

Ramsar Information Sheet

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PolandDruzno Lake Nature Reserve



Designation date 29 October 2002
Site number 1563
Coordinates 54°04'53"N 19°27'47"E
Area 3 068,00 ha

https://rsis.ramsar.org/ris/1563 Created by RSIS V.1.6 on - 23 July 2019

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

Druzno Lake Nature Reserve is located in northern Poland in Warmińsko-Mazurskie Voievodeship. The Site contains the shallow and largely overgrown delta lake along with surrounding wetland and swampy alder forests is a relic of a much larger body of water formerly part of the Vistula Lagoon. The water in the lake is slightly brackish due to saline inflows from the Lagoon brought by Elblag River. Roughly one third of Druzno Lake remains open though overgrown with aquatic vegetation, and the remaining part is covered by reedbeds. The reedbeds border on inaccessible willow shrub, alder swamps and the combination of an abundant water vegetation provides excellent conditions for breeding birds and other wildlife. The Site is internationally important for bird species migrating along the Baltic coastline. During spring and autumn, it is an important resting and feeding site for flocks of ducks and geese numbering in the thousands of individuals, mainly of mallard, greater white-fronted goose and bean goose. The lake is also a moulting site for mute swan, mallard, greylag and gadwall. In summer more than 140 bird species find refuge within the Site, of which 108 do so regularly.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of the	his RI	of	piler	comp	the	of	address	and	lame	- N	.1	2.1	2
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Compiler 1

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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 Spanish)

Druzno Lake Nature Reserve

Unofficial name (optional)

Rezerwat Przyrody

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

(Update) A Changes to Site boundary Yes O No

(Update) B. Changes to Site area

No 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

<1 file(s) uploaded>

Former maps 0

Boundaries description

The boundary of the Ramsar site is the same as of the Drużno Lake Nature Reserve (Rezerwat przyrody "Jezioro Drużno").

2.2.2 - General location

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

Warmińsko-Mazurskie

b) What is the nearest town or population Elbląg

2.2.3 - For wetlands on national boundaries only

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

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): 3068

Area, in hectares (ha) as calculated from GIS boundaries 3125.05

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	10. Boreonemoral
Bailey's Ecoregions	220 Hot Continental Division
WWF Terrestrial Ecoregions	Temperate broadleaf and mixed forest
EU biogeographic regionalization	Continetal

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

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

Hydrological services provided

The lake surface is estimated at about 1450 ha (Drwal 1991) - 1700 ha (Kotlinski 1994, Bulinski 1998) and totally overgrown by immersed and submersed vegetation. The lake functions as a local reservoir collecting surface and subsurface runoffs, though its water level depends on river inflow, the water level in the Vistula Lagoon and polder inflow through pumping stations.

Other ecosystem services provided

Lake Drużno was formerly used as a water route for rafting timber and in present times it is used for tourist cruising from Elbląg to the Elbląg Canal and to Vistula Lagoon. The old XIX century sluices and inclines on the Elbląg Canal are industrial monuments of European significance and the Elbląg Canal was in 2011 considered by the President of the Republic of Poland as the Monument of the History. Main uses of the lake are fisheries and tourism/recreation activity as a water channel for shipping tourists. A hiking and biking trail follows along two-thirds of the length of the dyke. An educational path with an observation tower is located near Stankowo.

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

The site is considered important for conserving the biodiversity of the biogeographical region (geobotanical region of deciduous forests of Central Europe – wetland type which is listed in Annex I of the Habitat Directive – according to Jerzy Kondracki, 2001: Regional geography of Poland ed. by Panstwowe Wydawnictwa Naukowe, Warsaw) as it supports, in addition to several larger wildlife species, e.g. otter (Lutra lutra), beaver (Castor fiber) both are listed in Annex II of the Habitat Directive, and a rich aquatic flora and vegetation.

Justification

About of 44% of all species of the Polish avifauna are to be found within the site. In this reserve at least 19 bird species listed in Annex I of the Bird Directive

- ☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions
- ☑ Criterion 6 : >1% waterbird population

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
Nymphoides peltata	Fringed Water Lily	2			LC		Polish Red Data Book of Plants (VU), species protected in Poland	

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

Phylum	Scientific name	Common name	qual un crite	der erion	Species contribute under criterior 3 5 7	Pop Size	Period of pop. Est.	% occurrence 1)	IUCN Red List		CMS Appendix I	Other Status	Justification
Birds													
CHORDATA / AVES	Anas clypeata	Northern Shoveler				100	0 2010	2.5					pop.size: 1000 i in passage period, 15 ind breeding; 2% of Polish population population name: North-west & Central Europe (win)
CHORDATA / AVES	Anas platyrhynchos	Mallard				100	0 2017		LC			Annex I Birds Directive	pop.size: 1000-2000 ind in passage period, 200-300 ind breeding.
CHORDATA / AVES	Anas strepera	Gadwall				800	2017	1				Annex I Birds Directive	Polish population - 3% breeding and 2% passage. population name: North-east Europe/Black Sea & Mediterranean
CHORDATA / AVES	Anser albifrons	Greater White- fronted Goose			2 00	1000	00	0.9	LC				pop size: up to 10000 ind
CHORDATA / AVES	Anser anser	Greylag Goose			2 00	800	2017		LC				pop. size: 2000-3000 ind;
CHORDATA / AVES	Anser fabalis	Bean Goose				300	0 2001-2009	5.8	LC				pop. size: 3000-7000 ind, >1% biogeographic population
CHORDATA / AVES	hybrida	Whiskered Tern	2 0				2011		LC			Annex I Birds Directive, Polish Red Data Book of Animals (LC)	pop. size: 240 pairs
CHORDATA / AVES	Chlidonias niger	Black Tem	2				2001-2012		LC			Annex I Birds Directive	pop. size: 50-150 pairs
CHORDATA / AVES	Luscinia svecica	Bluethroat	2				2008					Annex I Birds Directive, Polish Red Data Book of Animals (NT)	pop. size: 8-13 pairs
CHORDATA / AVES	Porzana parva	Little Crake	2 0				2008-2011					Annex I Birds Directive, Polish Red Data Book of Animals (NT)	pop. size 20-30 pairs
CHORDATA / AVES	Sterna hirundo	Common Tern	2				2004-2017		LC			Annex I Birds Directive	pop. size 25-80 pairs
Others													
CHORDATA / MAMMALIA	Castor fiber	Eurasian Beaver	2						LC			Annex II Habitats Directive	
CHORDATA / MAMMALIA	Lutra lutra	European Otter	2						NT	V		Annex II Habitats Directive	
CHORDATA / MAMMALIA	Myotis dasycneme	Pond Bat; Pond Myotis	2						NT			Annex II Habitats Directive	

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
91E0 alluvial forests with Anus glutinosa and Fraxinus excelsior (Ano-Padion, Anion incanae, Salicion albae)	Ø		Annex 1 of the Habitat Directive (Council Directive 92/43/EEC)
3150 natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation	Ø		Annex 1 of the Habitat Directive (Council Directive 92/43/EEC)
6430 hydrophilous tall herb fringe communities of plains (Convolvuletalia sepium)	Ø		Annex 1 of the Habitat Directive (Council Directive 92/43/EEC)
91D0 bog woodland	Ø		Annex 1 of the Habitat Directive (Council Directive 92/43/EEC)

Optional text box to provide further information											

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

4.1 - Ecological character

The shallow and largely overgrown delta lake along with surrounding wetland and swampy alder forests is a relic of a much larger body of water formerly part of the Vistula Lagoon. The water in the lake is periodically brackish due to saline inflows from the Lagoon brought by Elblag River. Roughly one third of Druzno Lake remains open though overgrown with aquatic vegetation, and the remaining part is covered by reedbeds, comprised mainly of Phragmitetum australis, as well as Scirpetum lacustris and Typhetum angustifoliae associations, among others. The reedbeds bordering on inaccessible willow and alder swamps and the combination of an abundant water vegetation provides excellent conditions for breeding birds and other wildlife. The Site is internationally important for bird species migrating along the Baltic coastline. In summer more than 150 bird species find refuge within the site.

Land form: the Site is located in the Vistula Delta in the eastern part of the depression. The current shape and size of Lake Druzno is the result of both the natural processes occurring in the Vistula delta and human activity in the last centuries. Its water is eutrophic and the water table lies at the elevation of 0.1 m a.s.l. No tidal variations of water level occur. In view of the inflow of brackish water (backwater) from the Lagoon, yearly fluctuations of the lake water level amount to about 1 m and salinity of the lake rises temporarily. The average and maximal depths are 1.2 and 3.5 m respectively, while the thickness of bottom sediments exceeds 12 m. The Lake is surrounded by dykes of a total length of 41 km. The water in the area is periodically brackish and not potable. The local climate has a maritime character, with seasonal temperatures milder than farther inland due to the proximity of the Baltic Sea mitigating continental influences.

The main habitat types are hydrogenic habitats – swamp, overgrown lake with immersed and submerged vegetation, shrubs and swampy forest. The vegetation cover of the Site is highly diverse with aquatic communities playing a dominant role. More than 56 plant community types can be found within the reserve.

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

Inland wetlands

mand wellands				
Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion
Fresh water > Lakes and pools >> P: Seasonal/ intermittent freshwater lakes		1		Representative
Saline, brackish or alkaline water > Lakes >> Q: Permanent saline/ brackish/ alkaline lakes		2		
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools		3		Representative
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		2		Representative

Human-made wetlands

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Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
6: Water storage areas/Reservoirs		1		Representative
9: Canals and drainage channels or ditches		2		Representative

4.3 - Biological components

4.3.1 - Plant species

Other notey	vorthy nla	nt species

Scientific name	Common name	Position in range / endemism / other
Campanula latifolia	Wide-leaved Bellflower	species partially protected in Poland
Drosera rotundifolia	Common Sundew	species protected in Poland
Dryopteris cristata	Crested Buckler Fern	
Gagea minima	Small star-of-Bethlehem	
Lathyrus palustris	Marsh Pea;Marsh Vetchling	species partially protected in Poland
Ranunculus lingua	Greater Spearwort	species partially protected in Poland
Salvinia natans	Water Butterfly Wings	species protected in Poland

(Optional	text	boxto	provide	further	informa	tion

Other noteworthy animal species

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Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATAAVES	Chroicocephalus ridibundus	Black-headed Gull		2004-2012		pop. size: 3500-4100 pairs

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	Changes at RIS update
CHORDATA/MAMMALIA	Neovison vison	American Mink	Actually (major impacts)	unknown

4.4 - Physical components

4.4.1 - Climate

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

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.4.2 - Geomorphic setting	
a) Mnimum elevation above sea level (in metres)	
a) Maximum elevation above sea level (in metres)	
Entire river basin	
Upper part of river basin ☐	
Middle part of river basin ☐	
Lower part of river basin ☑	
More than one river basin ☐	
Not in river basin \square	
Coastal 🗆	
Please name the river basin or basins. If the site lies in a sub-basin, please a	also name the larger river basin. For a coastal/marine site, please name the sea or ocean.
Vistula River	

4.4.3 - Soil

Organic 🗹

 $\text{(Update)} \ \text{Changes at RIS update} \quad \text{No change O Increase O Decrease O Unknown } \textbf{\textcircled{9}}$

No available information \Box

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

Please provide further information on the soil (optional)

Current fields and meadows surrounding the reserve were created on rich humic fen soils, and the main land use type is agriculture.

4.4.4 - Water regime

Water permanence

riator pormanorios		
Presence?	Changes at RIS update	
Usually permanent water present	unknown	

Source of water that maintains character of the site

Source of water that maintains character of the site			
Presence?	Predominant water source	Changes at RIS update	
Water inputs from rainfall		unknown	
Water inputs from surface water		unknown	
Water inputs from groundwater		unknown	
Marine water		unknown	

Water destination

Presence?	Changes at RIS update
Feeds groundwater	No change
To downstream catchment	No change
Marine	No change

Stability of water regime

	oldbinty or trator roginno	
	Presence?	Changes at RIS update
	Water levels largely stable	No change
Water levels fluctuating (including tidal)		No change

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

No tidal variations of water level normally occur. In view of the periodical inflow of brackish water (backwater) from the Lagoon, yearly fluctuations of the lake water level amount to about 1 m and salinity of the lake rises temporarily.

4.4.5 - Sediment regime

Significant accretion or deposition of sediments occurs on the site $\ensuremath{\overline{\omega}}$

(Update) Changes at RIS update No change

● Increase

O Decrease

O Unknown

O

Sediment regime unknown

4.4.6 - Water pH

Unknown 🗷

4.4.7 - Water salinity

Unknown 🗹

Please provide further information on salinity (optional):

The water in the lake is slightly brackish due to saline inflows from the Lagoon brought by Elblag River.

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic 🗹

 $^{ ext{(Update)}}$ Changes at RIS update No change $ext{O}$ Increase $ext{O}$ Decrease $ext{O}$ Unknown $ext{@}$

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

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

i Townstorining Convicce		
Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Erosion protection	Soil, sediment and nutrient retention	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Low
Recreation and tourism	Nature observation and nature-based tourism	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High
Scientific and educational	Major scientific study site	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

Within the site: 1000

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 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
van alata availalalas

<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

Provincial/region/state
government

Private ownership

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

Other

Category	Within the Ramsar Site	In the surrounding area
Unspecified mixed ownership		/

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

Most of the area is the state land administrated by the Regional Board of Water Management in Gdansk (Lake Drużno). Part of the area is the state land administered by State Forests (Forest District Elblag) and the regional government land administrated by Zuławski Board of Land Reclamation and Water Facilities.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Regional Director for Environmental Protection in Olsztyn
Provide the name and title of the person or people with responsibility for the wetland:	Agata Moździerz, Regional Director for Environmental Protection in Olsztyn
Postal address:	ul. Dworcowa 60, 10-437 Olsztyn, Poland
E-mail address:	sekretariat.olsztyn@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

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Dredging	unknown impact	unknown impact		No change	✓	increase
Canalisation and river regulation	unknown impact	unknown impact		No change	✓	increase

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	unknown impact		No change	✓	unknown

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Renewable energy		unknown impact	✓	increase	✓	unknown

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Shipping lanes	unknown impact		✓	unknown		No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fishing and harvesting aquatic resources	unknown impact		✓	unknown		No change

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		✓	increase		No change

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		✓	unknown	>	unknown

Invasive and other problematic species and genes

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Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	unknown impact		✓	increase		No change
Problematic native species	unknown impact		✓	increase		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		/	unknown	2	No change
Agricultural and forestry effluents	unknown impact		2	No change	2	No change
Industrial and military effluents	unknown impact		2	increase	2	unknown

5.2.2 - Legal conservation status

Regional (international) legal designations

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Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	SCI Ostoja Drużno PLH280028		whole
EU Natura 2000	SPA Jezioro Druzno, PLB280013		whole

National legal designations

rate rain regar accignations			
Designation type	Name of area	Online information url	Overlap with Ramsar Site
Nature Reserve	Jezioro Drużno		whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Jezioro Drużno PL030		whole

5.2.3 - IUCN protected areas categories (2008)

la 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
Il Natural Monument: protected area managed mainly for conservation of specific natural features
VHabitat/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

Legal protection	
Measures	Status
Legal protection	Implemented

Human Activities

Measures	Status
Fisheries management/regulation	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 \odot

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

processes with another Contracting Party?

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
Birds	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

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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)

iii. a description of the site in a national or regional wetland inventory

iv. relevant Article 3.2 reports

<no file available:

v. site management plan

vi. other published literature

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site



Drużno Lake (Joanna Gomia, 27-07-2016



Drużno Lake (Joanna



Drużno Lake (Magdalena Hadwiczak, 29-09-2013



Drużno Lake (Grzegorz Jedro, 01-10-2016

6.1.4 - Designation letter and related data

Designation letter

Date of Designation 2002-10-29