Information Sheet on Ramsar Wetlands (RIS)

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

Note 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. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Bureau. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

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

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2. Date this sheet was completed/updated: 1 February, 2003 (Updated: 19 March 2004)

3. Country: Mongolia

4. Name of the Ramsar site:

Lake Ganga and its surrounding wetlands.

5. Map of site included:

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

a) hard copy (required for inclusion of site in the Ramsar List): yes \Box -or- no

b) digital (electronic) format (optional): yes _____-or- no ___

6. Geographical coordinates (latitude/longitude): N45°15, E114°00

7. General location:

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

Lake Ganga is located in the eastern part of Mongolia in 12 km from Dariganga *soum* (county) of the Sukhbaatar *aimag* (province). And, Dariganga *soum* center is located in 696 km from the

capital city of Ulaanbaatar, 170 km from Baruun-Urt town, the Sukhbaatar aimag center. Total wetland area is 3,280 ha, from which the lake Ganga has 220 ha, and others are surrounding small lakes and wetlands.

8. Elevation: (average and/or max. & min.) 1294m a.s.l. 9. Area: (in hectares) 3,280 ha

10. Overview:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

This is one of small brackish water lakes in the eastern part of Mongolia within unique landscape that combines a group of small lakes, steppe and sand dune which locates in the strip between the south steppe zones of Mongolia and Gobi zones. The Lake and its surrounding wetlands are one of important breeding and resting grounds for a great variety of water birds.

11. Ramsar Criteria:

Circle or underline 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).

1 • **2** • **3** • **4** • 5 • **6** • 7 • 8

12. Justification for the application of each Criterion listed in 11. 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. *Ganga* Lake and its wetland are found in Mongolian steppe region and have unique ecosystems including Gobi, steppe, *Khangai* (hilly and wooded country with cool climate).

Criterion 2. The site supports the following globally threatened species: *vulnerable* White-naped Crane-Grus vipio, endangered Swan Goose –Anser cygnoides, vulnerable Great bustard-Otis tarda (IUCN Red Book), as well as Whooper Swan -Cygnus cygnus listed in Red Book of Mongolia and the very rare in Mongolia Little Curlew - Numenius minutus.

Besides, some fauna species are listed as endangered by the Mongolian Law on Wildlife (Environmental Laws of Mongolia, 1999), e.g. 2 species of Very Rare animals, 3 species of Rare animals; 4 species listed in the Red Book of Mongolia (1997); 4 species listed in the Red Book of Asia (2001); 1 species listed in the "CITES" Appendix I (Convention on International Trade in Endangered Species of wild fauna and flora); 16 species listed in the "CITES" Appendix I.(CITES Handbook,2001); Also, 2 species listed in the Appendix I and 14 species in Appendix I of the Convention on Migratory Species, respectively and totally 43 species of birds are found from the lake region. (See *Table1-2 Birds of Ganga Lake*)

Criterion 3. *Ganga* Lake has a unique characteristic with combined landscape apart from wetland conditions for coastal birds, migrating and water birds and biodiversity. The migrating birds through *Ganga* Lake are from *Amur* River of East Siberian-Chinese population of species. This group of lakes are the only place within the neighbouring region, where many vulnerable waterbirds stay during the migration and some rare waterfowl breed in summer.

Criterion 4. *Ganga* Lake is the only group of lakes that located in desert and steppe mid-zones of *Dariganga soum*. During the late autumn or sometimes until the end of November it becomes an area where migrating birds such as *Tadorna ferruginea, Tadorna tadorna stop* over. And often during the early spring, when it is too cold in *Siberia* and *Khentii* region, these birds stay

for a longer period.

Criterion 6.

The site supports the following species whose populations exceed 1% of the relevant biogeographic population (see Table 2): Great Crested Grebe (*Podiceps cristatus*) 250 (1%), Whooper Swan (*Cygnus cygnus*) 300 (1.5%), Ruddy Shelduck (*Tadorna ferruginea*) 500 (1%).

13. 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:

According to general bio-geographical classification Mongolia belongs to the Holarctical region (Voronov, A.G. 1963, 1985, Lame, 1966) and the lake basin is a region with flora and fauna influenced by Central Asian type.

Ganga lake region belongs to Euro-Asian steppe's bird region, Mongol Daguur's provinces (Bold A. 1990).

b) biogeographic regionalisation scheme (include reference citation):

In 1990 A.Bold, based on previous works, conducted bird classification of Mongolia, by which he determined 4 regions: 1) Central Asian Mountainous-desert, 2) Euro-Asian larch forest, 3) Euro-Asian steppe and 4) China-Manjurian bird regions. These 4 regions are subdivided into 12 provinces.

14. 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.

Ganga Lake and its group of lakes are formed in lowlands that were created by wind actions. Ganga Lake region is rich in extinct volcanoes of new stone era. So it classifies as a territory, where Dariganga-basalt stones are widely spread. Here, blue and gray colored flows of the third era are also widely spread.

Ganga, Kholboo, Zuun Kholboo, Tsagaan Lake, Erdene Lake, Sumtiin Lake, Khoshmogt Lake and Red dryed-up Lake, are salty lakes that fed by rain and springs and don't flow out. And these Lakes are settled in hollow and lowlands of steppe. A small lake named Khoshmogt located in the south north side of Kholboo sand dune, which is 2 km long and 800 m wide.

#	Names of the Lake	Altitude, <i>a.s.l</i> , m	Water surface area, sq.km	Length, km	Average width, km	Average depth, m	Max depth, m	Water volume, cub.km
1	Duut Lake	1227	0.5	1.1	0.4	0.7	1.8	0.0003
2	Ganga Lake	1394	2.2	2.1	1.0	1.5	2.0	0.0072
3	Sumtiin Lake	1260	2.7	2.2	1.2	0.7	1.5	0.0019
4	Erdene Lake	1260	2.0	2.1	0.9	0.4	1.6	0.008
5	Kholboo Lake	1320	0.07	0.5	0.13	0.3	*	0.000021
6	Zyyn Kholboo	1308	1.44	1.8	0.8	0.7	*	0.001
	L.							
7	Tsagaan Lake	1309	1.68	2.1	0.8	0.7	*	0.0011

Morphology of Ganga Lake and group of small lakes

8	Khoshmogt	1313	0.18	0.7	0.25	0.4	*	0.000072
	Lake							
9	Red dryed-up	1299	0.99	1.1	0.9	0.4	*	0.0004
	Lake							
10	Zegst Lake	1230	0.25	1.0	0.25	0.7	*	0.00018

Note: * - no particular measurement is taken

In July and August the Ganga Lake's average water temperature is 20.1°-22.2°C. The lake bottom is muddy. General mineralization is 2.58 g/l and classifies as carbonic type of lake.

15. Physical features of the catchment area:

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

Ganga Lake's region is a part of the famous place, known by Mongolians as Dariganga. Most of the area is in 1240-1530 m above the see level. In geological term, it surrounded by basalt stone formation of neo-gen. The basin of Ganga Lake is belongs to the Central Asian Internal basin and water network of this territory is consisted of carbonic lakes, seasonal lakes, a few springs, small streams that flow in and out of those lakes (Tsegmid. Sh. 1969,). Zegst and Duut Lakes are fed by small streams of Dagshin spring, located in the south of Darigaga soum center.

Climatic condition is similar to the Southern regions of Mongolian steppe zones. During the coldest month in January the air average temperature is $-20-24^\circ$, the warmest is in July 21-24°. The average wind speed intensifies in March till May, and between June and September becomes normal and then in October again intensifies. The average temperature in winter is -25.4° C and the average wind speed 8 m/s, which makes winter the hardest time.

16. Hydrological values:

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

This group of lakes belongs to the Internal Drainage Basin in Mongolia, which is covering mostly southern part of Mongolia. The wetland is therefore of fundamental importance for the ground water recharge of the area.

17. 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) $\mathbf{Q} \cdot \mathbf{R} \cdot \mathbf{Sp} \cdot \mathbf{Ss} \cdot$ Inland: Ν Tp Ts• U• M • $W \bullet Xf \bullet Xp \bullet Y \bullet Zg \bullet$ Vt• Human-made: 1 2 3 5 6 8 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.

 Q, R, S_P, S_S, Z_K

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

Steppe plant communities surround the wetland.

The Lake Ganga area, according to the geo-botanical regionalization of Mongolia, belongs to the Moltsog-Ongon Sand province. The Lake Ganga area vegetation may be classified into following types: arid steppe, meadow and desert steppe vegetation (Badrakh S.1982).

19. Noteworthy flora:

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. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

The dominant species of the arid steppe vegetation are grasses such as needle grass, couch grass, *Cleistogenes songorica*, *Agropyron cristatum* and forbs including sagebrush, *Cymbaria daurica*, Allium lineare, *Potentilla bifurca*, *Potentilla bifurca*, *Potentilla* acaulis, *Haplophyllum* dahuricum, and *Bergenia crassifolia*. The steppe vegetation basal cover is 40 to 50%; the average height ranges between 15 and 18 cm. The average beneficial summer yield is 780kg/ha. This type of vegetation is ideal for all kinds of livestock throughout the year.

The dominant species of the meadow vegetation are grasses such as couch grass, meadow-grass, bent-grass and others including *Carex duriuscula*, *Carex caespitosa*, *Carex coriophora*, cinquefoil, snakeweed, couch grass, and plantain. The meadow vegetation basal cover ranges from 60 to 70% on average. The average summer production is 500-600 kg/ha.

The vegetation of the cluster of scattered sand dunes belongs to the desert steppe vegetation type. The dominant species are grasses such as lyme-grass, couch grass, *Cleistogenes songorica*, köleria, and forbs including sagebrush, *Haplophyllum dahuricum*, milk vetch, *oxytropis*, and snakeweed. In addition to the solitary elms grown in the sand, sparse elm-willow patches frequently occur.

20. 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*.

The following species of animals live and spread around the *Ganga* Lake area: Daurian Pika-Ochotona daurica, Siberian marmot-Marmota sibirica, Daurian Groundsquirrel-Celtellus dauricus, Dwarf Hamster-Phodopus sungorus, Transbaikal Hamster-Cricetulus pseudolgriseus, Narrow-skulled Vole-Microtus gregalis, Brandt's Vole-Lasiopodomys brandtii, Mongolian Gerbil-Meriones unguiculatus, Corsac Fox-Vulpes corsac, Tolai Hare-Lepus tolai, Mongolian Gazelle-Procapra gutturosa, Long-eared Hedgehog-Erinaceus anritus, Red Fox-Vulpes vulpes, Eurasian Badger-Meles meles, Gray Wolf-Canis lupus etc (Dulamtseren,2001).

There are 111 species of birds inhabiting *the Ganga* Lakes. 12 bird species of them are settled and 99 species are migratory. 32 species of migrating birds lay eggs, 62 species of birds pass by, one species of birds happen to be encountered and 5 species of birds have indefinite residence (Piechoki R. 1968, Piechoki R., Bolod A.1972, Fomin B. E., Bold A. 1991, Tseveenmyadag N. 1998).

In the table 1 (Excel file: Table1-2 Birds of Ganga Lake.xls), shown names of the birds in Latin, and English and the international documents and acts, protecting these birds, classified by *Stepanyan* L.C. (1990).

The following 7 species of Amphibians and Reptiles live in Ganga Lake region: Radde's Toad-

Comment [U1]: Is it right?

Bufo raddei, Asiatic Grass Frog-*Rana chensinensis*, Toad-headed Agama-*Phrynocephalus versicolor*, Mongolian Racerunner-*Eremias argus*, Pallas' Coluber-*Elaphe dione*, Steppe Ribbon Snake-*Psammopis lineolatus*, Central Asian Viper Halysotter-*Akistrodon halys*. 60 Asiatic Grass Frog were registered during the estimated census of 1000 m, around the *Dagshin* River (Munkhbayar, Munkhbaatar et., 2001)

Spiny loach- *Cobitis taenia*, a small fish live in the Lake Ganga (Purevtseren,2002). In mid of 1980s re-introduced (by supervision of doctor A.Dulmaa) Gollden carp (*Carassius auritus*), ñíîì-Amur catfish(Parasilurus asotus), Europan carp (*Cyprinus carpio*) from Tuul River to the Ganga lake.

21. Social and 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 wetland has a high potential for eco-tourism, recreation, environmental education and scientific research. However, eco-tourism is not yet developed, due to poor condition of infrastructure.

22. Land tenure/ownership:

(a) within the Ramsar site:

(b) in the surrounding area:

The wetland and the surrounding areas are state owned.

23. Current land (including water) use:

(a) within the Ramsar site:

The general form of land use is nomadic and animal husbandry in the wetlands and surrounding areas. The herdsmen breed sheep, goat, horse, cattle and camel. There is no crop production or industry near by the lake. There is Dariganga *soum* center close to the wetlands in the north. The following table shows the total area of the *Soum* and Protected Area (by category of Monument) and their different type of land use forms.

		Total area (in	From total area:					
	Land	thousand	Pasture	Crop	Urban and	Water	Other	
No	ownersnip	na)		land	rural area	bodies		
INU								
1	Dariganga soum	481.4	458.8	0.02	0.034	2.44	20.11	
2	(Nature) Monuments	32.86	31.8	-	0.013	0.96	0.015	
	(This protected area was							
	established in 1993)							

Table 1. Land use forms

(b) in the surroundings/catchment:

The nearest settlement area to *Ganga* Lake is *Dariganga soum* center, which is located just outside of the wetland. *Dariganga soum* has 2828 population and almost 800 families. And 50% of population is adults. The *soum's* economy is based mainly on pasture oriented livestock (100,300).

Dariganga soum center has a secondary school for 400 pupils, an ambulatory with 15 beds and cultural center. And also have kindergarten complex building. Local people are able to listen to the radio and watch the National Television Program through satellite. In generally,

agricultural production of *Dariganga soum* is based on livestock alone. There are 20 ha of agricultural field at *soum* level. The *soum* has over 100 thousand livestock: sheep-52%, goats-23.6%, horses-11.2%, cattle-12.3%, camels-0.5%. And 78 livestock would fall to one family.

24. 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:

(b) in the surrounding area:

Due to climate change during the last years lake area is reducing, which is becoming main ecological concern in the area. In generally, many livestock graze around the lake, which are resulting in overgrazing of pasture land, as well as pollution the lake water by livestock (Durring the hot days many livestock stay in the lake water). These actions also increase sand movements. Change of soil occurs here, because of the degradation of plants and soil. And also birds seem to be staying away, because their home, nest and place are being destroyed by people and livestock.

25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Ganga Lake and its group lakes is state protected as (Natural) Monument Area since 1993 (Oyungerel B, 1993) in accordance to the Strictly Protected Area Law. Management Action Plan will be developed till 2005 on this site. The main purpose is to preserve *Ganga* Lake ecosystem and develop ecological tourism in *Ganga* Lake, and conserve a complex Monuments area of *Ganga* Lake and its ecological conditions.

26. Conservation measures proposed but not yet implemented:

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

It is necessary to protect marshy place of *Ganga* Lake in order to create a favorable condition for the reproduction or breeding the water birds, in particular to carry out bio-technical activity in this area, where the migrating birds gather in a huge number to nest and lay eggs. And also it is necessary to provide the ecological balance and prevent the extinct of biodiversity by saving the eco-system and developing eco-tourism as well as wide protection of the Monument Area of *Ganga* Lake. Scientists made a plan to expand the area by 134 sq.km.

27. Current scientific research and facilities:

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

Within the framework of UN's biodiversity project such research works on lake, fish and birds have been in *Ganga* Lake Monument Area. But these research works are not systematical and very rare. Scientific information is based on the research work of natural resources and condition that carried out in East Mongolian region. The East Mongolian biodiversity project implementation creates a better opportunity for expansion of biodiversity studies and new information.

We can mention a soil and geo-botanic studies (M1: 100000) on land management of *Dariganga soum* territory and the Catalogue of Mongolian Lakes as research works on natural resources relevant to *Ganga* Lake territory. During the soil studies in 1982, the Monument Area's soil was studied at different soil level and the expansion and location were surveyed and also defined the chemical, physic and morphology forms. The Catalogue of Mongolia Lakes gives a brief definition on the origin of Lakes by specifying the morphology forms of some lakes such as *Ganga* and *Duut* Lakes and other lakes around this territory.

Constant monitoring work on water regulation, quality and biodiversity of *Ganga* and *Duut* Lakes was carried out from 1982 through 1992 and then stopped. From 1997 Institute of Meteorology and Hydrology (Davaa G., Sh.Oyunbaatar, Sh.Enkhtsetseg, 2001) has started a monitoring work on water regime, quality and biodiversity of *Ganga* and *Duut* Lake by establishing permanent water study posts around these area. And also there are some articles and reports in the domestic newspapers about the public concerns on nature and ecology degradation of *Ganga* Lake. Apart from the monitoring work of the Institute, a permanent and continues monitoring work on nature and ecology has not been done in the Monument Area.

28. Current conservation education:

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

There are no educational facilities, e.g. visiting centers, observation hides etc.

29. Current recreation and tourism:

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

Tourists walk through the Golden-Ovoo--Ganga Lake—Taliin Agui—Shiliin Bogd route and come to the coast of Lake for recreation. "Dariganga" summer recreation home for children and "Dagshin" rest home situated next to Zegst Lake. Villages of Dariganga soum center and oblation objects of ancient times such as Golden-Ovoo and Duut Lake are situated outside but closer to the Monument area. So they tend to pressure the nature and ecology. Ganga Lake area, especially Strictly Protected Area is not included for organized tourism activities. Tough domestic tourists and interested voyager travel through Shiliin Bogd-Taliin Agui-Golden-Ovoo-Ganga Lake route and spend few hours, while climbing up the Golden-Ovoo. Every year at the end of September and at the start of October when it is a bit colder there is a Swan Assembly of migrating birds, which is very interesting.

30. Jurisdiction:

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

Territorial: Dariganga soum of Sukhbaatar aimag

Functional: The Soum's Governor Office in Dariganga soum of Sukhbaatar aimag. Also: Government of Sukhbaatar aimag, Baruun-Urt town.

All activities in Soum's territory and also in Monument Area are governed by the local authorities within the Mongolian Environmental Law, Law on Strictly Protected Area, and State Administration Law of Mongolia.

31. 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.

Local management of the wetland and its surrounding areas falls to the Ministry for Nature and Environment Protected Areas Administration of Eastern Mongolia. Director Zulzagyn Tserenbaltav Phone: 976 01582 23373 (o) 976 01582 23249 (h) Fax: 976 01582 21018 E-mail: esbp@mongol.net

Soum's Governor Office in Dariganga soum of Sukhbaatar aimag. B.Dugarsuren Phone: 976 01512 26514

32. Bibliographical references:

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

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- 28. Wetlands International 2002 . Waterfowl Population Estimates-Third Edition. Wetlands International Global SeriesNo12 Wageningen, The Netherlands

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