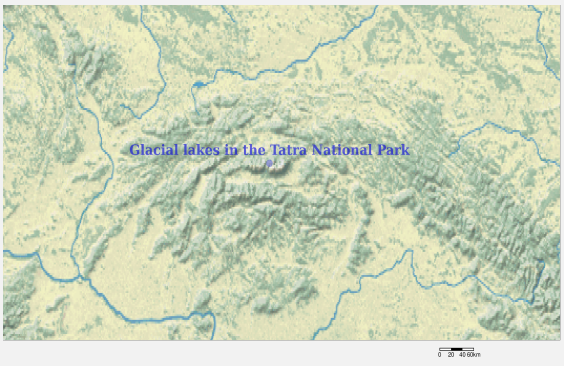
Ramsar Information Sheet

Published on 9 May 2018

Poland

Glacial lakes in the Tatra National Park



Designation date	11 December 2017
Site number	2340
Coordinates	49°13'02"N 19°59'36"E
Area	571,13 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 consists of ten subsites and includes primarily the high mountain small lakes of the High Tatra Mountains and their nearest surrounding: Morskie Oko, Czarny Staw nad Morskim Okiem, the lakes between Szpiglasowy Wierch and Mnich (Stawek na Kopkach, Staw Staszica Wyżni, Staw Staszica Niżni, Wyżnie Mnichowe Stawki), the whole Valley of the Five Polish Lakes (including: Przedni Staw, Mały Staw, Wielki Staw, Czarny Staw and Zadni Staw). The Site comprises also the lakes in Gąsienicowa Valley (Czarny Staw Gąsienicowy, Zadni Staw Gąsienicowy, Zielony Staw, Litworowy Staw, Długi Staw, Kurtkowiec, Dwoisty Staw Zachodni, Dwoisty Staw Wschodni, Dwoiśniaczek, Kurtkowiec). Moreover, the lake Czerwony Staw Pańszczyca Valley is also included. Finally, two places in the Western Tatra Mountains are included: Dudowe Stawki and Siwe Stawki.

Marshy banks of Tatra lakes and adjoining peaty grounds provide habitats for a few unique species of vascular plants – the Alpine bulrush Trichophorum alpinum and the Juncus triglumis limited in the Polish Carpathians only to the Tatra Mountains. The dwarf-pine scrub in mosaic with grasslands, tall grass swards and wetlands around lakes are a habitat for the boreal-alpine form of bluethroat Luscinia svecica svecica, species protected in the Natura 2000 site Tatry. It is an exceptionally rare species: its breeding areas in Tatry (both on Polish and Czech side of the border) are the only ones in the whole Carpathian Mountains.

The majority of Tatra lakes are situated in the erosion depressions and areas of glacial accumulation, whilst in Gąsienicowa Valley there are also lakes with karst genesis. The biggest lakes are Morskie Oko, Wielki Staw and Czarny Staw pod Rysami. The maximal depth is reached in Wielki Staw (79,3 m). The state and the level of water in these lakes are diverse and are dependent on weather conditions. The water in the lakes is mainly supplied with groundwater, and periodically also comes from surface run-off, snow, ice and also from rainfall. The Tatra lakes can be divided into two groups: drainage lakes and seepage lakes (here are most of valley lakes).
The Site is entirely located within the borders of Tatra National Park, which is a popular recreational area. Among activities popular at the Site are hiking and nature-observation tourism. It is also a long-term monitoring site.

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 30-074 Kraków Poland
E-mail	wojtek@habitats.pl
Phone	+48-516073820

Compiler 2

Name	Antoni Zięba, Paweł Kauzal
Institution/agency	Tatra National Park
Postal address	Kuźnice 1, 34-500 Zakopane Poland
E-mail	azieba@tpn.pl
Phone	48182023214

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

From year	2007
To year	2018

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Glacial lakes in the Tatra National Park
Unofficial name (optional)	Polodowcowe Stawy Tatrzańskiego Parku Narodowego

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<4 file(s) uploaded>

Former maps	0

Boundaries description

The Site consists of ten parts, two of which are situated in the West Tatra Mountains and the remaining ones are in the High Tatras. In the west, where typical mountain glacial lakes that fill in postglacial cirques did not form, the area includes Dudowe Stawki situated in Dudowy Kocioł at the eastern side of Czubik mountain and Siwe Stawki located in Siwa Kotlinka Valley west from Siwa Przełęcz.

In the High Tatras, all permanent glacial lakes are included in the Site (without those of dystrophic character included in the Ramsar site Peat bogs in the Tatra National Park). In Dolina Gąsienicowa valley, three parts are included: Czarny Staw Gąsienicowy, Zmarzły Staw situated in higher altitudinal zone and so called Dolina Zielona Gąsienicowa with lakes: Zielony, Litworowy, Kurtkowiec, Długi, Zadni and several minor lakes together with dwarf-pine scrub and wetlands that surround them. In higher part of Dolina Pańszczycy valley, the only lake in this region - Czerwony Staw – is also included. In the neighbouring Dolina Waksmundzka, small lakes Waksmundzkie Stawki are included. In Dolina Pięciu Stawów valley located in the south, the whole lake complex encompassing bigger lakes: Wielki, Czarny, Przedni, Zadni, Mały, Wole Oko with adjoining area were included, together with smaller water bodies, peaty grounds, acidophilous and Nardus grasslands, dwarf-pine scrub. The area encompasses also Wielka Siklawa - waterfall created by Roztoka-stream coming from Wielki Staw. The boundary of this fragment runs at the footside of hillsides descending to the valley. Only in the north-eastern part the boundary goes outside of the valley Dolina Pięciu Stawów Polskich and encompasses fragment of its threshold and part of the stream Roztoka in Dolina Roztoki, crossing it close to the tourist routes' crossing. Another area included in the Site is located south-east from the previous one and comprises of a grouping of minor ponds: Stawy Staszica, Stawek na Kopkach, Wyżnie Mnichowe Stawki situated in the region of Dolinka za Mnichem. Together with these ponds, this part of the area includes wetlands and acidophilous grasslands. The last fragment included in the area is in Rybi Potok Valley and encompasses two big lakes: Morskie Oko and Czarny Staw at the foot of the Rysy Mountain with a stream that joins them. The boundary of this part runs close to the banks of both of these lakes.

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? Zakopane

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): 571.13

Area, in hectares (ha) as calculated from GIS boundaries 571.13

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 reasons: The site comprises the biggest group of typical oligotrophic glacial lakes in Poland. Similar lakes can be also observed in Karkonosze Mountains, but they are situated in lower altitudes and in a smaller number.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification: The international importance of the Site for biodiversity arises from the occurrence of plant and animal species important for the preservation of the Alpine biogeographical region biodiversity in this part of Europe. It is especially important for the biodiversity of birds, as it includes breeding sites of the bluethroat and the common redpoll. The bluethroat is listed in the Appendix I of the EU Birds Directive and the Tatra Mountains it is the only refuge of its boreal-alpine subspecies. Beside this refuge, in the Carpathians outside of the Tatra Mountains, bluethroat occurs most probably only in Ukraine. The Tatras within the Site is also a refuge of the common redpoll and one of three places in the Polish Carpathians (together with Babia Góra and Pilsko stands) where it breeds. Beside Polish refuges, this bird occurs only in the Carpathians in Slovakia and locally in Eastern Carpathians. Two plant species occurring in the Site - Juncus triglumis and alpine bulrush Trichophorum alpinum – are very rare in the Carpathian region. In the Site they occur on isolated refuges. They have not been noticed in the Polish Carpathians outside of the Tatra mountains. Therefore, the Site is of great importance for the alpine bulrush, bluethroat and common redpoll as one of their main sanctuaries in the Carpathian Mountains.

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

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Juncus triglumis		☑	☑	☐	LC	☐	Polish Red Book of Plants -CR; Polish Red List- CR; Red Book of Polish Carpathian- CR	
Trichophorum alpinum	alpine bulrush	☑	☑	☐	EN	☐	Polish Red Book of Plants - VU; Polish Red List- VU; Red Book of Polish Carpathian- EN	

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	*Acanthis flammea*	Common Redpoll	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	Polish Red Book of Animals- LC	
CHORDATA / AVES	*Luscinia svecica svecica*	bluethroat	☑	☑	☐	☐	☑	☐	☐	☐					☐	☐	Polish Red Book of Animals- NT Birds Directive Annex I	important breeding site

1) Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

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

4.1 - Ecological character

The majority of Tatra lakes are situated in the erosion depressions and areas of glacial accumulation, whilst in Gąsienicowa Valley there are also lakes with karst genesis. The biggest lakes are Morskie Oko, Wielki Staw and Czarny Staw pod Rysami. The maximal depth is reached in Wielki Staw (79,3 m). The water level in these lakes is diverse and dependent on weather conditions. The lakes are supplied mainly by groundwater, periodically water comes also from surface run-off, melting snow and ice as well as from rainfall. The Tatra lakes can be divided into two groups: drainage lakes and seepage lakes.

Generally, low water hardness in Tatra lakes is similar to the values observed in crystalline rock springs (0,01-0,45 mval/l). It indicates the high proportion of rainfall in waters retained in these lakes.

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 > Lakes and pools >> O: Permanent freshwater lakes		2	120	Representative
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		1		Representative

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
6150 – Siliceous alpine grasslands	
8110 – Siliceous scree	
4070 – Bushes with Pinus mugo	
4060 – Alpine heaths	
4080 – Salix silesiaca shrub	
9410 – Montane spruce forest	
9420 – Larch and arolla forest	

4.3 - Biological components

4.3.1 - Plant species

<no data available>

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
ARTHROPODA/BRANCHIOPODA	*Branchinecta paludosa*	circumpolar fairy shrimp	0			Ex in Polish Red Data Book of Invertebrates
ARTHROPODA/INSECTA	*Zalutschia tatrica*					Relict species. Arctic-alpine disjunction

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts
CHORDATA/ACTINOPTERYGII	*Salvelinus fontinalis*	brook trout	Actually (major impacts)

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): 1392

a) Maximum elevation above sea level (in metres): 1890

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.

Czarny Dunajec, Biały Dunajec, Białka

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 inputs from groundwater	☑

Water destination

Presence?
Feeds groundwater
To downstream catchment

Stability of water regime

Presence?
Water levels largely stable
Water levels fluctuating (including tidal)

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

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Drinking water for humans and/or livestock	Low
Fresh water	Water for energy production (hydro-electricity)	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Erosion protection	Soil, sediment and nutrient retention	Medium
Climate regulation	Local climate regulation/buffering of change	Medium

Cultural Services

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

Within the site: 1000000

Outside the site: 3000000

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

4.5.2 - Social and cultural values

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

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

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

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

<no data available>

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

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

Private ownership

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

5.1.2 - Management authority

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

Provide the name and title of the person or people with responsibility for the wetland: Director of Tatrzański National Park

Postal address: Tatrzański Park Narodowy
Kuźnice 1, 34-500 Zakopane

E-mail address: sekretariat@tpn.pl

5.2 - Ecological character threats and responses (Management)

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

Human intrusions and disturbance

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

Invasive and other problematic species and genes

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

5.2.2 - Legal conservation status

Global legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	Tatra Transboundary Biosphere Reserve	http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?mode=all&code=POL-SLO+01	whole

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	TatryPLC120001	http://n2k-ws.gdos.gov.pl/wyszukiwarkaN2k/webresources/pdf/PLC120001	whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Park	Tatrzański Park Narodowy	www.tpn.pl	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

Species

Measures	Status
Control of invasive alien animals	Proposed

Human Activities

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

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 need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water quality	Implemented
Water regime monitoring	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Wit-Jóźwikowa K., Ziemońska Z. 1962. Hydrografia Tatr Polskich. W: Szafer W. (red. Tatrzański Park Narodowy. Zakład Ochrony Przyrody PAN, Wyd. popularnonauk.., 21:125-138.

Łajczak A. 1996. Hydrologia. W: Mirek Z. (red.) Przyroda Tatrzańskiego Parku Narodowego. TPN: 169-196.

Oleksynowa K., Komornicki T. 1996. Chemizm wód. W: Mirek Z. (red.) Przyroda Tatrzańskiego Parku Narodowego. TPN: 197-214.

Kownacki A., Żurek R. 1996. Fauna Jezior. W: Mirek Z. (red.) Przyroda Tatrzańskiego Parku Narodowego. TPN: 535-554.

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:

Morskie Oko in Tatra Mts (*Marcin Strączek, 26-09-2012*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation	2017-12-11