

Ramsar Information Sheet

Published on 23 August 2019

UkrainePrut River Headwaters



Designation date 20 March 2019
Site number 2395
Coordinates 48°10'N 24°33'08"E
Area 4 935,44 ha

https://rsis.ramsar.org/ris/2395 Created by RSIS V.1.6 on - 20 May 2020

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 represented by an alpine post-glacial community of wet meadows, peat bogs, lakes, streams, watercourses, riparian zones, and century-old forests of the Chornohora mountain range in the Ukrainian part of the Carpathians. The Prut River has its source in these highlands, and one of the largest alpine lakes, Nesamovyte, can be also found there. The Site holds a high concentration of Carpathian endemic and a number of post-glacial relict species. It is one of the most important biodiversity hotspots in the Ukrainian Carpathian region, crucial for the conservation of its species and ecological communities. A relatively small area of the Site supports about 700 species of vascular plants and plant communities, over 137 species of vertebrates (12 species of amphibians and reptiles, 85 species of birds, 40 species of mammals). The site provides habitats for 35 vulnerable and endangered species included in the Red Data Book of Ukraine (2009), which are vital components of biological diversity of the Carpathian highlands. It supports 6 plants and 17 animal species of IUCN Red List. Also, here, it was recorded 3 species listed in Appendix II (Bern Convention). The Site provides a habitat for at least 45 endemics plant and animal species and their subspecies. Remarkably, the Site holds 12 habitats included in Resolution 4 of the Bern Convention. It is recognized as habitats hotspot of highland wetlands for the Ukrainian Carpathians.

The territory is also characterized by a unique landscape with a high diversity of relief mountain forms, developed under the prolonged effect of geological epochs. Apart from this, the Site acts as a large storage tank of water resources, slowly accumulating them during heavy rains or snow-melting, and thus preventing drastic floods in the downstream areas. It is an important source of fresh water for at least 5,000 people and crucial for the support of the hydrological balance of the Prut River. The favourable climate conditions and weakly disturbed landscapes have turned the wetland into a very popular and the most frequently visited place of interest in the Ukrainian Carpathians.

The Site is a part of the Carpathian National Nature Park, which is responsible for the restricted use and management of natural resources of the area.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Compiler 2

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

From year 2011

To year 2018

Fax +380322356917

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Prut River Headwaters

Unofficial name (optional)

Витоки ріки Прут (Vytoky riky Prut)

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<3 file(s) uploaded>

Former maps 0

Boundaries description

The Site is located in 100 km to the south-west from Ivano-Frankivsk city, 12 km to the south from the town of Vorokhta (Yaremchanska City Council of Ivano-Frankivsk Region). It is located in the headwaters of the Prut River. The upper part of the Site lies on the border between Ivano-Frankivska Oblast and Zakarpatska Oblast (Transcarpathia) and follows mountain peaks along the edge of the river catchment. Thus, the Site delimitation goes clockwise across Mount Kizly (1,911 m a.s.l.) to Mount Turkul (1,933 m), Dantser (1,856 m), Pozhyzhevska (1,822 m), Breskul (1,912 m), Hoverla (2,061 m), Mala Hoverla (1,762 m), Velyka Kozmeska (1,573 m), Kukul (1,539 m), Mount Ozirnyi (1,337 m), Velyka Maryshevska (1,567 m), and Shpytsi (1,863 m), Kryvohyhy (1,299 m) and Marysh (1,352 m). The delimitation of the Site between from the Mount Kukul (1,539 m) and Mount Ozirnyi (1,337 m) goes via Zakukul Polonyna, mountain range till the Zarosliak-Vorokhta tourist road (910 m) appears. After the tourist road, the delimitation goes via mountain range (which belongs to Ozirnyi track), and Ozirna Polonyna till the Mount Ozirnyi (1,337 m).

2.2.2 - General location

a) In which large administrative region does	Nadvirna District (Nadvirnianskyi Raion), Ivano-Frankivsk Region, Ukraine
b) What is the nearest town or population centre?	Vorokhta town

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other Yes O No

Yes O No countries?

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

2.2.4 - Area of the Site

Official area, in hectares (ha): 4935.44

Area, in hectares (ha) as calculated from 4935.442 GIS boundaries

2.2.5 - Biogeography

Biogeographic regions

Regionalisati	on scheme(s)	Biogeographic region
	eographic alization	Alpine

Other biogeographic regionalisation scheme

According to geobotanical zoning of Ukraine, the site is located within the European broad-leaved region (zone), the Carpathian-alpine mountain province of forests and alpine vegetation, the Eastern Carpathian sub-province of the deciduous and coniferous forests and alpine vegetation of the Marmorosko-Chornohirsko-Svydovetskyi district of the sessile- and common oak, beech, larch and fir forests, subalpine and alpine vegetation (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 Site is crucial for the natural functioning of the Prut river basin. It plays a leading role in the natural control and mitigation of floods and is an important storage tank, seasonally accumulating water for the areas protected within the Carpathian National Nature Park (Ukraine) and located downstream.

It is also an important source of fresh water for at least 5,000 citizens of Vorokhta Town and its vicinities. The peat bog prevents floods in the upper part of the river and plays a determining role in the mitigation of flood consequences. The wetland areas are crucial for the support of the hydrological balance of the Prut River.

Other ecosystem services provided

Forest areas in the region of the Prut Headwaters provide supporting services for such key ecosystem processes as soil formation, protection from soil erosion, primary productivity, basic biochemical processes (nutrient cycle, photosynthesis) and microclimatic stability support.

The Site is located within the area of the Hutsul ethnographic group of Ukrainians. The part of rich spiritual and cultural heritage of this group is linked to this Site. A cultural value of the ecosystem services lies in the enrichment of cultural, spiritual and aesthetical aspects of human welfare: positive emotions due to communication with nature.

Other reason

The Prut Headwaters is a rare natural wetland in the Eastern Carpathian biogeographical region. It is one of the most important biodiversity hotspots, crucial for the conservation of species and ecological communities of the Ukrainian Carpathians, including regionally rare and threatened ones. This value is increasing under the climate change and the continuing upward shift of the upper forest border in mountains.

- ☑ Criterion 2 : Rare species and threatened ecological communities
- Criterion 3 : Biological diversity

The ecological diversity of the Chornohora mountain range and historical peculiarities of flora genesis have led to a high species variety of plants in this site. 700 species of plants, found there, makes up more than half of the total number of species of the Ukrainian Carpathians. As for a taxonomic structure, the families Asteraceae, Poaceae, Cyperaceae dominate. Montane (25.9%), boreal (24.7%) and nemoral (30.7%) flora elements are the most numerous. Arctic-alpine (2.7%), alpine (5.4%), polyzonal (5.8%) and arid (2.8%) elements are more localized.

The Prut Headwaters is one of the hotspots for endemic and relict species of plants, including Arcticalpine species (Carex bicolor, Polygonum viviparum, Botrychium lunaria), Eastern Carpathian endemics (Pulmonaria filarszkyana, Silene dubia, Centaurea mollis, Gentiana laciniata, Chrysosplenium alpinum), Eastern-Southern-Carpathian endemics (Viola declinata, Aconitum paniculatum), and one Carpathian-Balkan endemic (Doronicum carpaticum). Among rare Carpathian endemics, Festuca carpatica and Pyrola carpatica are important.

Slopes of Mount Turkul is the only locality of Oreochloa disticha in the Ukrainian Carpathians. The Site also holds a unique isolated habitat of Linnaea borealis on the northern macroslope of Mount Pozhyzhevska.

Justification

The wetland supports animal species important for the biodiversity of the Eastern Carpathians. It also holds a great number of endemic species of invertebrates, including Amphipoda (at least 37 species and subspecies are endemics of the Carpathians): Niphargus stygius corinae, N.stygius hoverlicus, representatives of Ephemeroptera (Ecdyonurus austriacus nataliae, E.rizuni, E.nigrescens), Trichoptera (Apatania carpathica, Drusus carpathicus, Chaetopteryx polonica, Chaetopteryx subradiata, Psilopteryx psorosa carpathica, etc.), and Coleoptera, Carabidae (Nebria fuscipes, N.reitteri, N.transsylvanica, Carabus auronitens escheri, C.hampei, C.obsoletus, etc).

The Site provides habitats for more than 137 species of vertebrates (12 species of amphibians and reptiles, 85 species of birds, 40 species of mammals). 30 vertebrate species, typical for the Site, are vital components of biodiversity of the Carpathian highlands and are listed in the Red Data Book of Ukraine (2009), Bern Convention (II), the IUCN Red List. They are Salamandra salamandra, Mesotriton alpestris, Lissotriton montadoni, Sorex alpinus, Lutra lutra, Chionomys nivalis, Ursus arctos, Canis lupus and others. The Site is valuable for rodents (Sicista betulina (Red Data Book of Ukraine), Arvicola scherman, Chionomys nivalis (RDBU), Microtus tatricus (RDBU), Microtus agrestis), preferring wet and waterlogged habitats, in particular, scrubs of Vaccinietum-Alnetum, Rumex, mountain valleys with rich grass cover, scrubs of Pinus mugo, juniper, alder, rhododendron and sedge, and raised bogs.

☑ 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
Botrychium Iunaria		V	₽				listed in the Red Data Book of Ukraine - VU	
Carex bicolor		V	V		LC		listed in the Red Data Book of Ukraine - EN	
Carex pauciflora		V	2		LC		listed in the Red Data Book of Ukraine - VU	
Cerastium cerastoides		2	2				listed in the Red Data Book of Ukraine - EN	
Dactylorhiza cordigera		V	2		LC		listed in the Red Data Book of Ukraine - VU	
Dactylorhiza maculata		V	2				listed in the Red Data Book of Ukraine - VU	
Erigeron atticus			 ✓				listed in the Red Data Book of Ukraine - EN	
Festuca porcii		V	 ✓				listed in the Red Data Book of Ukraine - VU	

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Gentiana acaulis			2		LC		listed in the Red Data Book of Ukraine - NT	
Gentiana lutea		V	2				listed in the Red Data Book of Ukraine - VU	
Gentiana punctata		✓	2				listed in the Red Data Book of Ukraine - VU	
Gladiolus imbricatus		V	2				listed in the Red Data Book of Ukraine - VU	
Goodyera repens		V	 ✓				listed in the Red Data Book of Ukraine - VU	
Gymnadenia conopsea		V	Ø				listed in the Red Data Book of Ukraine - VU	
Gymnadenia densiflora		V	 ✓				listed in the Red Data Book of Ukraine - VU	
Linnaea borealis		V	Ø				listed in the Red Data Book of Ukraine - EN	
Neottia cordata		V	 ✓		LC		listed in the Red Data Book of Ukraine - VU	
Orchis mascula		V	Ø				listed in the Red Data Book of Ukraine - EN	
Oreochloa disticha		V	 ✓				listed in the Red Data Book of Ukraine - EN	
Primula matthioli		V	Ø				listed in the Red Data Book of Ukraine - EN	
Pseudorchis albida		V	 ✓				listed in the Red Data Book of Ukraine - VU	
Pulsatilla scherfelii			₽				listed in the Red Data Book of Ukraine - NT	
Rhodiola rosea		V	₽				listed in the Red Data Book of Ukraine - VU	
Rhododendron myrtifolium		V	₽		EN		listed in the Red Data Book of Ukraine - NE	
Salix lapponum		V	₽				listed in the Red Data Book of Ukraine - VU	
Selaginella selaginoides		V	2				listed in the Red Data Book of Ukraine - VU	
Spinulum annotinum		V	₽				listed in the Red Data Book of Ukraine - VU	
Traunsteinera globosa		V	2				listed in the Red Data Book of Ukraine - VU	

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

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Phylum	Scientific name	Common name	Species qualifies under criterion 2 4 6 9	Species contribute under criterion 3 5 7	Pop Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds												
CHORDATA/ AVES	Aegolius funereus	Boreal Owl						LC			listed in the Red Data Book of Ukraine - NT	
CHORDATA/ AVES	Aquila chrysaetos	Golden Eagle	Ø000					LC			listed in the Red Data Book of Ukraine - VU	
CHORDATA/ AVES	Aquila pomarina	Lesser Spotted Eagle									listed in the Red Data Book of Ukraine - NT	

Phylum	Scientific name	Common name	Species qualifies under criterion	Species contributes under criterion 3 5 7 8	Pop. Size Period of pop. Est.	% occurrence 1)		CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Falco peregrinus	Peregrine Falcon					LC	₽		listed in the Red Data Book of Ukraine - NT	
	Glaucidium passerinum	Eurasian Pygmy Owl					LC			listed in the Red Data Book of Ukraine - VU	
CHORDATA/ AVES	Prunella collaris	Alpine Accentor					LC			listed in the Red Data Book of Ukraine - VU	
	Regulus ignicapilla						LC			listed in the Red Data Book of Ukraine - NE	
CHORDATA/ AVES	Strix uralensis	Ural Owl					LC			listed in the Red Data Book of Ukraine - DD	
Fish, Mollusc a	nd Crustacea										
ACTINOPTERYGII		Common bullhead					LC				
CHORDATA/ ACTINOPTERYGII							LC				
CHORDATA/ ACTINOPTERYGII	Salmo trutta						LC				
CHORDATA/ ACTINOPTERYGII							LC			listed in the Red Data Book of Ukraine - VU	
Others											
CHORDATA/ AMPHIBIA	Bombina variegata						LC			listed in the Red Data Book of Ukraine - VU	Area of breeding and growth of juveniles
CHORDATA/ MAMMALIA	Canis lupus	Gray Wolf					LC	V		Bern Convention - Appendix II	
MAMMALIA	Capreolus capreolus	western roe deer					LC				
CHORDATA/ MAMMALIA	Cervus elaphus						LC		V		
CHORDATA/ MAMMALIA	Chionomys nivalis	European snow vole					LC			listed in the Red Data Book of Ukraine - NT	
	lchthyosaura alpestris						LC			listed in the Red Data Book of Ukraine - VU	Area of breeding and growth of juveniles
	Lissotriton montandoni						LC			listed in the Red Data Book of Ukraine - VU	Area of breeding and growth of juveniles
CHORDATA/ MAMMALIA	Lutra lutra	European Otter	2 000				NT			listed in the Red Data Book of Ukraine - NT, Bern Convention - Appendix II	
CHORDATA/ MAMMALIA	Lynx lynx	Eurasian Lynx					LC			listed in the Red Data Book of Ukraine - NT	
CHORDATA/ MAMMALIA	Martes martes	European Pine Marten					LC				
CHORDATA/ MAMMALIA	Microtus tatricus	Tatra Pine Vole; Tatra Vole	2 000				LC			listed in the Red Data Book of Ukraine – EN Bern Convention - Appendix II	
CHORDATA/ MAMMALIA	Mustela erminea	Ermine					LC			listed in the Red Data Book of Ukraine - NE	
CHORDATA/ MAMMALIA	Mustela lutreola	European Mink					CR			listed in the Red Data Book of Ukraine - CR	
	Salamandra salamandra						LC			listed in the Red Data Book of Ukraine - VU	Areas of breeding and growth of juveniles
CHORDATA/ MAMMALIA	Sicista betulina						LC			listed in the Red Data Book of Ukraine - NT	
CHORDATA/ MAMMALIA	Ursus arctos	Brown Bear					LC	₽		listed in the Red Data Book of Ukraine - EN	

1) Percentage of the total biogeographic population at the site

The site supports at least 37 Carpathian endemic species and subspecies of invertebrates. The Prut Headwaters provide valuable habitats for Salmo trutta m. fario. The river is inhabited by Salmo trutta, Cottus gobio, Phoxinus phoxinus. It is also an important reproduction area for mountain species of amphibians, listed in the Red Data Book of Ukraine (2009): Salamandra salamandra, Ichthyosaura alpestris, Lissotriton montadoni, and Bombina variegata.

Species, adapted to extreme climatic conditions of highlands, can be also found there: Canis lupus, Vulpes vulpes, Ursus arctos, Martes martes, Mustela erminea, Mustela lutreola, Lutra lutra, Lynx lynx, Sus scrofa, Capreolus capreolus, Cervus elaphus. The wetland is important for a number of rodents, preferring wet and waterlogged habitats (in particular, scrubs of Vaccinietum-Alnetum, Rumex; mountain valleys with rich grass cover; scrubs of Pinus mugo, juniper, alder, rhododendron and sedge; raised bogs).

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
C2.12 Hard water springs	2	Species-rich habitats with high moss cover, high dominance of moss Cratoneuron commutatum is typical. The stands belong to alliances Cratoneurion commutati and Lycopodo-Cratoneurion commutati with typical species Saxifraga aizoides, Viola biflora.	Bern Convention - Resolution 4 habitat type.
C2.18 Acid oligotrophic vegetation of spring brooks.	Ø	Euhydrophyte communities of Palaearctic streams poor in nutrients and in lime, with, in particular Callitriche hamulata, or acidophilous mosses and algae.	Bern Convention - Resolution 4 habitat type.
C2.25 Acid oligotrophic vegetation of fast- flowing streams	✓	Euhydrophyte communities of Palaearctic streams poor in nutrients and in lime, with, in particular, Callitriche hamulata, or acidophilous mosses and algae.	Bern Convention - Resolution 4 habitat type.
D2.226 Peri-Danubian black-white-star sedge fens	v	Acidic fens, with an herbaceous sward formed by Carexechinata, Carexcanescens, Carex dacica or Carex rostrata and sometimes Juncus effusus, or Nardus stricta.	Bern Convention - Resolution 4 habitat type.
D5.2 Beds of large sedges normally without free-standing water	Ø	Terrestrialized stands of tall Carex, usually species-poor and often dominated by one species, growing on waterlogged ground. These species also grow as emergents and fringing vegetation beside water bodies (C3.2).	Bern Convention - Resolution 4 habitat type.
E1.71 Nardus stricta swards	2	Mesophile and xerophile Nardus stricta- dominated Other important species: Festuca rubra, Agrostis capillaris, Avenula versicolor, Campanula alpina and Avenella flexuosa.	Bern Convention - Resolution 4 habitat type.
E2.3 Mountain hay meadows	Ø	Often species-rich mesotrophic to eutrophic hay meadows of the montane and subalpine levels of higher mountains of the nemoral and southern boreal zones.	Bern Convention - Resolution 4 habitat type.

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Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
E4.3 Acid alpine and subalpine grassland	✓	Alpine and subalpine grasslands developed over crystalline rocks and other lime-deficient substrates or on decalcified soils of mountains. On boreal mountains, Carex bigelowii and Juncus trifidus.	Bern Convention - Resolution 4 habitat type.
E5.5 Subalpine moist or wet tall-herb and fem stands	2	Luxuriant tall herb formations of deep, humid soils in the montane to alpine, but mostly subalpine, levels of the higher mountains, with Cicerbita alpina, Ranunculus platanifolius, Adenostyles alliariae, Trollius europaeus, Tozzia alpina.	Bern Convention - Resolution 4 habitat type.
F2.224 Carpathian Rhododendron kotschyi heaths	2	Heaths of the subalpine and lower alpine levels (1700-2000 m) of the eastern and southern Carpathian Mountains, common and widespread, but occupying small surfaces, dominated by Rhododendron myrtifolium.	Bern Convention - Resolution 4 habitat type.
G1.12 Boreo-alpine riparian galleries	Ø	Riverside of the high mountains of the nemoral zone and of their piedmont influence region, dominated by Alnus incana. In the herb layer, nitrophilous and hygrophilous species dominate.	Bern Convention - Resolution 4 habitat type.
G3.1B Alpine and Carpathian subalpine Picea forests	Ø	Picea abies forests of the lower subalpine level. The spruces, often stunted or columnar, are accompanied by an undergrowth of decidedly subalpine affinities. Picea abies forests of the lower subalpine level of the Carpathians.	Bern Convention - Resolution 4 habitat type.

Optional text box to provide further information

Generally, the fauna has the nature of "insular" mountain taiga. It is a specific community of boreal-taiga and mountain species of vertebrates, plants and habitats has been formed.

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

4.1 - Ecological character

The site is represented by a catchment basin with a system of streams, bogs and lakes of natural origin in the Prut Headwaters. It is located within Chornohora tectonic zone, formed of chalk and Paleogene flysch, with the dominance of massive sandstones and less developed layers of argillite and aleurolite. Soil cover is represented by weakly developed and short-profile types of mountain-meadow sour subalpine brown soils and sour moderately cold brown soils. The climate is transitional from moderately warm Western European to continental Eastern European. The macroclimate is moderately continental and represented by several mountain's altitudinal mesoclimate belts, overlapped with vegetation zones.

The relief is characterized by a combination of rounded and dome-shaped mountain peaks with steep slopes of the relict glacial complex (Meso-Pleistocene glacial cirques and deflections of valleys), associated with current nival, gravitational and fluvial-denudation processes. The site provides valuable habitats and breeding grounds for numerous representative fauna: wet and waterlogged areas, banks of streams and rivers, boggy areas in the upper part of a beech and fir forest zone; alpine meadows with abundant grass cover; beds of Rumex; elfin woodland; scrubs (in particular Vaccinietum-Alnetum, juniper, rhododendron), evergreen sedges; raised bogs and water bodies of different size, including temporary ones.

Beech-spruce (up to 1250 m), spruce (1250-1500 m), sub-Alpine with mountain pine, juniper and green alder (1500-1750 m) and Alpine (over 1750 m) altitudinal vegetation zones are delineated here. The forests and the Alpine pastures were intensively exploited until the middle of the 20th century – therefore, there are frequent cultural spruce monodominant stands in the spruce-beech altitudinal belt.

The wetland provides regulatory services for such ecosystem processes as the climate formation, protection from floods, landslides and other natural disasters, air and water purification.

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

Inland wetlands

nland 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 >> Mt Permanent rivers/ streams/ creeks		4	3	Representative
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		3	5	Representative
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		3	15	Representative
Fresh water > Marshes on peat soils >> U: Permanent Non- forested peatlands		3	25	Rare
Fresh water > Marshes on inorganic soils >> W. Shrub- dominated wetlands		2	487.54	Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		1	3080	Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		3	20	Rare
Fresh water > Flowing water >> Y: Permanent Freshwater springs; oases		4	0.5	Representative

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
1: Aquaculture ponds	Trout fish farming	4	1	
2: Ponds		4	0.5	

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Foliated rocks	25
Meadows and mountain valleys	200
Elfin woodland	150
Buildings	10
Roads	0.5
Coniferous and deciduous forests	950

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Aconitum nanum		endemic
Carex umbrosa		Red Data Book of Ukraine - NE
Centaurea mollis		endemic
Crocus heuffelianus		Red Data Book of Ukraine - NE, a montane-alpine species at the south-eastern limit of its range
Epipactis helleborine		Red Data Book of Ukraine - NE
Huperzia selago		Red Data Book of Ukraine - NE, a tertiary relict
Jacobaea abrotanifolia carpathica		endemic
Lilium martagon		Red Data Book of Ukraine - NE
Neottia nidus-avis		Red Data Book of Ukraine - NE
Neottia ovata		Red Data Book of Ukraine - NE
Phyteuma vagneri		endemic
Platanthera bifolia		Red Data Book of Ukraine - NE
Poa granitica disparillis		south-eastern Carpathian endemic
Tozzia alpina		Carpathian-Balkan endemic

Invasive alien plant species

Scientific name	Common name	Impacts	
Bidens frondosa		Potentially	No change
Erigeron annuus		Potentially	No change
Heracleum sosnowskyi		Potentially	No change

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
ARTHROPODAINSECTA	Acrophylax vernalis					Carpathian endemic
ARTHROPODAINSECTA	Apatania carpathica					Carpathian endemic
ARTHROPODA/INSECTA	Carabus sylvestris transylvanicus					
ARTHROPODA/INSECTA	Chaetopteryx polonica					Carpathian endemic
ARTHROPODA/INSECTA	Chaetopteryx subradiata					Carpathian endemic
ARTHROPODA/INSECTA	Chionophylax czarnohoricus					Carpathian endemic
ARTHROPODAINSECTA	Drusus carpathicus					Carpathian endemic
ARTHROPODA/INSECTA	Ecdyonurus nigrescens					Carpathian endemic
ARTHROPODA/INSECTA	Ecdyonurus rizuni					Carpathian endemic
ARTHROPODA/INSECTA	Isogamus czarnohorensis					Carpathian endemic
THROPODA/MALACOSTRACA	Niphargus corinae					Carpathian endemic
THROPODA/MALACOSTRACA	Niphargus hoverlicus					Carpathian endemic
ARTHROPODA/INSECTA	Potamophylax carpathicus					Carpathian endemic
ARTHROPODA/INSECTA	Psilopteryx psorosa carpathica					Carpathian endemic

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)

Climate zoning: a cold zone, a cooler subzone (the sum of temperatures is 6,000-10,000, hydrothermal coefficient is 4-5, the total vegetation period lasts 90 days).

The macroclimate of the area is moderately continental and represented by several mountain altitudinal mesoclimatic belts corresponding to altitudinal vegetation belts. The altitude differs between 2061 and 910 meters above sea level. It influences the temperature and precipitation. The mean temperature differs between 0.1-0.5 °C at the highest peaks and 2.95 °C at lowest area of the Site. The annual sum of active temperatures (above 10°C) ranges from 1,400°C in the lower part of the site to 100-200°C on the highest mountain peaks. The annual mean precipitation amount is about 1,100 mm. The beech-fir (up to 1,250 m), fir (1,250-1,500 m), subalpine with the participation of Pinus mugo, juniper and green alder (1,500-1,750 m) belts and the alpine (above 1,750 m) altitudinal vegetation belts are distinguished ther

4 4 0	_	4.0	
447	 Geomor 	nhic	setting

a) Mnimum elevation above sea level (in metres) 910
a) Maximum elevation above sea level (in metres) 2061
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 \square
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 Prut River is the left tributary of the Danube. The site is represented by a catchment basin of the Prut headwaters.

4.4.3 - Soil

Mneral ☑
Organic ☑
No available information □

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)?

Please provide further information on the soil (optional)

The soil cover is represented by weakly developed and short-profile types of dominant mountain-meadow sour subalpine brown soils and sour moderately cold brown soils. The only peat bog located at the lower part of the Pozhyzhevska Mount has got the peat organic soil.

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Course of Water that manner orientation of the Site				
Presence?	Predominant water source			
Water inputs from rainfall		No change		
Water inputs from groundwater		No change		
Water inputs from surface water	V	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 Prut River is the left tributary of the Danube. Its length is 910 km; the catchment area covers 27,500 km2. The width varies from 50 to 150 m, reaching 500-800 m in branched sections. The depth of the river is insignificant (0.5–1.m, reaching 5-6 m or even more during the peak water levels). The flow rate does not exceed 1-1.2 m/sec, and during floods – 3-4 m/sec. High floods are frequent, the width of the flooded area reaches 3 km. The site is represented by a catchment basin of the Prut headwaters and play a significant role in the formation of the hydrological regime of the river upper reaches.

4.4.5 - Sediment regime

Significant erosion of sediments occurs on the site $\ \square$
Significant accretion or deposition of sediments occurs on the site \qed
Significant transportation of sediments occurs on or through the site $\hfill\square$
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)

Akaline (pH>7.4) □	
Unknown	

Please provide further information on pH (optional):

Water pH varies depending on the bog type (raised bog, transitional, lowland bog), the altitude above sea level, the extent and type of anthropogenic impact.

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 O site itself:

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	High	
Wetland non-food products	Timber	Medium	
Wetland non-food products	Fuel wood/fibre	Medium	
Genetic materials	Medicinal products	Low	

Regulating Services

Regulating Services		
Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes		
Climate regulation	Local climate regulation/buffering of change	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance	
Recreation and tourism	Nature observation and nature-based tourism High		
Recreation and tourism	Picnics, outings, touring	High	
Spiritual and inspirational	Inspiration	Medium	
Spiritual and inspirational	Contemporary cultural significance, including for		
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium	
Spiritual and inspirational	Spiritual and religious values	Medium	
Spiritual and inspirational	Aesthetic and sense of place values	High	
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High	
Scientific and educational	Educational activities and opportunities	Medium	
Scientific and educational	Long-term monitoring site	High	
Scientific and educational	Major scientific study site	High	

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High
Nutrient cycling	Carbon storage/sequestration	Medium
Pollination	Support for pollinators	High

Other ecosystem service(s) not included above:

Due to the favourable climate and availability of almost undisturbed landscapes, the wetland is very popular among tourists. This territory is one of the most frequently visited within the whole Ukrainian Carpathians. There is a wide network of thematic ecological trails: botanical, zoological, geographic and landscape ones. Their aim is to show visitors the natural ecosystems, geological and geomorphologic monuments. Also the Prut is mentioned in many ancient historical texts. The territory is deeply connected with a cultural ethnographic nationality of Ukraine and the Carpathians, called the Hutsuls. The site is valuable in terms of ecological education, recreation and scientific research. It encloses part of the highest peak of Ukraine, Mount Hoverla, being is an important social and cultural heritage of the national level.

Within the site:	10 000
Outside the site:	100 000

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site?

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	j
iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples	j
iv) relevant non-material values such as sacred sites are present and their existence is stronglylinked 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

	wne		

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

Private ownership

Thate officers				
Category	Within the Ramsar Site	In the surrounding area		
Religious body/organization	✓			
Other types of private/individual owner(s)		2		

Other

Category	Within the Ramsar Site	In the surrounding area
Commoners/customary rights		⊘

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

The owneship regime of the Site is fully linked to the National/Federal government, which is represented by the Carpathian National Nature Park. The only small chapel for religious purpose (ca. 20 sq.m) belongs to local religious community and located at the tourists concentration point before the tourist trail starts.

5.1.2 - Management authority

agency or organization responsible for	Carpathian National Nature Park
managing the site: Provide the name and title of the person or	
people with responsibility for the wetland:	V.Ya. Slobodian, director
Postal address:	6, Stusa Str., Yaremche town, Ivano-Frankivska oblast, 78500, Ukraine
E-mail address:	cnnp@meta.ua

5.2 - Ecological character threats and responses (Management)

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

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Tourism and recreation areas	Medium impact	Medium impact	A	✓

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Water abstraction	Low impact	Low impact	✓	✓

Agriculture and aquaculture

<u> </u>					
	Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
	Livestock farming and ranching	Low impact	Low impact	/	✓
	Marine and freshwater aquaculture	Low impact	Low impact	✓	✓

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact	Low impact	✓	✓

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Gathering terrestrial plants	Low impact	Low impact	✓	✓
Logging and wood harvesting	Low impact	Low impact	✓	V

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Medium impact	Medium impact	A	✓

Invasive and other problematic species and genes

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

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Household sewage, urban waste water	Low impact	Low impact		✓
Garbage and solid waste	Low impact	Low impact	>	2

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Avalanches/landslides	Medium impact	Medium impact	✓	✓

Please describe any other threats (optional):

The basic threat for the ecological status of the site is represented by intensive recreation pressure, especially along the watercourses. It has a direct impact not only on the wetland ecosystems but more or less on the adjacent areas as well, depending on their accessibility and infrastructure.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Nature Park	Carpathians	http://cnnp.if.ua/en/	whole

5.2.3 - IUCN protected areas categories (2008)

la Strict Nature Reserve
lb Wilderness Area: protected area managed mainly for wilderness protection
II National Park: protected area managed mainly for ecosystem protection and recreation
Natural Monument: protected area managed mainly for conservation of specific natural features
/Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation

M Managed Resource Protected Area: protected area managed mainly $\hfill\Box$

for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Legal protection			
Measures	Status		
Legal protection	Implemented		

Habitat

Measures	Status
Habitat manipulation/enhancement	Implemented

Species

oposioo	
Measures	Status
Threatened/rare species	Implemented
management programmes	implemented

Human Activities

Measures	Status
Regulation/management of recreational activities	Partially implemented
Harvest controls/poaching enforcement	Partially implemented
Communication, education, and participation and awareness activities	Implemented
Research	Partially implemented

The wetland belongs to the territory of the Carpathian National Nature Park. The conservation activity is mostly focused on the protection of valuable natural communities. The south-western border of the site adjoins to the territory of the Carpathian Biosphere Reserve. Conservation regime and management of the site is ensured by the Carpathian NNP; IUCN categories – la and II. The Management Plan is valid ("Project of the territory organization").

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?

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes $\ensuremath{\mathbb{O}}$ No $\ensuremath{\mathbf{0}}$ processes with another Contracting Party?

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

The Site is important area for ecological awareness and recreation. Coordination of recreational and educational activities is carried out by Carpathian NNP. The park has a small educational center in the city of Yaremcha.

URL of site-related webpage (if relevant): http://cnnp.if.ua/en/visit-center

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
Plant species	Implemented
Plant community	Implemented
Animal community	Implemented
Animal species (please specify)	Implemented

The territory of the site is one of the most important scientific research areas for the investigation of the Carpathian alpine zone. The ecological, biological and geographic surveys are carried out by employees of the Carpathian National Nature Park, scientists of the Ivan Franko National University of Lviv and the Institute of Ecology of the Carpathians (Lviv).

The botanical monitoring within the given area is carried out by scientists of the Carpathian National Nature Park, the Institute of Ecology of the Carpathians (Lviv) and the State Museum of Natural History, NAS of Ukraine (Lviv). A network of transects have been developed to study the alpine biota.

A research station, belonging to the Institute of Ecology of the Carpathians (Lviv), and a weather station are located on Mount Pozhyzhevska. The permanent monitoring of rudents, ground beetles, amphibians, bats and large carnivores (brown bear, wild cat) is implemented at the Site.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

The Carpathian National Nature Park / ed. by M.M. Prykhodko, O.I. Kyseliuk, A.I. Yavorskyi. - Ivano-Frankivsk: Foliant, 2009. - 672 p. [in Ukrainian]

Kyseliuk O.I. Mammal communities of the north-eastern macroslopes of the Ukrainian Carpathians // International aspects of the study and protection of the Carpathian biodiversity: Conference proceedings. - Rakhiv, 1997. - P. 80-83. [in Ukrainian]

Kyseliuk O.I., Klapchuk V.M., Tymchuk O.V. On the Red Data Book of Ukraine. - Yaremcha, 2001. - 138 p. [in Ukrainian]

Kyseliuk O. Mammals of the Carpathian National Nature Park // Scientific notes of Ivano-Frankivsk National History Museum. – Ivano-Frankivsk, 2001. – P. 188-192. [in Ukrainian]

Malynovskyi K. A. Vegetation of the alpine zone of the Ukrainian Carpathians. – Kyiv: Naukova Dumka. – 1980. – 280 p. [in Ukrainian]

Malynovskyi K. A. Plant communities of the alpine zone of the Ukrainian Carpathians / K. A. Malynovskyi, V. V. Krichfalushii. - Uzhhorod: Karpatska Vezha, 2002. - 244 p. [in Ukrainian]

National Atlas of Ukraine. - Kyiv: Kartografiia, 2007. - 440 p. [in Ukrainian]

Phytogenetic fund of rare species of western regions of Ukraine (sozological assessment and scientific basis of conservation) / [ed. by S. M. Stoiko]. - Lviv: Liha-Press, 2004. - 232 p. [in Ukrainian]

Rizun V. B. Endemic species of ground beetles (Coleoptera, Carabidae) in the Carpathian National Nature Park // National natural parks: issues of designation and development. - Yaremche, 2000. - P.242-247. [in Ukrainian]

Rizun V. B. Ground beetles of the Ukrainian Carpathians. - Lviv, 2003. - 210 p. [in Ukrainian]

Stoiko S. M. Nature of the Carpathian National Park / [S. M. Stoiko, L. I. Milkina, L.O. Tasenkevich et al.]. - Kyiv: Naukova Dumka, 1993. - 214 p. [in Ukrainian]

Tatarynov K.A. Vertebrate fauna of the west of Ukraine: ecology, value, conservation. - Lviv: Lviv University Press, 1973. - 257 p. [in Ukrainian]

Fedorenko A.P., Rohatko I.V., Yakivchuk I.M. Terrestrial vertebrate animals of the park and their conservation // Nature of the Carpathian National Park. - Kyiv: Naukova Dumka, 1993. - P. 145-169. [in Ukrainian]

Red Data Book of Ukraine. Plant World / ed. by Ya.P. Didukh - Kyiv: Globalconsulting, 2009.-912 p. [in Ukrainian]

Red Data Book of Ukraine. Animal World / ed. by I. A. Akimov. - Kyiv: Globalconsulting, 2009. - 600 p. [in Ukrainian]

[IUCN, 2018]. 2018 IUCN Red List of Threatened Species. Gland, IUCN.

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

Szczęsny B., Godunko R.J. Catalogue of caddis flies (Insecta: Trichoptera) of Ukraine. - Lviv, 2008. 104 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

· ·

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:



Prut river flow start (B. Prots, 22-10-2012)



Shrubed peat-bog (B. Prots



View on Tsybulnyk forested/shurbed peat bog (B. Prots, 10-06-2012)



Stream running through peat bog (B. Prots, 22-10-2012)



Spurce virgin wet/dry forests (*B. Prots, 22-10-2012*)



A post-glacial kettle under Mount Turkul with the alpine lake Nesamovyte (*I.* Danylyk, 17-07-2011)



A rivulet in the boggy cirque between the mounts of Hoverla and Breskul (*I. Danylyk, 01-09-2012*)



A sedge-moss bog "Tsy bulnyk" under Mount Breskul (*I. Danylyk*, 24-06-2009)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2019-03-20