Ramsar Information Sheet

Published on 9 May 2018

Poland

Czerwone bog woodland - nature reserve

Designation date	11 December 2017
Site number	2339
Coordinates	49°27'28"N 20°02'19"E
Area	114,66 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

The Site is an active raised bog, which together with the surrounding bog woodland, represents a typical example of a mountain bog. It is a rare complex of three bog habitats of European importance such as transition mires and quaking bogs (7140), bog woodland (91D0) and active raised bogs (7110). A very well developed dome of raised bog of 0.5-5 meters height covers the area of around 35 ha. The dome is overgrown by plant communities: Pino x rhaeticae-Sphagnetum and Ledo-Sphagnetum. The flat part of the bog is overgrown with very sparse pine stand covering 5-30%. Its herbal layer is dominated by the marsh Labrador tea Ledum palustre and the bog bilberry Vaccinium uliginosum as well as species from Oxycocco-Sphagnetea class (the hare's-tail cottongrass Eriophorum vaginatum, the small cranberry Oxycoccus palustris, the bog-rosemary Andromeda polifolia, the Sphagnum rubellum and other). The dome is surrounded by transition mires, sometimes overgrown by shrubs of pine or birch. Together with Sphagna mosses, other plant species typical for peat bogs occurring here are the white beak-sedge Rhynchospora alba, the round-leaved sundew Drosera rotundifolia, the hare's-tail cottongrass Eriophorum vaginatum, the small cranberry Oxycoccus palustris and the bog-rosemary Andromeda polifolia. An important part of the reserve is covered by forests, particularly bog woodland Sphagno-Piceetum, Calamagrostio villosae-Pinetum and Vaccinio uliginosi-Pinetum.
The Site is of a great importance for carbon storage, education, long-term monitoring and research; it is used as a scientific reference and demonstration site for students. It is also of importance for recreation.
The Site has the same boundaries as the nature reserve with the same name. It is also protected as the part of two Torfowiska Orawsko-Nowotarskie Natura 2000 sites - special area of conservation PLH120016 and special protection area PLB120007.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name: Wojciech Mróz

Institution/agency: Wojciech Mróz

Postal address:
ul. Kazimierza Wielkiego 36/3
30-374 Kraków
Poland

E-mail: wojtek@habitats.pl

Phone: +48-516073820

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

From year: 2007

To year: 2015

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): Czerwone bog woodland - nature reserve

Unofficial name (optional): Rezerwat przyrody „Bór na Czerwonem”

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<2 file(s) uploaded>

Former maps: 0

Boundaries description

The boundary of the site is the same as the boundary of existing nature reserve Czerwone bog woodland.

2.2.2 - General location

a) In which large administrative region does the site lie? Małopolskie

b) What is the nearest town or population centre? Nowy Targ

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes ○ No ◉

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha): 114.66

Area, in hectares (ha) as calculated from GIS boundaries: 113.91

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Alpine

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

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

Other ecosystem services provided	The Site is of a great importance for carbon storage.
Other reasons	The reserve is one of three sites in Polish Carpathians with active raised bogs. The bog, together with surrounding bog woodland, is a typical example of a mountain bog so it's often presented to the scientific public and students. It is a rare complex of three bog habitats (Natura 2000 codes - 7110, 7140 and 91D0).

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification	The site includes unique and representative bog system with valuable natural habitats and typical bog vegetation - Spagnum sp., typical bog chamaephytes. There are also localities of rare plant species the Pinus rhaetica and the Drosera rotundifolia.

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
Drosera rotundifolia	common sundew	☑	☑	☐	LC	☐	Zarzycki K., Mrek Z. 2006 Red list of plants and fungi in Poland. (Czerwona lista roślin i grzybów Polski) - VU	Numerous locality of this rare species
Pinus rhaetica	Sosna drzewokosa	☑	☐	☐		☐	Polish red book of plant species - VU	

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

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA / AVES	*Lyrurus tetrix*	Eurasian Black Grouse; Black Grouse	☑	☐	☐	☐	☐	☐	☐	☐					☐	☐	Polish Red Data Book - EN	

1) Percentage of the total biogeographic population at the site

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
Ledo-Sphagnetum	☑	7110 * Active raised bogs	Annex I EU Habitats Directive
Vaccinio uliginosi-Pinetum	☑	91D0 * Bog woodland	Annex I EU Habitats Directive
Eriophorum vaginatum-Sphagnum fallax	☑	7110 * Active raised bogs	Annex I EU Habitats Directive
Pino rhaeticae-Sphagnetum	☑	91D0 * Bog woodland	Annex I EU Habitats Directive
Rhynchosporetum albae	☑	7110 * Active raised bogs	Annex I EU Habitats Directive

Optional text box to provide further information

The sign '*' indicates priority habitat types.

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

4.1 - Ecological character

There are five important plant communities on the bog dome: Pino rhaeticae-Sphagnetum, Ledo-Sphagnetum, Vaccinio uliginosi-Pinetum, Rhynchosporetum albae and community Eriophorum vaginatum-Sphagnum fallax.
The vegetation analysis shows that the water conditions of the bog are disturbed and the dome is over dried. It is proved by the occurrence of shrub communities - Pino rhaeticae-Sphagnetum, expansion of bog woodland Vaccinio uliginosi-Pinetum and lack of typical communities of bog depressions. Pinus sylvestris was present on the bog also in previous years but its occurrence was limited by high water level. In the last two decades the rapid expansion of pine with irruptive increase of undergrowth was observed. The expansion of pine was connected with changes in the bog hydrology and it caused further changes of vegetation and bog structure.
Pino rhaeticae-Sphagnetum – the community covers the majority of the dome (ca. ¾) and it occurs mainly in its marginal zone. The dominant species is Pinus x rhaetica. The height and density of shrub is diverse (form 0,5 to 4 m high). The herb layer is created by typical raised bog species: Andromeda polifolia, Drosera rotundifolia, Eriophorum vaginatum, Oxycoccus microcarpus, O. palustris and the species of bog woodland: Ledum palustre, Vaccinium myrtillus, V. uliginosum, V. vitis idea. The moss layer is well developed (Polytrichum strictum, Sphagnum fuscum, S. magellanicum, S. rubellum, S. fallax, S. girgensohnii, Pleurozium schreberii).
Transitional community between Sphagnetum magellanici and Ledo-Sphagnetum – the association of active raised bogs - occurs in central part of the dome and in small enclaves in the Pinus rhaetica scrub. In last decades it has strongly overgrown with Scots pine. Predominant amount of the scrub was removed from the dome of the peat bog in 2012 and new re-sprouts are being removed every two years. There are typical raised bog species - Andromeda polifolia, Drosera rotundifolia, Eriophorum vaginatum, Oxycoccus microcarpus, O. palustris. The significant over drying of the habitat is indicated by growing proportion of woodland species (Ledum palustre, Vaccinium myrtillus, V. uliginosum, V. vitis-idaea) and Calluna vulgaris. The moss layer is well developed - Aulacomnium palustre, Polytrichum strictum, Sphagnum fuscum, S. magellanicum, S. rubellum, S. fallax. Typical for bog depression species – Sphagnum cuspidatum is rather rare. The bad water conditions are also indicated by high proportion of lichens and typical forest moss species -Pleurozium schreberii. The present state of the community is unfavourable.

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

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands		2	34	Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		1	70	Representative

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Andromeda polifolia	bog-rosemary	
Calluna vulgaris	common heather	
Drosera rotundifolia	common sundew	
Eriophorum vaginatum	hare's-tail cottongrass	
Pleurozium schreberi	red-stemmed feathermoss	
Polytrichum strictum	bog haircap moss	
Rhododendron tomentosum	marsh Labrador tea	
Sphagnum fallax	flat-topped bogmoss	
Sphagnum fuscum	rusty bogmoss	
Sphagnum girgensohnii	Girgensohn's bogmoss	
Sphagnum magellanicum	Magellanic bogmoss	
Sphagnum rubellum		
Vaccinium microcarpum	Small Cranberry	
Vaccinium myrtillus	common bilberry	
Vaccinium oxycoccos	bog cranberry	
Vaccinium uliginosum	bog bilberry	
Vaccinium vitis-idaea	lingonberry	

4.3.2 - Animal species

<no data available>

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
H: Highland	H: Highland (-)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 612

a) Maximum elevation above sea level (in metres): 627

- Entire river basin ☐
- Upper part of river basin ☐
- Middle part of river basin ☑
- Lower part of river basin ☐
- More than one river basin ☐
- Not in river basin ☐
- Coastal ☐

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

the basin of the White Dunajec river

4.4.3 - Soil

Mineral ☐

Organic ☑

No available information ☐

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

4.4.4 - Water regime

Water permanence

Presence?
Usually permanent water present

Source of water that maintains character of the site

Presence?	Predominant water source
Water inputs from rainfall	☑
Water inputs from surface water	☐

Water destination

Presence?
To downstream catchment
Feeds groundwater

Stability of water regime

Presence?
Water levels largely stable

4.4.5 - Sediment regime

Significant erosion of sediments occurs on the site ☐

Significant accretion or deposition of sediments occurs on the site ☐

Significant transportation of sediments occurs on or through the site ☐

Sediment regime is highly variable, either seasonally or inter-annually ☑

Sediment regime unknown ☐

4.4.6 - Water pH

Acid (pH<5.5) ☐

Circumneutral (pH: 5.5-7.4) ☑

Alkaline (pH>7.4) ☐

Unknown ☐

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☑

Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☐

Euhaline/Eusaline (30-40 g/l) ☐

Hyperhaline/Hypersaline (>40 g/l) ☐

Unknown ☐

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐

Mesotrophic ☐

Oligotrophic ☑

Dystrophic ☑

Unknown ☐

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ○ ii) significantly different ◉

Surrounding area has greater urbanisation or development ☐

Surrounding area has higher human population density ☐

Surrounding area has more intensive agricultural use ☐

Surrounding area has significantly different land cover or habitat types ☐

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Climate regulation	Local climate regulation/buffering of change	Low

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	High
Recreation and tourism	Nature observation and nature-based tourism	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High
Scientific and educational	Long-term monitoring site	High
Scientific and educational	Major scientific study site	High

Supporting Services

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

Other ecosystem service(s) not included above:

The site is an important area for recreation and leisure for inhabitants of Nowy Targ and its surroundings. A large number of tourists visiting the site bring an income and benefit the local community.

Within the site: 100000

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ○ No ○ Unknown ◉

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland ☐

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☐

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☐

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

<no data available>

4.6 - Ecological processes

(ECD) Carbon cycling: The Site is of a great importance for carbon storage.

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	☑	☐
Local authority, municipality, (sub)district, etc.	☑	☐

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	☐	☑

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

The area managed by State Forest Administration (Nadleśnictwo Nowy Targ) - 107,89 ha.
Small part of the area (6,77 ha) belongs to the Nowy Targ commune, and the areas in buffer zones are owned e.g. by Aeroklub Nowy Targ.

5.1.2 - Management authority

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

Nadleśnictwo Nowy Targ
Regionalna Dyrekcja Ochrony Środowiska w Krakowie

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

Regional Director for Environmental Protection in Cracow

Postal address:

Nadleśnictwo Nowy Targ
Kowaniec 70, Nowy Targ

Regionalna Dyrekcja Ochrony Środowiska w Krakowie
Plac Na Stawach 3, 30-107 Kraków

E-mail address: sekretariat.krakow@rdos.gov.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	In the surrounding area
Housing and urban areas	Low impact		☐	☑
Commercial and industrial areas		Medium impact	☐	☑
Tourism and recreation areas	Low impact		☐	☑

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Drainage	High impact		☑	☑

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-timber crops		unknown impact	☐	☑

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads		Low impact	☐	☑
Aircraft flight paths		High impact	☐	☑

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Gathering terrestrial plants	Low impact		☑	☐

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	☑	☑

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fire and fire suppression		Low impact	☑	☑

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Problematic native species	High impact	High impact	☑	☐

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Excess heat, sound, light		Medium impact	☐	☑

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	PLB120007 Torfowiska Orawsko-Nowotarskie	http://n2k-ws.gdos.gov.pl/wyszukiwarkaN2k/webresources/pdf/PLB120007	whole
EU Natura 2000	PLH120016 Torfowiska Orawsko-Nowotarskie	http://n2k-ws.gdos.gov.pl/wyszukiwarkaN2k/webresources/pdf/PLH120016	whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Nature reserve	Bór na Czerwonem		whole

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☐

Ib Wilderness Area: protected area managed mainly for wilderness protection ☑

II National Park: protected area managed mainly for ecosystem protection and recreation ☐

III Natural Monument: protected area managed mainly for conservation of specific natural features ☐

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

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Habitat manipulation/enhancement	Partially implemented

Other:

Predominant amount of the scrub was removed from the dome of the peat bog in 2012 and new re-sprouts are being removed every two years.

5.2.5 - Management planning

Is there a site-specific management plan for the site?	In preparation
Has a management effectiveness assessment been undertaken for the site?	Yes ○ No ◉
If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party?	Yes ○ No ◉

5.2.6 - Planning for restoration

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

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Implemented

The natural habitats in the site are being monitoring within national scheme of monitoring

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Dyakowska J.,1929: Historia torfowiska na Czerwonem pod Nowym Targiem w świetle analizy pyłkowej. Spraw. Kom. Fizjogr. PAU. 63: 129-150. Kraków.
Horawski M., Curzydło J., Wójcikiewicz M., 1979: Wahania poziomu powierzchni torfowiska wysokiego Bór na Czerwonem w latach 1974 i 1975. Zesz. Nauk. AR im H. Kołłątaja w Krakowie. 153. Melioracja 10: 20-32.
Koczur A., Wach J. 2011. Analiza stanu siedliska 7110 * w rezerwacie „Bór na Czerwonem" (obszar Natura 2000 PLH120013 Torfowiska Orawsko - Nowotarskie). Raport z badań hydrologicznych i fitosocjologicznych zrealizowanych w ramach Programu Aktywnej Ochrony w Nadleśnictwie Nowy Targ. Instytut Ochrony Przyrody PAN, msc.
Obidowicz A., 1975: Entstehung und Alter einiger Moore im nordlichen Teil der Hohen Tatra – Geneza i wiek kilku torfowisk po północnej stronie Tatr Wysokich. Fragm. Flor. Geobot. 21 (3): 289-323.
Obidowicz A., 1978: Genese und Stratigraphie des Moors „Bór na Czerwonem" In Orawa-Nowy Targ Muldle - Geneza i stratygrafia torfowiska Bór na Czerwonem w Kotlinie Orawsko-Nowotarskiej. Fragm. Flor. Geobot. 24 (3): 447-466.
Obidowicz A., 1990: Eine Pollenanalytische und Moorkundliche Studie zur Vegetationsgeschichte des Podhale-Gebietes (West-Karpaten). Acta Paleobot. 30(1,2): 147-219.
Staszkiewicz J., 1958: Zespoły sosnowe Borów Nowotarskich. Fragm. Flor. Geobot. 3(2): 105-129.
Staszkiewicz J., Szeląg Z., 2003: Flora i roślinność rezerwatu „Bór na Czerwonem" w Kotlinie Orawsko-Nowotarskiej (Karpaty Zachodnie). Fragm. Flor. Geobot. Polonica 10: 67-91.
Wójcikiewicz M., 1979: Stratygrafia torfowiska "Bór na Czerwonem" z uwzględnieniem zespołów subfosylnych oraz rozmieszczenia i zróżnicowania współczesnych zespołów roślinnych. II. Charakterystyka szaty roślinnej torfowisa. Zesz. Nauk. AR im H. Kołłątaja w Krakowie 153. Melioracja 10: 159-193

6.1.2 - Additional reports and documents

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

ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>

iii. a description of the site in a national or regional wetland inventory
<no file available>

iv. relevant Article 3.2 reports
<no file available>

v. site management plan
<no file available>

vi. other published literature
<no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

The active bog in the central part of the site (*Anna Koczur, 01-03-2010*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation 2017-12-11