PROPOSAL FOR INCLUSION OF SPECIES ON THE APPENDICES OF THE CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS

A. PROPOSAL: Inclusion of the Saiga Antelope (*Saiga tatarica*) on Appendix II

B. PROPONENT: Government of Mongolia

C. SUPPORTING STATEMENT:

1. Taxon

1.1	**Classis**	Mammalia
1.2	**Ordo**	Artiodactyla
1.3	**Familia**	Bovidae
1.4	**Genus or Species**	*Saiga tatarica* (Linnaeus, 1766)
1.5	**Common name(s)**	English: Saiga French: Saïga Spanish: Antílope saiga; Saiga Italian: Antilope delle steppe Russian: Saigak

2. Biological data

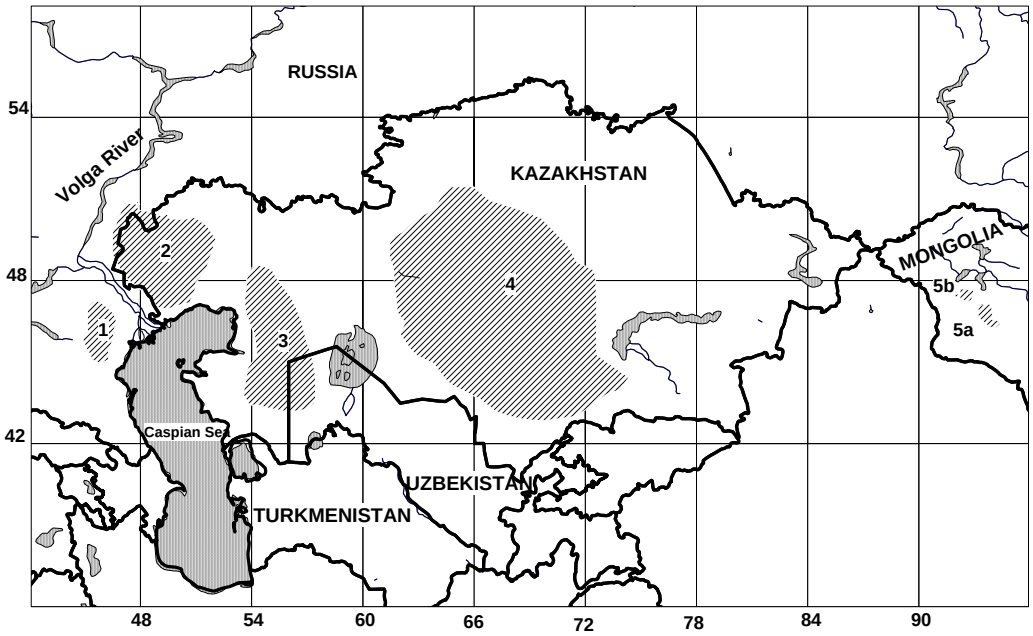
2.1. Distribution

Currently there are four isolated populations of the subspecies *Saiga tatarica tatarica*, three in Kazakhstan, the Ural, Ust'-Urt and Betpak-dala, and one in Kalmykia, Russia; there are also two small populations of *Saiga t. mongolica* in Mongolia. Up to the early sixties there was a population of *Saiga tatarica tatarica* also in Mongolia.

In the Quaternary Period the Saiga antelope occupied an area far more extensive than its present range. The animal's bones have been found in Ice Age deposits scattered from the British Isles to Alaska and the Northwest Territories of Canada, all the way to the New Siberian Islands in the north and the Caucasus region in the south (Sokolov & Zhirnov, 1998). Up through the 17th and 18th centuries A.D., the animal still had a broad range in Europe, reaching as far as the Carpathian foothills in the west and the environs of Kiev in the north (Sokolov & Zhirnov, 1998). By the late 19th century, however, the blitzkrieg of agricultural development nearly wiped it from the face of the continent, leaving but a few sparse flocks on the plains along the northwestern shore of the Caspian Sea. In the middle of the 19th century, although already gone from the plains west of the Don, the species was still quite plentiful in the Kalmyk steppes.

Figure 1. Current range of the Saiga antelope, showing the approximate range area of each of the populations, together with country borders and latitude and longitude. 1. Kalmykia, 2. Ural, 3. Ustiurt, 4. Betpak-dala (all *Saiga tatarica tatarica*), 5 - Mongolia (*Saiga tatarica*

mongolica, 5a - Shargyn Gobi population, 5b - Mankhan population) (From Milner-Gulland *et al*., 2001).



2.2 Population

The total population has shown an observed decline of over 80 % over the last 10 years, and decline is continuing. Severely skewed sex ration are leading to reproductive collapse. It is classified as Critically Endangered using IUCN red list criteria (CR A2a, IUCN 2004).

The global population is now c.50,000, down from 1,250,000 in the mid-1970s. Most are found in Kazakhstan (decline from 1,000,000 to 30,000).

Between 1980 and 1994, the total numbers of Saiga antelope fluctuated around 670,000 - 1,251,000 animals. The Kalmykian population ranged between 142,000 to 430,000; the Ural population between 40,000 to 298,000; the Ust'-Urt population between 140,000 to 265,000; the Betpak-Dala between 250,000 to 510,000 and the Mongolian population between 300 to 1600 individuals. All four populations of *S. t. tatarica* show dramatic population declines from 1998 onwards. Annual decline rate for the total *S.t. tatarica* population in 1998-1999 was about 35 % (63 % for Kalmykia, 19% for the Ural, 19 % for the Ust'-Urt and 47 % for the Betpak-dala population). In 1999-2000 the rate of decline increased to 56 % (53%, 79%, 42%, 77% and 56 % respectively). The Betpak-dala population has suffered particularly heavy declines, with the current population numbers barely reaching 4% of the 1980-90 population estimates. The Ural and Kalmykia populations have similar status, with populations currently at 15-20% of their 1980s level, with steep declines between 1998 and 2001. For example, an aerial survey in May 2001 yielded an estimate of only 17,800 Saigas in Kalmykia, indicating that the population is continuing to decline. The Ust'-Urt population is also declining rapidly.

The Mongolian sub-species is in a perilous state because of its small population size, but there is no clear evidence for a steady decline. Number fluctuation of the Mongolian Saiga is clearly observable with comparison of previous survey reports. It is determined that there were about 700 Saigas in Shargiin Gobi in 1976 after reviewing all survey reports done since 1960s. After this, the Saiga numbers were 300 in 1978 (Sokolov *et al*.), 600-750 in 1981 (Lushekina *et al*., 1997), 750-1,600 in the period of 1982-1989 on the basis of annual counting (Dulamtseren, 1992) and 1,400 by 1993 counting (Dulamtseren and Tulgat, 1993). Mongolian-German joint researchers estimated over 1,600 Saigas in Shargiin Gobi in 1994, but in August 1997, a Mongolian-Russian biological expedition reported that the population had decreased in to 860 individuals. The Khuisiin Gobi population was later estimated by Amgalan (1994) and by Lushekina *et al.* (1997) at around 200 Saiga. The Mankhan population had over 130 Saiga in 1982. But due to harsh winter in 1983-1984 less than 30 survived, but it went up to 70 individuals in 1993. It again decreased to 44-48 in 1998 (Badrakh 1993, Shar 1998).

According to the census in December 2000, the number of Mongolian Saiga in Shargiin Gobi, Khuisiin Gobi, Durgun steppe, in an area of about 13,375 km^2, has increased up to 5200 individuals. The number had almost doubled from the estimation made in 1998. The population assessment carried out in winter of 2003 suggests that approximately 750 Mongolian Saigas remain in Mongolia (Amgalan 2004). The survey carried out in March 2005 showed that about 1050 individuals inhabit the Shargiin Gobi and Khuisiin Gobi. The last survey carried out in January 2008 showed that about 3200 saiga inhabit Mongolia (Lhagvasuren et al., 2008) and summer calf study held in May-June, 2008 showed that the birth rate is high and percentage of twins is about 70% comparing to 25% in late 1980s.

2.3 Habitat

The main habitats of the Saiga antelope are the plains in dry steppe and semi-desert natural zones of Kazakhstan and Kalmykia. It avoids any areas with dense bushes and thickets along water bodies, but could use them as a shelter during severe winters particularly in days with strong wind. During the dry season Saiga can visit irrigated crop fields for feeding.

2.4 Migrations

Both intra-seasonal and inter-seasonal migrations are observed. Inter-seasonal migrations are somewhat regular and take place in spring and autumn, usually with a north-south direction. The length of those migrations depends on the weather and foraging conditions of the year. Normally, the length of these inter-seasonal migrations is about 150 to 300 km for the Kalmykian population, in the order of 600 to1200 km for Betpak-dala population, of 300 to 600 km for the Ust'-Urt population, and from 200 to 300 km for the Ural population. During such movements, Saiga can reach the northern and the north-western part of Turkmenistan.

3. Threat data

3.1 Direct threat

All the Saiga populations have suffered from heavy poaching, habitat degradation and disturbance. Droughts or severe winters, diseases and predation pressure from wolves can also act as factors of threat of Saiga populations (Bekenov *et al*., 1998), however these are not

major causes of declines. There is no evidence of mass mortality from disease in any population. Kalmykia has had to suffer from serious drought in the last few years, which may have been a contributing factor. However, climate conditions in Kazakhstan have been favourable for Saiga since 1994. The most likely explanation of the dramatic recent declines is severe poaching pressure. As only males bear horns, poaching has led to a dramatic drop in the proportion of adult males in the population.

3.2. Habitat destruction

Extensive and increasing occupation by livestock, overgrazing and consequent destruction of preferred habitats, competition for water sources, construction of roads and canals, or more generally habitat destruction is an important cause of decline of the Saiga. Before 1991, livestock numbers, mostly sheep, increased enormously, and the rangelands, particularly in Kalmykia, formerly grazed only in winter, were used intensively throughout the year. Saigas are being pushed off into less preferred and unsuitable habitats. Large areas of rangeland have been lost to cultivation and short-term irrigation projects. In many cases former areas of good quality steppe and semi-desert rangeland were replaced by tracts of sand and saline marshes. In Kalmykia, between 1953 and 1959, areas of blown sand represented no more than 2-3% of the land, but by 1985 they covered 33%. This desertification process is continuing. The impacts of irrigation canals, highways and wire fences (for protection of so-called "cultural pastures") on Saiga populations are serious. These obstacles have interrupted Saiga migration routes and sometimes lead directly to increased mortality. There is evidence that Saiga populations in some regions have become sedentary or semi-sedentary and the lack of good seasonal pastures, along with the effects of increased disturbance, have lowered fecundity and increased mortality. Notwithstanding the preceding description of the Saiga's decline relative to habitat, the careful evaluation and analysis of the impact of different factors on the habitat’s degradation in different parts of the Saiga's range up to now has not been examined systematically and should be considered a priority area for future actions directed to Saiga conservation at national and regional levels.

3.3 Indirect threat

Indirect threats include fragmentation of range due to agriculture development, irrigation, construction of roads, highways and canals.

3.4 Threats connected especially with migrations

During long distance migrations Saigas appeared at territories where it is difficult to organize their protection. Data show that when Saiga herds from Kalmykia migrated in winter into Daghestan (North Caucasus), they were heavily poached. The same observations are applicable for migrating Saiga across frontiers between Kazakhstan and Uzbekistan and Turkmenistan. In Mongolia, water points and grazing areas used by Saigas during migration are now mostly occupied by human and livestock.

There is an ongoing migration study with satellite telemetry on Saiga in Mongolia since 2006 and the results showed that some migration bottleneck can affect the Saiga movement to better pastures.

3.5 National and international utilization

National use: Saiga is used for meat consumption. The recent social and economic changes increased its impact. A serious decline in livestock numbers beginning from 1992 has certainly increased the interest in Saiga as a source of meat. Indeed, its meat can now be bought on food markets even in the capital of Kalmykia as well as in different parts of Kazakhstan (Lundervold, 2001; Pereladova & Lushchekina, 2001).

International use. Saigas are hunted for their horns. An increasing impact of horn hunting was already observed in the last years of the Soviet Union's existence, when the state monopoly on international trade was dissolved and the customs regulations became lax, stimulating a massive illegal hunt for Saiga horns and their subsequent exportation to the Oriental markets, to be used for medicinal purposes. By the turn of the 1990s, one kilogram of Saiga horns (~4 pairs) could be sold in Kalmykia for US $30. Because this is a great deal of money by local standards, the amount of poaching in those years is believed to have reached no less than 15,000 to 20,000 animals a year (Sokolov & Zhirnov, 1998). In parallel, the proportion of adult males declined steadily from 1997, which shows that poaching for horns grew more intense as well. Female Saiga is hornless. Saiga horns prices in Kalmykia have by now reached as much as US $100 per kilo, making it very attractive for the impoverished population of the pastoral regions.

In Mongolia, Saiga males are hunted mostly for their horns. Poachers sell the horns to buyers from towns and big cities who in turns sell them to Chinese. It is reported that Saiga horns are used in Chinese medicine in association with other products to make so called "helpful" drugs. Saiga meat is not in favour among Mongolians.

4. Protection status and needs

4.1. National protection status

In Kazakhstan, Russia, Uzbekistan, Turkmenistan, up to now *Saiga tatarica tatarica* is protected as a common hunting animal: regulation for opening hunting seasons and introduction of hunting bans when there are some data on low numbers of Saiga population. It was applied for many years before the 1950s last century and repeated again recently in Kalmykia and Kazakhstan (1998).

In Mongolia, Saiga is listed in several legislative documents:

- Resolution 83 of the MP on Protected Areas as of 1993.01.12
- Law on Special Protected Areas as of 1994.11.15
- Law on Environmental Protection, 03.30.30
- The Hunting Law, 1995.04.10
- Law on hunting fees, 1995.05.22

Personal and commercial hunting is not allowed under the Law as of 1930. The Saiga is listed as a very rare animal in Mongolian Red Data Book (1987, 1997) and in the reviewed version of the Hunting Law, 1995.

4.2. International protection status

International concern about the plight of the Saiga antelope was first raised in 1995 (Chan *et al*., 1995; New Scientist, 1995). Nowadays, the total population has shown an observed decline of over 80 % over the last 10 years, and decline is continuing. Severely skewed sex ration are leading to reproductive collapse. It is classified as critically endangered (CR A2a) using IUCN red list criteria's (2004).

Heightened international awareness about the plight of the Saiga led to a CITES Appendix II listing in 1995; proposals to list the Mongolian subspecies on Appendix I were rejected because of difficulties in distinguishing horns from this subspecies in trade. Since Kazakhstan's accession in 2000, all the Saiga range states are now CITES parties.

4.3 Additional protection needs

Legislation protecting Saiga exists at national level but increased enforcement, and especially external funding for anti-poaching measures and linked rural development are urgently needed. Presently the key requirement is funding of national conservation actions, rather than improving the international trade control.

Special protected areas for lambing/rutting places should be established in all territories inhabited by Saiga populations.

In Mongolia it is important to regulate pasture and water sources so they are available for Saiga. Another important measure is the provision of additional food during the harsh winter and clearing out of water sources occupied by human and livestock during droughts, and most importantly funding is needed for local rangers to regularly maintain patrolling around Saiga area especially in critical seasons like birth giving and rut.

5. Range States[1]

KAZAKHSTAN, MONGOLIA, Russian Federation, Turkmenistan, UZBEKISTAN; recently extinct in China and UKRAINE.

6. Comments from Range States

7. Additional remarks

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[1] CMS Parties in capitals.

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Appendix

Table 1. Population estimates for the Saiga antelope. The total estimated Saiga population size (rounded to the nearest thousand animals) is given for those years in which all four populations of the nominate subspecies were surveyed. Numbers in bold are dubious as they are extrapolated from counts of 50% of the range area (estimate = 2x actual count), and those in italics are the product of vehicle surveys. Vehicle surveys are not easily comparable to aerial surveys, and are much more prone to error and bias (and particularly to underestimating population size). All other values are total counts from aerial surveys, hence confidence intervals are not given. Data up to 1997 for Kazakhstan are from Bekenov *et al*. (1998) and for Mongolia from Lushchekina *et al*. (1999). Kalmykian data up to 1994 are from Sokolov *et al*. (1998). Data after these dates are from surveys carried out by the following organisations: Kalmykia - the Department for Conservation, Control and Management of Game Animals, the Central Laboratory for Hunting Management and the former Saiga Research Centre; Kazakhstan - the Institute of Zoology of the Kazakhstan Ministry of Education and Science; Mongolia - WWF-Mongolia and the Institute of Ecology and Evolution, Moscow, Russia, and are reproduced with permission. (From Millner-Gulland *et al*.,2001).

)	**Populations**					**Total**
Year	**Kalmykia**	**Ural**	**Ust'-Urt**	**Betpak-dala**	**Mongolia**	
1980	380,000	120,000	170,000	400,000	-	1,070,000
1981	430,000	160,000	190,000	470,000	*750*	1,251,000
1982	385,000	180,000	190,000	480,000	*925*	1,236,000
1983	280,000	150,000	180,000	440,000	-	1,050,000
1984	265,000	40,000	190,000	340,000	*125*	835,000
1985	222,000	50,000	190,000	400,000	-	862,000
1986	200,000	70,000	150,000	250,000	-	670,000
1987	143,000	100,000	140,000	300,000	-	683,000
1988	157,000	90,000	207,000	368,000	*1700*	824,000
1989	150,000	135,000	265,000	323,000	-	873,000
1990	160,000	138,000	202,000	361,000	-	861,000
1991	168,000	236,000	232,000	357,000	-	993,000
1992	152,000	298,000	254,000	375,000	-	1,079,000
1993	148,000	250,000	216,000	510,000	*300*	1,124,000
1994	142,000	274,000	254,000	282,000	*300*	952,000
1995	220,000	-	-	212,000	*1300*	-
1996	196,000	-	**214,000**	248,000	-	-
1997	*259,000*	-	-	-	*1300*	-
1998	150,000	*104,000*	246,000	**120,000**	-	620,000
1999	55,000	84,000	**200,000**	***64,000***	-	403,000
2000	26,000	17,500	116,000	*15,000*	*3000*	178,000

Table 2 Rates of decline of populations of *Saiga tatarica tatarica*. The mean population size in 1980-90 is calculated from Table 1, and the 1998-2000 population estimates are given as a proportion of this. The rate of decline for 1998-1999 and 1999-2000 is also shown. The 1980-90 mean population size for Kalmykia is multiplied by 0.58 to correct for the difference in time of year between the two sets of surveys. (From Millner-Gulland *et al*.,2001)

	Kalmykia	**Ural**	**Ust'-Urt**	**Betpak-dala**	**Total**
Mean 1980-90	146,200	112,000	188,500	375,600	823,300
Pop size as a proportion of 1980-90 mean					
1998	1.03	0.93	1.30	0.32	0.67
1999	0.38	0.75	1.06	0.17	0.43
2000	0.18	0.16	0.62	0.04	0.19
Annual decline rate					
1998-1999	63%	19%	19%	47%	35%
1999-2000	53%	79%	42%	77%	56%