

Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties

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2. Country:

UKRAINE

3. Date:

April 7, 2003

4. Name of the Ramsar site:

Lake Synevyr

5. Map of the Ramsar site:

a) hard copy

yes

b) digital (electronic) format

raster

6. Geographical coordinates:

48°37' N 23°41' E

7. General location:

The Ukrainian Carpathians within Zakarpatska Oblast (Transcarpathian Region)

near the border with Ivano-Frankivska Oblast (Ivano-Frankivsk Region), Mizhgirya Rayon (Mizhgirya District), Synevyr village. The site is located 15 km east of the town of Mizhgirya (4 thousand inhabitants), 45 km of the city of Khust (35 thousand inhabitants), and for 60 km of the city of Mukachevo (95 thousand inhabitants).

8. Elevation:

989 m, bank - 1020 m above sea level.

9. Area:

29 ha

10. Overview:

Lake Synevyr is a comparatively small lake; however, it is the largest lake by its area (about 8 ha during filling) and water volume (about 400 thousand m³) in the Ukrainian Carpathians. The lake emerged 10-11 thousand years ago as a result of mountain landslides, and it gave the name of Synevyr National Nature Park. The lake is located among spruce forests. It feeds from three mountain streams, which are silted at their mouths, and eutrophic grassland (*Glyceria* – horsetail) swamps are forming on these soils. Totally over 2 million m³ of bottom sediments have been already accumulated in the lake. Water from the lake through underground water-bearing horizons flows into the Tereblyya River – one of the numerous tributaries of the Danube. Lake Synevyr, with its charming nature, is a national symbol of the Ukrainian Carpathians, and because of that it is of great environmental and educational importance.

11. Ramsar Criteria:

1 2 3

12. Justification for the application of each Criterion listed in 11. above:

(1) Lake Synevyr is the unique and largest water body of a natural origin in the Ukrainian Carpathians, with the lake area about 8 ha during maximum filling, maximum depth up to 23.5 m, and water volume about 400 thousand m³) The lake was formed in postglacial times, when landslides blocked the river valley. It plays an important role in maintenance of the water regime of the Tereblyya River, inflows of the Tisza River, which, in turn, runs into the Danube.

The lake feeds from three permanent mountain streams, which are silted in places of emptying into the lake, and the process of swamping with initiation of eutrophic grassland swamps (flote-grass, or *Glysecra* sp., and horsetail) is ongoing. The lake is associated with legends and is widely popular among the local Ukrainians as a symbol of the Carpathians.

(2)The Noble Crayfish *Astacus astacus* listed in IUCN Red List as vulnerable and the flora species listed in the Red Data Book of Ukraine are registered within the site: *Huperzia selago*, *Lycopodium annotinum*, *Leucojum vernum*, *Dactylorhiza traunsteinerii*, *Dactylorhiza majalis*, *Dactylorhiza maculata*, and the lichen

Lobaria pulmonaria.

In and around the lake, three birds species listed in the Red Data Book of Ukraine occur and feed: the Black Stork *Ciconia nigra*, Eagle Owl *Bubo bubo*, Lesser Spotted *Aquila pomarina*. Also rare for the fauna of Ukraine, the following species occur in the riverside area: amphibians *Rana dalmatina* and *Salamandra salamandra*, reptiles *Elaphe longissima* and *Coronella austriaca*.

(3) Wetland site supports populations of plant and/or animal species important for maintaining the biological diversity of the Carpathian biogeographic region, including lake, stream, swamp, and forest ecosystems.

Free-floating vegetation communities of the lake are represented by different species of *Potamogeton* (*P. alpinus*, *P. crispus*), littoral-water communities, by stands of *Glyceria fluitans*, *Equisetum palustre*, *Mentha piperita* and other species. Where the mountain streams flow into the lake, 3 areas are transforming into eutrophic mires. Each mires which are reaching almost 2 ha, are overgrown mainly by *Glyceria fluitans* and *Equisetum palustre*.

13. Biogeography:

Biogeographical region on the map of the Emerald Network of Europe: Alpine
According to geobotanical zoning of Ukraine: East-Carpathian Mountain Subprovince; the Central-European Province; European Broadleaf Forest Region.
Basin affiliation: the Danube basin.

14. Physical features of the site:

Synevyr Lake is located on the southern slopes of the Gorgany Mountain Ridge at the elevation of 989 m above sea level. The lake was formed after blocking of the mountain river valley by landslides. The geological structure of the site is determined by its location at the border of central synclinal and inner anticlinal zone of the Carpathians, by development of sedimentary formation of the flysch structure, which were formed from the Upper Cretaceous until the Oligocene. According to the geomorphological zoning, the site is located in the region of middle-altitude ridges and mountain groups of the Vododilno-Verkhovyna (Drainage Divide – Verkhovyna) Province of the Carpathian Mountain Country. The relief is vertically dissected with deep valleys, sharp forms of the ridges and mountaintops, and shows clear dependence from the lithology of geological layers.

Mountain-meadow, mountain-podzolic, brown mountain-forest, and loamy soils prevail on the territory of the site.

Water of Lake Synevyr belongs to the hydrocarbonate-sulfate and sulfate-hydrocarbonate type with mineralization of 107-186 mg/l, clean, has the stable temperature of +11°.

An average temperature of the warmest month is +13°C, coldest, +10°C. Winter is characterized by comparatively high temperatures and air humidity; duration of the frost-free period is 110-130 days, the period of spring snow thaw lasts about 25

days. Annual precipitation is 950-1050 mm.

15. Physical features of the catchment area:

The catchment area of Lake Synevyr forms on its whole perimeter in the mountain area in the Verkhovyna Carpathians with the maximum elevations of 1 495.60 m above sea level (Ozerna Mountain). The catchment area of Lake Synevyr is 2.30 km².

16. Hydrological values:

Depending on its filling, Lake Synevyr has the area about 4.45-7.58 ha, an average depth 8-10 m, the greatest depth 19-23.5 m, and the volume of water 350-460 thousand m³. The catchment basin is located in the middle-altitudes part of the Carpathians at absolute altitudes less than 1 200 m in the watershed of the Tereblya and the Rika rivers by the area of 2.3 million km². Feeding occurs at the expense of surface and atmospheric waters. Three mountain streams (swamped and waterlogged at their mouths) run into the lake. The flow and self-regulation of the water level in the lake is maintained by the Synevyr Stream, which flows from under the landslide at 913 m above sea level, 350 m to the west of the lake, and feeds the Tereblya River, a tributary of the Tisza, which, in its turn, runs into the Danube.

The solid matter runoff into Lake Synevyr is about 50 tons per year, and from the lake, no more than 1 ton per year, which means that 98 % of the solid runoff is accumulated in the lake. Now in the lake bowl 200 thousand m³ of lacustrine sediments are concentrated, due to which in the western part of the lake the silty sediments 11-12 m thick have almost reached the water surface. Water in that area is well warmed, which stimulates luxuriant growth of higher aquatic vegetation and, with deterioration of dead plants, secondary pollution of the lake.

17. Wetland Type:

O Tp M Xf N

18. General ecological features:

Lake Synevyr is ecologically and geologically peculiar as an ecotope of glacial origin dating back to ancient geological epochs, a unique natural monument. Vegetation of the water area is represented by floating aquatic plants, littoral-aquatic and littoral forest communities.

19. Noteworthy flora:

Adjacent plant communities are formed by larch-spruce forests (including beech) with blackberry bushes – formation of *Abieto (albae)-Piceetum (abietis)* and *Fagus sylvatica rubosum (hirtis)*.

20. Noteworthy fauna:

The following species are found in the lake: fish species *Salmo irideus*, *S. trutta m. fario*, *Salmo trutta m. lacustris*, *Cottus gobio*, *Cottus poecilopus*, *Phoxinus phoxinus*, rare for the fauna of Ukraine *Thymallus thymallus*, and the crayfish

species *Astacus astacus*. In and around the lake, the Grey Heron occurs and feeds.

21. Social and cultural values:

Lake Synevyr is a symbol of the Ukrainian Carpathians and is widely popular among local people. On the road to Synevyr Lake (21 km), there is the Museum of Timber Rafting, which much suffered from the flood in 1998 and is being restored now; in Synevyr village (15 km from the lake), where the administrative building of Synevyr National Nature Park is located, there is the Museum of Nature, which will be used as the base for establishing the Visitors Center.

22. Land tenure/ownership of:

site:

Lands of the state ownership are given to the permanent use to the Administration of Synevyr National Nature Park (there is the Certificate on the right of permanent land use).

surrounding area:

Other lands of the state ownership, transferred to the permanent use to the Administration of the Synevyr National Nature Park.

23. Current land (including water) use:

(a) site:

The site is located within the zone of regulated recreation of Synevyr National Nature Park, where the following activities are allowed: scientific research, nature conservation activities, including regulated recreation (see below).

(b) surroundings/catchment:

Lands outside the site are located within the zone of regulated recreation of Synevyr National Nature Park, and the same land use as within the site and, in particular, grazing and haymaking, are allowed there.

24. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

at the site:

Tourism, recreation; silting of the lake by sediments incoming with water as solid runoff.

around the site:

Forestry; tourism; recreation; floods.

25. Conservation measures taken:

The site territory is the part of Synevyr National Nature Park (40 696 ha), created by the Resolution of the Government of Ukraine of 5 January 1989, No. 7, and by the Order of the Ministry of Forestry of Ukraine (now State Committee of Forestry) of 17 February 1989, No. 9.

Biodiversity management is performed according to the Law of Ukraine “On the Nature Reserve Fund of Ukraine” (1992), the Regulation (By-law) on Synevyr National Nature Park (2001).

26. Conservation measures proposed but not yet implemented:

Implementation of nature conservation measures according to the management plan of the territory, protection, use and restoration of natural resources of Synevyr National Nature Park, which is authorized by the order of the Ministry of the Environment and Natural Resources of Ukraine of 27 March 2003 No. 47/ДC, has started. A special management plan on the wetland of international importance will be developed.

27. Current scientific research and facilities:

Annually the scientific researches within the framework of the Chronicles of Nature of Synevyr National Nature Park are carried out. Researches are performed mainly by research officers of the Park and the curator institution, Uzhgorod State University (city of Uzhgorod). The staff of the National Nature Park includes 7 research officers working in the Scientific Department. Among the main research directions there are monitoring for the state of biological and landscape diversity within the frameworks of the annual Program on Chronicles of Nature; studies of hydrobionts, vascular plants, development of nature conservation measures and recommendations, studies on restoration of degraded and disturbed ecosystems.

28. Current conservation education activities related to communications, education and public awareness (CEPA) related to or benefiting the site:

In Synevyr National Nature Park there is the department for recreation and environmental education activities, consisting of 4 staff members, who are responsible for environmental education activities. Within the site, there is the Synevyr ecological trail 4 km long. At the National Nature Park there is the Museum of Ecology, the Forest School for schoolchildren and students; summer field trainings and excursions for schoolchildren and students; leaflets, posters, cards are published. The NGO “Syniy Vyr” (Blue Pool) and children environmental NGO “Parostok” (Sprout) are active in environmental issues.

29. Current recreation and tourism:

On the bank of Lake Synevyr there is a tourist center for 12 places and a cafe, and there is a camping site 1 km from the lake. Annually about 20 thousand people visit Lake Synevyr and the Synevyr ecological trail.

30. Jurisdiction:

Territorial jurisdiction – State Administration of Zakarpatska Oblast (Transcarpathian Region) of Ukraine.

Functionally the site is subordinated to the Administration of Synevyr National Nature Park (biodiversity conservation, regulation of recreational activities), which reporting to the Ministry of the Environment and Natural Resources of Ukraine.

31. Management authority:

Synevyr National Nature Park

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32. Bibliographical references:

1. Chronicle of Nature: Synevyr National Nature Park, 11 volumes (1991 - 2001).
2. Red Data Book of Ukraine: Flora - 1996, 608 pp.; Fauna - 1994, 464 pp. - Kyiv: Ukrainian Encyclopaedia.
3. Reserves and National Nature Parks of Ukraine. – Kyiv: Vyshcha Shkola (Higher School), 1999. – 230 pp.