



Ramsar Information Sheet

Published on 23 August 2019

Ukraine Black Bog



Designation date	20 March 2019
Site number	2389
Coordinates	48°25'37"N 23°05'50"E
Area	15,00 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 "Black Bog" is the largest surviving peat bog within the Volcanic Carpathian Mts of Ukraine. The peat bog dome of the Site contains the largest peat deposits (up to 6 m), by area and depth, among all of the peat bogs in the Ukrainian Carpathians, therefore containing important data on the vegetation history of the Carpathians.

The Site is dominated by the oligotrophic sphagnum marsh habitat, which is very rare for the mountain areas of the region, and is reduced to just a few locations in the Ukrainian Carpathians. This wetland is a refuge for rare wetland plant species and mosses. The flora of the Site is composed by 67 vascular plant species, almost 30% of which have a threatened status in different national and regional red lists. The wetland maintains populations of rare plant species, animals and habitats, important for the protection of biological diversity of the Volcanic Carpathians. The Site supports 8 plant and 12 animal species listed in the Red Data Book of Ukraine (2009), the majority of which have got "vulnerable" status. Among them there are 13 IUCN Red List species (2 plant and 11 animal species).

The Site is one of few localities in the Ukrainian Carpathians that contains 5 different sphagnum mosses species, including *Sphagnum cuspidatum* and *S. magellanicum*, which are rare in Central Europe. A peculiarity of the wetland's vascular plant composition is the presence of marsh species representatives of the boreal flora

The Site supports the survival of 3 rare habitat types, which are reduced to just a few localities in the Ukrainian Carpathians. They appear in the Resolution 4 regarding habitat types of the Bern Convention.

The wetland is significant for maintaining the water balance of the Irshava river and plays an important role in the flash flood control and mitigation. Water purification for local communities (over 10.000 people) is the most important ecosystem service. These communities are found in the lower part of the Irshava River catchment, where a deficit of high-quality drinking water has been observed within the last decade. Throughout the wetland, conservation measures are carried out by the "Zacharovanyi Krai" National Nature Park administration.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

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Compiler 2

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

From year	2012
To year	2018

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Black Bog
Unofficial name (optional)	Чорне Бажно (Chorne Bahno)

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<2 file(s) uploaded>

Former maps	0
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Boundaries description

The wetland is situated on the Irshava River catchment, which is a part of Tysa (Tisza) basin. It is a part of Irshava District of Zakarpattia Region (70 km south-east from the city of Uzhgorod), 7 km from the village of Pidhirne. The wetland stretches from the south to the north and is located between Buzhora Mount and Martynskyi Kamin Mount within the mountain ridge of Velykyi Dil.

The Site is situated at the Plato called "Bahno". It surrounded by beech-fir-spruce forests and post forest meadows. The northern, eastern and south borders of the Site is delimited by the edge of forest stands, fragmented meadows and horse road. These borders are located by 5 to 30 meters before a large forest massive starts along the horse road. The western border is delimited by former drainage channel restored as water body and after a cover of a post forest meadow.

2.2.2 - General location

a) In which large administrative region does the site lie?	Irshavskiy Rayon (County), Zakarpatska Oblast (Region)
b) What is the nearest town or population centre?	Irshava 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):

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

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Alpine

Other biogeographic regionalisation scheme

According to the geobotanical zoning of Ukraine, the wetland is situated within the European broad-leaved area (zone), of the Carpathian-Alpine mountain province of forests and highland vegetation, of the East-Carpathian subprovince of deciduous and coniferous forests and highland vegetation, of the Verkhovyna-Beskydy district of common oak, beech, and spruce forests and forest meadows (National Atlas of Ukraine, 2007).

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 significant for maintaining the water balance of the Irshava river, and plays a basic role for flash flood control and mitigation. It provides hydrological support for surrounding natural and old growth beech-fir-spruce forests, being specially important as a component part and buffer zone of the "Zachrovanyi Krai-Irshavka" UNESCO World Heritage Site (in total ca. 1400 ha).

Other ecosystem services provided

Water purification for local communities (over 10.000 people) is the most important ecosystem service. These communities are found in the lower part of the Irshava River catchment, where a deficit of high-quality drinking water has been observed within the last decade.

Other reasons

The wetland is a sphagnum marsh type, which is unique for the Volcanic Carpathians. It consists of minerotrophic mires, wet and waterlogged habitats, streams and fluxes, marshy areas, elements of spruce forests and meadow areas. The peat bog dome of the Site contains the largest peat deposits (up to 6 m) by area and depth among all peat bog sites of the Ukrainian Carpathians. It contains important data on the vegetation history of the Carpathians.

- Criterion 2 : Rare species and threatened ecological communities

- Criterion 3 : Biological diversity

Justification

The wetland maintains populations of plant and animal species important for the Carpathians. The flora diversity consists of 67 vascular plant species, which is a significant indicator for a rather conservative ecosystem, the upper sphagnum marsh. A peculiarity of the wetland's vascular plant composition is the presence of marsh species representatives of the boreal flora. In particular, *Scheuchzeria palustris* and *Oxycoccus microcarpus* are known to exist in only three localities of the Ukrainian Carpathians. The Site is one of the few localities in the Ukrainian Carpathians that contain 5 different sphagnum moss species, including *Sphagnum cuspidatum* and *S. magellanicum*, which are rare for Central Europe. Besides the different red listed species, 10 regionally rare plant species (for the Zakarpattia region) are found at the Site.

The representativeness of the wetland is between 70-95%, according to different groups of plant and animals. A considerable variety of water beetles (28 species), ground beetles (8 species) and rove beetles (5 species) is found in the Site. About 20 mammal species were recorded in the wetland and its surroundings. The territory of the wetland and its adjacent areas are a habitat for Red fox (*Vulpes vulpes*), European pine marten (*Martes martes*), wild boar (*Sus scrofa*), European roe deer (*Capreolus capreolus*) and the red deer (*Cervus elaphus*).

- 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
<i>Anacamptis palustris</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
<i>Carex pauciflora</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
<i>Dactyloctenium aegyptium</i>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	listed in the Red Data Book of Ukraine - NT	
<i>Dactyloctenium aegyptium</i>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	listed in the Red Data Book of Ukraine - NT	
<i>Leucophaea verna</i>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - NE	
<i>Neottia ovata</i>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	listed in the Red Data Book of Ukraine - NE	
<i>Scheuchzeria palustris</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
<i>Schoenus ferrugineus</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
<i>Vaccinium microcarpum</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	

The feature of the Site flora is its narrow ecological conjunction – dominate stenotope plant species with very narrow ecological amplitude. Another feature of the Site flora is the presence of typical marsh representatives of the boreal flora. In particular, such species as *Scheuchzeria palustris*, *Oxycoccus microcarpus* have been preserved in small amount of locations.

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																		
ARTHROPODA / INSECTA	<i>Agabus clypealis</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN	<input type="checkbox"/>	<input type="checkbox"/>		
ARTHROPODA / INSECTA	<i>Agria tau</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
ARTHROPODA / INSECTA	<i>Aromia moschata</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
CHORDATA / AMPHIBIA	<i>Bombina variegata</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	The Site supports crucial life stages such as spawning
CHORDATA / MAMMALIA	<i>Canis lupus</i>	Gray Wolf	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Bern Convention - Appendix II	The Site supports crucial life stages such as mating
CHORDATA / MAMMALIA	<i>Castor fiber</i>	Eurasian Beaver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Bern Convention - Appendix III	
ARTHROPODA / INSECTA	<i>Cerambyx cerdo</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
CHORDATA / AMPHIBIA	<i>Lissotriton montandoni</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	supports crucial life stages such as spawning
CHORDATA / MAMMALIA	<i>Lynx lynx</i>	Eurasian Lynx	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - NT	
CHORDATA / MAMMALIA	<i>Myotis brandtii</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Red Data Book - NT, Bern Convention - Appendix II	
CHORDATA / MAMMALIA	<i>Neomys anomalus</i>	Mediterranean Water Shrew; Southern Water Shrew	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - NT	
ARTHROPODA / INSECTA	<i>Parnassius mnemosyne</i>	Clouded Apollo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
ARTHROPODA / INSECTA	<i>Rosalia alpina</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	
CHORDATA / AMPHIBIA	<i>Salamandra salamandra</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	listed in the Red Data Book of Ukraine - VU	supports crucial life stages such as spawning

1) Percentage of the total biogeographic population at the site

Due to the relatively small area of the wetland, here is noted a relatively small amount of animal species, however, the significant part of them has a high conservation status. At the same time, there is a great diversity of water beetles (28 species), ground beetles (8 species) and rove beetles (5 species). About 20 mammal species were detected on the territory and aside of the wetland, 5 of them are noted on the Red Data Book of Ukraine (2009). The territory of the wetland and its adjacent areas are place of habitats for the wolf (*Canis lupus*), red fox (*Vulpes vulpes*), European pine marten (*Martes martes*), wild boar (*Sus scrofa*), European roe deer (*Capreolus capreolus*), the red deer (*Cervus elaphus*) and European beaver (*Castor fiber*).

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
D2.226 Peri-Danubian black-white-star sedge fens.	<input checked="" type="checkbox"/>	Acidic fens, with an herbaceous sward formed by <i>Carex echinata</i> , <i>Carex canescens</i> , or <i>Carex rostrata</i> and sometimes <i>Juncus effusus</i> , or <i>Nardus stricta</i> .	Bern Convention - Resolution 4 habitat type.
D1.234 Northern boreo-Atlantic <i>Calluna</i> - <i>Empetrum</i> - <i>Sphagnum fuscum</i> blanket bogs	<input checked="" type="checkbox"/>	Bog-surface and hummock communities of the northern boreal blanket bogs dominated by <i>Calluna vulgaris</i> , <i>Empetrum</i> spp., <i>Vaccinium uliginosum</i> and <i>Sphagnum fuscum</i> with <i>Andromeda polifolia</i> , <i>Vaccinium microcarpum</i> , <i>Drosera rotundifolia</i> .	Bern Convention - Resolution 4 habitat type.
D2.3 Transition mires and quaking bogs.	<input checked="" type="checkbox"/>	Incompletely terrestrialized wetlands occupied by peat-forming vegetation with acid groundwater. Characteristic species are <i>Carex lasiocarpa</i> , <i>Rhynchospora alba</i> , <i>Scheuchzeria palustris</i> . Included are rafts of <i>Sphagnum</i> and <i>Eriophorum</i> (D2.38).	Bern Convention - Resolution 4 habitat type.

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

4.1 - Ecological character

The Site is composed of a sphagnum bog located at the foothill of the Buzhora Mount in the Bahonskyi river valley. It has the characteristic shape of bogs, with a spherical relief. The peat profile at the dome is over 6 meters deep. It's very unique for the Volcanic Carpathians. Despite fire incidents that occurred on the second half of the 20th century, a number of melioration efforts and recent restoration efforts have maintained the bog, which is almost fully recovered.

The Site consists of a minerotrophic mire, wet and waterlogged habitats, streams and fluxes, marshy areas, fragments of wet spruce forests and wet meadow areas. The soils and vegetation receive their water supply mainly from streams. Peatbog soils with a varying thickness of the peat layer dominate. The adjacent forest is formed mainly by groupings with dominance of spruce, beech, fir and sycamore. This wetland is an indispensable refuge for the survival of many rare plant and animal species.

The depth of the main stream in the upper part exceeds 30-50 cm, while it is around 1 m in some lower parts, with a width of about 1.5 m. The left bank of the Bahonskyi stream is a man-made dam, remnant of failed amelioration activities. The overgrowth of the marsh surface is insignificant, up to 5%.

The wetland is located within the meso-ecoregion of the Vyhorlat-Hutyn volcanic low-mountain ridge with a temperate warm montane meso-climate. The annual mean temperature is 8.5 °C, in January -4.0 °C and in July 19.5 °C. The annual amount of precipitation is about 850 mm.

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 >> N: Seasonal/intermittent/irregular rivers/streams/creeks		4	0.1	Representative
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		1	14.1	Rare
Fresh water > Marshes on inorganic or peat soils >> Va: Montane wetlands		2	0.7	Rare

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	0.1	

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
<i>Andromeda polifolia</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Calluna vulgaris</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Drosera rotundifolia</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Dryopteris dilatata</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Empetrum nigrum</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Eriophorum vaginatum</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Polytrichum commune</i>		
<i>Rhynchospora alba</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Sphagnum cuspidatum</i>		
<i>Sphagnum fuscum</i>		
<i>Sphagnum magellanicum</i>		
<i>Sphagnum recurvum</i>		
<i>Sphagnum rubellum</i>		
<i>Valeriana dioica</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Veratrum album</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region
<i>Viola palustris</i>		Regionally rare, included into the regional list of rare flora species of Zakarpattia Region

Optional text box to provide further information

No invasive plant species were spotted at the Site

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	<i>Capreolus capreolus</i>	western roe deer				
CHORDATA/MAMMALIA	<i>Cervus elaphus</i>	elk/wapiti or elk				
CHORDATA/MAMMALIA	<i>Martes martes</i>	European Pine Marten				
CHORDATA/MAMMALIA	<i>Sus scrofa</i>	wild boar				
CHORDATA/MAMMALIA	<i>Vulpes vulpes</i>	Red Fox				

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 is of moderate continental type. The average annual temperature is 8.5°C, in January -4.0°C, in July 19.5°C. Annual precipitation sum is about 850 mm. Marshy soils with different thickness of the peat layer dominate.

4.4.2 - Geomorphic setting

- a) Minimum elevation above sea level (in metres)
- a) Maximum elevation above sea level (in metres)

- 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.

Tysa River Basin

4.4.3 - Soil

- Mineral
- Organic
- 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)

Marshy soils with different thickness of the peat layer dominate. Besides marshy peat soils, there are alluvial meadow brown earth soils and podzolic brown earth soils. Vegetation is of the wetland and the mesophilic type.

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from surface water	<input type="checkbox"/>	No change
Water inputs from groundwater	<input type="checkbox"/>	No change
Water inputs from rainfall	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	
To downstream catchment	No change

Stability of water regime

Presence?	
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 situated in the upper part of Irshava, which is the tributary of the Borzhava River. The marsh is a flood regime regulator, as it accumulates waters from the surface run-off of the surrounding slope surfaces, what influences on the flood level in the valley of the Irshava River. The hydrological regime of the marsh has underwent a partial change due to the land irrigation.

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site
- Significant accretion or deposition of sediments occurs on the site
- Significant transportation of sediments occurs on or through the site
- Sediment regime is highly variable, either seasonally or inter-annually
- Sediment regime unknown

4.4.6 - Water pH

- Acid (pH<5.5)
- Circumneutral (pH: 5.5-7.4)
- Alkaline (pH>7.4)
- Unknown

4.4.7 - Water salinity

- Fresh (<0.5 g/l)
- Mxohaline (brackish)/Mxosaline (0.5-30 g/l)
- Euhaline/Eusaline (30-40 g/l)
- Hyperhaline/Hypersaline (>40 g/l)
- Unknown

4.4.8 - Dissolved or suspended nutrients in water

- Eutrophic
- Mesotrophic
- Oligotrophic
- Dystrophic
- Unknown

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 i) broadly similar ii) significantly different site itself.

- 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:

The surrounding area of the wetland is represented by slopes with forest vegetation and flooded wet meadows. Marshes in the Carpathians are rather rare phenomenon. They are concentrated mainly in swales of the relief creases, which in the process of the historical development in the humid climate, were formed as a result of herbaceous-moss vegetation. On these heights in the Carpathians, dominate conifer on slopes of different steepness, mixed and deciduous forests. Wet or damp meadows occupy the area of the wetland from the western side, they are represented by tall miscellaneous herbs, sedges and grain plant species.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Drinking water for humans and/or livestock	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium

Supporting Services

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

Other ecosystem service(s) not included above:

The wetland function is also the water purification for local communities (over 10.000) in the lower current of the part of the Irshava River catchment, where within the last decade has been observed a deficit of high-quality drinking water.

Within the site:

Outside the site:

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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Local authority, municipality, (sub)district, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

The area of the wetland belongs to the National Nature Park "Zacharovanyi Krai" .

5.1.2 - Management authority

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

National Nature Park «Zacharovany Krai»

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

Fennych Vasyl Stepanovych, director

Postal address: Zakarpattia Region, Irshava District, village lnytsia, Partyzanska str.

E-mail address: zacharovanijkraj@ukr.net

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	In the surrounding area
Drainage	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Wood and pulp plantations	Low impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Logging and wood harvesting	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Droughts	Low impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Habitat shifting and alteration	Low impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Nature Park	Zacharovanyi Krai	http://nppzk.info/golovna.html	whole

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	Proposed
Habitat manipulation/enhancement	Proposed

Species

Measures	Status
Threatened/rare species management programmes	Proposed

Human Activities

Measures	Status
Communication, education, and participation and awareness activities	Partially implemented
Research	Partially implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? No

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

URL of site-related webpage (if relevant):

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, the site has already been restored

Further information

The restoration was undertaken 3 years ago (2015-2016) to respond to threats identified for the wetlands, like fire, low water table, poor vegetation recovery and decrease of rare species populations. After a number of activities were implemented, like (1) raise the water table, (2) destroy the ditches and large drainage channels, (3) increase the water flow into the wetland, the situation has changed dramatically in favour of the wetland like the species populations were raised, significantly increased the water table and natural processes were improved.

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Proposed
Plant community	Proposed
Animal species (please specify)	Proposed
Plant species	Proposed

It was proposed to monitor number of animal species, like *Myotis brandtii*, *Lynx lynx*, *Canis lupus*, *Rosalia alpina*, *Cerambyx cerdo*, *Agabus clypealis* and *Castor faber* on permanent basis for the scientific staff of the "Zacharovanyi Krai" National Nature Park. Some periodical (non regular) monitoring of *Agabus clypealis*, *Castor faber* and *Canis lupus* are arranged.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Andriyenko T.L. Peat-marsh area of the Carpathians and Prykarpattia // Peat-marsh fund of USSR, its zoning and exploitation. - K.: Naukova Dumka, 1973.- P. 201-229.

Bashta A.-T.V., Potish L. A. Mammals of Zakarpattia Region. – Lviv, 2007. – 260 p.

Kovalchuk A. A. and others Marsh ecosystems of the Eastern Carpathians region within Ukraine. – Uzhhorod, 2006. – 228 p.

Mateleshko O.Y. Water beetles of the Ukrainian Carpathians. – Uzhhorod, 2008.- 200p.

Mygal A.V. Current condition and reconstruction of plant cover of the oligotrophic sphagnum marsh "Chorne Bahno" (RPE «Zacharovany Krai») / Ecology of wetlands and peatlands (collection of scientific articles). – Kyiv: «SPE «Interservice» Ltd., 2014. – P. 158-161.

National Atlas of Ukraine. – Kyiv: State SPE « Cartography», 2007. – 440 p.

Potish L. A. Birds of Zakarpattia Region (annotated list). – Lviv, 2009.- 124 p.

The Red Data Book of Ukraine. Vegetation world / under ed.of Y.P. Didukh – K.: Globalconsulting, 2009.- 912 p.

The Red Data Book of Ukraine. Animal world / under ed.of I.A. Akimov. - K.: Globalconsulting, 2009. – 600 p.

EU Water Framework Directive 2000/60/EC Definitions of Main Terms

Popov S. 2008. Butterflies of the Transcarpathian Floodplain ecosystems: monitoring, ecology and conservation. - Uzhgorod: Art Line.- 124 p.

Official Lists of regionally rare plants of administrative territories of Ukraine (reference edition) / Redactors: doctor of biology, professor T.L. Andriyenko, PhD in Biological Sciences M. M. Peregryn. – Kyiv: Altpress, 2012. – 148 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

<no file available>

vi. other published literature

<no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



The Site "Black Bog" (Bohdan Prots, 07-10-2013)



The Site "Black Bog" (Bohdan Prots, 19-08-2014)



The Site "Black Bog" (Bohdan Prots, 19-08-2014)



The Site "Black Bog" (Bohdan Prots, 19-08-2014)



The Site "Black Bog" (Bohdan Prots, 12-10-2013)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation