WETLANDS OF INTERNATIONAL IMPORTANCE

UVS LAKE

2022
What is the RAMSAR Convention?

The Convention on the Wetlands of International Importance especially as Waterfowl habitat was first adopted on a meeting held in the Iranian city of Ramsar on February 2, 1971. Governments and non-governmental organizations from countries around the world negotiated and adopted the global treaty concerned about increasing loss and degradation of the wetland habitat for migratory water birds, one of the most vulnerable and irreparable ecosystems on the planet, due to a number of factors such as global warming, climate change and improper human activities and recognized the wetland ecosystem must be protected. The Convention is so named for the city Ramsar in Iran, where the treaty came into force. As of 2021, there were 172 Contracting Parties (member countries) and a total of 2,431 wetlands covering 254,620,630 hectares of internationally importance in List in the Appendix to the Ramsar Convention.

What is a purpose of the Ramsar Convention?

A purpose of the Convention is to provide a framework for national and international cooperation for conservation and wise use of wetlands and their resources. Its activities are regulated by inter-governmental treaties and agreements. A primary reason for global signing the international Convention is to recognize that water fowl in their seasonal migrations do transcend frontiers and so should be regarded as an international resource while considering that the wetlands, their key habitat, must be protected globally through the Convention.

What is a wetland?

Wetlands are basically transition zones between terrestrial and water environments, where a specific ecosystem is created, supported, and interacted by water flows, soil nutrient cycles, and solar energy.

The Ramsar Convention uses a broad definition of the wetlands which include all lakes, rivers, streams, and ponds and their floodplains, wet grasslands, peatland, oasis, estuaries, deltas, mineral water bodies, tidal flats, mangroves, and other coastline areas, coral reefs, and all human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans. The definition under the Convention encompasses a variety of the wetlands and encourages preservation, protection, and wise (balanced) use of the globally significant biodiversity thereof through enhanced wetland conservation framework.

How are areas designated and listed as the Ramsar sites?

Countries in the world signed the Convention do commit to designate and nominate suitable wetlands within their territories for the List of Wetlands of International Importance (“Ramsar List”) based on the following nine criteria:

A Sites containing representative, rare or unique wetland types

Criterion 1 Sites contain representative, rare or unique example of a natural or near-natural wetland type found within the appropriate biographic region;
Criterions based on species and ecological communities

Criterion 2 Sites support vulnerable, endangered, or critically endangered species or threatened ecological communities

Criterion 3 Sites support populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region

Criterion 4 Sites support plant and/or animal species at a critical stage in their life cycles, or provide refuge during adverse conditions

Specific criteria based on water birds:

Criterion 5 Sites regularly support 20,000 or more individuals of a species or sub-species of water birds

Criterion 6 Sites regularly support 1% or more of the individuals in a population of one species or subspecies of water birds

Specific criteria based on fish

Criterion 7 Sites support a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity

Criterion 8 Sites are an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend

Specific criteria based on other taxa

Criterion 9 Sites regularly support 1% or more of the individuals in a population of one species or subspecies of wetland-dependent non-avian animal species.

Why do wetlands need to be protected?

There are numerous types of wetlands existing worldwide. Each type of wetland provides habitat for thousands of species of terrestrial and aquatic plants and animals. Wetlands are valuable for flood protection, water quality improvement, and riparian zone and shoreline erosion control. Also, wetlands have recreational, aesthetical, and cultural values.
MONGOLIA AND THE RAMSAR CONVENTION

Mongolia officially signed the Convention on Wetlands of International Importance especially as Waterfowl habitat on April 8, 1998 and became the 104th Contracting Party. The Contracting Parties to the Convention act as its policy making unit represented by the Governments of the countries signed. Thus, the officially recognized body representing Mongolia at the Ramsar Convention is the Ministry of Environment and Tourism.

As of 2021, Mongolia has included a total of 1,439,530 ha of its 11 designated areas in the Ramsar Convention Appendix List. Three sites out of 11 Ramsar sites in Mongolia are still outside the national PA network (Table 1) while the rest are included in the national PA system and conservation activities are undertaken in accordance with their protection status in the PA network.

As the Contracting Party to the Convention, Mongolia commits to implement the wetlands conservation management, submit its performance progress reports, and regularly take part in implementation of the Convention activities under its commitment to the Convention.

Map 1. Sites in Mongolia designated in the Ramsar Convention Appendix List
UVS LAKE AND ITS WETLANDS

Name: Uvs Lake and its Wetlands
Ramsar site code: 1379
Area: 585,000 ha
Location: 50°20'N 092°45'E
Altitude: 759 m

IMPACT OF WETLANDS IN WESTERN MONGOLIA

A primary role wetlands play is that they act as an ecological regulator for maintaining water regimes and wildlife (flora and fauna) habitats. Mountainous Altay area or Western Mongolia is a home to 13.3% of total lakes in the country. Lakes in the region are relatively large in their covering areas and most of them are of modern glaciation, glaciers, and tectonic origins. Geographically, the region lies along Central Asian-Indian, East African-West Asian, East Asian-Australian-Asian flyways provided for a major strategically important stopover and resting land for numerous migratory bird species. As such, lakes and their wetlands in the region have international importance. One of the major wetlands in Western Mongolia is Uvs Lake and its wetlands.
LOCATION

Lake Uvs and its wetlands lie at 30 km in the east from Ulaangom, the centre of Uvs province, and at 1,592 km from Ulaanbaatar, the Capital City of Mongolia. Basin of Uvs Lake borders with Republic of Tuva in the Russian Federation, the heart of Asia. Uvs Lake is at 759 m a.s.l. which is the lowest among Great Lakes' Depression in the region. According to the administrative unit divisions, the Lake Uvs and its wetlands belong to a territory of Uvs province. A total covering area of Uvs Lake and its wetlands is 585,000 ha including 335,000 ha of Uvs Lake's surface. Surrounding areas (with radius of 10 to 60 km) of the Lake include territories of seven soums (sub-provinces) of Uvs aimag (province).

Figure 2. Uvs Lake and its wetlands

JUSTIFICATION FOR LISTING AS THE RAMSAR CONVENTION SITE

Uvs Lake and its wetlands are characterized by a unique natural formation connecting desert steppe and high mountain ecosystems. Dense tall reed and cane stands along the Lake and tributary streams provide favourable stopover, breeding, and resting grounds for 128 water bird species including the globally threatened species such as white-headed duck (Oxyura leucocephala) and swan goose (Anser cygnoides) during their migrations. In addition, the Lake and its wetlands are distributed by the globally threatened wild animal and plant species including mammal and the fish species endemic to Western Mongolia. Accordingly, Uvs Lake and its wetlands were officially designated as a site of the Ramsar Convention on March 22, 2004 based on I, II, III, V, VI, and VII out of nine criteria of Ramsar Convention for designation of sites of international importance.

Figure 2. Uvs Lake and its wetlands

Country border
Boundary of Ramsar site
Boundary of Uvs nur (Lake) strictly protected area
Boundary of Tesiin gol nature reserve
INCLUSION OF THE WETLANDS IN THE NATIONAL PROTECTED AREA NETWORK

To protect the specific natural formation, namely the desert and semi-desert landscape surrounding the Lake and its wetlands that are a home to the biodiversity including diverse species of avian species occurring in the dry region, a total of 424,298 ha of Lake Uvs and its vicinity were included with a category of Special Protected Area (SPA) in the national Protected Area network according to the Parliament Resolution No. 83 dated November 23, 1993. To date, its daily conservation management of the Protected Area is responsible by Administration of Uvs Nuur Basin State Protected Area. Uvs Lake and its wetlands are entirely included in the national PA network.

HABITAT CHARACTERISTICS OF UVS LAKE AND ITS WETLANDS

Uvs Lake is the lowest point within Great Lakes’ Depression located in enclosed Central Asian Basin. A total surface of Uvs Lake is 335,000 ha stretched for 84 km from the west to the east and 79 km from the north to the south and having up to 22 m depths. In surrounding areas of Uvs Lake, there are 44 small lakes and 38 different sized streams such as Tes, Nariin, Turgen, Kharkhiraa, Khundlun, Sagil, Borshoo, Khandgait, and Torkhirog inflowing into the Lake. A total water catchment area of the Lake is 7,110,000 ha. Uvs Lake is the lake with over-saturation of different types of mineral salts because of its location on a stone salt deposit at the depression’s bottom.

Buurug Del sand entirely covering valleys of Nariin and Bazarun Turuun Rivers inflowing into Uvs Lake in the east and south-east forms a sand dune next to the Lake. Shorelines of the Lake are often curved and bended having created bays while delta or lower parts of tributary streams are swampy and distributed by dense deciduous and mixed forest and cane stands. Besides, areas surrounding the delta and lower parts of tributary streams are broadly distributed by larch, spruce, pine, birch, aspen, poplar, cane stands supporting bushes of wild berries such as Sea-buckthorn and liquorice. Rest of the areas surrounding the Lake are riparian areas abundant by stony (gravely) and swampy steppe-like land covers.
There are 83 mammalian species recorded within the Lake and its wetlands. Many of them are globally and regionally threatened. For instance, the species include Siberian roe deer (*Capreolus pygargus*), wild boar (*Sus scrofa nigripes*), beaver (*Castor fiber*), and marbled polecats (*Vormela peregugna*), Eurasian otter (*lutra lutra*), Eurasian badger (*Meles meles*), European mink (*Mustela lutreola*), and Siberian weasel (*Mustela sibirica*), from the mustelodae and muskrat (*Ondatra zibethica*) from Cricetidae recorded within the vicinity of Uvs Lake. The species such as snow leopard (*Uncia uncia*), sable (*Martes zibellina*), marbled polecats (*Vormela peregugna*), beaver (*Castor fiber*), wild boar (*Sus scrofa nigripes*), Altay Argali sheep (*Ovis ammon*), and Siberian ibex (*Capra sibirica*) are listed in the Red Book of Mongolia. The vicinity of Uvs Lake is the northernmost habitat for the species such as snow leopard, Siberian roe deer, Altay Argali sheep, and Altay (Siberian) marmot in the country.
Uvs Lake and its wetlands are distributed by 367 species of 185 genera, of 56 families of 22 orders that comprise about 72 per cent of the total bird species recorded throughout Mongolia. According to their occurrence within Uvs Lake and its wetlands, there are 191 nesting migrant species, 75 resident species, 78 transit migrant species, 17 vagrant species, and 16 wintering species. Moreover, the species recorded include nine very rare species and 21 rare species listed in the Mongolian Red Book; four very rare and nine rare species according to the Law of Mongolia on Fauna; eight and 38 species listed in CITES Appendices 1 and 2 respectively; and 18 and 41 species of birds listed in the CMS Appendices I and II, respectively.

Also, there are many wetland species such as Dalmation pelican (*Pelecanus crispus*), lesser white-fronted goose (*Anser erythropus*), relict gull (*Larus relictus*), swan goose (*Anser cygnoides*), white-headed duck (*Oxyura leucocephala*), Pallas's gull (*Lchthyaetus ichthyaetus*), bar-headed goose (*Anser indicus*), white-tailed eagle (*Haliaeetus albicilla*), and black stork (*Ciconia nigra*) occurring within Uvs Lake.
FISH, AMPHIBIAN, AND REPTILE

There are seven species such as multi-cellated racerunner (*Eremias multiocellata*), Gobi racerunner (*Eremias przewalskii*), Siberian salamander (*Hynobius keyserlingi*), Pallas’ coluber (*Elapha dione Pallas*), and toad-headed agama (*Phrynocephalus versicolor Strauch*) recorded in vicinities of Uvs Lake and its wetlands.

From fish, there are the species such as Mongolian grayling (*Thymallus brevirostris*), narrow-headed Altay osman (*Oreoleuciscus angusticephalus*), and dwarf Altay osman (*Oreoleuciscus humilis*) recorded in Uvs Lake and in lower parts of Tes and Torkhilog tributaries.
Geographically, Uvs Lake and its wetlands lie at a conjunction of Siberian boreal forest, Altay highland, and Mongolian steppe. Thus, vicinities of the Lake and its wetlands are specific with different types of geographic and ecosystem zones such as sand dune, semi-desert and desert, Salsola and Caragana steppe, floodplain, meadow, saline swamp, deciduous boreal forest, mountain meadow, and tundra and richness of biodiversity.

There are 1,263 plant species recorded in the vicinity of Uvs Lake. Amongst, there are 19 plant species endemic to Mongolia and Tuva; 51 relict species, and 94 rare plant species. From the endemic species, the species such as *Juncus salsuginosus* and *Zygophyllum pterocarpum* are grown only within Uvs Lake vicinity. From the woody plants recorded, the species such as *Picea obovata*, *Larix sibirica*, *Populus tremula*, *Populus laurifolia*, *Hippophae rhamnoides*, *Larix gmelinii*, and *Pinus sibirica* are abundant. There are 49 phytoplankton species, 83 algae species, 45 aquatic macro phytic species, 66 zoo-plankton species, and 118 zoobenthic species recorded in Uvs Lake. Very rare species such as *Aspicilia esculenta* and *Typho minima* grow in a narrow strip area in the north-east of Uvs Lake.
CULTURE AND TRADITION

Uvs Nuur Basin is rich in historical and cultural heritages. Territories of Tes, Davs, Naranbulag, Ulaangom, Malchin, and Tarialan soums (sub-provinces) are a home to multi-ethnic groups. Local people in these areas uphold a culture of nomadic animal husbandry. As part of this culture, conservation and sustainable use of natural resources are strongly encouraged. Tsagaan Ergiin Ovoo (*a stockpile of stones on a mountain pass*) in the east of Uvs Lake has been locally worshipped for 400 years. The long tradition to annually worship the *Ovoo* has been well kept and applied by locals up to the present time. Moreover, there are many other small *Ovoos* locally worshipped by diverse ethnic groups residing in the vicinity of Uvs Lake.

There are two human stone monuments in Bor Nurgan area in a territory of Davst sub-province. The human stones are unique that they are made of the material like sandy stones of red colour and stand at 20 cm from each other faced to the south east. One of them is 165 cm high, 31 cm wide, and 13 cm thick. Images on the stone monuments show a human standing with crossed legs, putting arms on its chest part but nothing is held in hands, and having convex face and breast and belly buttons. These body parts are clearly engraved, but types of their clothing are unclear to see. According to the locals, the human stones are called as “ovoo for children” because they do pray and make incense-offerings at the stones when the diseases such as flu are spread among young children.

The park administration built a monument on the shore of Uvs Lake in 2006 in relation to the stone site listed as the World Heritage site.
In 1997, Mongolia and Russia established their Protected Areas within Uvs Lake and had them included in the World Network for Man and Biosphere Reserves, UNESCO with names “Biosphere Reserve of Uvs Nuur” and “Uvsunurskaya Kotlovina of Biosphere Reserve” respectively. Uvs Nuur Biosphere Reserves aim to protect and preserve the diverse ecosystems representing major biomes of Eastern Eurasia and containing the globally and regionally threatened wildlife such as snow leopard, Argali sheep, Siberian ibex, and waterfowls, and endemic plants through systematic integrated conservation approach and upgraded conservation status.

The most recently or in 24 years from the first designation, the International Coordinating Council of the UNESCO Man and Biosphere Reserve Programme approved a trans-boundary Biosphere Reserve of Uvs Nuur Depression with its Decision dated September 15, 2021.

The List of 200 Priority Eco-Regions for Conservation includes Altay Sayan Eco-Region which contains Uvs Lake and its wetlands. A priority conservation goal of Altay Sayan Eco-Region is to protect and preserve exceptionally contrasted and specific natural formations such as high mountains, vast steppe, Gobi Desert, lakes, and wetlands co-existing in the region. Altay Sayan Eco-Region comprises territories of Mongolia, Russian Federation Kazakhstan, and Republic of China covered a total of 862,000 km²: 29% in Mongolia, 62% in Russia, 5% in Kazakhstan, and 4% in China.

Uvs Lake and its vicinity is a home to diverse species of bird, small mammal, and the threatened species such as snow leopard, Argali sheep, and Siberian ibex so that it is a globally significant natural outstanding heritage to protect and preserve the regional biodiversity. Upon consideration of these values, the World Heritage Committee approved the trans-boundary Uvs Nuur Basin as a Natural Heritage on its 27th session based on the proposals submitted by Mongolia and the Russian Federation. The established World Heritage covers a total of 87,830 ha including 87,830 ha in the Russian Federation and 810,234 ha in Mongolia.
In 2009, a total of 502,462 ha of Uvs Lake and its vicinity were designated as a part of important bird areas (IBAs) in Mongolia based on the occurrence of the bird species such as Dalmation pelican (Pelecanus crispus) (NT), white-headed duck (Oxyura leucocephala) (EN), swan goose (Anser cygnoides) (VU), sea eagle (Haliaeetus leucoryphus) (EN), greater spotted eagle (Aquila clanga) (VU), imperial eagle (Aquila heliaca) (VU), great bustard (Otis tarda) (VU), and relict gull (Larus relictus) (VU) assessed by the IUCN Red List criteria and distribution of plant and fish species endemic to Eurasia and Western Mongolia.

Trans-boundary Uvs Nuur Depression Strictly Protected Area was established by the Resolution dated May 31, 2011 of inter-governmental session of Mongolia and Russian Federation. Currently, Administration for Uvs Nuur Basin State Protected Area from Mongolia and Administration for Ubsunurskaya Kotovlina State Biosphere from the Russian Federation are taking a leading role to propose international trans-boundary Protected Area, which is pertinent Mongolia, Russia, and China.

Uvs Lake and its wetlands provide stopover and breeding grounds to more than 29,000 waterfowl individuals including the globally threatened species such as swan goose (Anser cygnoides), relict gull (Larus relictus), falcated teal (Anas falcata), and white-headed duck (Oxyura leucocephala) those do breed therein. Furthermore, 6,822 individuals (5.6%) of great cormorant (Phalacrocorax carbo) and 9,111 individuals (0.6%) of Mongolian gull (5.6%) are counted at the Lake and its wetlands during their spring and autumn migrations. Thus, the Lake and its wetlands were included in East Asian-Australian Flyway Network on July 13, 2016.
THREAT

It is one of ideal destinations for nature-based tourism development. However, visitors and tourists often pollute the Lake water and riparian zone with their garbage and trash. There are some small lakes existing around the Lake. These lakes are favourable nesting and feeding grounds for avian species; however, a loss or disappearance of these small lakes has been threatened due to increasing dryness in the region. At the same time, overgrazing is likely to be a concern around the lakes according to the recent assessments, this threat has been assessed as relatively lower amongst other threats to the region.

CONSERVATION MANAGEMENT AND COOPERATION

Uvs Lake and its wetlands belong to Uvs Nuur Basin Special Protected Area and their daily conservation management lies with Administration for Uvs Nuur Basin State Protected Area. The park administration is also responsible for Uvs Nuur, Turgen Mountain, Tsagaan Shuvuut Mountain Strictly Protected Areas; Achit Lake-Devel Aral and Tes River Nature Reserves, and Mungut Tsahir Natural Monument.

Under its cooperation agreements, the park administration collaborates with the local stakeholders including governments, the Governor’s Offices, environmental and specialized inspectorate offices, forestry and police (e-police) divisions and international organizations. According to the management plan for Uvs Lake, the white-headed duck (Oxyura leucocephala), wild boar (Sus scrofa), reed stands, Uvs Lake and forest stands in its vicinity are selected as valuable representative and target biodiversity for conservation.

A joint Mongolian-Russian commission for trans-boundary Uvs Nuur Depression annually convenes with respect to designing, approval, and implementation of joint action plans of park administrations in neighbouring areas, joint Commission programme and protocols as well as a joint management plan for trans-boundary PA (2018-2022). Under
these action oriented documents, the park administrations carry out a number of activities and events for local residents, school (eco-club) children and youth, and communities dealing with environmental conservation. In addition, the park administrations organize the research, monitoring, and awareness activities such as bi-annual international symposium “Central Asian Ecosystem: Research, Conservation, and Sustainable Use”, annual meetings of joint Mongolian-Russian commission for trans-boundary Uvs Nuur Depression, and annual international festival-study tour “Outstanding World of Uvs Nuur Depression” “Snow Leopard Day” and “Bird Day of Uvs Lake” for local school children, residents, and researchers. Moreover, experience sharing (meetings, exchange of researchers, and technical trainings) and joint research and monitoring on trans-boundary PA are organized for the park administrations’ researchers and rangers.

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