

4. Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

NOTE: It is important that you read the accompanying *Explanatory Note and Guidelines* document before completing this form.

1. **Date this sheet was completed/updated:**

June 1997

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Designation date

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Site Reference Number

2. **Country:** Russian Federation

3. **Name of wetland:** Islands in Onega Bay, White Sea

4. **Geographical coordinates:** 64°56'N, 35°10'E

5. **Altitude:** 31-123 m a.s.l.

6. **Area:** 3,600 ha, including 900 ha of land and 2,500 ha of water.

7. **Overview:** Rocky islands in the White Sea: Russki and Nemetski Kuzova, Oleshin, Verkhni, Sredni Domnin, Verkhni Domnin, Zhiloi, Setnoi, Lodeiny, Kurichya Nilaksa, Chernetski, Voronii and Severnaya Tupichikha, and surrounding waters. These wetlands are of particular importance for breeding populations of waterbirds.

8. **Wetland Type** (please circle the applicable codes for wetland types as listed in Annex I of the *Explanatory Note and Guidelines* document.)

marine-coastal: A . B . C . D . E . F . G . H . I . J . K

inland: L . M . N . O . P . Q . R . Sp . Ss . Tp . Ts
 U . Va . Vt . W . Xf . Xp . Y . Zg . Zk

man-made: 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9

Please now rank these wetland types by listing them from the most to the least dominant: A,D,E,U,Xp.

9. **Ramsar Criteria:** (please circle the applicable criteria; see point 12, next page.)

1a . 1b . 1c . 1d | 2a . 2b . 2c . 2d | 3a . 3b . 3c | 4a . 4b

Please specify the most significant criterion applicable to the site: 3c

10. **Map of site included?** Please tick *yes* ✓ -or- *no*

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits).

11. **Name and address of the compiler of this form:** Valentin V.Kolomaev: Ministry of Environment and Natural Resources of the Republic of Karelia. 9 Dzerzhinsky Street, Petrozavodsk 185035. Karelia, Russia.

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12. Justification of the criteria selected under point 9, on previous page: 3c - the wetlands support over 1% of the East-Atlantic population of razorbill *Alca torda* and over 1% of the Russian population of black guillemot *Cepphus grylle*.

13. General location: Republic of Karelia, Kem Region (northern part of European Russia), 27 km west of the town of Kem, 18 km west-northwest of the port of Rabocheostrovsk. The site includes the islands of Russki and Nemetski Kuzova, Oleshin, Verkhni, Sredni Domnin, Verkhni Domnin, Zhiloi, Setnoi, Lodeiny, Kurichya Nilaksa, Chernetski, Voronii, Severnaya Tupichikha and several nameless islands.

14. Physical features:

Geology and geomorphology

The site is situated on the Baltic shield. The islands are built up from metamorphic and igneous rocks (gneiss, granites, crystalline schists, *etc.*), prior to the Cambrian in age. The area was subjected to glaciation during the Quaternary Ice Age. There are various glacial landforms, such as scarrys: rocks with steep slopes and smoothed-out surface. The ‘roches moutonnees’ formations are characteristic of the relief. On the largest islands, aggradational terraces are found.

Genesis of the wetland

Onega Bay is the southern portion of the White Sea which was developed about ten thousand years ago, during the last Ice Age. The islands were mainly formed in the Upper Holocene, resulting from the vertical movements of the Earth’s crust and exogenic processes.

Climate

The area is situated within the Atlantic-Arctic climatic zone and has a transitional continental-marine climate. The winters are warmer than those on the continent, with the mean air temperature of -9°C, the summers are colder (+10°C), and all seasons come in somewhat later. The warm period, when the temperatures are above zero, lasts for 120 days; and when the temperatures are above +10°C, for 70 days (Romanov, 1961). Annual precipitation is 400 mm, falling mainly in the warm period. Snow cover persists from late October till late May. Due to the peculiarities of the relief, low precipitation in winter and strong winds, many islands are not covered with snow.

Hydrological regime

The water exchange between Onega Bay and the White Sea is unobstructed. The level of water in the bay is subject to one-metre daily tidal variations. The Solovetsky Archipelago and Kem scarrys, located at the mouth of Onega Bay, hamper the movement of tidal waves. This entails an increase in the velocity of the waves. There is a permanent outward current in the White Sea, which passes through the Kem scarrys and is directed to the centre of Onega Bay. The sea bottom within the site is uneven and down to 40 m deep. The bay freezes in late November-early December, but a large part of the water area within the site is never covered with ice.

Soils

Podzolic soils dominate on the largest islands covered by forests. Specific marine peats are formed on the smaller islands under the tundra-like crowberry communities. Many islands have no soil cover.

Waters

The mean water temperature is about 10°C in summer. Salinity of water on the eastern border of the site fluctuates from 20‰ in April to 29‰ in January (Babkov, 1985), with an average of 25-27‰. The waters on the western boundary of the site are largely desalinated by the Kem River. This river has a relatively large catchment area extending west as far as the Manselkya and West-Karelian highlands.

15. Hydrological values: No data

16. Ecological features: The site is located within the north taiga biogeographical sub-zone, but due to the influence of the cold White Sea, there are vegetation communities typical for regions situated further north, such as elfin woodlands and marine tundra. The taiga forests cover 40-50% of the area. Spruce forests with *Hylocomium*, *Dicranum* and *Phytidiadelphus* sp. occur on the largest islands (Russki and Nemetski Kuzova, Voronii Islands and Kurichya Nilaksa), at places shielded from the wind. Sparse pine forests occur on the cliffs. Young pine-birch mixed forests cover the burns. Smaller islands (Oleshin, Verkhni, Setnoi, Lodeiny and others) are occupied by the tundra-like communities dominated by crowberry *Empetrum* sp., mosses and lichens. These communities cover 35-40% of the total area of the site. Birch elfin forests occur on the shielded slopes and in the depressions (esp. on Oleshin Island), covering about 10% of the total area. Mires and coastal meadows are found only on Russki Kuzov Island and occupy only about 2% of the total area. Anthropogenic pressure is high and is mainly responsible for frequent fires on the islands. For example, a large portion of Russki Kuzov Island, which used to be covered with spruce forest, is now overgrown with primary birch and pine communities on the burns.

17. Noteworthy flora: Rare plants include *Rhodiola rosea*, *Orchis maculata* and *Juniperus sibirica*.

18. Noteworthy fauna:

About 150 species of birds occur at the site at different times of the year, or at different stages of their life cycle. The importance of the islands for migrating waterbirds is not very high: the areas covered by the meadows and highly productive littoral shallows are small, and most birds pass through the area quickly, stopping only briefly at the site. Brant goose *Branta bernicla* is common in late May- early June.

Over 60 waterfowl species have been registered during the breeding season, including large colonies of sea birds. Of particular interest is razorbill *Alca torda*, comprising 35-40% of the total breeding population. In the last years, between 550 and 630 pairs have been counted at the site (over 20% of the White Sea population of this species and about 15% of its total population in Russia). The largest razorbill colony with 350-420 breeding pairs is located on Verkhni Island. The other colonies are smaller: 100 pairs have been registered on Sredni Island, 90 pairs breed on Severnaya Tupichikha and 20 pairs on Oleshin Island. Herring gull *Larus argentatus* is also plentiful, with a total of 350-400 pairs (25% of the breeding bird population) and one of the largest White Sea colonies of 120-210 pairs on Verkhni Island. Other breeding species include: guillemot *Cephus grylle* (250 pairs; large colonies are on the islands of Verkhni, Setnoi and Oleshin with 50, 45 and 35 pairs respectively), Arctic tern *Sterna paradisea* (180-320 pairs in two colonies) and eider *Somateria mollissima* (150 pairs).

The site is important for a number of waterbird species during winter, because there are large open leads in the ice cover. Wintering birds include *Cephus grylle*, *Somateria mollissima* (up to 10% of the White Sea population) and possibly *S. spectabilis*.

Species listed in the Red Data Books of the Russian Federation and Karelia, that breed at the site, include: Steller's eider *Polisticta stelleri*, white-tailed eagle *Haliaeetus albicilla* and kestrel *Falco tinnunculus*. Barnacle goose *Branta leucopsis*, osprey *Pandion haliaetus*, gyrfalcon *Falco gyrfalco* and peregrine falcon *F. peregrinus* occur during migration.

Among the noteworthy mammals are bearded seal *Erignathus barbatus*, ringed seal *Phoca hispida* and marsoon *Delphinapterus leucas*.

19. Social and cultural values: There are objects of archaeological importance, including sacred places of primitive tribes.

20. Land tenure/ownership: State owned (Goslesfond: State Forest Lands).

21. Current land use: Fishing (allowed for locals); collecting of algae, recreation.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects: Man-induced fires pose the major threat to the site's ecological character.

23. Conservation measures taken: The site includes the Kuzova Nature Reserve ('zakaznik'), established at the local level. Economic activities, such as agriculture, extraction of minerals, hunting and collecting of medicinal plants are prohibited. During the breeding period (1 June- 15 July), it is forbidden to visit the islands. Practical protection is inadequate.

24. Conservation measures proposed but not yet implemented: None

25. Current scientific research and facilities: No regular research has been conducted until recently, although ornithologists have been visiting the islands since the 19th century (Tarnani, 1892). Several surveys have been made by the Kandalaksha Nature Reserve (Bianki, 1964, 1967). Since the 1980s, A.E.Cherenkov (Solovetsky Biological Station of Moscow University) has been carrying out monitoring studies of the colonies of sea birds (Semashko & Cherenkov, 1990; Cherenkov & Semashko, 1992). S.B.Sazonov studied bird populations on the Kem scarrys in the early 1990s (Zimin *et al.*, 1993). Fieldwork at the site is associated with a number of difficulties: the lack of fresh water on most islands, high frequency of storms, *etc.*

26. Current conservation education: No data

27. Current recreation and tourism: The islands are popular tourist destinations, for boating, collecting of berries and mushrooms and sight-seeing.

28. Jurisdiction:

Territorial: Administration of the Kem Region (Proletarski Prospekt 30, Kem, Karelia 186600, Russia).

Functional: State Committee of the Environment Protection of the Russian Federation (4/6 Bolshaya Gruzinskaya Street, Moscow 123812, Russia).

29. Management authority: Kem Regional Committee of Nature Protection (Proletarski Prospekt 26, Kem, Karelia 186600, Russia).

30. Bibliographical references: Babkov (1985); Bianki (1963, 1967, 1968, 1996); Bianki *et al.* (1967); Breslina (1971, 1987); Cherenkov & Semashko (1992); Zimin *et al.* (1993); Kokhanov (1967); Legkova *et al.* (1977); Nevesskii *et al.* (1977); Red Data Book of Karelia (1985); Red Data Book of RSFSR (1984); Rikhter (1946); Romanov (1961); Semashko & Cherenkov (1990); Sorokin, Kasabov &

Vanyukhin (1982); Tarnani (1892).
