

Information Sheet on Ramsar Wetlands

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

1. Name and address of the RIS compiler:

Dr. Nataliya Kostenko

Karadag Nature Reserve

Kurortne village, Feodosiya, Autonomous Republic of Crimea, 98188, Ukraine

Phone/fax: +380 6562 383-31

E-mail: karadag@crimea.com

Mr. Mykola Stetsenko, First Deputy Head of the State Agency for Protected Areas

Ministry of the Environment and Natural Resources of Ukraine

1 Tymiryazevska Str., 01014 Kyiv, Ukraine

Tel./fax: +380 44 295 3572

E-mail: parks@parks.freenet.kiev.ua

2. Country:

UKRAINE

3. Date:

April 7, 2003

4. Name of the Ramsar site:

Aquatic-cliff Complex of Karadag

5. Map of the Ramsar site:

a) hard copy

yes

b) digital (electronic) format

raster

6. Geographical coordinates:

44°56' N 35°14' E

7. General location:

The southeastern part of the Autonomous Republic of Crimea, between Otuzka

(Otuz) and Koktebelska (Koktebel) valleys. Territorially lands of the Site belong to the city of Feodosiya (10 km east of the Site, 150 thousand inhabitants), between villages of Koktebel and Kurortne.

8. Elevation:

0 m; terrestrial area – up to **120** m above sea level.

9. Area:

224 ha

10. Overview:

The aquatic-cliff complex of Karadag comprises sublittoral marine areas of the Black Sea, bays, and a narrow strip of pebble-boulder coast and coastal cliffs (up to 120 m high). It is the habitat of many rare plant and animal species. The colony of the fish-eating bird species, Shag *Phalacrocorax aristotelis* (about 80 pairs) is characteristic, as well as nesting areas of birds of prey Peregrino *Falco peregrinus* and Saker *Falco cherrug*. Non-freezing shoals, which are protected by the Crimean Mountains from the northerly winds, are refuges from bad weather and habitats of such rare bird species as Squacco Heron *Ardeola ralloides*, Glossy Ibis *Plegadis falcinellus*, Ferruginous Duck *Aythya nyroca*, Stone Curlew *Burhinus oedicephalus*, Black-winged Stilt *Himantopus himantopus*, and Oystercatcher *Haematopus ostralegus*. Numerous cliffs and the stony bottom are covered with brown algae *Cystoseira crinita* and *C. barbata*, marine vascular plants *Zostera marina* and *Z. nana*, and colonies of mussels, which create good conditions for fish reproduction.

11. Ramsar Criteria:

1 2 4 7 8

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

(1) The site is a combination of sublittoral marine areas of the Black Sea, bays, a narrow strip of pebble-boulder coast and coastal rocks (height up to 120 m) with cliffs, typical for the South Coast of Mountain Crimea. The typical features of the faunal and floral complex is the presence of fish-eating birds, which nest on rocks (cormorant and gulls), thicket of algae *Cystoseira crinita* and *Cystoseira barbata*, and marine vascular plants *Zostera marina* and *Zostera nana*, and colonies of mussels on solid surfaces, with other accompanying flora and fauna species.

(2) The following bird species listed as the Europe's most threatened bird in the European Bird Directive and the Red Data Book of Ukraine are protected within the site: the local population of Shag *Phalacrocorax aristotelis* (about 80 pairs); during migrations constantly occur Squacco heron *Ardeola ralloides*, Glossy Ibis *Plegadis falcinellus*, White-eyed Pochard *Aythya nyroca*, Stone Curlew *Burhinus oedicephalus*, Black-winged Stilt *Himantopus himantopus*; in winter, Ruddy Shelduck *Tadorna ferruginea*.

Animal species which are listed in the Data Book of Ukraine and are protected within the site: Eurasian Oystercatcher *Haematopus ostralegus* and Common Goldeneye *Bucephala clangula*. Birds of prey Peregrine *Falco peregrinus* (1 pair-listed on the Bird Directive) and Western Saker Falcon *Falco cherrug* (2 pairs) nest on steep coastal slopes. Colonies of Lesser Horseshoe bat, *Rhinolophus hipposideros*, Geoffroy's bat *Myotis emarginatus* (both species listed in IUCN red list as vulnerable), Greater horseshoe bat *Rhinolophus ferrumequinum* (Listed on Annex 2 Habitat Directive), are found in grottoes.

The following species of algae registered in the sea are listed in the Red Data Book of Ukraine: *Dictyota dichotoma*, *Cladostephus spongiosus*, *Nemalion helminthoides*, *Laurencia hybrida*, and *Siphonocladus pussilus*.

Within the site, there is one rare type of habitats, sea-grass meadows (No 11.3), listed as endangered habitats requiring specific conservation measures in the Resolution n°4 (1996) of the Standing Committee of the Bern Convention for the Emerald Network.

Criterion 4:

During migrations constantly occur the following bird species listed in the Bird Directive: Squacco heron *Ardeola ralloides*, Glossy Ibis *Plegadis falcinellus*, White-eyed Pochard *Aythya nyroca*, Stone Curlew *Burhinus oedicephalus*, Black-winged Stilt *Himantopus himantopus*; in winter, Ruddy Shelduck *Tadorna ferruginea*.

Criterion 7

The following species listed in the Red Data Book of Ukraine constantly occur within the site's waters: Great sturgeon *Huso huso ponticus* (Endangered / IUCN Red List; protected under the Appendix III of the Bern Convention; International trade restricted since 1.4.98 under **CITES II**), Long-snouted seahorse *Hippocampus guttulatus microstephanus*, Sharpshout seabream *Puntazzo puntazzo*, *Callionymus festivus*, *Callionymus belenus*, Flatsnout goby *Neogobius platyrostris*, Tub gurnard *Trigla lucerna*, Scaldback *Arnoglossus kessleri* and the Black Sea salmon *Salmo trutta labrax* which is also subject of the European Red List of Globally Threatened Animals and Plants (Economic Commission for Europe, 1991)

Criterion 8 :

The following fish species spawn on shallow water: *Mullus barbatus ponticus*, *Labrus viridis* (*L. turdus*), *Callionymus festivus* (both in the Red Data Book of Ukraine), Annular gilthead *Diplodus annularis*, Solea *nasuta*, Sea scorpion *Scorpaena porcus*, Black-umber *Sciaena umbra*, *Arnoglossus kessleri*, Greater weever *Trachinus draco*

13. Biogeography:

Biogeographical region on the map of the Emerald Network of Ukraine: Steppe
According to geobotanical zoning of Ukraine: Mountain Crimean Province of
Mediterranean Forest Region

Basin affiliation: Northeastern Black Sea area in the region of the Crimean
Peninsula.

14. Physical features of the site:

Geologically the site is located in the easternmost part of the anticlinorium of the
Alpine Syncline Region, the southern part of which is submerged into the Black
Sea. From west to east along the coast, the coastline has a very complicated
configuration; here numerous small bays, divided by capes are located. The
Karadag Mountain Range emerged as a result of a volcanic eruption in the
Jurassic.

Brown mountain macadam soils (carbonate, non-carbonate and alkali) are most
typical here.

Water quality is “good” throughout the year.

The site lies in the subtropical climate zone of the Mediterranean type. Annual
sunshine period is 2200-2300 hours. Solar radiation exceeds 120 kilocalories /sm²
per year. Tropic continental and sea air currents play the leading role in forming
the local climate. Average annual temperature is 11-14⁰ C. Average annual
temperature of the coldest month (February) is +2⁰ C; the warmest (July), more
than +23⁰ C.

Ebb and flow tidal variation exceeds several centimeters.

15. Physical features of the catchment area:

The site is a coastal-aquatic area of the Black Sea. The Black Sea basin (catchment
area) inflow is formed by flows of many rivers; the largest of them are the Danube
and the Dnipro. Salinity of the Black Sea is constant (about 18 ‰). In summer,
seawaters warm up to +25°C, and in winter cool down to +6-8°C.

16. Hydrological values:

In summer, precipitation is formed mostly by storm rainfall and heavy showers.
Evaporation considerably exceeds the annual amount of precipitation (300 mm,
with up to 60% during the autumn-winter period). The coastal line is stable.

17. Wetland Type:

D B A E in order of dominance by area

18. General ecological features:

The main habitats are the following: sublittoral areas of water to 6 m depth, a
narrow strip of the pebble-boulder coast, steep coastal rocks with cliffs up to 120 m
high.

At the depths to 4-5 m, there are communities of macrophytic algae *Cystoseira crinita* and *Cystoseira barbata*, and at the depths of 5-6 m – marine vascular plants *Zostera marina* and *Zostera nana*.

Steppe, halophyte, forest, shrubby and savannoid vegetation communities are characteristic for the mountain-cliff terrain.

19. Noteworthy flora:

Within the coastline, there are 5 species of algae listed in the Red Data Book of Ukraine (see i.12).

20. Noteworthy fauna:

The fauna of the site includes species listed in the Red Data Book of Ukraine (see i.12). Dolphins approach the coast periodically, including the species listed in the Red Data Book and International Red Lists: *Tursiops truncatus ponticus*, *Phocoena phocoena relicta*, and *Delphinus delphis ponticus*.

21. Social and cultural values:

At the Administration of Karadag Nature Reserve (Kurortne village) there are two dolphinariums, the library, and the ecological Visitors Center, which includes the wildlife expositions (live animals and plants) and museum collections of fish, reptiles, and birds.

22. Land tenure/ownership of:

site:

State ownership on land, which transferred to permanent use to Karadag Nature Reserve. Karadag Nature Reserve has the Certificate on the right of permanent land use.

surrounding area:

The following areas border with the lands of the site: from the sea side – Protection zone (up to 1 km from the coast) of Karadag Nature Reserve, from mainland – lands of the Reserve, and behind it – small populated areas with recreation facilities: Kurortne, Koktebel, Schebetovka, and private agricultural lands.

23. Current land (including water) use:

(a) site:

The site is located within the protected area and therefore is used only for scientific purposes.

(b) surroundings/catchment:

Annually 12 hectares of hayfield mowed, for fire protection and economic purposes, near the site within Karadag Nature Reserve, and behind the Reserve, viticulture is developed near the inhabited areas, outside the Reserve in the coastal zone there are recreation activities; in the sea – fishing and navigation.

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:

In the past: fishing, grazing and haymaking, felling, prospecting of valuable minerals (usually semi-precious stones).

At present, only scientific research and monitoring for the state of biological and landscape diversity, educational activities; exceptional cases of illegal visiting of the Site area have been registered.

around the site:

Fishing, navigation, viticulture, and especially recreation. Controlled (by the ecological trail) and non-controlled visiting of the area by local people, tourists (resulting in disturbance of animals and trampling of plants).

25. Conservation measures taken:

Karadag Nature Reserve was created in 1979. In 2002 the Karadag site was proposed to be included into the Emerald Network of Europe (Bern Convention). At the date of Ramsar information completion, the site is not yet included in the Emerald network but still on the stage of consideration because of long procedure of inclusion.

Karadag Nature Reserve is among 138 most valuable areas of Ukraine, designated for the Important Bird Area Programme. Value of the site is determined mostly by the presence of the colony of *Phalacrocorax aristotelis* (71 pairs, now about 80 pairs).

Biodiversity management is carried out in accordance with the Law of Ukraine "On the Nature Reserve Fund of Ukraine" (1992), and the Regulation (By-law) of Karadag Nature Reserve (1998).

26. Conservation measures proposed but not yet implemented:

It is planned to develop a Management plan for the area and protection of natural complexes of Karadag Nature Reserve. The special Management plan on the wetland of international importance will be developed.

27. Current scientific research and facilities:

Karadag Nature Reserve has the status of a scientific research institution of the National Academy of Sciences of Ukraine. The staff is 15 scientists working in the Department of Environmental Monitoring and Department of Experimental Hydrobiology. The Institute of Biology of the Southern Seas of the National Academy of Sciences of Ukraine (located in the Sevastopol) is the curator of the Reserve. The main research directions are monitoring of the state of biological and landscape diversity for compilation of the annual Chronicles of Nature; physiological-biochemical studies of marine hydrobionts; reproduction of diatom algae; peculiarities of behavior of sea mammals.

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

Ecological trail is located near the site in the mountain part of Karadag Nature Reserve. In the administrative center of Karadag Nature Reserve (Kurortne village), there are two dolphinariums and the ecological Visitors Center with wildlife expositions (live animals and plants) and museum collections of fish, reptiles, and birds (Kurortne). Leaflets and informational sheets are published regularly.

Environmental education activities with the local population, especially school students, are carried out on the permanent basis. Annually groups of pupils, who help employees of the Reserve to maintain the nature conservation regime, visit Karadag Nature Reserve.

29. Current recreation and tourism:

Near the Site there is an ecological trail with the Site's sightseeing. Annually 15 thousand visitors use the trail, mainly in summer.

30. Jurisdiction:

Functionally the site is subordinated to the Administration of Karadag Nature Reserve of the National Academy of Sciences of Ukraine.

31. Management authority:

Administration of Karadag Nature Reserve

Dr. Alla Morozova

Director

Kurortne, Feodosiya, Autonomous Republic of Crimea, 98188, Ukraine

Phone/fax: +380 6562 383-31

E-mail: karadag@crimea.com

32. Bibliographical references:

1. Chronicle of Nature: Karadag Nature Reserve – 18 volumes (1978 - 2001).
2. Mykytyuk, O. IBA Territories in Ukraine. Kyiv: SoftART, 1999. – 324 pp. ISBN 966-95027-1-3.
3. Red Data Book of Ukraine: Flora - 1996, 608 p.; Fauna - 1994, 464 p. - Kyiv: Ukrainian Encyclopaedia.
4. Reserves and National Nature Parks of Ukraine. – Kyiv: Vyshcha Shkola (Higher School), 1999. – 230 p.
5. Karadag State Reserve. Flora /Ya.P. Didukh, Yu.R. Shelyag-Sosonko. – Kiev: Naukova Dumka, 1982. – 152 p
6. Nature of Karadag. (Eds. A.L. Morozova and A.A. Vronskiy.) - Kiev: Naukova Dumka, 1989. - 289 p.