a close-to-natural state, despite the significant negative impact of adjacent melioration systems. Open fen mires absolutely dominate by area. The mineral islands are characterized by rich and sometimes unique flora amongst the monotonous mire vegetation.

The species diversity of the mineral islands is 3-10 times higher than the species diversity of the mire tracts. Preservation of the unique flora of the mineral islands is to a large extent dependent on the conservation of the open mire: any changes in the hydrological regime on the latter cause rapid simplification of the floristic composition and falling out of a number of species.

Open water surfaces are represented by a lake and a network of canal and ditches. Zalesskoie Lake became very shallow following drainage of the adjacent territories. Over the last 15 years it has turned into a dystrophic water body, completely overgrown with Water Soldier Stratiotes aloides.

The largest European population of the globally threatened Aquatic Warbler Acrocephalus paludicola breeds here.
On the basis of aerial photos the data on changes of the main biotopes were obtained. During the period from 1955 till 2006 the area of the open fen mires - the most important habitat of the unique biodiversity - has shrunk almost by 2000 ha, or by 11.4% as a result of encroachment of shrubs and trees. The area of shrubs over the same period has increased by 1385 ha. Estimations show that from 1955 till 2006 the number of the Aquatic Warbler declined on the Zvanets mire by 18.6%. If the shrinkage rate of the open fen mire area will be the same, the further decline in number of this globally threatened species is predicted.

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				
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		4		
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		1		Representative
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands		2		Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		3		

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
4: Seasonally flooded agricultural land				
9: Canals and drainage channels or ditches				

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Cardamine bulbifera		
Carex umbrosa		
Gladiolus imbricatus		
Iris sibirica		
Neottia ovata		
Silene armeria		
Silene baccifera		

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	moose				
CHORDATA/AMPHIBIA	Bombina bombina					
CHORDATA/AMPHIBIA	Bufo bufo	European Toad				
CHORDATA/MAMMALIA	Canis lupus	gray wolf;Wolf				
ARTHROPODA/INSECTA	Coenagrion armatum					
CHORDATA/REPTILIA	Emys orbicularis					
ARTHROPODA/INSECTA	Nehalennia speciosa					
CHORDATA/AMPHIBIA	Pelobates fuscus					

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)

Changes in the amount of winter precipitation in the last years have resulted in years with either no spring flood or – the opposite – with a very high spring flood. Summer rainfall floods have also become more frequent. Absence of flood or prolonged inundation of the floodplain during the vegetation season results in serious changes in the “operational mechanics” of the mire ecosystem, exemplified by temporary replacements of vegetation associations, changes in species composition distribution and density of birds, flooding of nests and as a result mass killing of nestlings.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 145

a) Maximum elevation above sea level (in metres): 151

More than one river basin: ☑

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 site is bounded by the Dnieper-Bug Canal (DBC) and its tributaries, Belooziorsk and Orekhovo Canals. The Zvanets mire is located on the watershed of basins of rivers Western Bug (the Baltic sea water basin) and Pripyat (the Black sea water basin). The Dnieper-Bug canal connects the Mukhavets River (a tributary of the Western Bug River, the Visla river basin, Baltic Sea basin) and the Pina River (a tributary of the Pripyat River, basin of the Dnieper river, Black Sea basin).

4.4.3 - Soil

Mineral: ☑

Organic: ☑

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)

Fen mire soils dominate on the site. Peaty and peat-gley soils, as well as peat-mire low-capacity soils (peat layer of 0.5-1.0 m) dominate along the margins. Central part of the site is dominated by moderately deep and deep peat mire soils (peat layer exceeding 1 m).
Mineral waterlogged gley and gleyish soils develop mainly on the numerous islands amidst the mire. Some of the islands are pretty large (up to 30-40 ha). These soil types are practically all calcareous soils characterized by high fertility level. They are pretty diverse in terms of texture (sands, sandy loams, loams) and underlying rocks (ranging from loose sands to moraine loams).

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 rainfall	☐	No change
Water inputs from surface water	☑	No change
Water inputs from groundwater	☐	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 fluctuating (including tidal)	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 water level fluctuates within +0.5 - -0.5 m. Almost annually the summer and fall no-flood period is interrupted by rainfall floods. The height and duration of summer floods are significantly lower than the same parameters of the spring floods. However, in some years the summer rain flood water levels surpass those of the spring melt floods. In especially dry years the groundwater table can drop up to 0.5 below surface. The hydrological regime of the mire is influence by amelioration polder systems and the drainage canals and ditches. Their exploitation defines the groundwater table on the mire.

4.4.5 - Sediment regime

Sediment regime unknown ☑

4.4.6 - Water pH

Circumneutral (pH: 5.5-7.4) ☑

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☑

4.4.8 - Dissolved or suspended nutrients in water

Mesotrophic ☑

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

the overall water mineralisation is 250-370 mg/l.

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:

Today, the site is on all sides surrounded by ameliorative drainage systems. Wetland areas around the site were drained and plowed. Drainage of lands around the site has resulted in disturbances of the natural hydrological regime of the mire itself: the groundwater table has dropped and shrub encroachment has started leading to degradation of open fens.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Wetland non-food products	Livestock fodder	Medium

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
Hazard reduction	Flood control, flood storage	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Low
Spiritual and inspirational	Aesthetic and sense of place values	Medium
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High
Scientific and educational	Long-term monitoring 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

Other ecosystem service(s) not included above:

The main land use types within the territory are grazing and mowing, which are conducted at the area of about 10% of the whole Ramsar site. Mineral islands are partially used by the local population for plowing and subsequent growing of arable crops, mainly potatoes. The western part of the mire is used more intensively, as well as the eastern part adjoining to the Beloozersk canal.
The mire serves as a water source and storage place: the area of the mire is also used as a large reservoir to store water pumped out of the ameliorated (poldered) areas in rainy periods and supply water for drained tracts during dry periods.
Large canals serve for amateour fishing of local people.
Traditional economic activity - wild-hive beekeeping, which is a part of a culture, is still practiced within the site. Bee-houses are mounted on large ancient oaks, the latter presenting significant historic, esthetic, and scientific value.

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

<no data available>

4.6 - Ecological processes

(ECD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.	There is rapid overgrowing of open fens with shrubs and trees (in mire parts with lowered groundwater level) and reeds (in mire parts with increased water level).

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	☑	☑

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: The State Nature Conservation Authority "Republican Biological Reserve Zvanets"

Provide the name and title of the person or people with responsibility for the wetland: The Director of the State Nature Conservation Authority - Melnichuk Nikolai Stepanovich

Postal address: 225844, Drogichin district
village Goravitsa
Centralnaya str. 4

E-mail address: drgprir@brest.by

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
Water releases	High impact	Medium impact	☑	decrease	☐	No change

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Marine and freshwater aquaculture	High impact	High impact	☐	decrease	☑	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	Medium impact	Medium impact	☑	No change	☐	No change
Logging and wood harvesting	Medium impact	Medium impact	☑	No change	☐	No change
Unspecified			☑		☐	

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	☑	decrease	☐	No change
Dams and water management/use	High impact	High impact	☑	decrease	☑	decrease
Unspecified/others			☑		☐	

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	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

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Droughts	High impact	High impact	☑	No change	☐	No change
Storms and flooding	High impact	High impact	☑	decrease	☐	No change

Please describe any other threats (optional):

One of the main threat to the area's ecosystems is disruption of the natural hydrological regime of the mire as a result of impact of adjacent amelioration systems, which causes floods or droughts. The impact of this factor was significantly lowered during the last years due to implementation of measures on optimization of the hydrological regime of the mire.

Uncontrolled burning of dry vegetation, especially under dry conditions, leads to peat fires, significant deterioration of breeding conditions for birds, decreasing of mire productivity and insect biomass. Speeding up of vegetation successions as a result of disruptions of hydrological regime.
Overgrowth of open sedge mire with shrubs and reeds (natural system modification - Other) is a serious threat to globally threatened biodiversity. This process is accelerated by changes in economic activities. Recent decades have seen a rapid decline in the amount of haymaking on the mire. Hence, many mire tracts get overgrown with shrubs and reeds, thus loosing its value as a habitat for unique biodiversity.

Land plowing on mineral islands (Biological resourse use - Other) presents a serious threat to floristic diversity. Often visits of people to mineral islands during early spring also disturb birds.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Landscape Reserve	Zvanets	http://drogichin.brest-region.gov.by/index.php?option=com_content&view=article&id=17329&Itemid=2060&lang=ru	whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Zvanets Mire	http://iba.ptushki.org/en/iba/13	whole

5.2.3 - IUCN protected areas categories (2008)

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

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Catchment management initiatives/controls	Partially implemented
Habitat manipulation/enhancement	Partially implemented
Hydrology management/restoration	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Partially implemented

Human Activities

Measures	Status
Management of water abstraction/takes	Partially implemented
Regulation/management of recreational activities	Partially implemented
Research	Implemented

Other:

Starting from the 2002 a row of construction projects were implemented to improve hydrological regime in the mire. It allowed to prevent strong droughts and floods.

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 ◉

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

There is ecological-educational center of the Zvanets Zakaznik.

URL of site-related webpage (if relevant): http://tour.brest.by/turobj/naturalob/359.html

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Implemented
Plant community	Implemented
Birds	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

1. Lishtvan I.I., Bambalov N.N. Yaroshevich L.M. 1991. Scientific-engineering solving of Polessia reclamation problems / The problems of Polessia region. Vol. 14. - P. 3-25. (In Russian).
2. Yaroshevich L.M., Krishtal Y.I. 1991. Ecological problems of soil erosion in Polessia /The problems of Polessia region. Vol. 14. - P. 153-170. (In Russian).
3. Climate of Belarus. 1996. Ed. Loginov V.F. - Minsk. - 234 p. (In Russian).
4. Parfenov V.I., Kim G.A. 1976. Dynamics of meadow-mire flora and vegetation influenced by drainage. - Minsk, Science and technics edition. - 191 p. (In Russian).
5. Dolbik M., Fedushin , 1967. Birds of Belarus, 520 pp. (In Russian).
6. Dolbik M.S. et al. 1987. Strategy for conservation and rational use of the terrestrial vertebrates of Byelorussian Polessie. Problemy Polessia [Problems of Polessie] 11: 139-149. (In Russian).
Doroveef A.M. (chief ed.) 1993. Red Data Book of the Republic of Belarus. Rare and endangered animal and plant species. Minsk: Belaruskaya Encyclopedia. 559 pp. (In Belarussian).
7. Kozulin A., Flade M., Tishechkin A., Pareiko O. Distribution and number of Aquatic Warbler (Acrocephalus paludicola) in Belarus // Subbuteo 1998, v.1, N 1, c.3-16.
8. Sushchenya L.M., Pikulik M.M. 1991. Results and perspectives of study of drainage impact on animal communities / The problems of Polessia region. Vol.14. - P. 131-152. (In Russian).
9. Titov I.V., Lebed B.E., Shkarabo L.S., Kozirev A.D., Mezhevich E.K. 1991. Complex approach to Belarus Polessia land drainage / The problems of Polessia region. Vol.14. - P. 25-54. (In Russian).
10. Personal information from Dombrovskiy V.Ch., Kalchenko A.I., Levy S.V., Malashevich U.U.
11. The management olan for the Republican Landscape Reserve Zvanets (developed by The Scientific and Practical Centre of the National Academy of Belarus for Bioresources, 2009).
12. Dubovik D.V., Skuratovich A.N. Zvanets Mire - the uniquenatural complex of Belarussian Polesie. // The Mire Vegetation: modern problems in classification, mapping, use and protection. Materials of international scientific-practical seminar. – Minsk: Legislation and economy, 2009, p. 156-158.
13. Report on Scientific Work "Censuses of indicator plant and animal species in reserves Sporovsky, Zvanets, Middle Pripyat, Prostyr". Scientific Leader Karlionova N.V., Minsk, 2010. – 56 p.

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>

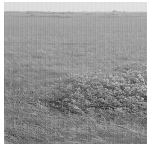
iv. relevant Article 3.2 reports
<no file available>

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

vi. other published literature
<no file available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Open fen mire Zvanets (*Kozulin A.V., 2002*)

The open fen mire is overgrowing with reeds and shrubs (*Kozulin A.V., 2006*)

6.1.4 - Designation letter and related data

Designation letter
<no file available>

Date of Designation: 2002-10-21