

# Ramsar Information Sheet

Published on 24 January 2019 Update version, previously published on : 1 January 2005

# **Poland**Wigry National Park



Designation date 29 October 2002
Site number 1567
Coordinates 54°02'39"N 23°05'57"E
Area 15 085,00 ha

https://rsis.ramsar.org/ris/1567 Created by RSIS V.1.6 on - 21 January 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

Wigry National Park is located in north-east Poland and its area encompasses Lake Wigry with an area of 2 163 ha (excluding islands), the forests surrounding the Lake, numerous peat bogs, a part of the Czarna Hańcza River Valley, the main watercourse flowing through the Lake, and the surrounding farmlands. Centrally located Lake Wigry together with 42 smaller lakes filling post-glacial gullies and holes constitute a wetland system. Rare dystrophic lakes also occur within the Site. The variety of landscapes within the Site from hills of glacial moraines in the north to almost flat land in the south is of a special biodiversity value. Diversified habitats provide a great variety of ecological niches. The Site represents a wetland system of a great value due to the biodiversity it supports, which is unique in the European Lowlands and in the entire sub-boreal biogeographical region.

#### 2 - Data & location

#### 2.1 - Formal data

2.1.1 - Name and address of the compiler of this RI
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Compiler 1

Name	Marek Jobda, Rafał Rzepkowski, Paweł Szałański
Institution/agency	Pracownia Przyrodnicza
Postal address	ul. Bohaterów Powstania Styczniowego 4, 05-480 Karczew, Poland
E-mail	pracownia@przyrodnicza.eu
Phone	+48 509 029 647

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

From year 2005

To year 2015

2.1.3 - Name of the Ramsar Site

Official name (in English, French or	Wigry National Park
Spanish	
Unofficial name (optional)	Wigry

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

(Update) A Changes to Site boundary Y	es @ No O
<sup>(Update)</sup> The boundary has been delineated more accurately ✓	
(Update) The boundary has been extended	
(Update) The boundary has been restricted	
(Update) B. Changes to Site area N	lo change to area

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?

Not evaluated

#### 2.2 - Site location

#### 2.2.1 - Defining the Site boundaries

b) Digital map/image <3 file(s) uploaded>

Formormone

Former maps 0

Boundaries description

The boundary of the Ramsar site is equal to the boundary of Wigry National Park

#### 2.2.2 - General location

a) In which large administrative region does the site lie?	Podlaskie
b) What is the nearest town or population	Suwałki

#### 2.2.3 - For wetlands on national boundaries only

Voc O No @	es the wetland extend onto the territory of one or more other	a)
162 0 140 6	countries?	

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes O No  $\odot$ 

#### 2.2.4 - Area of the Site

Official area, in hectares (ha): 15085

Area, in hectares (ha) as calculated from GIS boundaries 15088.605

#### 2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Continetal
Udvardy's Biogeographical Provinces	2.10.5. Boreal
Bailey's Ecoregions	210 Warm Continental Division
WWF Terrestrial Ecoregions	Temperate broadleaf and mixed forest

#### 3 - Why is the Site important?

Hydrological services provided

#### 3.1 - Ramsar Criteria and their justification

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

The main hydrological services carried out in the Wigierski National Park:

- 1. Microclimate landscape design (influence on wind strength, temperature, humidity, radiation)
- 2. Water circulation control (influence on retention and run-off regulation, natural drainage, draugth mitigation)
- 3. Maintaining of sustainable water flow

#### Tourism

The dominating forms of tourism in Wigry National Park are: hiking, cycling and kayaking. Current level of tourism is considered to be sustainable.

#### Research

Research activity (among others – hydrobiological and limnological study) is carried out by the Research-Educational Centre of Wigry National Park. Study is conducted with special emphasis on the Czarna Hańcza River basin and mires situated along the River section from Sobolewo to its mouth at Wigry Lake. A hydrobiological study is performed by the University of Warmia and Mazury in Olsztyn, while a botanical study, i.e. research on rare and endangered plants is conducted by the Botanical Garden of the Warsaw University.

Other ecosystem services provided

#### Agriculture, fishery

Around 15 % of the area of the Park is covered by agricultural land. Extensively used meadows and pastures and arable lands prevail. In order to maintain the biodiversity of the agricultural landscape of the Park, old varieties of plants and old breeds of household animals are introduced. Lake Wigry is also used for extensive fishing.

Wigry National Park contains several wetland types preserved in a near-natural state, which alongside a great range of well-preserved habitats and biological diversity, constitute a unique wetland system in the Polish Lowlands and in the entire biogeographical region.

The diversity of the Park's landscape is related to a mosaic of habitats dominated by forests. Within the area of Wigry National Park, 14 forest communities occur, dominated by subcontinental mixed forest Serratulo-Pinetum, and poor broadleaved Calaminarian Tilio-Carpinetum Calamagrostietosum. The particularly valuable forest communities, preserved in very good state and covering relatively large areas are: boreal spruce on peat Sphagno girgensohnii-Piceetum, pine and birch forest swamp Dryopteridi thelypteridis-Betuletum pubescentis, continental swampy forest Vaccinio uliginosi-Pinetum, and alder currant Ribeso nigri-Alnetum with patches of alder peaty Sphagno squarrosi-Alnetum and ashalder riparian Fraxino-Alnetum. Noteworthy is the presence of a small area of subboreal moist mixed forest Querco-Piceetum.

Other reasons

Among 104 non-forest communities found in the area of Wigry National Park, the best preserved and the most valuable ones are transition mires and quaking bogs associated mainly with dystrophic forest reservoirs and troughs. The proportion of well-preserved raised bogs dominated by the community of Sphagnetum magellanici is also important.

Moreover, the communities which are remarkably valuable in terms of flora are quite well-preserved alkaline peat bogs with field peatbogs and bog-springs and calcareous fens with Cladium mariscus and species of the Caricion davallianae.

The extensively used lowland hay meadows Arrhenatheretum medioeuropaeum are the most widely distributed non-forest communities in WNP.

#### ☑ Criterion 2 : Rare species and threatened ecological communities

#### ☑ Criterion 3 : Biological diversity

The fauna of the Park is represented by 46 species of mammals, 202 species of birds as well as 12 species of amphibians and 5 species of reptiles. Many of them are endangered and threatened species reaching in the Park their European range limits.

This group of animals consists of boreal species such as Three-Toed Woodpecker Picoided tridactylus, Tengmalm's Owl Aegolius funereus, Mountain Hare Lepus timidus. The main representative of mammals and, at the same time, the symbol of the Park, is beaver Castor Fiber. At present its population is estimated at about 250 animals. Large predators are represented by wolves Canis lupus. The site is also visited by another rare predator – lynx Lynx lynx. Moreover, one can observe many species of birds of prey. Some of them are connected with lakes and marsh areas like White - Tailed Eagle Haliaeetus albicilla, Marsh Harrier Circus aeruginosus, Black Kite Milvus migrans.. Also many species rare on the European scale occur in the Park, such as Lesser-Spotted Eagle Aquila pomarina and Red Kite Milvus milvus, which, thanks to the rich mosaic of various habitats, such as forests and open areas, found here a convenient place to breed. Fish are represented by 32 species. Only in one Wigry lake, there are 26 species of fish. Three species occurring in the site are listed in Annex II of Habitats Directive. A great variety of water and land habitats makes an impact on the richness of the Park's invertebrates. At least 2000 species have been found in the Park so far. Some of them, such as bumblebee Bombus schrencki and wild bees Hylaeus pfankuchi and Chelostoma foveolatum, were observed for the first time in Poland.

#### Justification

#### ☑ Criterion 7 : Significant and representative fish

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Fish are represented by 32 species. Only in one Wigry lake, there are 26 species of fish. Three species occurring in the site are listed in Annex II of Habitats Directive.

#### 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
Aldrovanda vesiculosa	Waterwheel Plant	✓			EN			Occurrence only in two places within the Park
Betula humilis	Shrubby Birch	<b>Ø</b>			LC Sign		Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (EN), species protected in Poland	
Carex buxbaumii	Buxbaum's Sedge; Club Sedge	Ø			LC Sign		Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (EN), species protected in Poland	
Carex chordorrhiza	Creeping Sedge; String Sedge	Ø			LC Sign		Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (VU), species protected in Poland	
Carex disperma	Softleaf Sedge	Ø					Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (EN), species protected in Poland	
Carex vaginata	Sheathed Sedge	<b>2</b>			LC ©SF		Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (VU)	
Cypripedium calceolus	Ladys-slipper Orchid	Ø	<b>2</b>		LC Str	V	Annex 2 of the Habitats Directive (Council Directive 92/43/EEC) Polish Red Data Book of Plants (VU)	Occurrence only in three places within the Park
Dactylorhiza incarnata ochroleuca		<b>2</b>					Species protected in Poland, Polish Red Data Book of Plants (EN)	
Dactylorhiza majalis baltica		<b>2</b>					Polish Red Data Book of Plants (EN), species protected in Poland	
Dicranum viride		<b>2</b>	<b>2</b>				Annex 2 of the Habitats Directive (Council Directive 92/43/EEC)	Occurrence only in two places within the Park
Eriophorum gracile	Slender Cottongrass; Slender Cottonsedge	<b>Ø</b>					Polish Red Data Book of Plants (CR), species protected in Poland	
Hamatocaulis vernicosus	Slender Green Feather Moss	Ø	<b>2</b>				Annex 2 of the Habitats Directive (Council Directive 92/43/EEC) Polish Red Data Book of Plants (LR)	
Hammarbya paludosa	Bog Orchid; Bog Adder's- mouth; Bog Adder's-mouth Orchid	<b>Ø</b>					Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (EN), species protected in Poland	
Herminium monorchis	Musk Orchid	Ø					Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (CR), species protected in Poland	
Lathyrus pisiformis		Ø					Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (VU), species protected in Poland	
Liparis loeselii	Fen Orchid	Ø	Ø			<b>2</b>	Annex 2 of the Habitats Directive (Council Directive 92/43/EEC) Polish Red Data Book of Plants (VU)	It is estimated, that the population of the species in the Park and its vicinity constitutes more than 15 % of Polish population.  Occurrence in 15 places within the Park

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Myriophyllum alterniflorum	Alternate Water-milfoil; Alternate Flower Watermilfoil	<b>2</b>			LC ●辞		Polish Red Data Book of Plants (EN)	
Neottianthe cucullata		<b>2</b>					Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (EN), species protected in Poland	
Potamogeton gramineus	Various-leaved Pondweed; Grass-leaved Pondweed; Grassy Pondweed	<b>2</b>			LC ●辞		Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (CR)	
Pulsatilla patens	Eastern pasqueflower; Prairie Crocus	<b>2</b>	<b>2</b>		LC		Annex 2 of the Habitats Directive (Council Directive 92/43/EEC) Polish Red Data Book of Plants (LR)	Occurrence only in 5 places within the Park
Saxifraga hirculus	Marsh Saxifrage; Yellow Marsh Saxifrage; Bog Saxifrage	<b>2</b>	V		LC Sign		Annex 2 of the Habitats Directive (Council Directive 92/43/EEC) Polish Red Data Book of Plants (EN)	It is estimated, that the population of the species in the Park and its vicinity constitutes more than 15 % of Polish population
Thesium ebracteatum		<b>2</b>	V				Annex 2 of the Habitats Directive (Council Directive 92/43/EEC)	Occurrence in 8 places within the Park
Trichophorum alpinum	Apine Bulrush	<b>2</b>			LC STSF		Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (VU), species protected in Poland	
Viola epipsila	Dwarf Marsh Violet	<b>2</b>					Red List of Plants and Fungi in Poland, Polish Red Data Book of Plants (CR), species protected in Poland	

About 970 species of vascular plants, 230 species of mosses, 2 species of hornworts, and more than 60 species of liverworts (of 79 known from the literature) have been found in Wigry National Park. 44 species of vascular plants are under strict protection and 43 species are under partial protection, while 30 of them are listed in the Polish Red Data Book and 66 are on the Polish Red List of Rare and Endangered Species. 6 species of liverworts occurring in the Park are under strict protection, 4 species are under partial protection and 7 species are included on the List of Endangered Species in Poland. 43 species of mosses are strictly protected, 27 species are partially protected, while 32 species have the status of an endangered species in Poland. One species of hornwort present in the flora of the Park has the status of an endangered species in Poland.

Plant species mentioned in Annex V of the Habitats Directive:

Lycopodium annotinum, Lycopodium clavatum, Arnica montana, Leucobryum glaucum, Sphagnum angustifolium, Sphagnum capillifolium, Sphagnum cuspidatum, Sphagnum fallax, Sphagnum fimbriatum, Sphagnum flexuosum, Sphagnum fuscum, Sphagnum girgensohnii, Sphagnum magellanicum, Sphagnum obtusum, Sphagnum palustre, Sphagnum riparium, Sphagnum rubellum, Sphagnum russowii, Sphagnum squarrosum, Sphagnum subsecundum, Sphagnum teres, Sphagnum warnstorfii

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	Criterion	Pop. Size Period of pop.	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification		
Birds													

Phylum	Scientific name	Common name	c	Spec quali und crite	fies ler rion	co	Species ntributes under riterion	Size Period of pop. Es	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Aegolius funereus	Tengmalm's Owl					ممم	]		LC			Polish Red Data Book of Animals (NT)	pop. size: 10-15 pairs
CHORDATA/ AVES	Aquila pomarina	Lesser Spotted Eagle	V				ممم	)			<b></b>		Annex I Birds Directive (Directive 2009/147/EC, Polish Red Data Book of Animals (LC)	pop. size: 5-10 breeding pairs
CHORDATA/ AVES	Botaurus stellaris	Eurasian Bittern; Great Bittern	V					15		LC			Annex I Birds Directive, Polish Red Data Book of Animals (LC)	pop. size: 15 males
CHORDATA/ AVES	Bubo bubo	Eurasian Eagle- owl	1			<b>V</b>	ممم	1		LC ●部	V		Annex I Birds Directive (Directive 2009/147/EC, Polish Red Data Book of Animals (NT)	pop. size: 1-3 pairs
CHORDATA/ AVES	Ciconia ciconia	White Stork	V					] 11		LC			Annex I Birds Directive	pop. size: 11 pairs
CHORDATA/ AVES	Ciconia nigra	Black Stork	1					1		LC ●辭	$\checkmark$		Annex I Birds Directive	
CHORDATA/ AVES	Circus aeruginosus	Western Marsh Harrier	¥				ممم	30		LC	V		Annex I Birds Directive	pop. size: 30 pairs
CHORDATA/ AVES	Circus cyaneus	Northern Harrier	V					]		LC •ss	V		Annex I Birds Directive, Polish Red Data Book of Animals (VU)	part time site
CHORDATA/ AVES	Circus pygargus	Montagu's Harrier	<b>V</b>							LC ●辭	$\checkmark$		Annex I Birds Directive, Polish Red Data Book of Animals (NT)	part time site
CHORDATA/ AVES	Crex crex	Corn Crake	1							LC ©SF			Annex I Birds Directive (Directive 2009/147/EC)	pop. size: 16-17 males
CHORDATA/ AVES	Dendrocopos leucotos	White-backed Woodpecker	¥			Ø	ممم			LC Sign			Annex I Birds Directive (Directive 2009/147/EC, Polish Red Data Book of Animals (NT)	pop. size: 5-10 breeding pairs
CHORDATA/ AVES	Ficedula parva	Red-breasted Flycatcher	V							LC Sign			Annex I Birds Directive	breeding
CHORDATA/ AVES	Grus grus	Common Crane	1				ممم	]		LC			Annex I Birds Directive (Directive 2009/147/EC)	pop. size: 30-50 pairs
CHORDATA/ AVES	Haliaeetus albicilla	White-tailed Eagle	e 🗷				ممم	] 3		LC ●数 ●簡	<b></b>	V	Annex I Birds Directive (Directive 2009/147/EC Polish Red Data Book of Animals (LC)	pop. size: 3 pairs
CHORDATA/ AVES	Milvus migrans	Black Kite	1			<b>V</b>	ممم	1		LC ●数 ●翻	V		Annex I Birds Directive (Directive 2009/147/EC, Polish Red Data Book of Animals (NT)	pop. size: 2-3 breeding pairs
CHORDATA/ AVES	Milvus milvus	Red Kite	1			<b>V</b>	ممم	1		NT Sign	V		Annex I Birds Directive (Directive 2009/147/EC, Polish Red Data Book of Animals (NT)	pop. size: 3-5 breeding pairs
CHORDATA/ AVES	Pandion haliaetus	Osprey, Western Osprey	1							LC ●辭	$\checkmark$		Annex I Birds Directive, Polish Red Data Book of Animals (VU)	part time site
CHORDATA/ AVES	Pernis apivorus	European Honey Buzzard	V							LC •Si •Si	<b></b>		Annex1 Birds Directive (Directive 2009/147/EC	pop. size: 8-10 breeding pairs
CHORDATA/ AVES	Picoides tridactylus	Three-toed Woodpecker	1			V	ممم			LC Sign			Annex I Birds Directive (Directive 2009/147/EC, Polish Red Data Book of Animals (VU)	pop. size: 5-10 breeding pairs
CHORDATA/ AVES	Picus canus	Grey-headed Woodpecker	V			<b>V</b>				LC Sign			Annex I Birds Directive (Directive 2009/147/EC	pop. size: 10-15 breeding pairs
CHORDATA/ AVES	Porzana parva	Little Crake	1				ممم						Annex I Birds Directive, Polish Red Data Book of Animals (NT)	breeding
CHORDATA/ AVES	Porzana porzana	Sspotted Crake	1							LC			Annex I Birds Directive	pop. size: 4-5 pairs

Phylum	Scientific name	Common name	Species qualifies under criterion	criterion	D. Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification		
CHORDATA/ AVES	Tetrastes bonasia	Hazel Hen		<b>2</b> 000						Annex I, II Birds Directive (Directive 2009/147/EC	pop. size: 50-150 breeding pairs		
Fish, Mollusc	Fish, Mollusc and Crustacea												
CHORDATA/ ACTINOPTERYG		Spine Loach					LC ©SF			Annex II of the Habitats Directive (Council Directive 92/43/EEC)			
CHORDATA/ ACTINOPTERYG	Coregonus albula	Sendace					LC Sing						
CHORDATA/ ACTINOPTERYG	Coregonus lavaretus	Baltic Whitefish					VU ●\$† ●∰						
CHORDATA/ ACTINOPTERYG	Misgurnus fossilis	Mud Loach					LC Sing			Annex II of the Habitats Directive (Council Directive 92/43/EEC), Polish Red Data Book of Animals (NT)			
CHORDATA/ ACTINOPTERYG	Phoxinus phoxinus	Common Minnow	0000				LC om						
CHORDATA/ ACTINOPTERYG		Amur Bitterling								Annex II of the Habitats Directive (Council Directive 92/43/EEC), Polish Red Data Book of Animals (NT)			
CHORDATA/ ACTINOPTERYG	Salmo trutta	Brown Trout					LC OSF						
MOLLUSCA/ BIVALVIA	Unio crassus	Thick Shelled River Mussel					EN ●\$} ●®			Annex II and IV of the Habitats Directive (Council Directive 92/43/EEC) Polish Red Data Book of Animals (EN)			
Others													
CHORDATA/ AMPHIBIA	Bombina bombina	European Fire- bellied Toad		0000			LC ©#			Annex II, IV Habitats Directive			
CHORDATA/ MAMMALIA	Canis lupus	Grey Wolf		10			LC	<b>√</b>		Annex II, IV, V Habitats Directive, Polish Red Data Book of Animals (NT)			
CHORDATA/ MAMMALIA	Castor fiber	Eurasian Beaver; European Beaver		<b>250</b>	0		LC STORY			Annex II and IV of the Habitats Directive (Council Directive 92/43/EEC)			
ARTHROPODA/ INSECTA	Graphoderus bilineatus			0000			VU •\$: •\$:			Annex II and IV of the Habitats Directive (Council Directive 92/43/EEC)			
CHORDATA/ MAMMALIA	Lutra lutra	European Otter					NT OTH	$\checkmark$		Annex II, IV Habitats Directive			
ARTHROPODA/ INSECTA	Lycaena dispar	Large Copper	<b>2</b> 000	0000						Annex II, IV Habitats Directive, Polish Red Data Book of Animals (LR-lower risk)			
CHORDATA/ MAMMALIA	Lynx lynx	Eurasian Lynx					LC •\$	V		Annex II and IV of the Habitats Directive (Council Directive 92/43/EEC)			
CHORDATA/ MAMMALIA	Myotis dasycneme	Pond Bat	<b>2</b> 000				NT or			Annex II Habitats Directive, Polish Red Data Book of Animals (EN)			
ARTHROPODA/ INSECTA	Ophiogomphus cecilia	Green Snaketail					LC of			Annex II, IV Habitats Directive			
CHORDATA/ AMPHIBIA	Triturus cristatus	Northern Crested Newt; Warty Newt					LC •#			Annex II, IV Habitats Directive, Polish Red Data Book of Animals (NT)			

#### 1) Percentage of the total biogeographic population at the site

#### crit. 2

invertebrate: Vertigo moulinsiana - Desmoulin's Whorl Snail, IUCN-VU, Annex 2, 4 of the Habitats Directive (Council Directive 92/43/EEC), Polish Red Data Book of Animals (CR); vertigo geyeri, Annex II Habitats Directive;

lycaena helle, Annex II, IV Habitats Directive

The fauna of the Park is represented by 46 species of mammals, 202 species of birds as well as 12 species of amphibians and 5 species of reptiles. Many of them are endangered and threatened species reaching in the Park their European range limits.

This group of animals consists of boreal species such as Three-Toed Woodpecker Picoided tridactylus, Tengmalm's Owl Aegolius funereus, Mountain Hare Lepus timidus. The main representative of mammals and, at the same time, the symbol of the Park, is beaver Castor Fiber. At present, its population is estimated at about 250 animals. Large predators are represented by wolves Canis lupus. The site is also visited by another rare predator – lynx Lynx lynx. Moreover, one can observe many species of birds of prey. Some of them are connected with lakes and marsh areas like White - Tailed Eagle Haliaeetus albicilla, Marsh Harrier Circus aeruginosus, Black Kite Milvus migrans. Also, many species which are rare on the European scale occur in the Park, such as Lesser-Spotted Eagle Aquila pomarina and Red Kite Milvus milvus, which, thanks to the rich mosaic of various habitats, such as forests and open areas, found here a convenient place to breed. Fish are represented by 32 species. Only in one Wigry lake, there are 26 species of fish. Three species occurring in the site are listed in Annex II of Habitats Directive. A great variety of water and land habitats makes an impact on the richness of the Park's invertebrates. At least 2000 species have been found in the Park so far. Some of them, such as bumblebee Bombus schrencki and wild bees Hylaeus pfankuchi and Chelostoma foveolatum, were observed for the first time in Poland.

#### 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
3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	<b>2</b>	area 2374 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
91D0-2 Continental pine bog woodland (Vaccinio uliginosi-Pinetum)	Ø	area 84,06 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
91E0-3 (Fraxino-Alnetum)	<b>2</b>	area 97,99 ha	Annex1 of the Habitats Directive (Council Directive 92/43/EEC)
7210 Calcareous fens (Cladietum marisci, Caricetum buxbaumii)	<b>2</b>	area 22,21 ha	Annex1 of the Habitats Directive (Council Directive 92/43/EEC)
7140 Transition mires and quaking bogs (Scheuchzerio-Caricetea)	<b>2</b>	area 41,03 ha	Annex1 of the Habitats Directive (Council Directive 92/43/EEC)
7110 Active raised bogs	Ø	area 15,72 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
6510 Lowland hay meadows (Arrhenatheretum medioeuropaeum)	<b>2</b>	area 88,91 ha	Annex1 of the Habitats Directive (Council Directive 92/43/EEC)
6430 Hydrophilous tall herb fringe communities (Convolvuletalia sepium)	Ø		Annex I of the Habitats Directive (Council Directive 92/43/EEC)
6230 Species-rich Nardus grasslands in lowland (Nardion)	V		Annex I of the Habitats Directive (Council Directive 92/43/EEC)

#### RIS for Site no. 1567, Wigry National Park, Poland

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
3210 Semi-natural dry grasslands (Festuco- Brometea)	Ø		Annex I of the Habitats Directive (Council Directive 92/43/EEC)
3160 Natural dystrophic lakes and ponds	Ø	area 31 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
3150 Natural eutrophic lakes with Nympheion, Potamion – type vegetation	Ø	area 395 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
6410 Molinia meadows (Molinion)	Ø		Annex I of the Habitats Directive (Council Directive 92/43/EEC)
91D0–5 Boreal spruce bog woodland (Sphagno girgensohnii-Piceetum)	Ø	area 163,87 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
91D0-6 Pine-birch bog woodland (Dryopteridi helypteridis-Betuletum Pubescentis)	<b>V</b>	area 155,55 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
9170-2 Subcontinental oak-hombeam forest Tilio-Carpinetum)	<b>2</b>	area 323.59	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
7230 Alkaline fens	<b>Ø</b>	area 21,67 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)
3260 Water courses of plain to montane evels with Ranunculion fluitantis vegetation	Ø	area 5 ha	Annex I of the Habitats Directive (Council Directive 92/43/EEC)

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

#### 4.1 - Ecological character

The area is situated in the Suwalki Lakeland, which was formed during the last phase of Baltic Glaciaction. The Lakeland has a diversified moraine landscape. The southern part of the Park is situated on an outwash plain formed as a result of accumulation of materials transported by the ice-front. The northern part of the Park is rolling, with large basal moraines and single hills of the frontal moraine. Some of the moraine hills are up to 35 m high. The site lies in the central part of the Czarna Hańcza basin and the River and lake Wigry constitute the core of the local hydrological system. The lakes and rivers remain in close hydrological contact due to high permeability of glacial formations. The main types of soils in the Park are: clayey-sandy brown soils, podsols, peatsoils, whereas the lands in the Park's area are used mainly for forestry and agriculture. The lake is used for extensive fishing. Climate is cool with distinct continental influences i.e. long (120 days) and frosty winters and snow pack remaining for about 100 days. Annual precipitation is 593 mm and average annual temperatures are around 6C. Vegetation period lasts only about 180 days.

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

#### Inland wetlands

irilariu wellarius				
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		4		Representative
Fresh water > Lakes and pools  >> O: Permanent freshwater lakes		1		
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		4		Representative
Fresh water > Lakes and pools >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		4		
Fresh water > Marshes on peat soils >> U: Permanent Nonforested peatlands		3		Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		2		Representative
Fresh water > Flowing water >> Y: Permanent Freshwater springs; oases		0		Representative

#### Human-made wetlands

Wetland types (code and	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha)	Justification of Criterion 1
name) 2: Ponds		4	of wetland type	
9: Canals and drainage channels or ditches		4		

#### Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
human settlement	
dryland forests	
agricultural land	

#### 4.3 - Biological components

#### 4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	IUCN Red List	Position in range / endemism / other
Ajuga pyramidalis	Pyramidal Ajuga		Red list of plants and fungi in Poland
Anemone sylvestris	Snowdrop Anemone		Species protected in Poland
Anthoceros agrestis	Field hornwort		Red list of plants and fungi in Poland
Aquilegia vulgaris	Common Columbine		Species protected in Poland
Arctostaphylos uva-ursi	Common Bearberry		Species protected in Poland
Amica montana	Mountain Arnica		Red list of plants and fungi in Poland, Species protected in Poland
Asperula tinctoria	Dyer's Woodruff		Red list of plants and fungi in Poland
Bazzania trilobata	Greater whipwort		Species protected in Poland

Betrychium Iuraria   Common Moorword   Red list of plants and fung in Poland, Species protected in Poland   Poland, Species protected   Poland				
Betrychnumustician   Betrychnumustician   Betry Grapetem   Pland   Species protected in Poland   Pland   P	Scientific name		IUCN Red List	Position in range / endemism / othe
Both Communities   Polancia Special Processor   Polancia Special Polancia and fungi in Polancia   Polancia Special Polancia   P	Botrychium lunaria	Common Moonwort		Poland, Species protected in Poland
Correct doison Disectious Sedge Planti, Species protected in Potand Correct doison Disectious Sedge Red list of plants and fungi in Potand Correct Initiate Correct Initiate Correct Initiate Correct Initiate Correct polison Pate Sudge Pate Sudge Pate Sudge Red list of plants and fungi in Potand Correct polison Springs Sedge Pate Sudge Pate Sudge Pate Island of plants and fungi in Potand Correct polison Springs Sedge Pate Sudge Pate Island of plants and fungi in Potand Correct polison Springs Sedge Pate Sudge Pate Island of plants and fungi in Potand Correct protected Springs Sedge Pate Island of plants and fungi in Potand Correct polison Correct plants and fungi in Potand Correct protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Correct plants and fungi in Potand, Species protected in Potand Corr	Botrychium multifidum	Leathery Grapefern		Red list of plants and fungi in Poland, Species protected in Poland
Cerex Infose  Cerex Infose  Cerex Infose  Cerex Infose  Cerex Infose  Regrass Sedge  Red list of plants and fungl in Poland  Poland, Species protected in Poland  Cerex parlescenz  Spring Sedge  Red list of plants and fungl in Poland, Species protected in Poland  Cerex parlescenz  Spring Sedge  Red list of plants and fungl in Poland  Cerex parlescenz  Spring Sedge  Red list of plants and fungl in Poland  Cerex parlescenz  Spring Sedge  Red list of plants and fungl in Poland  Cerex parlescenz  Spring Sedge  Red list of plants and fungl in Poland  Cerex parlescenz  Spring Sedge  Prince's Pine  Species protected in Poland  Cerex parlescenz  Elix Sedge  Species protected in Poland  Red list of plants and fungl in Poland Species protected in Poland  Cerex parlescenz  Cerex polant fund in Poland  Cerex parlescenz  Cerex polant fund in Poland  Cerex parlescenz  Elix Sedge  Species protected in Poland  Red list of plants and fungl in Poland Species protected in Poland  Cerex parlescenz  Cerex polant fund in Poland  Cerex parlescenz  Cerex parlescenz  Cerex polant fund in Poland Species protected in Poland  Cerex parlescenz  Declar parlescenz  Declar parlescenz  Declar parlescenz  Department fund in Poland  Species protected in Poland  Red list of plants and fungl in Poland Species protected in Poland  Declar parlescenz  Department fund in Poland  Species protected in Poland  Declar parlescenz  Department fund in Poland  Elix fu	Bromus secalinus	Rye Brome		
Corex foliocos  Regrass Sedge  Reglias of plants and fungi in Poland Species protected	Carex dioica	Dioecious Sedge		Red list of plants and fungi in Poland, Species protected in Poland
Pedand, Species protected in Poland   Pedand   Pedand, Species protected in Pedand, Species protected	Carex limosa	Mud Sedge		
Cares pasecox  Spring Sedge  Red list of plants and fungl in Poland  Caphactarial agringera  Spiny threadwort  Poland	Carex Ioliacea	Ryegrass Sedge		Red list of plants and fungi in Poland, Species protected in Poland
Cares praecox Spirity threadwort Caphaloziella spirigera Spiry threadwort Red dist of plants and fungl in Poland Crimsphila umbellata Prince's Pine Cincidium Moss Cincidium Moss Elik Sedge Species protected in Poland Cladum mariscus Elik Sedge Species protected in Poland Red list of plants and fungl in Poland, Species protected in Poland Cladum mariscus Ciadopodella flutans Bog notichwort Climadium Moss Species protected in Poland Red list of plants and fungl in Poland, Species protected in Poland Climadium Moss Crosscoalya hollerianus Heller's Notchwort Poland, Species protected in Poland Constructive flutans Common Spotted Orchid Red list of plants and fungl in Poland, Species protected in Poland Species protected in Poland Dectylcriniza funcial Dectylcriniza incarnata March Orchid Dectylcriniza manufata Heath Spotted Orchid Red list of plants and fungl in Poland, Species protected in Poland Dectylcriniza manufata Dephrae mascareum Daphne Species protected in Poland Dephrae mascareum Daphne Species protected in Poland Species protected in Poland Species protected in Poland Dectylcriniza manufata Diana mascareum Daphne Species protected in Poland Diana servantus Diana se	Carex pallescens	Pale Sedge		
Cerphalcarials apringera  Crimsphila umbellata  Crinclidium styglum  Cinclidium styglum st	Carex praecox	Spring Sedge		
Crincidium stygium Cincidium Moss Red list of plants and fungi in Poland, Species protected in Poland Cindum mariscus Elik Sedge Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Cirmacium dendroides Cirmacium dendroides Cirmacium dendroides Cirmacium dendroides Common Spotted Orchid Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Poland, Species protected in Poland Dectylorhiza incarnata Dectylorhiza incarnata March Orchid Dectylorhiza macutata Dectylorhiza macutata Dephne mazereum Dephne Dephne mazereum Dephne Species protected in Poland Dephne mazereum Dephne Species protected in Poland Decranum borgieari Bonjean's Dicranum Moss Pad list of plants and fungi in Poland, Specie protected in Poland Dicranum borgieari Bonjean's Dicranum Moss Pad list of plants and fungi in Poland, Species protected in Poland Dicranum borgieari Dicranum borgieari Dicranum borgieari Dicranum Moss Species protected in Poland Dicranum polyeetum Dicranum Moss Species protected in Poland Dicranum borgieari Dicranum Moss Species protected in Poland Dicranum polyeetum Dicranum Moss Species protected in Poland Dicranum polyeetum Dicranum Moss Species protected in Poland Dicranum scoparium Dicranum Moss Species protected in Poland Dicranum scoparium Dicranum Separium S	Cephaloziella spinigera	Spiny threadwort		
Cincilidum stygium  Cladum meriscus  Elik Sedge  Species protected in Poland  Red list of plants and fungl in Poland, Species protected in Poland  Climacium dendroicks  Climacium Moss  Common Species protected in Poland  Ped list of plants and fungl in Poland, Species protected in Poland  Common Species protected in Poland  Dectylorhiza fuchsii  Common Species doctorid  Red list of plants and fungl in Poland, Species protected in Poland  Dectylorhiza incamata  March Orchid  Dectylorhiza incamata  March Orchid  Dectylorhiza incamata  Dectylorhiza mexilata  Heath Spotted Orchid  Dephne mexereum  Daphne  Species protected in Poland  Species protected in Poland  Dephne mexereum  Daphne  Species protected in Poland  Dioranum borgienii  Bonjean's Dioranum Moss  Poland, Species protected in Poland  Dioranum polysetum  Dioranum polysetum  Dioranum Moss  Species protected in Poland  Dioranum scoparium  Dioranum Moss  Species protected in Poland  Dioranum scoparium  Dioranum Moss  Species protected in Poland  Dioranum scoparium  Red list of plants and fungl in Poland  Dioranum scoparium  Dioranum sc	Chimaphila umbellata	Prince's Pine		Species protected in Poland
Cadepodeila flutans  Climacium dendroides  Climacium dendroides  Climacium dendroides  Climacium dendroides  Climacium dendroides  Common Spotted Orchid  Common Sundew  Common Spotted Orchid  Common Spotted	Cinclidium stygium	Cinclidium Moss		Red list of plants and fungi in Poland, Species protected in Poland
Cilmacium Moss Cilmacium Moss Cilmacium Moss Cilmacium Moss Cossocalyx hellerianus Heller's Notchwort Red list of plants and fungi in Poland, Species protected in Poland Dectylorhiza fuchsii Common Spotted Orchid Red list of plants and fungi in Poland, Species protected in Poland Dectylorhiza incarnata March Orchid Dectylorhiza mecutata Heath Spotted Orchid Red list of plants and fungi in Poland, Species protected in Poland Dectylorhiza mecutata Heath Spotted Orchid Red list of plants and fungi in Poland, Species protected in Poland Dectylorhiza mecutata Dephne mezereum Daphne Species protected in Poland Diarhus arenarius Sand Pink Species protected in Poland Diarhus arenarius Dicrarum borjearii Dicrarum borjearii Dicrarum polysetum Dicrarum polysetum Dicrarum Seperium Dicrarum Seperium Dicrarum Seperium Dicrarum Complanatum Cround Pine Diphasiastrum complanatum Drosera anglica Creat Sundew Drosera anglica Drosera rotundiolia Drosera rotundiolia Common Sundew Drosera rotundiolia Drosera rotundiolia Common Sundew Red list of plants and fungi in Poland Drosera rotundiolia	Cladium mariscus	Elk Sedge		Species protected in Poland
Crossocalyx hellerianus  Heller's Notchwort  Red list of plants and fungi in Poland, Species protected in Poland Dectyforhiza fuchsii  Dectyforhiza fuchsii  Dectyforhiza incernata  March Orchid  Dectyforhiza incernata  March Orchid  Dectyforhiza macufata  Dephne mazereum  Daphne  Daphne  Daphne  Dephne mazereum  Daphne  Diranum borjeenii  Dicranum Soperium  Dicranum Soperium  Dicranum Soperium  Diphasiastrum complanatum  Diphasiastrum complanatum  Diphasiastrum complanatum  Dicranum Soperium  Diphasiastrum complanatum  Dicranum Soperium  Dicranum Soperium  Diphasiastrum complanatum  Dicranum Soperium Complanatum  Dicranum Sope	Cladopodiella fluitans	Bog notchwort		
Poland, Species protected in Poland   Poland   Poland, Species protected in Poland   Poland, Species prote	Climacium dendroides	Climacium Moss		Species protected in Poland
Dectylorhiza fuchsii  Dectylorhiza incarnata  March Orchid  Dectylorhiza incarnata  March Orchid  Dectylorhiza macutata  Heath Spotted Orchid  Dephre mezererum  Daphne  Daphne  Diarthus arenarius  Sand Pink  Dicranum borgiesrii  Dicranum borgiesrii  Dicranum borgiesrii  Dicranum Broom Moss  Dicranum Broom Moss  Dicranum secparium  Dicranum secparium  Dicranum secparium  Dicranum complanatum  Dicranum complanatum  Drosera anglica  Creat Sundew  Drosera oboveta  Drosera rotundifolia  Drosera rotundifolia  Drosera iristata  Drosera	Crossocalyx hellerianus	Heller's Notchwort		
Dectylorhiza incarnata         Heath Spotted Orchid         Red list of plants and fungi in Poland, Specie protected in Poland           Dephne mezereum         Daphne         Species protected in Poland           Diarthus arenarius         Sand Pink         Species protected in Poland           Dicrarum borjeerii         Bonjean's Dicranum Moss         Red list of plants and fungi in Poland, Species protected in Poland           Dicrarum polysetum         Dicranum Moss         Species protected in Poland           Dicrarum scoparium         Broom Moss         Species protected in Poland           Digitalis grandiflora         Large Yellow Foxglove         Species protected in Poland           Diphasiastrum complanatum         Ground Pine         Species protected in Poland           Drosera anglica         Great Sundew         Red list of plants and fungi in Poland, Specie protected in Poland           Drosera coboxeta         Chowateleaf Sundew         Species protected in Poland           Drosera rotundfolia         Common Sundew         Red list of plants and fungi in Poland, Specie protected in Poland           Dryopteris cristata         Crested Wood Ferm         Red list of plants and fungi in Poland           Emperum rigrum         Black Crowberry         Red list of plants and fungi in Poland           Epipactis atroubers         Royal Helleborine         Species protected in Poland	Dactylorhiza fuchsii	Common Spotted Orchid		
Dephne mezereum Daphne Dianthus arenarius Dianthus arenarius Sand Pink Dicranum bonjeenii Dicranum scoparium Dicranum scoparium Dicranum scoparium Dicranum scoparium Dijulaiis grandiflora Diphasiastrum complenatum Red list of plants and fungi in Poland Diphasiastris Diphasiastris Diphasiastris Diphasiastris Diphasiastrum complenatum Dip	Dactylorhiza incarnata	March Orchid		Species protected in Poland
Dianthus arenarius  Dianthus arenarius  Bonjean's Dicranum Moss  Dicranum polysetum  Dicranum polysetum  Dicranum scoparium  Broom Moss  Species protected in Poland  Dicranum scoparium  Dicranum scoparium  Dicranum scoparium  Dicranum scoparium  Dicranum complanatum  Diphasiastrum complanatum  Drosera anglica  Creat Sundew  Dicranum scoparium  Drosera anglica  Common Sundew  Drosera rotundiolia  Drosera rotundiolia  Crested Wood Fem  Black Crowberry  Black Crowberry  Black Crowberry  Broadleaf Helleborine  Epipactis atrorubens  Epipactis palustris  Marsh Helleborine  Sand Pink  Species protected in Poland  Species protected in Poland  Species protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland	Dactylorhiza maculata	Heath Spotted Orchid		
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Dicranum borjeania   Dicranum Moss   Species protected in Poland	Dianthus arenarius	Sand Pink		Species protected in Poland
Dicranum scoparium         Broom Moss         Species protected in Poland           Digitalis grandiflora         Large Yellow Foxglove         Species protected in Poland           Diphasiastrum complanatum         Ground Pine         Species protected in Poland           Drosera anglica         Great Sundew         Red list of plants and fungi in Poland, Specie protected in Poland           Drosera obovata         Chovateleaf Sundew         Species protected in Poland           Drosera rotundifolia         Common Sundew         Red list of plants and fungi in Poland, Specie protected in Poland           Dryopteris cristata         Crested Wood Fem         Red list of plants and fungi in Poland           Empetrum rigrum         Black Crowberry         Red list of plants and fungi in Poland, Specie protected in Poland           Epipactis alrorubens         Royal Helleborine         Species protected in Poland           Epipactis helleborine         Broadleaf Helleborine         Species protected in Poland           Epipactis palustris         Marsh Helleborine         Red list of plants and fungi in Poland, Specie protected in Poland           Euphrasia micrantha         Common Slender Eyebright         Red list of plants and fungi in Poland	Dicranum bonjeanii	Bonjean's Dicranum Moss		
Digitalis grandiflora  Large Yellow Foxglove  Species protected in Poland  Diphasiastrum complanatum  Drosera anglica  Great Sundew  Great Sundew  Red list of plants and fungi in Poland, Species protected in Poland  Drosera obovata  Drosera rotundifolia  Common Sundew  Red list of plants and fungi in Poland, Specie protected in Poland  Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Dryopteris cristata  Crested Wood Fern  Red list of plants and fungi in Poland  Empetrum nigrum  Black Crowberry  Red list of plants and fungi in Poland, Specie protected in Poland  Epipactis atrorubens  Royal Helleborine  Species protected in Poland  Epipactis helleborine  Epipactis palustris  Marsh Helleborine  Common Slender Eyebright  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland	Dicranum polysetum	Dicranum Moss		Species protected in Poland
Diphasiastrum complanatum  Diphasiastrum complanatum  Drosera anglica  Great Sundew  Great Sundew  Great Sundew  Drosera obovata  Drosera obovata  Drosera rotundifolia  Drosera rotundifolia  Common Sundew  Drosera rotundifolia  Crested Wood Fern  Dryopteris cristata  Crested Wood Fern  Black Crowberry  Black Crowberry  Black Crowberry  Broadleaf Helleborine  Epipactis atrorubens  Epipactis helleborine  Broadleaf Helleborine  Epipactis palustris  Marsh Helleborine  Common Slender Eyebright  Red list of plants and fungi in Poland	Dicranum scoparium	Broom Moss		Species protected in Poland
Drosera anglica  Great Sundew  Great Sundew  Red list of plants and fungi in Poland, Specie protected in Poland  Drosera obovata  Drosera rotundifolia  Common Sundew  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Empetrum rigrum  Black Crowberry  Royal Helleborine  Species protected in Poland  Epipactis atrorubens  Epipactis helleborine  Broadleaf Helleborine  Species protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Common Slender Eyebright  Red list of plants and fungi in Poland	Digitalis grandiflora	Large Yellow Foxglove		Species protected in Poland
Drosera anglica         Great Sundew         Poland, Specie protected in Poland           Drosera obovata         Obovateleaf Sundew         Species protected in Poland           Drosera rotundifolia         Common Sundew         Red list of plants and fungi in Poland, Specie protected in Poland           Dryopteris cristata         Crested Wood Fern         Red list of plants and fungi in Poland           Empetrum nigrum         Black Crowberry         Red list of plants and fungi in Poland, Specie protected in Poland           Epipactis atrorubens         Royal Helleborine         Species protected in Poland           Epipactis helleborine         Broadleaf Helleborine         Species protected in Poland           Epipactis palustris         Marsh Helleborine         Red list of plants and fungi in Poland, Specie protected in Poland           Euphrasia micrantha         Common Slender Eyebright         Red list of plants and fungi in Poland           Common Evebright         Red list of plants and fungi in Poland	Diphasiastrum complanatum	Ground Pine		Species protected in Poland
Drosera obovata       Red list of plants and fungi in Poland, Specie protected in Poland         Drycoteris cristata       Crested Wood Fern       Red list of plants and fungi in Poland         Empetrum rigrum       Black Crowberry       Red list of plants and fungi in Poland, Specie protected in Poland         Epipactis atrorubens       Royal Helleborine       Species protected in Poland         Epipactis helleborine       Species protected in Poland         Epipactis palustris       Marsh Helleborine       Red list of plants and fungi in Poland, Specie protected in Poland         Euphrasia micrantha       Common Slender Eyebright       Red list of plants and fungi in Poland         Common Evebright       Red list of plants and fungi in Poland	Drosera anglica	Great Sundew		
Drosera rotundifolia  Common Sundew  Poland, Specie protected in Poland  Red list of plants and fungi in Poland  Red list of plants and fungi in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Epipactis atrorubens  Royal Helleborine  Broadleaf Helleborine  Species protected in Poland  Epipactis helleborine  Red list of plants and fungi in Poland, Specie protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Common Stender Eyebright  Red list of plants and fungi in Poland  Red list of plants and fungi in Poland  Red list of plants and fungi in Poland	Drosera obovata	Obovateleaf Sundew		Species protected in Poland
Dryopteris cristata  Crested Wood Ferri Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Epipactis atrorubens  Royal Helleborine Species protected in Poland  Epipactis helleborine Broadleaf Helleborine Species protected in Poland  Epipactis pellustris Marsh Helleborine Red list of plants and fungi in Poland, Specie protected in Poland  Euphrasia micrantha Common Slender Eyebright Red list of plants and fungi in Poland	Drosera rotundifolia	Common Sundew		
Empetrum rigrum  Brack Crowberry  Poland, Specie protected in Poland  Epipactis atrorubens  Epipactis helleborine  Broadleaf Helleborine  Epipactis helleborine  Epipactis palustris  Marsh Helleborine  Marsh Helleborine  Epipactis palustris  Marsh Helleborine  Epipactis palustris  Common Slender Eyebright  Common Slender Eyebright  Red list of plants and fungi in Poland	Dryopteris cristata	Crested Wood Fern		
Epipactis helleborine  Broadleaf Helleborine  Species protected in Poland  Red list of plants and fungi in Poland, Specie protected in Poland  Epipactis palustris  Marsh Helleborine  Red list of plants and fungi in Poland, Specie protected in Poland  Euphrasia micrantha  Common Stender Eyebright  Red list of plants and fungi in Poland  Red list of plants and fungi in Poland	Empetrum nigrum	Black Crowberry		
Epipactis helleborine  Epipactis palustris  Marsh Helleborine  Red list of plants and fungi in Poland, Specie protected in Poland  Euphrasia micrantha  Common Slender Eyebright  Red list of plants and fungi in Poland  Red list of plants and fungi in Poland	Epipactis atrorubens	Royal Helleborine		Species protected in Poland
Epipactis palustris  Poland, Specie protected in Poland  Euphrasia micrantha  Common Slender Eyebright  Red list of plants and fungi in Poland  Common Eyebright  Red list of plants and fungi in	Epipactis helleborine	Broadleaf Helleborine		Species protected in Poland
Euphrasia micrantha  Common Evebright  Red list of plants and fungi in	Epipactis palustris	Marsh Helleborine		
COMMON EVENIUM	Euphrasia micrantha	Common Slender Eyebright		
	Euphrasia nemorosa	Common Eyebright		

Scientific name	Common name	IUCN Red List	Position in range / endemism / other
Fontinalis dalecarlica	Fontinalis Moss		Red list of plants and fungi in Poland, Species protected in Poland
Geocalyx graveolens	Turps Pouchwort	Turps Pouchwort	
Goodyera repens	Rattlesnake Plaintain		Red list of plants and fungi in Poland, Species protected in Poland
Helichrysum arenarium	Everlasting Flower		Species protected in Poland
Helodium blandowii	Blandow's Feather Moss		Red list of plants and fungi in Poland, Species protected in Poland
Hieracium cymosum	Yellow-Tipped Straw-Flower		Red list of plants and fungi in Poland
Hierochloe australis	Forest Grass		Red list of plants and fungi in Poland, Species protected in Poland
Hierochloe odorata	Sweet Grass		Red list of plants and fungi in Poland, Species protected in Poland
Hippuris vulgaris	Mare's Tail		Red list of plants and fungi in Poland
Homalia trichomanoides	Blunt Feather-Moss		Species protected in Poland
Huperzia selago	Fir Clubmoss		Red list of plants and fungi in Poland, Species protected in Poland
Hygroamblystegium tenax	H. Moss		Red list of plants and fungi in Poland, Species protected in Poland
Hylocomium splendens	Glittering Wood Moss		Species protected in Poland
Juncus atratus	Dark Rush		Red list of plants and fungi in Poland
Koeleria pyramidata	Crested Hair Grass		Red list of plants and fungi in Poland
Lathyrus laevigatus	Yellow Pea		Species protected in Poland
Lathyrus palustris	Marsh Pea;Marsh Vetchling		Red list of plants and fungi in Poland
Leucobryum glaucum	White Moss		Species protected in Poland
Lilium martagon	Turk's Cap Lily		Species protected in Poland
Linnaea borealis	Twinflower		Species protected in Poland
Lycopodium annotinum	Stiff Club Moss		Species protected in Poland
Lycopodium clavatum	Wolf's Foot Club Moss		Species protected in Poland
Malaxis monophyllos	Adder's-Mouth Orchid		Red list of plants and fungi in Poland, Polish red data book of plants (NT), Specie protected in Poland
Melittis melissophyllum	Bastard Balm		Species protected in Poland
Menyanthes trifoliata	Bogbean		Species protected in Poland
Neckera complanata	Flat Neckera		Species protected in Poland
Neottia cordata	Heartleaf Twayblade		Red list of plants and fungi in Poland, Species protected in Poland
Neottia nidus-avis	Bird's Nest Orchid		Species protected in Poland
Neottia ovata	Common Twayblade		Species protected in Poland
Nowellia curvifolia	Wood-rust		Red list of plants and fungi in Poland, Species protected in Poland
Nymphaea alba	Common White Waterlily		Species protected in Poland
Nymphaea candida	Dwarf White Water Lily		Polish red data book of plants (NT), Species protected in Poland
Odontoschisma denudatum	Matchstick flapwort		Species protected in Poland
Ophioglossum vulgatum	Adder's Tongue		Red list of plants and fungi in Poland, Species protected in Poland
Orthotrichum patens	Orthotrichum Moss		Red list of plants and fungi in Poland

Cerebrichum attentinom  Stew Briste Noss  Paed list of plants and fungi in Poland  Orthoriotum attentinom  Shewis Briste Noss  Poland  Shewis Briste Noss  Red list of plants and fungi in Poland  Species protected in Poland  Pedicularis polaritis  Merch Lousewort  Productions polaritis  Productions polaritis  Productions polaritis  Productions conformation  Mor-King Lousewort  Productions conformation  Production conformation	Scientific name	Common name	IUCN Red List Position in range / endemism / oth
Optimization advisation  Optimization pilose  Weally Milliowitch  Particulate againmose  Angled Paludella Mose  Productate againmose  Angled Paludella Mose  Productate againmose  Angled Paludella Mose  Productate againmose  Morr-King Lousewort  Productate againmose  Morr-King Lousewort  Productate againmose  Thick-Nemed Apple Mose  Productate accommone  Common Butterwort  Productate adaptis  Productate	Orthotrichum stramineum	Straw Bristle Moss	
Argido Paludalia Muss Petitusia aquamosa Argido Paludalia Muss Pedicularis paluetris Pedicularis paluetris Pedicularis paluetris Pedicularis paluetris Pedicularis sociotrum Ped	Orthotrichum striatum	Shaw's Bristle Moss	
Pedacularis patustris  Merish Lousewort  Red ilist of plants and fungl in Poland. Species protected in Poland Pedand. Species protected in Poland Pedand Pedand. Species protected in Poland Pedand Pedand. Species protected in Poland Pedand Pedand Pedand Pedand. Species protected in Poland Pedand Pedan	Oxytropis pilosa	Woolly Mikvetch	Species protected in Poland
Peland, Species protected in Poland Poland, Species protected in Poland Peland, Species protected in P	Paludella squarrosa	Angled Paludella Moss	
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### Processes accesses    Prograture adjustics   Common Butterwort   Red list of plants and fungi in Poland. Species protected in Poland		Moor-King Lousewort	
Poland, Species protected in Poland Platerthera bildia  Platerthera bildia bildia praterasis  Platerthera bildia bildia praterasis  Platerthera bildia bildia praterasis  Platerthera bildia bildia praterasis  Platerthera bildia bi	Philonotis calcarea	Thick-Nerved Apple Moss	Species protected in Poland
Platerthera bifolia Paterthera chroratha Greater B. Orchid Species protected in Potand Flateratura chroratha Flateratura chroratha Flateratura schroberi Schreber's Moss Species protected in Potand Flateratura schroberi Common Heir Moss Species protected in Potand Flateratura schroberi	Pinguicula vulgaris	Common Butterwort	
Relative action   Relative a	Plagiochila asplenioides	Greater featherwort	Species protected in Poland
Restriction scheduler   Schreiber's Moss   Species protected in Poland	Platanthera bifolia	Butterflyorchid	Species protected in Poland
Restriction schrebed   Releasement   Relea	Platanthera chlorantha	Greater B. Orchid	Species protected in Poland
Red   Species protected in Poland   Species protected in Poland   P	Pleurozium schreberi	Schreber's Moss	Species protected in Poland
Red   Species protected in Poland   Red   Species protected in Poland   Poland   Red   Species protected in Poland   P		Greek Valerian	Species protected in Poland
Poland Primula elator True Oxlip Pseudoscellergon inferium Pseudoscellergon inferium Pseudoscellergon inferium Pseudoscellergon inferium Pseudosceleropodium purum Pseudoscele	<u> </u>	Common Hair Moss	Species protected in Poland
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Pseudoscleropodium purum Neat Feather Moss Species protected in Poland Pseudoscleropodium purum Neat Feather Moss Species protected in Poland Species protected in Poland Pseudoscleropodium purum Neat Feather Moss Species protected in Poland Species protected in Poland Species protected in Poland Palidum ciliare Pilium crista-castrensis Pasque Flower Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Poland, Species protected in Poland Rearunculus lingua Parunculus lingua Parunculus lingua Parunculus repens Creeping Buttercup Red list of plants and fungi in Poland, Species protected in Poland Species protected in Poland Species protected in Poland Poland Species protected in Poland Species protected in Poland Poland Species protected in Poland Species protected in Poland Species protected in Poland Poland, Species protected in Poland Species protected in Poland Poland, Species protected in	Primula elatior	True Oxlip	Species protected in Poland
Pillium crista-castrensis  Right's Plume  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Renunculus lingua  Greater Spearwort  Red list of plants and fungi in Poland, Species protected in Poland  Renunculus trichophyllus  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Scheuchzeria palustris  Rannoch-Rush  Red list of plants and fungi in Poland, Species protected in Poland  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Truidium delicatulum  Truidium temeriscinum  Tofieldia calyculata  Toefield's Asphodel  Tomentyprum nitens  Species protected in Poland  Tomentyprum nitens  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Tomentyprum nitens  Species protected in Poland  Poland, Species protected in Poland	Pseudocalliergon trifarium	Blunt Water Moss	
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Palsatilla pratensis  Pasque Flower  Pasque Flower  Pasque Flower  Parola media  Intermediate Wintergreen  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland  Species protected in Poland  Species protected in Poland  Species protected in Poland  Species protected in Poland  Wild Rosemary  Species protected in Poland  Species protected in Poland  Red list of plants and fungi in Poland  Species protected in Poland  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Scheuchzeria palustris  Rannoch-Rush  Red list of plants and fungi in Poland, Species protected in Poland  Scorpidium scorpicides  Scorpidium Moss  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Poland, Species protected in Poland  Syntrichia virescens  Truidium delicatulum  Delicate Fern Moss  Species protected in Poland  Truidium tamariscirum  Tofield's Asphodel  Tomentypnum nitens  Tomentypnum Moss  Polant, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Tomentypnum nitens  Polant, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Poland, Species protected in Poland  Tomentypnum nitens	Ptilidium ciliare	Ciliated fringewort	Species protected in Poland
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Poland, Species protected in Poland Ranunculus lingua Greater Spearwort Red list of plants and fungi in Poland, Species protected in Poland Ranunculus repens Creeping Buttercup Red list of plants and fungi in Poland Ranunculus trichophyllus Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Scheuchzeria palustris Rannoch-Rush Red list of plants and fungi in Poland, Species protected in Poland Scorpidium scorpicides Scorpidium Scorpicides Scorpidium Mbss Red list of plants and fungi in Poland, Species protected in Poland Splachnum ampuliaceum Small Capsule Dung Mbss Red list of plants and fungi in Poland, Species protected in Poland Syntrichia virescens Screw Mbss Red list of plants and fungi in Poland, Species protected in Poland Thuidium delicatulum Delicate Fern Mbss Species protected in Poland Thuidium temeriscinum Common Tamarisk-Moss Species protected in Poland Tofieldia calyculata Toefield's Asphodel Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland	Pulsatilla pratensis	Pasque Flower	
Ranunculus lingua  Creeping Buttercup  Creeping Buttercup  Red list of plants and fungi in Poland, Species protected in Poland  Wild Rosemary  Species protected in Poland  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Scheuchzeria palustris  Rannoch-Rush  Red list of plants and fungi in Poland, Species protected in Poland  Scorpidum scorpioides  Scorpidium Species protected in Poland  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Splachnum ampullaceum  Small Capsule Dung Moss  Red list of plants and fungi in Poland, Species protected in Poland  Spritrichia virescens  Screw Moss  Red list of plants and fungi in Poland, Species protected in Poland  Thuidium temariscinum  Common Tamarisk-Moss  Thuidium temariscinum  Toefieldia calyculata  Toefield's Asphodel  Tomentypnum nitens  Tomentypnum nitens  Polish Red Data Book of Plants (NT)	Pyrola media	Intermediate Wintergreen	
Ranunculus repens    Poland	Ranunculus lingua	Greater Spearwort	
Ranunculus trichophyllus Species protected i Species protected in Poland Species protected in Poland, Species protected in Poland, Species protected in Poland Scorpidium scorpioides Scorpidium Mbss Scorpidium Mbss Red list of plants and fungi in Poland, Species protected in Poland Splachnum ampullaceum Small Capsule Dung Mbss Red list of plants and fungi in Poland, Species protected in Poland Spritrichia virescens Screw Mbss Red list of plants and fungi in Poland, Species protected in Poland Thuidium delicatulum Delicate Fern Mbss Species protected in Poland Thuidium tamariscinum Toefieldia calyculata Toefieldi's Asphodel Tomentypnum nitens Tomentypnum nitens Species protected in Poland Species protected in Poland Species protected in Poland Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Tomentypnum nitens Tomentypnum nitens Siberian Qatgrass Polish Red Data Book of Plants (NT)	Ranunculus repens	Creeping Buttercup	
Rhydidiadelphus squarrosus  Springy Turf Moss  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Scorpidium scorpioides  Scorpidium Moss  Red list of plants and fungi in Poland, Species protected in Poland  Thuidium delicatulum  Delicate Fern Moss  Species protected in Poland  Thuidium tamariscinum  Toefieldia calyculata  Toefield's Asphodel  Tomentypnum nitens  Tomentypnum nitens  Polish Red Data Book of Plants (NT)	Ranunculus trichophyllus		Species protected in Poland
Red list of plants and fungi in Poland, Species protected in Poland.  Scorpidium scorpioides  Scorpidium Moss  Red list of plants and fungi in Poland, Species protected in Poland.  Red list of plants and fungi in Poland, Species protected in Poland.  Species protected in Poland.  Red list of plants and fungi in Poland, Species protected in Poland.  Species protected in Poland.  Screw Moss  Red list of plants and fungi in Poland, Species protected in Poland.  Screw Moss  Red list of plants and fungi in Poland, Species protected in Poland.  Thuidium delicatulum  Delicate Fern Moss  Species protected in Poland  Thuidium tamariscinum  Toefieldia calyculata  Toefield's Asphodel  Tomentypnum niters  Tomentypnum niters  Siberian Calgrass  Polish Red Data Book of Plants (NT)	Rhododendron tomentosum	Wild Rosemary	Species protected in Poland
Scheuchzeria palustris  Poland, Species protected in Poland Scorpidium scorpicides  Scorpidium Moss  Red list of plants and fungi in Poland, Species protected in Poland Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland Red list of plants and fungi in Poland, Species protected in Poland  Thuidium delicatulum  Delicate Fern Moss  Species protected in Poland  Thuidium tamariscinum  Common Tamarisk-Moss  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Tomentypnum nitens  Tomentypnum nitens  Polish Red Data Book of Plants (NT)	Rhytidiadelphus squarrosus	Springy Turf Moss	Species protected in Poland
Scorpidium scorpioides  Scorpidium scorpioides  Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Syntrichia virescens  Screw Moss  Red list of plants and fungi in Poland, Species protected in Poland  Thuidium delicatulum  Delicate Fern Moss  Species protected in Poland  Thuidium tamariscinum  Toefieldia calyculata  Toefield's Asphodel  Tomentypnum nitens  Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Tomentypnum nitens  Tomentypnum nitens  Polish Red Data Book of Plants (NIT)	Scheuchzeria palustris	Rannoch-Rush	
Splachnum ampullaceum  Sinair Capsuler During Woss  Poland, Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Thuidium delicatulum  Delicate Fem Moss  Species protected in Poland  Thuidium tamariscinum  Common Tamarisk-Moss  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Toefieldia calyculata  Toefield's Asphodel  Tomentypnum nitens  Red list of plants and fungi in Poland, Species protected in Poland  Siberian Catgrass  Polish Red Data Book of Plants (NT)	Scorpidium scorpioides	Scorpidium Moss	
Syntrichia virescens  Thuidium delicatulum  Delicate Fern Moss  Species protected in Poland  Species protected in Poland  Thuidium tamariscinum  Common Tamarisk-Moss  Species protected in Poland  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Tomentypnum nitens  Tomentypnum nitens  Siberian Catgrass  Polish Red Data Book of Plants (NT)	Splachnum ampullaceum	Small Capsule Dung Moss	
Thuidium tamariscinum  Common Tamarisk-Moss  Species protected in Poland  Red list of plants and fungi in Poland, Species protected in Poland  Toffieldia calyculata  Tomentypnum nitens  Tomentypnum nitens  Siberian Qatgrass  Polish Red Data Book of Plants (NT)	Syntrichia virescens	Screw Moss	
Thuidium tamariscinum  Tofieldia calyculata  Toefield's Asphodel  Red list of plants and fungi in Poland, Species protected in Poland  Tomentypnum nitens  Tomentypnum nitens  Red list of plants and fungi in Poland, Species protected in Poland  Siberian Catgrass  Polish Red Data Book of Plants (NT)	Thuidium delicatulum	Delicate Fern Moss	Species protected in Poland
Tofieldia calyculata  Poland, Species protected in Poland  Tomentypnum nitens  Tomentypnum nitens  Red list of plants and fungi in Poland, Species protected in Poland, Species protected in Poland  Siberian Catgrass  Polish Red Data Book of Plants (NT)	Thuidium tamariscinum	Common Tamarisk-Moss	Species protected in Poland
Tomentypnum nitens  Poland, Species protected in Poland Siberian Catgrass  Polish Red Data Book of Plants (NT)	Tofieldia calyculata	Toefield's Asphodel	
Trisetum sibiricum Siberian Catgrass Polish Red Data Book of Plants (NT)	Tomentypnum nitens	Tomentypnum Moss	
110000011000000000000000000000000000000	Trisetum sibiricum	Siberian Oatgrass	Polish Red Data Book of Plants (NT

Scientific name	Common name	<b>IUCN Red List</b>	Position in range / endemism / other
Trollius europaeus	Globeflower		Species protected in Poland
Uota crispa	Ulota Moss		Red list of plants and fungi in Poland, Species protected in Poland
Utricularia intermedia	Intermediate Bladderwort		Red list of plants and fungi in Poland, Species protected in Poland
Utricularia minor	Lesser Bladderwort		Red list of plants and fungi in Poland, Species protected in Poland
Vaccinium microcarpum	Small Cranberry		Red list of plants and fungi in Poland
Veronica prostrata	Prostrate Speedwell		Red list of plants and fungi in Poland

Scientific name	Common name	IUCN Red List	Impacts	Changes at RIS update
Acer negundo	Box Elder		Actually (minor impacts)	increase
Echinocystis lobata	Wild Cucumber		Actually (major impacts)	No change
Heracleum sosnowskyi	Sosnowsky's Hogweed		Potentially	unknown
Impatiens glandulifera	Policeman's Helmet		Actually (major impacts)	No change
Impatiens parviflora	Small-flowered Touch-me-not		Actually (major impacts)	No change
Lupinus polyphyllus	Russell Lupin;Garden Lupin;Large- leaved Lupine;Blue Pod;Meadow Lupine		Actually (minor impacts)	increase
arthenocissus quinquefolia	Virginia Creeper		Actually (minor impacts)	increase
Prunus serotina	Black Cherry		Actually (major impacts)	No change
Quercus rubra	Northern Red Oak		Actually (major impacts)	No change
Reynoutria japonica	Japanese Knotweed		Actually (minor impacts)	increase
Rhus typhina	Staghorn Sumac		Potentially	unknown
Robinia pseudoacacia	False Acacia;Black Locust		Potentially	unknown
Rosa rugosa	Ramanas rose		Actually (minor impacts)	increase
Rudbeckia laciniata			Potentially	unknown
Solidago canadensis	Canada Goldenrod		Actually (major impacts)	No change
Solidago gigantea	Giant goldenrod		Actually (major impacts)	No change
Sorbaria sorbifolia	False Spiraea		Potentially	unknown

#### Optional text box to provide further information

Other noteworthy plant species (not found on the list):

Calypogeia suecica - Swedish Pouchwort, Red list of plants and fungi in Poland

Fossombronia wondraczekii - Acid Frillwort, Red list of plants and fungi in Poland

Lophozia laxa - Bog palewort, Red list of plants and fungi in Poland, Species protected in Poland

Ephmerum serratum var. Angustifolium - Serrate Eph. moss, Red list of plants and fungi in Poland

Limptrichtia cossonii - Cosson's Limptrichtia Moss, Species protected in Poland Limptrichtia revolvens - L. Moss, Species protected in Poland

#### 4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	IUCN Red List	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/MAM/MALIA	Alces alces	European Elk					pop. size: 35-45 ind.
CHORDATA/MAMMALIA	Cervus elaphus	deer					pop. size: 20-150 ind.
CHORDATA/MAMMALIA	Eptesicus nilssonii	Northern Bat					Protected under Polish law
CHORDATA/MAM/MALIA	Eptesicus serotinus serotinus	Serotine Bat					Protected under Polish law
CHORDATA/MAMMALIA	Myotis daubentonii	Daubenton's Myotis					Protected under Polish law
CHORDATA/MAM/MALIA	Pipistrellus pipistrellus	Common Pipistrelle					Protected under Polish law
CHORDATA/MAMMALIA	Plecotus auritus	brown big-eared bat;Brown Long-eared Bat					Protected under Polish law
CHORDATA/MAMMALIA	Vespertilio murinus	Particolored Bat					Protected under Polish law

Invasive alien animal species

indoive difficultivial opedice					
Phylum	Scientific name	Common name	<b>IUCN Red List</b>	Impacts	Changes at RIS update
CHORDATA/MAMMALIA	Neovison vison	American Mink		Actually (major impacts)	No change
CHORDATA/MAMMALIA	Nyctereutes procyonoides	Raccoon dog		Actually (major impacts)	No change

#### 4.4 - Physical components

#### 4.4.1 - Climate

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

112-	Geomori	nhic	cattina
4.4.2	Geomon		SELLING

a) Mnimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

183

Entire river basin

Upper part of river basin  $\square$ 

Middle part of river basin

Lower part of river basin  $\square$ 

More than one river basin  $\square$ 

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 Czarna Hańcza River basin

#### 4.4.3 - Soil

Mineral 🗹

(Update) Changes at RIS update No change  $\ensuremath{\mathbf{\Theta}}$  Increase O Decrease O Unknown O

Organic 🗷

(Update) Changes at RIS update No change O Increase O Decrease O Unknown 

O

No available information  $\hfill\Box$ 

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

Please provide further information on the soil (optional)

The main kinds of soild in the Park are clay-sandy brown soils, podsols and peatsoils.

#### 4.4.4 - Water regime

Water permanence

Water permanence		
Pres	ence?	Changes at RIS update
	manent water	unknown

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water	<b>&gt;</b>	unknown
Water inputs from groundwater		unknown
Water inputs from rainfall	✓	unknown

#### Water destination

Presence?	Changes at RIS update	
Feeds groundwater	unknown	
To downstream catchment	unknown	

#### Stability of water regime

Presence?		Changes at RIS update
	Water levels largely stable	unknown

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

Wetlands constitute over 19 percent of the Park's area. The largest Lake Wigry together with other 25 lakes are located centrally in the Park and with the Czarna Hańcza River and the smaller rivers, they constitute an interconnected hydrological system.

The Czarna Hańcza River has two distinct sections. The northern section is characterised by its rapid current, whereas the southern section flows slowly as if it were a typical lowland river.

Lake Wigry receives both surface and underground water since the area is built of permeable sands and sandy clays. Around the southern banks of Lake Wigry, there are numerous springs which contribute to unique hydrological properties of Wigry National Park. The quality of the Park's water is generally high. The region is rich in natural small rivers where water management is partly controlled by beavers damming and inundating sections of valleys.

4.4.5			

Sediment regime unknown

4.6 - Water pH
Acid (pH<5.5) ☑
(Update) Changes at RIS update No change O Increase O Decrease O Unknown ⊚
Circumneutral (pH: 5.5-7.4 ) ☑
(Update) Changes at RIS update No change O Increase O Decrease O Unknown ●
Alkaline (pH>7.4) ☑
(Update) Changes at RIS update No change O Increase O Decrease O Unknown ⊚
Unknown □
4.7 - Water salinity
Fresh (<0.5 g/l)
(Update) Changes at RIS update No change O Increase O Decrease O Unknown ●
Unknown □
4.8 - Dissolved or suspended nutrients in water
Eutrophic ☑
(Update) Changes at RIS update No change O Increase O Decrease O Unknown ●
Mesotrophic ☑
(Update) Changes at RIS update No change   ● Increase O Decrease O Unknown O
Oligotrophic ☑
(Update) Changes at RIS update No change  Increase  ODecrease   ODecrease   ODecrease   ODecrease  ODecrease   ODecrease
Dietrophie 🗹

(Update) Changes at RIS update No change 

● Increase 

O Decrease 

O Unknown 

O

#### 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 O ii) significantly different  $\odot$ site itself:

Unknown

Surrounding area has greater urbanisation or development 🗹

Surrounding area has higher human population density  $\overline{\mathbb{Z}}$ 

Surrounding area has more intensive agricultural use 🗵

Surrounding area has significantly different land cover or habitat types  $\hfill\square$ 

#### 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

**Provisioning Services** 

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

Regulating Services

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

Cultural Services

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

Supporting Services

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

Within the site: 100000

Have studies or assessments been made of the economic valuation of Yes O No Unknown O 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  $\ensuremath{\checkmark}$ use that maintain the ecological character of the wetland

#### Description if applicable

The way in which the land is managed can be considered as model because of use of environmental-friendly methods in agriculture as well as forestry and fishery.

The eco-friendly agro-managements contains actions such us: mowing inside - out, plowing in parallel towards shore of ponds or rivers. Farms are modernize in dung plates and slurry tanks. The protective treatments in forest are in correct with natures protection. The methods are the result of traditional experience and modern knowledge.

The forest and fish management carried out by the park aims to protect species and habitats. The same applies to agricultural activities that are in line with good practices.

ii) the site has exceptional cultural traditions or records of former  $\ensuremath{\slash\hspace{-0.4em}\mathbb{Z}}$ civilizations that have influenced the ecological character of the wetland

Archaeological sites dating from the Paleolithic to the Middle Ages and from so-called Age of the Reindeer (Magdalenian culture). Old fishing villages and a baroque monastery on the peninsula of Lake Wigry are located in the area of Wigry National Park. There is evidence for the occurrence of ancient civilizations in the park, however, their impact on changes in the ecosystem can't be determined

iii) the ecological character of the wetland depends on its interaction  $_{\ensuremath{ \swarrow}}$ with local communities or indigenous peoples

Description if applicable

The local community fully accepts the rules of using wetlands imposed by the Wigierski National Park. A significant part of the local community uses the resources of wetlands, as determined by the Park, accepting the overriding role of nature conservation. This attitude of society results to a large extent from the belief that maintaining wetlands in the best possible condition is beneficial for local residents, both in the cultural and economic dimensions.

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological  $\hfill\Box$  character of the wetland

#### 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	<b>&gt;</b>	✓
Local authority, municipality, (sub)district, etc.	<b>2</b>	V
Other public ownership		✓

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<b>2</b>	<b>2</b>

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

The lands of the Park belong mainly to the State Treasury

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for	Wigry National Park
managing the site:	
B. Clark and the second	
Provide the name and title of the person or people with responsibility for the wetland:	Jarosław Borejszo, Director of the Wigry National Park
people with responsibility for the wettand.	
Postal address:	Krzywe 82, 16-402 Suwałki, Poland
E-mail address:	wigry_pn@wigry.org.pl

#### 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	Changes	In the surrounding area	Changes
Tourism and recreation areas	unknown impact		<b>&gt;</b>	unknown	✓	unknown
Housing and urban areas	unknown impact		V	unknown	✓	increase

Water regulation

rator rogulation						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	unknown impact		✓	unknown	✓	increase
Water abstraction	unknown impact		✓	unknown	✓	unknown

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Annual and perennial non-timber crops	unknown impact		<b>2</b>	unknown	<b>2</b>	unknown
Livestock farming and ranching	unknown impact		<b>2</b>	unknown	<b>2</b>	unknown
Marine and freshwater aquaculture	unknown impact		<b>/</b>	unknown	<b>/</b>	unknown

Transportation and service corridors

Trainepertation and eet not	0 001110010					
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Roads and railroads	unknown impact		✓	unknown	✓	unknown
Shipping lanes	unknown impact		<b>✓</b>	unknown		No change
Aircraft flight paths	unknown impact		✓	unknown	✓	unknown

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Logging and wood harvesting	unknown impact		<b>/</b>	unknown	<b>&gt;</b>	unknown
Fishing and harvesting aquatic resources	unknown impact		<b>/</b>	unknown	<b>2</b>	unknown

#### Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities	unknown impact		<b>2</b>	unknown	<b>2</b>	unknown

#### Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fire and fire suppression	unknown impact		<b>2</b>	unknown	<b>2</b>	unknown
Vegetation clearance/ land conversion	unknown impact		<b>2</b>	unknown	<b>2</b>	unknown

#### 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	unknown impact		<b>2</b>	No change	<b>2</b>	No change

#### Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Household sewage, urban waste water	unknown impact		<b>/</b>	unknown	✓	decrease
Agricultural and forestry effluents	unknown impact		<b>/</b>	unknown	✓	unknown
Garbage and solid waste	unknown impact		<b>2</b>	unknown	✓	unknown

#### Please describe any other threats (optional):

#### The main threats of the area are:

- 1. Urbanization in some areas in the Parks buffer zone
- 2. Changes of water regime in the Park buffer zone
- 3. Water pollution in the Park buffer zone
- 4. Disappearance and transformation of animals' and plants' habitats
- 5. Expansion of alien species of animals and plants

#### Agriculture:

Inadequate agricultural practices can be a threat, but when they are subordinate to nature protection, they can be an important factor in maintaining the appropriate condition of habitats or species.

#### Fishing:

The fish regulatory catch is one of the methods of regulating the quantitative and qualitative structure of the fish population. The catches, however, concern selected species, which are undesirable due to their importance in the ecosystem. Uncontrolled catch of fish, carried out at the wrong time and without a set plan, poses a threat to aquatic ecosystems. Also uncontrolled fish catches by fishermen may have a negative impact on the state of protection of the ecosystem or particular species of fish.

#### 5.2.2 - Legal conservation status

#### Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	Ostoja Wigierska PLH200004	natura2000.gdos.gov.pl	whole
EU Natura 2000	ra 2000 Puszcza Augustowska PLB200002		whole

#### National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Park	Wigry National Park	www.wigry.org.pl	whole

#### Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Puszcza Augustowska (Augustow Forest) PL043	www.ostojeptakow.pl	whole

#### 5.2.3 - IUCN protected areas categories (2008)

la Strict Nature Reserve
lb Wilderness Area: protected area managed mainly for wilderness protection
Il 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
Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

#### 5.2.4 - Key conservation measures

#### Legal protection

9 F	
Measures	Status
Legal protection	Implemented

#### Habitat

Measures	Status	
Habitat manipulation/enhancement	Implemented	
Improvement of water quality	Partially implemented	
Hydrology management/restoration	Partially implemented	
Land conversion controls	Partially implemented	
Faunal corridors/passage	Implemented	

#### **Species**

Measures	Status	
Control of invasive alien plants	Proposed	
Control of invasive alien animals	Implemented	

#### Human Activities

Measures	Status
Regulation/management of wastes	Implemented
Livestock management/exclusion (excluding fisheries)	Implemented
Fisheries management/regulation	Implemented
Harvest controls/poaching enforcement	Implemented
Regulation/management of recreational activities	Implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

#### 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 O No ®

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes O No oprocesses 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 Park has established one information centre with two permanent exhibitions and an educational station. Tourist facilities include nine observation hides, six educational paths and 208 km tourist trails.

URL of site-related webpage (if relevant): www.wigry.org.pl

#### 5.2.6 - Planning for restoration

#### Further information

There are no heavily degraded habitats in the Park. The maintenance or improvement of the ecosystems condition is ensured by the protective actions carried out by the Park.

#### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Implemented
Plant species	Implemented
Water regime monitoring	Implemented
Water quality	Implemented
Animal species (please specify)	Implemented
Birds	Implemented

#### 6 - Additional material

#### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Atlas Klimatu Polski (Climate of Poland - Atlas). Warszawa 2005. IMGW

BirdLife International 2004 Birds in Europe Population estimates, trends and conservation status

Birds Directive (Directive 2009/147/EC)

Zygmunt Dajdok, Anna Krzysztofiak, Lech Krzysztofiak, Maciej Romański, Michał Śliwiński Rośliny inwazyjne

w Wigierskim Parku Narodowym (Invasive species in Wigry National Park), Krzywe 2007.

Dobrowolski K., Lewandowski K. 1998. Ochrona środowisk wodnych i błotnych w Polsce. (Protection of wetlands in Poland), Instytut Ekologii PAN.

EEA publication 2002: Europe's biodiversity – biogeographical regions and seas.

Information Sheet on Ramsar Wetlands (RIS) (Wigry National Park) 2005, Institute of Environmental Protection, Warsaw.

Głowaciński Z. (red.). 2001. Polska czerwona księga zwierząt.PWRiL, Warszawa. (Polish Red Data Book of Animals).

Habitats Directive (Council Directive 92/43/EEC)

Important Bird Areas, Puszcza Augustowska (Augustow Forest) PL043 www.ostojeptakow.pl

Kondracki J. 2001: The Regional geography of Poland ed. by Panstwowe Wydawnictwa Naukowe, Warsaw.

Polska Czerwona Księga Roślin. 2001. Instytut Ochrony Przyrody im W. Szafera. Kraków 2001. (Polish Red Data Book of Plants).

Ramsar convention on wetlands http://www.ramsar.org/

Tomiałojć L., Stawarczyk T. Awifauna Polski, rozmieszczenie, liczebność i zmiany Birds of Poland, distribution, numbers, changes), Wrocław

www.wigry.org.pl (official web side of Wigry National Park

www.natura2000.gdos.gov.pl (official Polish site about Natura 2000)

http://www.iop.krakow.pl/ias (data base - invasive species in Poland)

http://www.ramsar.org/

Materials from Wigry National Park

#### 6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

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

vi. other published literature

<no data available>

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site



Jezioro Wigry ( Wojciech Misiukiewicz, 12-09-2017 )



Czarna Hańcza (Wojciech Misiukiewicz, 18-06-2014 )

#### 6.1.4 - Designation letter and related data

**Designation letter** 

<1 file(s) uploaded>

Date of Designation 2002-10-29