

Information Sheet on Ramsar Wetlands (RIS) – 2006-2008 version

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Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

V.A. Andronov, R.S. Andronova;
Khabarovsk, PO box 105-26, 680030 Russia

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

September 2008

3. Country:

Russian Federation

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Lake Udył and the mouths of the Bichi, Bitki and Pilda Rivers (No. 687)

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

a) Designation of a new Ramsar site ; or

b) Updated information on an existing Ramsar site

“This updated version of the RIS has been accepted under the condition that the Secretariat’s comments originally provided on this RIS will be taken into account during the preparation of the next update. Cartographic materials provided are schematic maps.”

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or
- ii) the boundary has been extended ; or
- iii) the boundary has been restricted**

and/or

If the site area has changed:

- i) the area has been measured more accurately ; or
- ii) the area has been extended ; or
- iii) the area has been reduced**

**** Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

No major changes to the ecological character identified.

7. Map of site:

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) a **hard copy** (required for inclusion of site in the Ramsar List): ;
- ii) an **electronic format** (e.g. a JPEG or ArcView image) ;
- iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** .

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The borders of the Ramsar wetland follow physical boundaries of natural objects. Head of the Khabarovsk Krai Administration (Decree No. 6 from 4th January 1996) has adopted Statute and borders of the Ramsar wetland.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

52°09' N, 139°51' E

9. General location:

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

The site is located in the lower Amur River. Lake Udył is located at the left-side bank of the Amur, 26 km from its watercourse. About 520 km from the province center, the city of Khabarovsk

(609,400 inhabitants); 40 km from the center of the district, the town of Bogorodskoye (27,100 people); and 5 km from the nearest settlement, the village of Kolchem.

10. Elevation: (in metres: average and/or maximum & minimum)

3 to 100 m a.s.l.

11. Area: (in hectares)

57,600 ha

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland. The site comprises Lake Udył, a large freshwater lake, with adjacent flooded meadows and various mires, thermokarst and relict lakes. It is important for large aggregations of breeding, moulting, and migrating waterbirds. A complex of breeding rare and endangered bird species. The local breeding populations of the Swan Goose (*Cygnopsis cygnoides*) and Steller's Sea Eagle (*Haliaeetus pelagicus*) in the Amur catchment.

13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 •	2 •	3 •	4 •	5 •	6 •	7	8 •	9
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14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criterion 1. The site is a characteristic example of a riverside lowland in the lower reaches of the Amur River that remain in a natural state.

Criterion 2. The site supports large concentrations of rare and endangered species of animals and plants; it is important for the conservation of endemic species in the Lower Amur region.

Criterion 3. The site provides for the conservation of wetland landscapes of Lake Udył and mouths of the Bichi, Bitki, and Pilda rivers that are indispensable for the restoration and reproduction of rare and endangered species of animals.

Criterion 4. The wetland supports and conserves the most important breeding stations of the Steller's Sea Eagle (*Haliaeetus pelagicus*), and supports favorable conditions for the successful breeding of a large group of the Swan Goose (*Cygnopsis cygnoides*) in the Lower Amur region.

Criterion 5. The site supports the existence of many bird species associated with wetlands. The site is located on a major migration route of birds that fly from South-East Asia, including India, along the ecological corridor following the Amur River. The wetland supports stopover and feeding habitats of hundreds of pairs of migrating Whooper Swans *Cygnus Cygnus* and Bewick's Swans *Cygnus bewickii*, Lesser White-fronted Geese *Anser erythropus*; 200,000 to 300,000 ducks and geese of other species, many shorebirds and passerines (Kadastrovye svedenia... 2007). Moreover, Lake Udył is used as a stopover site by numerous birds from Japan that migrate alongside the Tatar Strait

to the other side of the Amur River. The site includes breeding and moulting habitats of massive aggregations of waterbirds and wetland-related birds.

Criterion 6. The site supports populations of the Swan Goose (*Cygnopsis cygnoides*) and Steller's Sea Eagle (*Haliaeetus pelagicus*) that are unique in the Amur catchment. In the 1980s, the Swan Goose population was the largest known on territory of the former USSR. It comprised at least 200 birds, but their number decreased noticeably in the 1990s. Today, 30 to 40 Swan Geese breed in the valleys of the Bichi, Bitki, Pilda, and Alochka rivers, with up to 200 birds in the chick-rearing period. The White-tailed Eagle (*Haliaeetus albicilla*) and Steller's Sea Eagle (*H. pelagicus*) breed at the southeast shore with an unprecedented density of 3-4 nests/km². The Udyl breeding population of the Steller's Sea Eagle is the greatest in the Amur region. There are 60 to 62 territories occupied by 35 to 19 pairs every year (Мастеров 1992, 1995; Masterov 2001).

Criterion 8. The Udyl basin plays an important role as spawning grounds of salmon fishes (*Oncorhynchus keta* and *O. gorbuscha*), which results in great densities of fish eating birds at the site. The lake is used as mass spawning and feeding grounds by numerous cyprinids that come there from the Amur.

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

The site falls into the Amur-Ussuri natural region and belongs to the Lower Amur mountain-and-valley ecoregion.

b) biogeographic regionalisation scheme (include reference citation):

The site is a part of the East Asian conifer-broadleaf geobotanic region. According to the botanical-geographical division, the Lower Amur lowlands belong to the Southern Taiga Subzone (Колесников 1969), while, according to the geobotanical regionalisation, they are included in the South-Okhotsk dark conifer-forest taiga region (Колесников 1963).

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

The site comprises the large freshwater lake Udyl, its shore zone, and lower reaches of the Bichi, Bitki, Alochka, and Pilda rivers; as well as adjacent flatland stretches with hills, lakes, and channels (Khalan) on the Amur River floodplain.

The site lies within the Udyl-Kizi Lowland and is an arching subsidence area formed by a thick layer of loose deposits. Terraces are Late Quaternary and Upper Quaternary. The Udyl-Kizi Lowland stretches along the Amur River in the north-easterly direction (Прозоров 1974). Its maximal width is 50 km. Characteristic of the floodplain are lateral-hollow and segment-hollow topography that evolved as a result of river debris sedimentation on levees and erosive activity of watercourses that washed out gullies (Прозоров 1974). Most of the lowland is occupied by a lake-alluvial plain with scattered *relki* – relict and lakeshore levees and residual fine sands (Красноярский, Садырина 1963; Аваряскин 1970a). The *relki* are mainly oblong formations reaching from 50 to over 100 m across.

The climate is cool, moderately wet, with summer precipitation sum of up to 52-56%. Some 296 mm of precipitation fall during the warm period; the rainfall factor is 0.85 for the evaporative capacity of 347 mm. Most of the precipitation fall in July and August. Alternation of dry and wet years is

cyclical in character. Summers are relatively warm, with mean temperatures of July + 17.6 °C. Winters are snowy and cold, with mean temperatures of January varying from -22 °C to -27 °C. Mean duration of the frost-free period is 130 days, while the duration of the period with temperatures exceeding +10 °C lies within 110-115 days and with temperature exceeding +15 °C – 50 to 65 days. Latest frosts are registered in early June, in some years in the end of May. First autumn frosts usually occur in the second half of October. The absolute minimum of air temperatures is registered in January; it varies between -40 °C and -45 °C. Mean annual precipitation is 656 mm. Northerly winds predominate at the site (46%). A stable snow cover is formed end October to early November and lasts for about 170 to 190 days (till the end of April). The snow depth averages at 30-40 cm. According to the soil-geographic regionalization, soils at the site belong to the Amur-North-Sakhalin province of podzolic soils, Far Eastern taiga-forest region of the Boreal belt. General features of the Udyl basin soils are as follows: soils of positive landforms are poor in organic matter, have a thin soil profile, and – with the exception of mountainous areas - contain much melkozem and mud particles; peat formation is typical of negative flatland and downwarp landforms. Soils are acidic, with an extremely low concentration of alkali (15-40%). Predominant in the Lake Udyl basin are peat-gleyey and peaty-gleyey soils and thin peatlands underlain by heavy lake-alluvial clays. These soils are formed in the conditions of permanent and excessive moistening. First upper floodplain terraces are dominated by brown floodplain soils, while *relki* are characterized by sod soils on sandy loams. The area falls within an insular permafrost zone typical for paludified intermountain basins (Аваряскин 1970b; Никонов 1970b; Никонов, 1974). Local edaphic factors (a heavy mechanic composition of underlying rocks, permafrost) make the substrate watertight and cause the formation of *mari* landscapes (sparse larch forests with peat moss litter; shallow, often hummocky, bog; horizontal or sloping stretches with numerous small knolls or ridges with swampy patches between).

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

The Lower Amur lowlands are called The Land of Lakes. Lakes vary in their origin, feeding regime, size, and shape. Udyl is a relict endogenous lake of tectonic origin that is a remnant of a larger water body. As a result of sinking, the lake basin became an accumulation area and lost antecedent features of its tectonic origin (Красноярский, Садырина 1963; Никонов 1970a). The lake is oblong in shape and stretched from southwest to northeast, being 52 km long and 5 to 10 km wide (up to 16 km in some places) (Хабаровский край 2001). The water surface area covers an area of 36500 ha, and the lake catchment occupies 12,400 km² (Кадастровые сведения... 2007). The Bezymyanny peninsula with the Zholmykh headland divides the lake's area into two nearly equal parts: one in the southwest and the other one in the northeast. The area between the headland and the Bitki River mouth is the narrowest portion of the lake (2.5 to 3 km) (Поярков и др. 2005). There are four islands on Lake Udyl, the largest being Tryokhgorny, with low mountains. The northeast shoreline is slightly indented. This shore is low and marshy, and composed of sands and clays. Occasional hills occur at a distance of 5-6 km from the shore. The southwest and southeast shores are precipitous. The lake's bottom grounds are as follows: clayey silt covers 43.3% of the area; silty sand 24.5%; sand 29%; and shingle 3.2% (Мищенко, Смиренский 1994). The lake is shallow, with a known maximal depth of 4.5 m. The stream channel is winding and hard to trace. The highest water level is observed in July/August, and the lowest in late March. Some changes of water level occur during surging and frequent storms brought about by northerly winds. Due to noticeable variations of water level, the littoral zone is not distinct, with its boundary shifting steadily. Water transparency varies within 1.0 to 1.5 m; however it declines during the period of plankton development (from late July to late autumn) and becomes a greenish color (Красноярский, Садырина 1963). Lake Udyl is a drainage lake, connected to the Amur River by the Ukhta channel that is 35 km long, 30-50 m wide and reaches a depth of 5-6 m during the flood period. Ten rivers and streams flow into the lake (Кадастровые сведения... 2007). The largest of these are the Bichi, Bitki, and Pilda. These rivers

originate in the mountains. Having reached the lowland, they keep their current speed for several kilometers and take features of lowland rivers thereafter. They are shallow even during summer monsoon rains, especially on numerous rapids (Прозоров 1974). The rivers annually bring large amounts of sediments into the lake, which deposit in river mouths forming a great number of small islands that are inundated during floods. The lower reaches of the rivers Bichi and Bitki are connected by channels and have developed one delta. Current speed of the rivers changes insignificantly, from 1.2 to 1.5 km/h. The rivers are from 15 to 100 m wide and 0.8 to 1.2 m deep. Their watercourses show frequent alternations of pools and rapids with log gorges. In the lower reaches, the rivers have low banks that are often flooded (Кадастровые сведения... 2007).

Hydrological regime of Lake Udyl largely depends on the Amur River and its tributaries. In the lower reaches of the Amur, like in other parts of the river, floods are relatively moderate in spring and high in summer. Water level in Lake Udyl rises during spring floods; variations of the level during spring and autumn floods may reach 2 m. Ice formation process differs in intensity in various portions of the lake, which delays the freeze-up. Lake Udyl freezes up in end October or early November. The ice usually breaks up in the first half of May. The waters warm up well in summer (Красноярский, Садырина 1963; Никонов, Шеенко 1974).

The lowland comprises a large number of smallish lakes located amidst *mari* complexes; some of them are connected to rivers by channels (Кадастровые сведения... 2007). Biogenic lakes are secondary by their origin. Their formation is associated with thermokarst processes. Most of the lakes are roundish or oblong in shape and form a complicated maze-like system. The lakes vary in size from a few square meters to some square kilometers. Their bottoms are formed by a peat layer that is on average 0.5 to 1 m deep. The lakes are fed by atmospheric precipitation and runoff from surrounding mires. The water level in the lakes fluctuates insignificantly (within 50 cm) during the vegetation period (Прозоров 1974).

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Hydrological values of the site require further study. The site supports groundwater level and accumulation of sediments. Peat accumulation processes lead to the formation of peat layers up to 5 m deep.

19. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • O • P • Q • R • Sp • Ss • Тр • Тs • U • Va •
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

- 1) Permanent freshwater lakes > 8 ha – O;
- 2) Permanent inland deltas – L;
- 3) Permanent rivers/streams/creeks – M;
- 4) Permanent freshwater marshes on inorganic soils – Тр;
- 5) Permanent non-forested peatlands – U;

- 6) Seasonal freshwater marshes on inorganic soils – Ts;
- 7) Permanent freshwater shrub-dominated swamps on inorganic soils – Tr;

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The site is located in the southern taiga subzone of northern light-conifer and dark-conifer forests (Колесников 1963). Positive landforms are represented by tree and shrub vegetation, while negative ones are shruba and meadow/marsh communities. Hills neighboring Lake Udyl are covered with larch forests, with many plant species belonging to East Siberian light-conifer floral subregion, where grass and shrub cover is accompanied by spruce and fir trees. Forest forming trees are the larch *Larix amurensis*, birches *Betula lanata* and *B. platyphylla*, aspen *Populus davidiana*, spruce *Picea ajanensis*, and fir-tree *Abies nephrolepis*. Groves of dwarf Siberian pine *Pinus pumila* are relatively rare; it is more common west of the Bichi River.

A considerable portion of the lake basin is covered with *mari* – a type of hypertrophic intrazonal mire communities that remind forest tundra in appearance (Нечаев 1970; Прозоров 1974). Large areas at the outskirts of the *mari* are occupied by *yernik*, which is brushes of birch *Betula ovalifolia* and *B. fruticosa*, willow *Salix brachypoda*, Labrador tea *Ledum palustre* and sphagna mires. Burnt out knaps are overgrown with lingberries *Rhodococcum vitis-idaea*. The vicinities of Lake Udyl are dominated by herbaceous vegetation. Meadows cover a part of upper floodplain terraces, while mires are often found in old oxbow lakes. Most of the lower floodplain is overgrown by reed-grass and sedge meadows that cover patches with negative landforms and hydrogenic conditions (Мищенко, Смиренский 1994; Сапаев 2005). At a distance of Lake Udyl, oligotrophic mires are the commonest. Reed-grass meadows predominated by *Calamagrostis langsfordii* are found in areas that undergo rapid and short-term inundation; these are the most common in the upper floodplain. Sedge meadows comprise hummock-forming species, such as *Carex schmidtii*, *C. appendiculata*, *C. meyerana*; rhizomatous sedges, such as *C. vesicata*, *C. lasiocarpa*, and *C. tuminensis*, with an admixture of *Calamagrostis langsfordii*, *Alisma orientale*, and *Cicuta virosa*. Meadows and marshes outside the floodplain are mainly widespread in the western portion of the site and along the northern shore of Lake Udyl.

The topography of the floodplain and lowland is even, with occasional residual outcrops of varying heights (Кадастровые сведения... 2007). They are covered with forest vegetation and form refuges for forest species of animals. Larch forest are the most widespread. They are usually sparse, with *Betula platyphylla* and *Populus davidiana*. Larch forests are the most common on old burnt areas. Of small-leaved forests, birch forests and birch-aspen forests predominate. They are usually 30 to 40 years old, with the canopy density of 0.5 to 0.9. Undergrowth and shrub story are usually sparse. The grass cover is variable with the predomination of reed-grass (Нечаев 1970; Кадастровые сведения... 2007).

Small water bodies are usually rich in organic matter, have an unfavorable chemical composition of water and poor aquatic vegetation. Some lakes that have an inflow of water from rivers develop relatively abundant aquatic vegetation and attract great numbers of breeding waterbirds (Поярков, Бабенко 1991; Поярков и др. 2005). The aquatic vegetation of Lake Udyl is represented by patches of submerged meadows of *Utricularia macrorhiza*, *Potamogeton* spp., carpets of *Nymphoides peltata*, *Trapa natans*, and *Sagittaria natans* located in bays. Flooded low shores of Lake Udyl are occupied by a fringe of hummock-forming sedges, sometimes with beds of *Acorus calamus*, reeds *Phragmites* spp. and other species of vascular emerged plants. All water bodies, including floodplain and large relict lakes, channels, and Lake Udyl differ by their importance for animals (Поярков и др. 2005).

Most large paludified relict lakes are low-productive, but they are hardly accessible for man and are therefore used by moulting waterbirds. Benthic biomass of the lake averages at 164.8 kg/ha; is it the greatest on clayey muds (246.9 kg/ha), smaller on sands (112 kg/ha), and the smallest on gravels (18.9 kg/ha) (Ловецкая, Микулич 1948). Shores of relict thermokarst lakes are paludified, with

usual ericoid dwarf shrubs, scarce stands of sedges, *Menyanthes trifoliata*, and *Iris setosa*. Fish species composition is poor and characteristic. Lake Udyl and the channels are productive water bodies; these are main habitats of fishes and feeding stations of fish eating animals. Floodplain lakes and smaller water bodies of the lowland with aquatic vegetation are used by wetland-related birds for breeding. Reed-grass and sedge-reed-grass meadows and marshes are common on the floodplain. They form narrow fringes along the shores of streams, bays, and some lakes. Elevated grounds are covered by larch forests and secondary aspen-birch forests.

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

The site has typical wetland vegetation of the Lower Amur region. Rare species found at the site are: *Glycyrrhiza pallidiflora*, *Cypripedium calceolus*, *Coleanthus subtilis*, and *Trapa natans*. It is necessary to continue and intensify botanic research.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

According to rough estimations, up to 26 rare bird species breed in the wetland. During summer, the site supports habitats of the Mandarin Duck *Aix galericulata* Baikal Teal *Anas formosa*, Osprey *Pandion haliaetus*, Eastern Curlew *Numenius madagascariensis*, Oriental Stork *Ciconia boyciana* and Black Stork *C. nigra*, Baer's Pochard *Aythya baeri*, Chinese Merganser *Mergus squamatus*, Hooded Crane *Grus monacha*, Eagle Owl *Bubo bubo*, Blakiston's Fish Owl *Ketupa blakistoni*. Important passage migrants are the Greater Spotted Eagle *Aquila clanga*, Golden Eagle *A. chrysaetos*, and Peregrine *Falco peregrinus*. The site is also used for aestivating and breeding by the following birds that are rare in the Khabarovsk Krai: the Bittern *Botaurus stellaris*, Schrenck's Bittern (*Ixobrychus eurythmus*), Purple Heron (*Ardea purpurea*), Whooper Swan (*Cygnus cygnus*), Eurasian Marsh Harrier (*Circus aeruginosus spilonotus*) (Смиренский, Мищенко 1980; Поряков и др. 2005). The Siberian Spruce Grouse *Falcapennis falcapennis* have been registered in the forests (Нечаев 1968). Colonial birds breeding at the site are: the Common Tern *Sterna hirundo* (up to 800 pairs), Common Gull *Larus canus* (several tens of pairs); Black-headed Gulls *Larus ridibundus* (up to 300 pairs).

Most important mammals are the following rare and game species: Asiatic black bear *Ursus thibetanus*, brown bear *Ursus arctos*, elk *Alces alces*, Reindeer *Rangifer tarandus*, Siberian roe deer *Capreolus pygargus*, sable *Martes zibellina*, American mink *Mustela vison*, stoat *M. erminea*, wolverine *Gulo gulo*, badger *Meles meles*, squirrel *Sciurus vulgaris*, mountain hare *Lepus timidus*. Rare fish species include *Aristichtys nobilis*, *Mylopharyngodon piceus*, *Silurus soldatovi*, and *Siniperca chuatsi*.

23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

The site is a part of traditional territories of indigenous peoples of the Far East (the Ulchs, Negidals, Evenks). A few ancient sites were discovered on elevated shores of Lake Udyl. The village of Kolchem at the headstream of the Ukhta channel is a national Ulchi settlement. Occupations of the local population are fishing (including sport fishing), hunting fur animals, ecological tourism.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide 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) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where 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:

24. Land tenure/ownership:

a) within the Ramsar site:

The site is owned by the state (State forest lands).

b) in the surrounding area:

25. Current land (including water) use:

a) within the Ramsar site:

Limitations to economic activities on the site have been introduced by the Statute of the Udyl State *Zakaznik* of the federal level and the Statute of the Ramsar wetland "Lake Udyl and the Mouths of the Bichi, Bitki, and Pilda Rivers".

b) in the surroundings/catchment:

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

a) within the Ramsar site:

Seasonal grass and forest fires; poaching; disturbance; fishing in spawning period and in winter; water quality of the rivers that flow into the lake; log felling.

b) in the surrounding area: needs further research.

27. Conservation measures taken:

The Statute of the Ramsar wetland was adopted by the Head of the Khabarovsk Krai Administration (Decree No. 6 from 4th January 1996).

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

The Udyl State *Zakaznik* of federal level (established in 1978, covers 100,400 ha) is located on the Ramsar wetland; the protection regime of the *Zakaznik* is extended over the whole Ramsar wetland area.

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?: No.

d) Describe any other current management practices:

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

It would be wise to consider introduction of the stricter regulations with regard to fishing and hunting near the *Zakaznik* boundaries, also to consider more accurate determination of the boundaries of the *Zakaznik* and of the Ramsar wetland. It is reasonable to consider the development of eco-tourism and eco-education.

29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Ornithological research were started in the 1970s and have continued, with some interruptions, to nowadays. Currently, various zoological and botanical studies can be carried out in the Udyl State *Zakaznik* Reserve.

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

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Printed mass media and TV are involved in awareness raising activities. Some education work have been carried out by the staff of the Udyl *Zakaznik*.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Nowadays tourism is not developed in the area; a few excursions are rafting along the Bichi and Pilda rivers.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

Government of the Khabarovsk Krai, Ministry of Natural Resources and Environment of the Russian Federation

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Ministry of Natural Resources and Environment of the Russian Federation, Federal Supervisory Natural Resources Management Service (Rosprirodnadzor).

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

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Please return to: **Ramsar Convention Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • e-mail: ramsar@ramsar.org