

# Ramsar Information Sheet

Published on 9 August 2022 Update version, previously published on : 1 January 1998

# **Ukraine**Sasyk Lake



Designation date 28 February 1997 Site number 762

Coordinates 45°39'41"N 29°39'44"E

Area 23 488,41 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

Lake Sasyk is a large artificially desalinated water body at the northern part of Black Sea coast. Today, it represents a reservoir, largely functioning due to the inflow of fresh water through the Danube-Sasyk Canal.

The area is important for birds. Over 250 bird species are recorded here, of which 224 species are migratory, 149 are wintering, about 110 species are nesting. Shallow waters in the upper reaches of the reservoir provide habitats for the highest variety of species, support the most important communities of breeding birds and massive bird concentrations up to 20,000 ind. The lower reaches of the reservoir are crucial as well, periodically supporting over 10,000-15,000 of Anseriformes.

The Site provides shelter to vulnerable and near threatened bird species of the IUCN Red List: Dalmatian Pelican (NT), Lesser White-fronted Goose (VU), White-eyed Pochard (NT), Black-tailed Godwit (NT). The Site plays a crucial role for Red-breasted Goose. In 2012-2018, more than 1,000 ind. of this species were recorded simultaneously. In the migration period, the Site provides feeding and staging areas for Pygmy Cormorant, Squacco Heron, Glossy Ibis, Black Stork, Ruddy Shelduck, Grey Crane and the White Pelican, supporting 500-1500 individuals of that species (1.4 - 4.1 % of the European population).

Sasyk Reservoir is inhabited by 57 species of fish. The rare fish species are represented by endemics of the Danube – zingel and huchen. Within the Site and along its shores there are recorded 6 species of reptiles and 5 species of amphibians, including the rare Danube crested newt; 37 species of mammals, including rare such as Eurasian otter, the stoat, European mink.

A significant part of the Site is occupied by aquatic (dominated by Potamogeton pectinatus, P. perfoliatus, P. nodosus, Myriophyllum spicatum, Ruppia spiralis, Zostera marina, Zannichelia palustris) and riparian-aquatic (Phragmites australis, Bolboschoenus maritimus, Typha angustifolia) plant communities. The latter became widespread in the northern part of the reservoir and along its shores. Halophytic, meadow, sandy-littoral communities and fragments of steppe communities are less common.

The areas adjacent to the Site are represented by agricultural lands with crop plantations. The seaside has a well-developed network of health resorts

The northern part of Sasyk Lake (covering an area of 3,450 hectares) is part of the Danube Biosphere Reserve.

# 2 - Data & location

2.1 - Formal data	
2.1.1 - Name and address of the comp	piler of this RIS
Responsible compiler	
Institution/agency	Danube Biosphere Reserve of National Academy of Sciences of Ukraine
Postal address	132a Tatarbunarskoho Povstannia St., Vilkove, Kiliia District, Odesa Region, Ukraine, 68355
National Ramsar Administrativ	ve Authority
Institution/agency	Ministry of Environmental Protection and Natural Resources of Ukraine
Postal address	35, Vasilya Lipkivs'kogo Street
2.1.2 - Period of collection of data and	d information used to compile the RIS
From year	2012
To year [	2018
2.1.3 - Name of the Ramsar Site	
Official name (in English, French or Spanish)	Sasyk Lake
, ,	Sasyk Reservoir, Kunduk
2.1.4 - Changes to the houndaries and	d area of the Site since its designation or earlier update
_	Changes to Site boundary Yes <b>®</b> No ○
(Update) The boundary has been do	
	indary has been extended
	Indary has been restricted   the green has increased.
	a) B. Changes to Site area the area has increased
(Update) The Site area has been c	
	elineated more accurately
(Update) The Site area has increased because	
(Update) The Site area has decreased because	
<sup>(Update)</sup> For secretariat only: Th	nis update is an extension
2.1.5 - Changes to the ecological char	
(Update) 6b i. Has the ecological character of the applicable Criteria) change	ne Ramsar Site (including described by the street of the s
	(Update) Are the changes Positive O Negative O Positive & Negative ●
(Update) Positive %	10
( <sup>Update)</sup> Negative %	30
(Update	No information available
(Update) Optional text box to provide further infor	mation
the Site. Thus, in 2017, the first breed Red Book of Ukraine and other cons	d due to the desalination of the water body, continues to cause changes in breeding bird communities of ding case of the Spoonbill was recorded, one breeding pair of White-tailed Eagles (species listed in the servation lists) was found in the vicinities of the Site.  per reaches of the reservoir continue to degrade. Because of this, such rare species as Collared opped nesting in the Site.
(Update) Changes resulting from causes op	perating within the existing
Changes resulting from causes op	boundaries?

(Update) Changes resulting from causes operating beyond the site's boundaries?

(Update) Changes consequent upon site boundary reduction alone (e.g., the exclusion of some wetland types formerly included within the site)?	
(Update) Changes consequent upon site boundary increase alone (e.g., the inclusion of different wetland types in the site)?	

(Update) Please describe any changes to the ecological character of the Ramsar Site, including in the application of the Criteria, since the previous RIS for the site.

Currently, Sasyk is a closed freshwater water body. Until the 1980s, it was one of the estuaries of the north-western part of the Black Sea region and had an active water exchange with the Black Sea. Then, according to the government decision in 1979, Lake Sasyk was transformed into a freshwater storage tank to use water for the irrigation of agricultural lands within the Danube-Dniester irrigation system. However, hypersalinity of bottom soils of the estuary prevented its complete desalination despite the repeated change of the water mass. When the lower reaches of the reservoir were desalinated, the water still remained salty (2-4 ‰) in its middle and upper parts. In addition, the bottom of Sasyk became considerably muddy with up to 2.5 million tons of saline bottom sediments. As a result, the ecosystem is undergoing continuous changes, which also affects avifauna. In particular, the reduction in the growing area of Charophyta algae (the forage for many ducks) has led to the significant decrease in the number of Aythya ferina during the migration and wintering seasons. Thus, before the beginning of the 2000s, its number in certain periods amounted to 18,000 ind. (Directory ..., 2002). For the period of 2012-2018, the maximum number of this species dropped to about 8,000 ind. (unpublished data). The degradation of salt marshes in the delta part of the Kohylnyk River and the Sarata River, which both form the upper reaches of Lake Sasyk, has brought about the disappearance of colonies of Charadrius alexandrinus, Recurvirostra avosetta, Glareola pratincola, which listed in the Red Book of Ukraine. Instead, these species began to nest on a small saline area, still remained at the western shore near Hlyboke Village.

Sterna hirundo and S. albifrons also stopped breeding at the lake. There is a decrease in breeding numbers of Aythya ferina (single pairs), Fulica atra (up to 50 pairs), Recurvirostra avosetta (up to 60 pairs), Charadrius alexandrinus (about 10 pairs). The number of Podiceps cristatus (500-1000 ind.), Anser albifrons (up to 12,000-15,000 ind.); Anser anser (up to 500 ind.) and other waterbirds declined in the migratory and wintering seasons

Instead, some positive changes occurred. In 2017, several pairs of Platalea leucorodia were recorded in a polyspecies colony of Ardeidae, and near the upper reaches of Sasyk the nesting of the White-tailed eagle Haliaeetus albicilla was registered (unpublished data). These two species had not been previously recorded on breeding, and their records in the mentioned period of time corresponds to the 2nd identification criteria for wetlands of international importance.

 $^{(Update)}$  Is the change in ecological character negative, human-induced AND a significant change (above the limit of acceptable change)

# 2.2 - Site location

# 2.2.1 - Defining the Site boundaries

b) Digital map/image

Former maps 0

# Boundaries description

Lake Sasyk is located in the interfluve of the Danube and Dniester in the northwestern part of the Black Sea Depression, within Kiliia and Tatarbunary districts of Odesa Region, 5 km to the south-east of Tatarbunary (the district administrative center). Natural borders of the Site in the west and east are delineated by riparian zones of the lake. In the south, the Site is delineated by a narrow (up to 0.5 km) sand spit that separates the lake waters from the Black Sea. The northern tip of the site and the most eastern part (in total 3,450) overlap with the Danube Biosphere Reserve (SiteCode: UA0000018). The rest of the boundary follows the Emerald Network Site Sasyk Lyman (SiteCode: UA0000151).

# 2.2.2 - General location

a) In which large administrative region does the site lie?	Odesa Region
b) What is the nearest town or population centre?	Tatarbunary Town

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other	Yes O No @
countries?	100 - 110 -

b) Is the site adjacent to another designated Ramsar Site on the Yes O No (9) territory of another Contracting Party?

# 2.2.4 - Area of the Site

Official area, in hectares (ha): 23488.41 Area, in hectares (ha) as calculated from 23488.41 GIS boundaries

# 2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Marine Ecoregions of the World (MEOW)	Black Sea
EU biogeographic regionalization	Steppic

### Other biogeographic regionalisation scheme

According to physiographic zoning of Ukraine, the site is located within the Trans-Dniestrian–Black Sea (Zadniestrovsko–Prychornomorsky) lowland of the Black Sea (Prychornomorsky) Middle Steppe Region of the Steppe Zone. According to geo-botanical zoning, the wetland is located within the Danube–Dniester district of grass and wormwood-grass steppes and wetlands ('plavni') of the Pontic Steppe Province of the Steppe Zone. According to zoogeographical zoning, it is the Danube-Dniester Sub-Area of the West Steppe Area of the Azov–Black Sea Rayon of the Pontic District of the Steppe Province of the Mediterranean–Central Asian Sub-Region of Palaearctic Region.

National Scheme of biogeographic regionalisation. National Atlas of Ukraine. – Kyiv: State scientific production enterprise 'Kartographia', 2007. – 440 p.

# 3 - Why is the Site important?

# 3.1 - Ramsar Criteria and their justification

<no data available>

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

The Site area is important for a number of rare species listed in the Red Data Bok of Ukraine and the

Rare fish species in the reservoir are represented by the Danube endemics – the zingel and the huchen. Among sturgeons, there are recorded single juveniles and adult specimens of Russian sturgeon and starry sturgeon entering the reservoir through the Danube-Sasyk Canal. In the lower reaches of the water body in the vicinities of the Danube-Sasyk canal, there is recorded an endemic species of the region – Optional text box to provide further the Danube crested newt. During seasonal movements of birds, the areas supports such vulnerable information species as the Dalmatian Pelican, Lesser White-fronted Goose, White-eyed Pochard, Black-tailed Godwit. In some years, single pairs of the White-eyed Pochard breed in mosaic reedbeds. The area is important for such a vulnerable species as the Red-breasted Goose. In 2012-2018, in some periods over 1,000 ind, of this species were recorded simultaneously (unpublished data). The territory is also important for the European mink and Eurasian otter. These two species are recorded in delta parts of the rivers Kohylnyk and Sarata as well as in the lower reaches of Lake Sasyk, not far from the Danube-Sasyk Canal.

# Criterion 3 : Biological diversity

The Site supports about 450-500 species of vascular plants. Representatives from the families Asteraceae, Gramineae, Chenopodioideae, Leguminosae, Brassicaceae dominate. Among plants there are recorded Stipa capillata, Stipa lessingiana. These species in small number grows near the western shore of Lake Sasyk and on the slope along the Kohylnyk river channel.

Diversity of Sasyk ichthyofauna is associated with the diversity of the Danube ichthyofauna which plays a determining role in the formation of species composition of fish which inhabit the reservoir. After desalination, a total of 57 species of fish belonging to 17 families are recorded in Sasyk. Part of them, predominantly species of salt waters, has inhabited Sasyk Liman before its desalination. In Lake Sasyk, similar to the Danube and other water bodies of the region, the most common fishes are from the family Cyprinidae which includes 24 species. The Danube continues to play a determining role in the Justification ichthyofauna development of Sasyk, taking into account insufficient number of suitable spawning areas in Sasyk itself. The dominant fish species include the crucian carp, freshwater bream, common carp, pikeperch, European perch. Through the canal, Sasyk is visited by the vimba bream (semi-anadromous species) and the barbell (typical rheophile).

The Site supports 7 species of reptiles (European pond turtle, grass and dice snakes, smooth newt, the Danube crested newt, sand lizard, steppe runner lizard) and 5 species of amphibians (European firebellied toad, European green toad, marsh frog, the European common spadefoot, European tree frog). Over 250 bird species are recorded in the Site, among which 224 species are migratory, 149 species are wintering, 110 species nest within the wetland and on the adjacent riparian zone.

There are 37 species of mammals. The area is crucial for the European water vole, harvest mouse, Eurasian otter, Eurasian water shrew, common and pygmy shrews, stoat, the least weasel, etc.

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

Optional text box to provide further information

The Site supports such rare species of birds as the Spoonbill (up to 3 pairs); White-eyed Pochard (single pairs); White-tailed Eagle (up to 2 pairs); Kentish Plover (up to 10 pairs); Black-winged Stilt (up to 65 pairs). The area is also important for the White Pelican. Dalmatian Pelican, Glossy bis, which breed in the adjacent Ramsar Sites «Kiliiske River Mouth» in Ukraine and «Danube Delta» in Romania, but in the period of movements it uses the wetland «Sasyk Lake». During the winter, the Site is important for the Red-breasted Goose, Lesser White-fronted Goose, Bewick's Swan, Red-breasted Merganser. Goldeneve. etc.

### ☑ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers 35000

Start year 2012

End year 2018

Source of data: Original data

information

Optional text box to provide further Data provided by Maxim Yakovlev

# ☑ Criterion 6 : >1% waterbird population

The Site supports:

information |2 %;

Aythya ferina (Common Pochard) - Central & NE Europe/Black Sea & Mediterranean – 1.3 %; Optional text box to provide further Bucephala clanqula (Common Goldeneye) - clangula, Western Siberia & North-east Europe/Black Sea -

Pelecanus onocrotalus (Great White Pelican) - Europe & Western Asia (bre) - 2.2 %.

# Criterion 7 : Significant and representative fish

Justification

Main commercial species of fish in Lake Sasyk are the crucian carp, freshwater bream, pike-perch, European perch and the common carp. The species, common for the north-western part of the Black Sea. such as European anchovy, Black and Caspian Sea sprat, the three-spined stickeback, black-striped pipefish, Caspian round goby, tubenose goby and monkey goby successfully breed and fatten in the reservoir like previously it was in Sasyk Liman. The most numerous is the monkey goby which is the main prey for the pike-perch that explains a relatively high number of this predator in the water body.

### ☑ Criterion 8 : Fish spawning grounds, etc.

The wetland is important as a spawning and reproduction area for fish and amphibians. About 15 species Justification of fish spawn within the Site, mostly they are freshwater lithophilous species as well as semi-anadromous and marine species.

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

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA/ MAGNOLIOPSIDA	Aldrovanda vesiculosa	<b>✓</b>	<b>2</b>		EN		listed in the Red Data Book of Ukraine - NT	
TRACHEOPHYTA/ MAGNOLIOPSIDA	Eremogone cephalotes		<b>2</b>				listed in the Red Data Book of Ukraine - NT	
TRACHEOPHYTA/ POLYPODIOPSIDA	Salvinia natans		<b>₽</b>		LC		listed in the Red Data Book of Ukraine - NE	
TRACHEOPHYTA/ MAGNOLIOPSIDA	Trapa natans		<b>✓</b>		LC		isted in the Red Data Book of Ukraine - NE	

Red data book Ukraine https://redbook-ua.org/	

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

Phylum Sci	ientific name	Species qualifies under criterion 2   4   6   9	Species contributes under criterion	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Others											
CHORDATA/ MAMMALIA	a lutra			)				✓		Red Data Book of Ukraine - NE	
CHORDATA / Must	tela erminea			]						listed in the Red Data Book of Ukraine - NE	
CHORDATA/ MAMMALIA	tela lutreola			)						Red Data Book of Ukraine - EN	
MAMMALIA	mys anomalus			]			LC			Red Data Book of Ukraine - NT	
CHORDATA / Neon	mys fodiens			]							
CHORDATA / Pleco	otus riacus			)			LC			Red Data Book of Ukraine - NT	
MAMMALIA	x araneus			]							
MAMMALIA	x minutus			]							
CHORDATA/ AMPHIBIA dobre	rus ogicus			]			NT			Bern Convention - annex II	
Fish, Mollusc and Cr											
CHORDATA / Acipe CTINOPTERYGII guelo	denstaedtii						CR				
CHORDATA / Acipe CTINOPTERYGII stella				]			CR				
CHORDATA/ CTINOPTERYGII	a immaculata			]			VU				Nursery for hutchlings and fattening for sometimes tens of millions specimens of yearlings
CHORDATA/ CTINOPTERYGII	no hucho			]						listed in the Red Data Book of Ukraine - CR	Danube endemics
CHORDATA/ CTINOPTERYGII	no labrax			]						listed in the Red Data Book of Ukraine - CR	
CHORDATA/ TINOPTERYGII	el zingel			)						listed in the Red Data Book of Ukraine - VU	Danube endemics
Birds											

Phylum	Scientific name	qua un crite	cies lifies der erion	Specie contribution unde criteri	ites r on	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Anas acuta					1000	2012		LC				Concentrate mostly in the delta part of the rivers Kohylnyk and Sarata. The annual number is about 1,000 ind.
CHORDATA/ AVES	Anas penelope					700	2012						Concentrate mostly in the delta part of the rivers Kohylnyk and Sarata. About 700 ind. concentrate annually.
CHORDATA/ AVES	Anas platyrhynchos					5000	2012- 2018						a breeding site
CHORDATA/ AVES	Anas strepera	<b>V</b>				150	2012- 2018					Bern - III; CMS - II; listed in the Red Data Book of Ukraine – NT.	The Site is important for the species during migrations and breeding. Aver 150 ind., max-400 ind. in the migration period. Single pairs breed in the Site.
CHORDATA/ AVES	Anser erythropus	<b>1</b>							VU		1		
CHORDATA/ AVES	Ardeola ralloides	<b>V</b>				5	2012- 2018		LC			Bern - II; listed in the Red Data Book of Ukraine – NT	The Site is important for the species during migrations and summering. Occurs in the migration period up to 10 ind. Earlier breed in the riparian zone.
CHORDATA/ AVES	Aythya ferina					8000	2012- 2018	1.3					Concentrate during migration up to 10,000 ind, usually up to 8,000. The number has slightly declined in the last years. Central & NE Europe/Black Sea & Mediterranean (AEWA CSR 7)
CHORDATA/ AVES	Aythya fuligula					3000	2012- 2018		LC				Concentrate up to 5,000 ind, usually up to 3,000. The number has slightly declined in the last years
CHORDATA/ AVES	Aythya nyroca	<b>V</b>				10	2012-2018		NT		V	Bern - III; CMS - I, II; listed in the Red Data Book of Ukraine - VU	Aver 10 ind., max - 50 ind. in the migration period. Single pairs breed in the Site
CHORDATA/ AVES	Branta ruficollis	<b>V</b>				100	2012- 2018		VU		Ø	Bern - II; CMS - II; listed in the Red Data Book of Ukraine - VU	The Site is important for the species during migrations and wintering. Aver 100 ind., max – 1,000 ind in the riparian zone of the wetland during migrations and wintering
CHORDATA/ AVES	Bucephala clangula	<b>I</b>				600	2012- 2018	2	LC			Bern - III; CMS - II; listed in the Red Data Book of Ukraine - NT	The Site is important for the species during wintering. Average number is 600 ind., max - 1,000 ind. The number of species increases during wintering. Western Siberia & North-east Europe/Black Sea (AEWA CSR 7)
CHORDATA/ AVES	Charadrius alexandrinus	<b>Z</b>				30	2012-2018					Bern - II; CMS - II; listed in the Red Data Book of Ukraine - VU	The Site is important for the species during migrations and breeding. In the migration period there are recorded up to 30 ind. Up to 10 pairs breed in the Site.
CHORDATA / AVES	Charadrius hiaticula	<b>V</b>				10	2012- 2018		LC			Bern - II; CMS - II; listed in the Red Data Book of Ukraine - NT	Up to 50 ind. in the migration period in the coastal part. Usually the number is about 10 ind.
CHORDATA/ AVES	Cygnus columbianus bewickii	<b>V</b>				30	2012- 2018					Bern - II; CMS - II; listed in the Red Data Book of Ukraine – NT	The Site is important for the species during wintering. In the wintering period the Site is used by up to 100 ind. The most frequently their number is about 30 ind.
CHORDATA/ AVES	Cygnus olor					500	2012- 2018		LC				The Site is important for the species during wintering.
CHORDATA/ AVES	Fulica atra					3000	2012- 2018						During migration periods the number of birds can reach up to 5000 ind., usually about 3,000 ind. The number of breeding pairs - 20-30
CHORDATA/ AVES	Glareola pratincola	<b>V</b>				100	2012- 2018		LC			Bern - II; CMS - II; listed in the Red Data Book of Ukraine – NT	The Site is important for the species during migrations and breeding. Up to 90 pairs breed in the Site. Averagely up to 100 ind. are recorded

Phylum	Scientific name	qua un crit	cies lifies der erion	Species contribut under criterion 3 5 7	es n	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Grus grus					15	2012- 2018		LC			Bern - II; CMS - II; listed in the Red Data Book of Ukraine - NT	Occurs in small numbers (up to 30 ind.), averagely – 15 ind. in the migration period. Usually crosses the area as a transit species.
CHORDATA/ AVES	Haliaeetus albicilla	<b>2</b>				1	2012- 2018		LC	<b></b>	<b></b>	Bern - II; CMS - I; listed in the Red Data Book of Ukraine - NT	The Site is important for the species during migrations, wintering and breeding. Up to 20 ind. are recorded in the wintering period (usually up to 10 ind.), up to 2 pairs breed in the Site.
CHORDATA/ AVES	Himantopus himantopus	<b>V</b>				100	2012- 2018		LC			Bern - II; CMS - II; listed in the Red Data Book of Ukraine - VU	The Site is important for the species during migrations and breeding. In the migration period there are recorded 50-130 ind. (usually about 100 ind.). Up to 25-30 pairs breed in the Site.
CHORDATA/ AVES	Hydroprogne caspia	<b>2</b>				5	2012- 2018		LC			Bern - II; CMS - II; listed in the Red Data Book of Ukraine - VU	The territory is important for the species in the migration period. Averagely – 5 ind., max. 20 ind.
CHORDATA/ AVES	Ichthyaetus ichthyaetus	<b>V</b>				100	2012-2018					Bern - III; CMS - II; listed in the Red Data Book of Ukraine - EN	The Site is important for the species during migrations, summering and wintering. Aver. – 100 ind, max- 200 ind. in the migration period, single ind. are wintering
CHORDATA/ AVES	Limosa limosa	<b>V</b>				150	2012-2018		NT			Bern - III; CMS – II	The Site is important for the species during migrations. Averagely up to 150 ind., max-300 ind. are recorded
CHORDATA/ AVES	Mergus serrator	<b>V V</b>				10	2012-2018		LC			Bern - III; CMS - II; listed in the Red Data Book of Ukraine - VU	The Site is important for the species during wintering. Up to 10-30 ind. are recorded.
CHORDATA/ AVES	Microcarbo pygmeus	<b>V</b>				15	2012-2018					Bern - II; CMS - II; listed in the Red Data Book of Ukraine - EN	The Site is important for the species during migrations and summering. Maximum number recorded during the migration period and movements is 30 ind., average – 15 ind.
CHORDATA/ AVES	Netta rufina	<b>V V</b>				50	2012- 2018		LC			Bern - III; CMS - II; listed in the Red Data Book of Ukraine – NT.	The Site is important for the species during migrations and breeding. Aver. – 50 ind., max - 300 ind. in the migration period. Single pairs breed in the Site.
CHORDATA/ AVES	Numenius arquata	<b>2</b> C				10	2012- 2018		NT			Bern - III; CMS - II; listed in the Red Data Book of Ukraine - EN	The territory is important for the species in the migration period. On the average there are recorded up to 10 ind.
CHORDATA/ AVES	Numenius phaeopus	<b>2</b>				5	2012- 2018		LC			Bern - III; CMS - II; listed in the Red Data Book of Ukraine - EN	On the average there are recorded up to 5 ind in the migration period
CHORDATA/ AVES	Pelecanus crispus	<b>Z Z</b>				5	2012-2018		NT	<b>√</b>	Ø	Bern - II; CMS - I,II; listed in the Red Data Book of Ukraine - EN	The Site is important for the species during migrations and summering. Maximum number recorded during the migration period and summering is up to 10 ind.
CHORDATA/ AVES	Pelecanus onocrotalus	<b>V</b>	<b>V</b>			800	2012-2018	2.2	LC		Ø	Bern - II; CMS – I,II; listed in the Red Data Book of Ukraine - EN	The Site is important for the species during migrations and summering. Aver. number.— 800 ind., max - 1500 ind. during the migration period. Europe & Western Asia (bre) (AEWA CSR7)
CHORDATA/ AVES	Platalea Ieucorodia	<b>V</b>				10	2012- 2018		LC			Bern - II; CMS - II; listed in the Red Data Book of Ukraine - VU	The Site is important for the species during migrations and breeding. Max 3 pairs were recorded on breeding in the study period (2017). Occurs in the migration period - up to 20 ind. on the average. Annually, up to 10 ind. can be seen simultaneously
CHORDATA/ AVES	Plegadis falcinellus	<b>V</b>				30	2012- 2018		LC			Bern - II; CMS - II; listed in the Red Data Book of Ukraine - VU	The Site is important for the species during migrations and summering. Aver. – 30 ind., max - 100 ind. in the migration period
CHORDATA/ AVES	Podiceps cristatus						1		LC				up to 40 pairs

Phylum	Scientific name	qu u cri	alifie nde iterie	es r on	contr un	der erion	Size		% occurre	IUCN nce Red List	Annondiy I	CMS Appendix	Other Status	Justification
CHORDATA/ AVES	Recurvirostra avosetta	<b>V</b> 5	<b>7</b> C		<b></b>		100	2012- 2018					Bern - II; CMS - II; listed in the Red Data Book of Ukraine – NT	The Site is important for the species during migrations and breeding. Up to 65 pairs breed in the Site. In the migration period there are recorded up to 150 ind. (usually about 100 ind.)
CHORDATA/ AVES	Sterna hirundo		7		<b>/</b>		300	)						a breeding site
CHORDATA/ AVES	Sternula albifrons	<b>√</b>	2		<b>2</b>		10						Bern - II; CMS - II; listed in the Red Data Book of Ukraine – NT.	Up to 20 ind. use the Site in the migration period. Averagely -10 ind.
CHORDATA/ AVES	Tadorna ferruginea	√ 5	7		2		10	2012- 2018		LC			Bern - II; CMS - II; listed in the Red Data Book of Ukraine - VU	The Site is important for the species during migrations. Min5 ind, max-15 ind. are recorded during migrations

<sup>1)</sup> Percentage of the total biogeographic population at the site

Main breeding areas of birds are reed thickets, salt meadows of upper and lowers parts of the water body, accumulative islands. The most numerous among birds, breeding over the period 2012-2018 were the Great Crested Grebe (up to 40 pairs), Great Cormorant (up to 100 pairs) Large Egret (up to 135 pairs), Little Egreat (up to 40 pairs), Night Heron (up to 40 pairs), Purple Heron (up to 15 pairs), Great Heron (up to 25 pairs), Black-winged Stilt (up to 25 pairs), Avocet (up to 65 pairs), Kentish Plover (up to 10 pairs), Collared Pratincole (up to 90 pairs), Yellow-legged Gull (up to 25 pairs). In migratory concentrations, the most numerous species are the Mallard (up to 5,000 ind.), Common Pochard (up to 8,000 ind.), Tufted Duck (up to 3,000 ind.), Pintail (up to 1,000 ind.), Wigeon (up to 700 ind.), Coot (up to 5,000 ind.), Greylag Goose (up to 300 ind.), Mute Swan (up to 700 ind.). During wintering, the water body and adjacent areas support the White-Fronted Goose (up to 18,000 ind.), Smew (up to 1,500 ind.), Yellow-legged Gull (up to 1,000 ind.). In summer, concentration of the White Pelican can be found (up to 1,500 ind.).

Red data book Ukraine https://redbook-ua.org/

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
B1.3: Shifting coastal dunes.	Ø	Elevated sand areas of the sea bottom with relatively steep slopes without vegetation of with sparse vegetation of the class Ammophiletea.	The community is included in Resolution 4 of the Bern Convention
A2.6: Littoral sediments dominated by aquatic angiosperms.	<b>2</b>	Littoral communities of Zostera noltii, Ruppia marina.	The community is included in Resolution 4 of the Bern Convention
A2.5 Coastal saltmarshes and saline reedbeds	Ø	Saltmarshes with the participation of annual plants such as Salicornia, Suaeda and Salsola.	The community is included in Resolution 4 of the Bern Convention
A5.5: Sublittoral macrophyte-dominated sediment.	Ø	Areas of the sublittoral sea bottom, formed of mobile rocks with different granulometric structure, which hold communities of macrophyte algae or vascular plants (Zostera marina, Zostera noltii, Ruppia marina).	The community is included in Resolution 4 of the Bern Convention
B1.2: Sand beaches above the driftline	Ø	Flat sandy sea coasts not flooded by waves. Vegetation of the classes Ammophiletea and Cakiletea maritimae.	The community is included in Resolution 4 of the Bern Convention
C1.3: Permanent eutrophic lakes, ponds and pools	Ø	Stagnant eutrophic water bodies Communities of Batrachium	The community is included in Resolution 4 of the Bern Convention
C1.6: Temporary lakes, ponds and pools.	<b>2</b>	Shallow temporary salt and brackish water bodies with Najas minor, Potamogetonion	The community is included in Resolution 4 of the Bern Convention
B1.6 Coastal dune scrub	<b>V</b>	Scrub-dominated areas of the sea bottom covered mostly by Hippophaë ramnoides. Communities of Tamarix spp. Elaeagnus angustifolia Elaeagnus argentea Artemisia scoparia Carex distans Lactuca tatarica Xanthium strumarium Petasites spurius Lycopus euro	The community is included in Resolution 4 of the Bern Convention
C3.5: Periodically inundated shores with pioneer and ephemeral vegetation.	Ø	This type of habitats includes: 1) communities of low annual plants Eleocharis palustris, Eleocharis acicularis, Cyperus difformis, Cyperus fuscus, Cyperus michelianus, Elatine hungarica, Juncus bufonius, Juncus tenageia, Limosella aquatica,	The community is included in Resolution 4 of the Bern Convention

# Optional text box to provide further information

Significant part of the Site is occupied by aquatic (dominants are Potamogeton pectinatus, P. perfoliatus P. nodosus, Myriophyllum spicatum, Ruppia spiralis, Zostera marina, Zannichelia palustris) and riparian-aquatic (Phragmites australis, Bolboschoenus maritimus, Typha angustifolia) plant communities. The latter are widespread in the northern part of the water body and along its shores. Halophytic, meadow, sand-littoral communities and fragments of steppe communities are less common within the Site.

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

# 4.1 - Ecological character

Sasyk Lake (formerly Sasyk Liman) is, in fact, represented by the mouth of the rivers Kohylnyk and Sarata. Until June 1978, it had been a brackish lagoon, further separated from the sea by the dam and turned into a reservoir "Sasyk Lake".

The lake length is 35 km. The maximum width is 11 km, the average width is 6.1 km. The maximum depth of Sasyk is 3.0 m, the average depth is 2.6 m. The length of its shoreline is 100 km. The total water volume of Sasyk Reservoir constitutes 459 million m3, of which the useful volume of water is 193 million m3.

The highest water level is observed in April-June, but the range of level fluctuations can be significantly reduced, depending on the water content of the year. The water level of the Danube also determines the water expenditure through the Danube-Sasyk Canal.

The water temperature in summer is 21.3-21.7 °C, in winter it is 0.8-1 °C. In some winters, the lake freezes to 0.39 m, freezing lasts up to 90 days. In summer, an intensive water bloom is observed caused by the active growth of blue-green algae with biomass of 100 mg/L (the 5th stage of bloom). In windy weather, biomass of blue-green algae in the wind-driven water mass rises to 300-400 mg/L. Increase in the content of heavy metals in the bottom sediments is also recorded.

It is the transformation of the liman into the reservoir (lake) which represents the main threat. It has led to serious changes in the former river channels and forced the decrease in the level of water salinity because of pumping water through the artificial Danube-Sasyk Canal. In recent years, the inflow of fresh water of the Danube through the Danube-Sasyk Canal into the lake has been reduced that causes salinity fluctuations and deterioration of ecological conditions in the water body.

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

# Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
G: Intertidal mud, sand or salt flats		3	463	

### Inland wetlands

nana welana				
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 >> L: Permanent inland deltas		2	827	
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		4	106	

# Human-made wetlands

Human-made wellands	idinan-made wellands				
Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type		
6: Water storage areas/Reservoirs		1	20161		
8: Wastewater treatment areas		4	5		

# Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known	
Dams	29	

# 4.3 - Biological components

# 4.3.1 - Plant species

# Invasive alien plant species

Phylum	Scientific name	Impacts	Changes at RIS update
TRACHEOPHYTAMAGNOLIOPSIDA	Cuscuta pentagona	Actual (minor impacts)	increase
TRACHEOPHYTA/LILIOPSIDA	Echinochloa crus-galli	Actual (minor impacts)	increase
TRACHEOPHYTAMAGNOLIOPSIDA	Elaeagnus angustifolia	Actual (major impacts)	increase
TRACHEOPHYTA/LILIOPSIDA	Hordeum murinum	Actual (major impacts)	increase
TRACHEOPHYTA/MAGNOLIOPSIDA	Xanthium orientale riparium	Actual (major impacts)	increase

# 4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/MAMMALIA	Spalax leucodon				Red Data Book of Ukraine - NE

### Invasive alien animal species

Phylum	Scientific name	Impacts	Changes at RIS update
MOLLUSCA/BIVALVIA	Dreissena bugensis	Actual (major impacts)	increase
MOLLUSCA/BIVALVIA	Mya arenaria	Actual (major impacts)	No change
ARTHROPODA/MALACOSTRACA	Rhithropanopeus harrisii	Actual (major impacts)	No change

# 4.4 - Physical components

# 4.4.1 - Climate

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

The climate of the Site is moderate continental with relatively short winters and a long, hot summer. The Black Sea stands out among the flat areas with the warmest winters (average January temperature is 2°C). The warm period lasts for 200 days, vegetation period is 235-245 days, the sum of active temperatures is 3500-3600 °C. The annual precipitation varies between years within 300-700 mm, the average rainfall is about 400 mm, annual evaporation is 800 mm. The relative humidity is the lowest in May when the temperature rises rapidly (70%); the highest humidity is in January (90%) when the moist air becomes wet as a result of low temperatures. According to the agroclimatic zoning of the territory of Ukraine, it is a very dry moderate hot zone with mild winters.

# 4.4.2 - Geomorphic setting

0	a) Minimum elevation above sea level (in metres)
25	a) Maximum elevation above sea level (in metres)
Entire river basin	
Upper part of river basin $\Box$	
Middle part of river basin $\Box$	
Lower part of river basin	
More than one river basin $\Box$	
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 Black Sea

The wetland is located at the Black Sea coast in the interfluve of the Danube and Dniester. About 4,000 years ago, when the Black Sea level was -12 m, there started a process of the formation of Kohylnytska erosion-denudation plain and the Black Sea depression (Yanko-Khombakh, 2011). It was the time, when the development of the liman has started.

# 4.4.3 - Soil

Mineral ☑	
<sup>(Update)</sup> Changes at RIS update No change <b>(1)</b> Increase <b>(2)</b> Decrease <b>(3)</b> Unknown <b>(3)</b>	
Organic ☑	
<sup>(Update)</sup> Changes at RIS update No change <b>(1)</b> Increase <b>(2)</b> Decrease <b>(3)</b> Unknown <b>(3)</b>	
No available information $\Box$	
Are soil types subject to change as a result of changing hydrological Yes O No  conditions (e.g., increased salinity or acidification)?	

# Please provide further information on the soil (optional)

Zonal soils of the Site are southern chernozem soils with low humus content, micellar-carbonate heavy loamy, on loess. They prevail in the eastern part of the waterless valley of the wetland. Relatively low shores of the water body in the western part along the shoreline are characterized by meadow-chernozem, meadow, meadow-boggy, saline-meadow and alkaline soils. The bottom is covered by clay, sand and mud

# 4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

# Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water	✓	No change
Water inputs from groundwater		No change
Water inputs from precipitation		No change

### Water destination

Presence?	Changes at RIS update
To downstream catchment	No change

### Stability of water regime

Presence?	Changes at RIS update	
Water levels largely stable	No change	

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

The water levels are mostly stable and depend on the level of the Danube River. The highest water level is observed in April-June, but the range of fluctuations can be significantly reduced, depending on the water content of the year. The water level in the Danube also determines the water expenditures through the Danube-Sasyk Canal. When the water level in the river is low, it does not enter the lake via the canal. In addition, in winter, regardless of the water level in the Danube, the canal is not served, and the water does not enter the lake through it. In recent years, the water exchange was carried out by gravity. Annual volume of filling the reservoir with the Danube water is up to 500 million m3. In recent years the water has not been abstracted for irrigation purposes. The groundwater level varies from 1.8-2.9 to 8.8-18.5 m at the eastern shore of Sasyk Reservoir and from 1.1-2.2 to 19.5-2.2 m - at the western shore. According to the scientific-economic and ecological justification, developed in 2004 by the Ukrainian Scientific-Research Institute of Environmental Issues (Kharkiv), the influx of groundwater makes a significant contribution to the salt balance of Sasyk. Weakly desalinated brines are located not only under the cup of Sasyk Liman, but also under other limans and between them.

# 4.4.5 - Sediment regime

Significant erosion of sediments occurs on the site $\ensuremath{m{\varnothing}}$	
<sup>(Update)</sup> Changes at RIS update No change <b>(Decrease)</b> Increase <b>(Decrease)</b> Unknown <b>(Decrease)</b>	
Significant accretion or deposition of sediments occurs on the site $\ensuremath{\checkmark}$	
<sup>(Update)</sup> Changes at RIS update No change <b>(</b> Increase <b>(</b> Decrease <b>(</b> Unknown <b>(</b>	
Significant transportation of sediments occurs on or through the site $\ensuremath{\oldsymbol{\varnothing}}$	
<sup>(Update)</sup> Changes at RIS update No change <b>(</b> Increase <b>(</b> Decrease <b>(</b> Unknown <b>(</b>	
Sediment regime unknown □	

# Please provide further information on sediment (optional):

Due to insufficient water exchange in the reservoir a considerable part of sediments, which in large volumes penetrate through the Danube-Sasyk canal, is accumulated in the southern part of Sasyk. The greatest amount of them gets into the reservoir during the flood period. The sediments, transported by waters of the river Kohylnyk and Sarata, accumulate in the northern part of the reservoir.

# 4.4.6 - Water pH

Alkaline (pH>7.4) ☑		
<sup>(Update)</sup> Changes at RIS update No change <b>②</b> Increase ○ Decrease ○ Unknown ○		
Unknown □		
Please provide further information on pH (optional):		
The chemical composition after desalination of the reservoir remains chloride, less often chloride-sulfate, pH varies within 7.36-8.32		

# 4.4.7 - Water salinity

Fresh (<0.5 g/l) ■	
<sup>(Update)</sup> Changes at RIS update No change <b>⊙</b> Increase <b>O</b> Decrease <b>O</b> Unknown <b>O</b>	
Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☑	
<sup>(Update)</sup> Changes at RIS update No change <b>⊙</b> Increase <b>○</b> Decrease <b>○</b> Unknown <b>○</b>	
Unknown	

Please provide further information on salinity (optional):

From the second half of the 1990s until now, Sasyk has been characterized by a delayed external water exchange, reduction in the volumes of water abstraction for irrigation, and a relative decrease in the water level of the reservoir. Prior to 2000, fluctuations of the Sasyk water level had followed the water level fluctuations in the Danube, with a smaller amplitude. However, starting from the second half of 2000, the water level in the lake is actually maintained at the zero point of the Baltic system. Relatively stable water level of recent years significantly reduces flooding of the adjacent areas and brings the inflow volume of underground waters nearer to the values typical for the liman that favours the stabilization of the salt regime of Lake Sasyk within the range of 1.5-2.0 g/m (Danube Basin Management Board, 2012).

In Sasyk Reservoir, the increase of mineralization and concentration of pollutants and nutrients is observed from the south to the north.

# 4.4.8 - Dissolved or suspended nutrients in water

Eutrophic 🗹	
<sup>(Update)</sup> Changes at RIS update No change <b>(</b> Increase C Decrease C Unknown C	
Unknown □	

Please provide further information on dissolved or suspended nutrients (optional):

Due to the insufficient water exchange, the water body accumulates a considerable amount of nutrients. This leads to summer water bloom because of active growth of blue-green algae with biomass of 100 mg/L (5th stage of bloom). In windy weather, the concentration of blue-green algae in the wind-driven water mass rises up to 300-400 mg/L. Increase in the content of heavy metals in bottom sediment is observed. The riparian protection zones of the water body and the rivers flowing into it are ploughed out almost until the water edge. As a consequence, soil and chemical substances, used for the treatment of adjacent agricultural lands, penetrate into Sasyk.

# 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 O site itself:

Surrounding area has greater urbanisation or development OSurrounding area has higher human population density OSurrounding area has more intensive agricultural use OSurrounding area has significantly different land cover or habitat types O

# 4.5 - Ecosystem services

# 4.5.1 - Ecosystem services/benefits

Provisioning Services

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

Regulating Services

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Ecosystem service	Examples	Importance/Extent/Significance
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Recreation and tourism	Picnics, outings, touring	Medium
Spiritual and inspirational	Aesthetic and sense of place values	Medium
Spiritual and inspirational	Contemporary cultural significance, including for arts and creative inspiration, and including existence values	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	High
Scientific and educational	Major scientific study site	
Scientific and educational	Educational activities and opportunities	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
Soil formation	Sediment retention	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Medium
Nutrient cycling	Carbon storage/sequestration	Medium

### Optional text box to provide further information

The Site currently provides important ecosystem services. Fishery enterprises practice seeding and commercial catching of fish, which is sold both at local markets and at remote points of sale. In small quantities, the crawfish is caught, which is mainly sold on local markets. Fresh water is used as process water by some villagers and the resort of Katranka. In addition, the water body is a drinking source for the livestock grazing on its shores. The vast majority of livestock is grazed in the upper reaches of the reservoir in the delta of the rivers Kohylnyk and Sarata. It is the area, where the largest meadows used for grazing are located.

Locals are often engaged in amateur fishing in the upper reaches of the reservoir (near the villages of Borisivka and Trapivka, Tatarbunary District). The lower reaches, which are not part of the protected area, is a hunting ground (gamebirds). Haymaking and reed harvesting is also practiced in the upper reaches of Sasyk.

Within the site:	5 000
Outside the site:	50 000
Have studies or assessments been made of the economic valuation of Yes O No O Unknown O ecosystem services provided by this Ramsar Site?	

Where economic studies or assessments of economic valuation have been undertaken at the site, it would be helpful to provide information on where the results of such studies may be located (e.g. website links, citation of published literature):

"Development of socio-economic and ecological justification of the restoration of the hydrological regime of Lake Sasyk" (Kharkiv, 2004). http://pryroda.in.ua/lystopad/sasik-%E2%80%9Erozrobka-socialno-ekonomichnogo-ta-ekologichnogo-ob%D2% 91runtuvannya-vidnovlennya-gidrologichnogo-rezhimu/

# 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
Local authority, municipality, (sub)district, etc.	<b>2</b>	<b>2</b>
National/Federal government	✓	✓

### Private ownership

Category	Within the Ramsar Site	In the surrounding area
Cooperative/collective (e.g., farmers cooperative)	<b>/</b>	<b>/</b>
Other types of private/individual owner(s)	<b>2</b>	<b>2</b>

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

In accordance with the Decree of the President of Ukraine "On the expansion of the territory of the Danube Biosphere Reserve" No. 117 of 02.02.2004, the territory of the Danube Biosphere Reserve (DBR), was added by the upper (northern) part of Lake Sasyk (3,450 ha) within Tatarbunary District without the withdrawal of lands from land users. The territory is classified as anthropogenic landscapes and makes up 6.8% of the total area of the reserve.

Within the Ramsar Site: state and collective ownership. For Lake Sasyk, a special regime of commercial fishery is implemented for the "Fishery Associations of Lake Sasyk" which include fish-catching organizations of different forms of property. In the adjacent area: state, collective and private forms of land ownership.

# 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Danube Biosphere Reserve
Provide the name and/or title of the person or people with responsibility for the wetland:	Oleksandr Voloshkevych, director
Postal address:	132a Tatarbunarskoho Povstannia St., Vylkove, Kiliia District, Odesa Region, Ukraine, 68355
E-mail address:	reserve@it.odessa.ua

# 5.2 - Ecological character threats and responses (Management)

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

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Housing and urban areas	Medium impact	High impact	✓	No change	<b>/</b>	increase
Tourism and recreation areas	Medium impact	Medium impact	<b>/</b>	increase	<b>2</b>	increase

Water regulation

rator rogaration						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	Low impact	Medium impact	✓	No change	<b>✓</b>	No change
Water abstraction	Low impact	Medium impact	<b>✓</b>	No change	<b>✓</b>	No change
Dredging	Low impact	Medium impact	✓	No change	<b>✓</b>	No change
Canalisation and river	High impact	High impact	✓	No change	✓	No change

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	Medium impact	High impact	✓	No change	<b>✓</b>	increase
Livestock farming and ranching	Medium impact	Medium impact	$\checkmark$	No change	<b>✓</b>	No change
Marine and freshwater aquaculture	Medium impact	High impact	<b>✓</b>	No change	<b>✓</b>	No change

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Mining and quarrying	Low impact	High impact	✓	No change	✓	No change
Renewable energy	unknown impact	Medium impact	<b></b> ✓	No change	✓	No change

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	Medium impact	✓	No change	✓	No change
Aircraft flight paths	unknown impact	Low impact	<b>₽</b>	No change	<b>₽</b>	No change

Biological resource use

Biological roccarco acc						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Hunting and collecting terrestrial animals	Medium impact	High impact	<b>₽</b>	No change	<b>∀</b>	No change
Fishing and harvesting aquatic resources	High impact	High impact	<b>/</b>	No change	✓	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	Low impact	High impact	✓	No change	<b>✓</b>	No change

Natural system modifications

realization of ottom in outlook	10					
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fire and fire suppression	Low impact	Low impact	✓	No change	✓	No change
Dams and water management/use	High impact	High impact	<b>2</b>	No change	<b>2</b>	No change
Vegetation clearance/ land conversion	Medium impact	High impact	✓	No change	<b>&gt;</b>	No change

# 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	High impact	High impact	<b>&gt;</b>	increase	<b>2</b>	increase

### Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Household sewage, urban waste water	Medium impact	High impact	<b>/</b>	increase	<b>&gt;</b>	increase
Agricultural and forestry effluents	Medium impact	High impact	<b>/</b>	No change	<b>/</b>	No change
Garbage and solid waste	Medium impact	High impact	<b>/</b>	No change	<b>/</b>	No change
Air-borne pollutants	Low impact	Medium impact	✓	No change	<b>2</b>	No change

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Avalanches/landslides	High impact	High impact	✓	No change	✓	No change

Climate change and severe weather

ommato onango ana ooven	Similar Shange and Soloto Weather					
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Droughts	High impact	High impact	✓	No change	✓	No change
Temperature extremes	High impact	High impact	✓	No change	✓	No change

# Please describe any other threats (optional):

The main threats to the site come as a direct consequence of the conversion of the lagoon into a reservoir causing dramatic modification of former river channels and an artificial reduction in salinity through the introduction of water from the River Danube. This has already led to the loss of saltwater fish fauna and is likely to have (or have had) a similar effect on other fauna and vegetation. When the lake was saline, natural water exchange occurred 8-10 times per year. Today, the Odessa Regional Water Management is not able to support even a 50% water exchange annually. As a result, aquatic organisms, especially fishes, are dead every year because of mass blooms of Cyanobacteriae.

# 5.2.2 - Legal conservation status

Global legal designations

Siobai iegai designations			
Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	3,450 ha of the wetland is included in the Danube Biosphere Reserve	http://zakon.rada.gov.ua/laws/sh ow/117/2004	partly

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other international designation	Sasyk Lyman UA0000151	http://natura2000.eea.europa.eu/ Emerald/SDF.aspx?site=UA0000151& release=2&form=Clean	whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Biosphere reserve	Danube Biosphere Reserve	http://www.dbr.org.ua/search/lab el/home_ua	partly

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	UA085 Sasyk lake	http://datazone.birdlife.org/sit e/factsheet/sasyk-lake-iba-ukrai ne	whole

# 5.2.3 - IUCN protected areas categories (2008)

la Strict Nature Reserve	
lb Wilderness Area: protected area managed mainly for wilderness protection	
II National Park: protected area managed mainly for ecosystem protection and recreation	
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	J

# 5.2.4 - Key conservation measures

Legal protection

20ga. p. oto ouo			
Measures	Status		
Legal protection	Partially implemented		

Habitat

Tablat			
Measures	Status		
Habitat manipulation/enhancement	Partially implemented		
Land conversion controls	Partially implemented		
Re-vegetation	Proposed		
Improvement of water quality	Proposed		
Hydrology management/restoration	Proposed		

Species

Ореско		
Measures	Status	
Control of invasive alien plants	Partially implemented	
Threatened/rare species management programmes	Proposed	

Human Activities

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

### Other

The Site was reserved for establishment of a regional landscape park. An optimal option is to extend the existing protected status of the uppers of Sasyk Lake for the whole lake with its transfer to the Danube Biosphere Reserve for a permanent use.

The short-term objectives and priorities are: solution of such urgent tasks as provision of recreation facilities, tourists and population with drinking water of high quality; restoration of ecosystems of lakes and limans; providing substantial support to perspective types and forms of recreation and tourist organizations in solving actual, legal, financial and organizational problems both at regional and national levels.

# 5.2.5 - Management planning

Is there a site-specific management plan for the site? No

Has a management effectiveness assessment been undertaken for the site? 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 opposesses with another Contracting Party?

# 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Yes, there is a plan

# 5.2.7 - Monitoring implemented or proposed

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

Animal species (reptiles, amphibians, mammals, molluscs, arachnids, cructaceans).

# 6 - Additional material

# 6.1 - Additional reports and documents

# 6.1.1 - Bibliographical references

- 1. Directory of the Azov-Black Sea Coastal Wetlands: Revised and updated. Edited by Gennadiy Marushevsky. Kyiv: Wetlands International, 2003. P. 175-177.
- 2. Bioproductivity and water quality of Sasyk Reservoir under its desalination / Kharchenko T.A., Timchenko V.M., Ivanov A.I. et al; Ed. by Bragin L.P.; Academy of Sciences of the UkSSR. Institute of Hydrobiology. Kyiv: Naukova Dumka, 1990. 276 pp. [in Russian]
- 3. Vinokurova S.V. Experience of the Wetland Management Unit in the development of a strategy for the management and rehabilitation of wetlands // Ecological management as an integral part of sustainable development. Collection of scientific works of DONDUU. Series "Public Administration". Donetsk, 2004. Vol. 5. Iss. 36. P. 161-172. [in Russian]
- 4. Voloshkevich A.N. Characteristics of the formation and sustainable use of fish stocks of a desalinated water body Sasyk Reservoir // Abstract of dissert. ... Candidate Biol. Sciences Moscow, 1991. 27 p. [in Russian]
- 5. The geology of the shelf of the UkrSSR. Limans Kiev, 1984. P. 99-100. [in Russian]
- 6. Hydrobiology of the Danube and limans of the north-western Black Sea coast. Kyiv: Naukova Dumka, 1986. p. 52-133. [in Russian]
- 7. Enaki I.G. Hydrochemical regime of Sasyk Lyman and Sasyk Reservoir // Hydrobiology of the Danube and limans of the north-western part of the Black Sea region: Collection of scientific papers. Kyiv: Naukova Dumka, 1986. P. 36-52. [in Russian]
- 8. Ivanov VA, Minkovskaya R.Ya. Coastal estuaries of Ukrainian rivers and estuarial processes. Sevastopol: EKOSI-Hydrophysics, 2008. 806 p. [in Russian]
- 9. Moshu A. Materials on the ichthyofauna of the Liman-Lake Sasyk // Academic Leo Berg 130 years: Collection of Scientific Articles. Bendery: EcoTyras, 2006. P. 103-109. [in Russian]
- 10. National scheme of biogeographical regionalization. National atlas of Ukraine. Kyiv: State Research and Production Enterprise "Kartografiia" 2007, 440 p. [in Ukrainian]
- 11. Scientific and technical report on the topic: Development of socio-economic and environmental justification for the restoration of the hydrological regime of Lake Sasyk. Kharkiv: UkrNDIEP, 2004. 215 p. [in Ukrainian]
- 12. Development of socio-economic and environmental justification for the restoration of the hydrological regime of Lake Sasyk (final report of UkrNDIEP). Kharkiv, 2004. [in Ukrainian]
- 13. Rusev I. Lake Sasyk in the captivity of ecological madness. Kyiv: Information Agency "Ekho-Vostok", 1996. 108 p. [in Russian]
- 14. Characteristics of fish stocks of Sasyk Reservoir / Report to the head of the Ecological Safety Department of Odesa Region. OdTSPivdenNIRO, 2000. 10 p. [in Russian]
- 15. Timchenko V.M. Ecological and hydrological studies of reservoirs of the north-western Black Sea coast. Kyiv: Naukova Dumka, 1990. 240 p. [in Russian]
- 16. Tkachenko V.A., Voloshkevich A.N. Formation of ichthyofauna of Sasyk Reservoir under desalination // Hydrobiological Jou

# 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

<1 file(s) uploaded>

# 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Sasyk Lake ( Maksym Yakovlev, 09-08-2020



Sasyk Lake ( Maksym



Sasyk Lake ( Maksym



Sasyk Lake ( Maksym

# 6.1.4 - Designation letter and related data

Designation letter

<2 file(s) uploaded>

Date of Designation 1997-02-28