12. 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:
July 1997

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DD MM YY

Designation date | Site Reference Number

2. Country: Russian Federation

3. Name of wetland: Islands in Ob Estuary, Kara Sea

4. Geographical coordinates: 66°40'N, 70°58'E

5. Altitude: 2-10 m a.s.l.

6. Area: 128,000 ha

7. Overview: Floodplain of the Lower Ob, presenting a complex of islands (up to 30 km across), lakes, channels and marshes. An important area for migrating, breeding and moulting populations of waterbirds, including rare and threatened species.

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: F

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

1a · 1b · ( ) · ( ) [3] ( ) · 2b · 2( ) 2d [3] 3a( ) 3b( ) 3c [3] 4a( ) 4b( )

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

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: L.K.Kamenev: Yamalo-Nenets Committee of Environment Protection: Yamalskaya Street 12, Salekhard 626608, Russia.
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12. Justification of the criteria selected under point 9, on previous page: 3a - the site is one of the richest waterfowl breeding and moulting arears in the northern hemisphere.

13. General location: In the northern part of Western Siberia, the Lower Ob area, to the north of the Polar Circle; in Yamalo-Nenets Autonomous Area, 15 km south of the village of Yar-Sale.

14. Physical features:

Landforms:
The geological evolution of the West Siberian Plain, with a predominance of negative tectonic movements in modern times, has resulted in the creation of a vast floodplain along the lower course of the Ob River. The significant thickness of the alluvial deposits reveals the great duration of the process. River flow is very slow due to the extremely low gradient of the land surface, and this promotes intensive accumulation of alluvium and the predominance of lateral erosion. The main channel of the Ob River flows along the southern side of the floodplain, and gradually opens out into a long narrow gulf, the Nadymskaya Ob, which is about 15-20 km wide. Smaller channels cut through the floodplain in various directions, and divide it into a large number of islands. The lateral parts of these islands are usually higher than the inner portions, and have a more uneven relief.

Climate:
The area has a severe, continental climate. The winter lasts for 6-6.5 months, with the mean January temperatures as low as -20° or -24°C. The spring is usually short (30 days) and cold, with abrupt weather changes and frequent return of light frosts. The growing period for vegetation is 110 days. The mean temperature of the warmest month is between +12° and +14°C. The autumn is short, with maximum instability in the baric gradient, abrupt temperature changes and frequent early frosts (Alisov, 1969). The mean annual precipitation is 400 mm; precipitation in summer is twice as high as that in winter.

Hydrology:
The hydrological regime of the lower Ob region is characterized by very wide seasonal variations in water level, with extremely high water levels during spring and summer. At the mouth of the Ob River, the water level typically rises by two metres during the prolonged spring-summer flood. The highest water levels occur once every 18 or 20 years. Different portions of the floodplain are inundated for different periods during the flood. The highest parts of the floodplain are covered with water for an average of 20 days. The lowest parts of the floodplain, especially near the mouth of the river, may be inundated for as long as 90 days. Variations in the duration of flooding determine soil type and patterns of distribution of the plant cover.

15. Hydrological values: The vast wetlands of the lower Ob and its delta reduce the inflow of pollutants into the Arctic Ocean through absorbtion by plants and accumulation in bottom sediments.

16. Ecological features: The Lower Ob is a complex of channels and various water bodies, dissecting the land by a great number of islands, from 0.6 to 163 km^2 in area. A typical feature of the floodplain wetlands is the presence of temporary water bodies ('sors') in the interior of the islands. These 'sors' occupy about 40% of the total area. Floodplain meadows composed of *Arctophila fulva* and *Carex* sp. occur widely in these areas. Closer to the delta, there are large sors almost lacking vegetation, except for scattered sparse groups of forbs and herbs such as *Arctophila fulva, Eleocharis acicularis, E. palustris* and *Beckmania eruciformis* (Iljina, 1985).

Zonation of the Ob River floodplain has been based on differentiation according to ecological levels, or altitudinal zones, and the extent to which each of these is affected by the flood regime (Shennikov, 1941). Three ecological levels have been distinguished within the lower Ob floodplain: low, medium and high (Iljina, 1985). Low-level floodplain occurs widely near the mouth of the river. During periods of low water, the relative elevation of the land does not exceed 1.5-1.8 m. The land surface of medium-level floodplain is 0.5-1.0 m above that of the low-level floodplain. High-level areas (3-4 m in elevation) occur in the upper (western) part of the delta, but never form large areas even during periods of low water. These high lands are covered with water only in years with the highest floods. Medium-level land is flooded in years with medium floods, while low-level land is flooded annually and for a long period (from late May until early September).

The differences in the duration of flooding are reflected in distinct differences in vegetation cover. In the low-level floodplain, fens and sor swamp meadows are widespread. The meadow vegetation cosists mainly of sedge-herb associations, although there are also some marshes dominated by willows. Marshes are hummocky, with a peat layer 30-50 cm thick. Hummocks are formed by sods of the sedges *Carex aquatilus* and *C. cespitosa*. Depressions between the hummocks support an association of *Carex chordorrhiza, Eriophorum polystrachyon* and *Calliergon stramineum*. In poorly drained flat areas of the floodplain, willow marshes grade into swampy hummocky sedge meadows formed by sods of the same sedge species (*Carex aquatilus* and *C. cespitosa*). Groves of shrubby and woody willow dominated by *Salix lanata* develop along the river channels (Baryshnikova, 1961; Iljina, 1985). Medium-level and high-level areas support associations of sedge-grass meadows (*Carex acuta* and *Calamagrostis langsdorffii*), willow, willow-yernik and yernik-alder tundra.

In the inner parts of the delta islands, there are some small patches of higher ground which are remnants of an ancient, higher floodplain. These appear as low, flattened ridges. Such areas are free of water, even in years with exceptionally high flood levels. The vegetation is quite similar to tundra ohytocenoses, and consists of associations of willow-yernic and yernik-alder tundra, as well as grasses and sparse moss cover.

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17. Noteworthy flora: No information. The flora has not been studied.

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18. Noteworthy fauna:

Birds:

(a) Migrating species

The lower Ob region is located on an important migration route for waterfowl breeding in the Yamal tundra and Taz Peninsula, and wintering in western Europe, southwest Asia and Africa. Under normal conditions, the spring migration is rapid, with most birds stopping only briefly in the lower Ob, but if prolonged cold weather returns, there may be some reversed migration. Ducks are the most numerous waterfowl migrating through the lower Ob. Dabbling ducks account for 70% of the total, and include Eurasian wigeon *Anas penelope*, common teal *A. crecca*, mallard *A. platyrhynchos*, northern pintail *A. acuta*, garganey *A. querquedula* and northern shoveler *A. clypeata*. Diving ducks account for 15%, and include tufted duck *Aythya fuligula*, greater scaup *A. marila*, black scoter *Melanitta nigra*, velvet scoter *M. fusca* and common goldeneye *Bucephala clangula*. The remaining 15% include whooper swan *Cygnus cygnus,* Bewick's swan *C. columbianus bewickii*, bean goose *Anser fabalis,* lesser white-fronted goose *A.erythropus,* greylag goose *A.anser* and red-breasted goose *Branta ruficollis*.

The autumn migration of waterfowl begins in the middle of August with the departure of male dabbling ducks that have completed their moult, and continues until mid-October. The species composition is the same as in spring, but the migration is less intense. Birds usually pass through the area quickly if the weather suddenly deteriorates.

(b) Breeding and moulting species

The lower Ob region is a very important breeding area for waterfowl, and supports even larger numbers of birds during the moult. The numbers of breeding birds fluctuate widely from year to year, and are inversely correlated with fluctuations in the average water level in June. Population densities vary from 500 to 2,000 birds per 10 sq.km, depending on water levels (Molochaev, 1990). Optimal breeding conditions for waterfowl occur in years with medium flood levels (*e.g.* 1976, 1980, 1982 and 1984). Bad years are those with high flood levels (*e.g.* 1978, 1979, 1981 and 1983). The average proportion of each species in the total breeding population of waterfowl (averaged over many years) is as follows: *Anas acuta* 53.4%, *A. penelope* 11.0%, *A. crecca* and *A. querquedula* 16.9%, *Aythya fuligula* 5.5%, *A. marila* 1.0%, *Melanitta nigra* 6.1%*, M.fusca* 3.1%, *Bucephala clangula* 0.4%, *Clangula hyemalis* 0.1%, *Mergus* spp. 0.1%, *Anser anser* 0.1% and *Cygnus cygnus* 1.9% (Molochaev, 1990).

Large flocks of moulting ducks gather at the mouth of the Ob River in years when there is a high and prolonged flood. In such years, conditions are unsutable in the Dvuobje region further south along the Ob River, and large numbers of birds move from Dvuobje to the lower Ob to moult. The most abundant species in the moulting areas are *Anas acuta* (about 49% of the total), *A. penelope* (16%), *A. crecca* (16%) and *Aythya fuligula* (10%). The total number of ducks in the lower Ob region at the end of the breeding and moulting seasons ranges from 0.7 to 1.5 million birds.

(c) Rare and threatened species

The wetlands provide habitat for five species of birds currently listed in the Russian Red Data Book:
- Bewick's swan *Cygnus columbianus bewickii:* a passage migrant.
- Red-breasted goose *Branta ruficollis:* a passage migrant.
- Osprey *Pandion haliaetus:* a breeding species.
- White-tailed eagle *Haliaeetus albicilla:* a breeding species in low numbers.
- Siberian crane *Grus leucogeranus:* a rare passage migrant.

Two of these species, *Branta ruficollis* and *Grus leucogeranus,* are listed as globally threatened in the IUCN Red Data Book.

Other fauna

Mammals of economic importance include muskrat *Ondatra zibethicus,* stoat *Mustela erminea*, red fox *Vulpes vulpes* and Arctic fox *Alopex lagopus*. The composition of the fish fauna is similar to that of the Dvuobje area, and differs only in the occurrence of *Coregonus sardinella, C. tugun* and *Salmo arcticus.*

The area is one of the richest whitefish habitat in the world. It supports large populations of *Stenodus leucichthys, Caregonus sardinella, C.tugun, C.peled, C.nasus, C.lavaretus* and *C.muksun.* Other important fish species include *Acipenser baeri, A.ruthenus* and *Salvelinus alpicus.*

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19. Social and cultural values: The lower Ob floodplain is an important region for fish production. It is an important feeding area for young sturgeon and whitefish which constitute one of the principal sources of food for the aboriginal people of Western Siberia and northern Khants.

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20. Land tenure/ownership: State owned (national land).

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21. Current land use: Hay harvesting, ship navigation and passage of reindeer herds along the Bolshaya Narechenskaya channel and the middle reaches of the Murinskaya Ob to the Purtovskiye Islands.

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22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects: Intensive hay harvesting may cause a change in ecological character of the wetland.

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23. Conservation measures taken: The site is located within the borders of the Nizhneobsky Nature Reserve (zakaznik). Practical protection of the reserve is carried out by 3 rangers.

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24. Conservation measures proposed but not yet implemented: It has been proposed to increase the staff of rangers.

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25. Current scientific research and facilities: Some ornithological research has been caried out, and this has become more regular in recent years (Vengerov, 1970; Braude, 1972; Krivenko *et al.,* 1980; Stopalov & Pokrovskaya, 1983). Maksimov and Merzljakina (1990) have investigated the hydrological regime. Annual waterfowl counts are currently being undertaken by the Yamalo-Nenets Committee for Protection and Rational Use of Game Resources.

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26. Current conservation education: A significant amount of publicity has been given to the area through the publication of articles in the popular literature, and radio and television programmes.

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27. Current recreation and tourism: None.

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28. Jurisdiction:
Territorial: Administration of Yamalo-Nenets Autonomous Area (Respubliki Street 72, Salekhard 626600, Russia); Administration of Yamal District (Yar-Sale, Yamalo-Nenets Autonomous Okrug 626600, Russia).
Functional: State Committee of the Russian Federation for Environmental Protection (4/6 Bolshaya Gruzinskaya Street, Moscow 123812, Russia).

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29. Management authority: Regional Committee for Environmental Protection (Yamalskaya Street 12, Salekhard 626608, Russia).

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30. Bibliographical references: Alisov (1969); Baryshnikova (1961); Braude (1972); Iljina (1985); Krivenko *et al.* (1980); Maksimov and Merzljakina (1990); Molochaev (1990); Shennikov (1941); Stopalov & Pokrovskaya, 1983); Vengerov (1970).
