Convention on the Conservation of Migratory Species of Wild Animals

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Agenda item 6(a)

DRAFT PROPOSALS FOR THE INCLUSION OF ASIATIC MAMMAL SPECIES ON CMS APPENDICES

(Prepared by the Secretariat)

1. The four draft proposals for the amendment of CMS Appendices attached to this note have been prepared by the Institut Royal des Sciences Naturelles de Belgique and have been submitted by Dr. Pierre Devillers, Scientific Councillor for the European Community and vice-chairman of the Scientific Council.

2. Preparation of these draft proposals is undertaken within the Central Eurasian Aridland Concerted Action and associated Cooperative Action approved by the 8th Meeting of the Conference of the Parties to CMS (Recommendation 8.23), covering threatened migratory large mammals of the temperate and cold deserts, semi-deserts, steppes and associated mountains of Central Asia, the Northern Indian sub-continent, Western Asia, the Caucasus and Eastern Europe.

3. In particular, Rec. 8.23 *"encourages Range States and other interested Parties to prepare, in cooperation with the Scientific Council and the Secretariat, the necessary proposals to include in Appendix I or Appendix II threatened species that would benefit from the Action"*.

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

Proposal to add in Appendix I

Pantholops hodgsonii

Document largely based on the species information provided in IUCN Redlist of Threatened Species database (2006)

February 2007

1. Taxon

1.1. Classis: MAMMALIA
1.2. Ordo: ARTIODACTYLA
1.3. Familia: BOVIDAE
1.4. Genus and Species: *Pantholops hodgsonii* (Abel, 1826)
1.5. Common names:
English – CHIRU, TIBETAN ANTELOPE
French - ANTILOPE DU TIBET, TCHIROU
German – ORONGO, TIBETANTILOPE, TSCHIRU
Italian – CHIRU, PANTALOPO DI HODGSON
Spanish - ANTÍLOPE DEL TIBET

2. Biological data

Despite its classification in the Antilopinae subfamily, recent morphological and molecular evidence suggests that the Chiru is more closely allied to goats and the subfamily Caprinae (Gentry 1992, Gatesy *et al*. 1992).

2.1 Distribution (current and historical)

Inhabits the Qinghai-Tibet Plateau. *P. hodgsonii* has disappeared from much of the eastern part of its former range due to hunting, expansion of domestic livestock herding, fencing of rangeland and economic development.

The main stronghold of the species is in the remote Kekexili or Chang Tang area of northwestern Tibet. It occurs in Chang Tang NR, Arjin Shan NR, Kekexili NR. A few occur in the proposed Sanjiangyuan NR.

2.2 Population estimates and trends

Numbers and distribution have both decreased sharply as a result of commercial hunting for the underfur. Protection measures have slowed the rate of illegal hunting though it continues to take place. Decline estimated to have reached 50%.

2.3 Habitat

Chirus live on the high mountain steppes and semi-desert areas of the Tibetan plateaus.

2.4 Migrations

Chiru are gregarious, sometimes congregating in herds hundreds strong. The females migrate up to 300 km yearly to calving grounds in the summer where they usually give birth to a single calf, and rejoin the males at the wintering grounds in late autumn (Schaller 1998).

3 Threat data

Red listed as EN A2d.

3.1 Actual and potential threats

Tibetan antelope are endangered due to commercial poaching for their underwool, competition with local domesticated herds, and the development of their rangeland for gold mining. The Chiru's wool, known as shahtoosh, is warm, soft and fine. The wool can only be obtained by killing the animal.

Its numbers have dropped accordingly from nearly a million (estimated) at the turn of the 20th century to less than 75,000 today. The numbers continue to drop yearly.

3.2 Exploitation
Commercial hunting for the valuable underfur (shahtoosh), which is mainly smuggled to Kashmir where it is woven into an extremely fine fabric, is the major threat. Collection of the underfur causes death of the animal. The horns of males are used in traditional Chinese medicine (TCM).

3.3 Other threats
In July 2006 the Chinese government inaugurated a new railway that bisects the chiru's feeding grounds on its way to Lhasa, the Tibetan capital. In an effort to avoid harm to the animal, thirty-three special animal migration passages have been built beneath the railway. However, the railway will bring many more people, including potential poachers, closer to the chiru's breeding grounds and habitat. Poor management of resources also endanger areas protected for the Tibetan antelope.

4 Protection status and needs

4.1 National protection status
The Tibetan antelope is legally protected in China and India but enforcement of the law over the vast area of its habitat is problematic. It occurs in four Protected or proposed Protected Areas: Chang Tang NR, Arjin Shan NR, Kekexili NR. A few occur in the proposed Sanjiangyuan NR.

A workshop to co-ordinate action and monitoring techniques between the three principal nature reserves with populations was organised by IFAW's China office in 2002.

4.2 International protection status
Listed at appendix I of CITES.

4.3 Additional protection needs

5 Range States

China (Qinghai; Xinjiang), India (Jammu-Kashmir) and until recently Nepal.

6 Comments from Range States

7 Additional Remarks

8 References

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

Proposal to add in Appendix I

Cuon alpinus

Document largely based on the species information provided in IUCN Redlist of Threatened Species database (2006)

February 2007

1. Taxon

1.1 Classis: MAMMALIA
1.2 Ordo: CARNIVORA
1.3 Familia: CANIDAE
1.4 Genus and Species: *Cuon alpinus* (Pallas, 1811)
1.5 Common names:
English – ASIATIC WILD DOG, DHOLE, INDIAN WILD DOG
French - CHIEN SAUVAGE D'ASIE, CUON D'ASIE
German – ALPENWOLF, ROTWOLF
Spanish - PERRO SALVAJE ASIÁTICO

2. Biological data

The animal is closely related to the genus *Canis*, and is by some authors considered part of *Canis*. Other related genera are *Lycaon* (African wild dog) and, more distantly, *Pseudalopex* and other South American Foxes.

There are about eleven subspecies of the dhole, spanning different sizes and colors. Two subspecies of the dhole are classified as endangered by the World Conservation Union, meaning that they face serious risk of extinction. Another two are on the verge of extinction.

- *Cuon alpinus javanicus*, found in Java, has a short, bright red coat, though there are regional variations.
- *Cuon alpinus sumatrensis*, found in Sumatra, has a short, bright red coat and dark whiskers.
- *Cuon alpinus infuscus*, found in Southern Myanmar, Malaysia, Thailand, and Vietnam has a dark brown coat and distinctive cranial features.
- *Cuon alpinus adjustus*, found in Northern Myanmar and Indo-China, has a reddish-brown coat.
- *Cuon alpinus dukhunensis*, found South of the Ganges in India, has a red coat, short hair on the paws, and black whiskers.
- *Cuon alpinus primaevus*, found in Himalayan regions of Nepal, Sikkim, and Bhutan, has a longer, redder coat than dukhunensis, and has long hair on the paws.
- *Cuon alpinus hesperius*, found in Eastern Turkestan, Southern Siberia and Western China (Altai and Tienshan), has a long, bright yellow coat with a white underside and pale whiskers.
- *Cuon alpinus laniger*, found in Kashmir and Southern Tibet, has a full yellow-gray coat.
- *Cuon alpinus fumosus*, found in Western Szechuan, China, and Mongolia, has a luxuriant yellowish-red coat with a dark back and gray neck.
- *Cuon alpinus lepturus*, found South of the Yangze in China, has a uniform red coat with thick under-fur.
- *Cuon alpinus alpinus*, found in Eastern Russia (east of eastern Sayans), including Amur, has a thick tawny-red coat with a grayish neck and an ochre muzzle.

2.1 Distribution (current and historical)

The Dhole was widespread in central and eastern Asia from Tian-Shan and Pamir to Korea and Ussuriland, and in South and South-East Asia where range probably include all or most of the Malaysian peninsula and the Indonesian islands of Sumatra and Java

In Central and eastern Asia, there have been no confirmed, recent reports of dholes from Russia, Mongolia, Kazakhstan, Kyrgyzstan (where they were found formerly in the Tian-

Shan area) or Tajikistan (where they were found formerly in the eastern Pamir area) (A. Poyarkov and N. Ovsyanikov in litt. D. Miquelle, pers. comm.).

There is a recent report of a dhole that was captured in Jiangxi district, south China (C. Bellamy, pers. comm.). Dholes were once present in parts of western China in the Tian-Shan Range, but the species' current status in this area is unclear.

The species is still found in Tibet today, particularly in areas bordering the Ladakh region of India (R. Wangchuk, pers. comm.), and the Tibet Forestry Bureau has reported that dholes are still "common" in parts of south-east Tibet (S. Chan, in litt.). Dholes occurred in northern Korea (Won Chang Man and Smith 1999) and a few small populations may still exist. There have been no records from Pakistan, but the species occurred on the alpine steppes of Ladakh, Kashmir, and India (Johnsingh 1985) that extend into the region termed Pakistan-occupied Kashmir by India.

Dholes are still found throughout much of India south of the river Ganges, and especially in the Central Indian Highlands and the Western and Eastern Ghats of the southern states. They are also found throughout north-east India, in the states of Arunachal Pradesh, Assam, Meghalaya, and West Bengal (A. Venkataraman, A.J.T. Johnsingh and L. Durbin, pers. comm.). In the Himalaya and north-western India, the status of dholes seems more precarious with a much more fragmented distribution. Dholes reportedly still occur in the Ladakh area of Kashmir, which is contiguous with the Tibetan highlands in China (R. Wangchuk, pers. comm.).

The species formerly was recorded in the Terai region of the Indo-gangetic plain, including the Royal Chitawan National Park in Nepal, but there have been few recent reports. There is an unconfirmed report of dholes in Dhorpatan Hunting Reserve in the late 1990s (R.C. Kandel, pers. comm.).

In Bhutan, there have been recent press reports that dholes have recovered from a government-initiated mass poisoning campaign in the 1970s and there have apparently been numerous recent incidents of dholes killing livestock in the lower Kheng region. Two recent, independent, eye-witness reports identify dholes in six protected areas in Bhutan (S. Wangchuk, pers. comm., T. Wangchuk, pers. comm.). In some regions, dhole predation on wild boar (*Sus scrofa*) may be viewed in a positive light by local people (T. Wangchuk, pers. comm.).

In Bangladesh, dholes were thought to occur in the forested tracts of the Chittagong and Sylhet Districts (Johnsingh 1985). It is not certain whether any remain in Bangladesh.

In Myanmar, dholes were recorded by camera trapping at 11 of 15 survey areas scattered across the country, only four of which were protected. Dholes and/or leopards have apparently replaced tigers as the top predator in these areas (Myanmar Forest Department, 2003).

In Indochina, dholes probably ranged over all or almost all of Laos, Cambodia, Viet Nam and Thailand, although reliable site-specific information is scarce. Present distribution is highly fragmented and large parts, particularly of Viet Nam and Thailand, are without any regular occurrence of dholes, although they persist in a number of protected areas (Duckworth et al. 1999, Waltson 2001, M. Baltzer and R. Shore in litt., A. Lynam, pers. comm.).

The species' historical range probably included all or most of the Malaysian peninsula and the Indonesian islands of Sumatra and Java, but reliable information is scarce. Current distribution is poorly known but is thought to be highly fragmented. On the Malaysian peninsula, dholes are known to occur in four sites in northern and central areas of the

peninsula (from recent camera-trap surveys; J.B. Abdul, pers. comm.). On Java, dholes appear to be most common in the protected areas at the eastern and western ends of the island. On Sumatra, very little is known, but dholes are known to occur in major protected areas in the southern, central, and northern parts of the island (e.g., from camera trapping; D. Martyr, pers. comm.).

2.2 Population estimates and trends

It is estimated that fewer than 2,500 mature individuals remain in the wild and the declining population trend is expected to continue.

2.3 Habitat

The dhole is found in a wide variety of vegetation types, including: primary, secondary and degraded forms of tropical dry and moist deciduous forest; evergreen and semi-evergreen forests; dry thorn forests; grassland–scrub–forest mosaics; and alpine steppe (above 3,000 m). They are not recorded from desert regions.

In India, tropical dry and moist deciduous forest may represent optimal habitats, based on the regions thought to hold the largest dhole populations. Ungulate biomass, particularly that of cervid species, is highest in these vegetation types when compared to others in the same region (A. Venkataraman and V. Narendra Babu, unpubl.). In India, tropical dry and moist deciduous forests are subject to seasonal monsoon climates.

Important factors that may influence habitat selection include the availability of medium to large ungulate prey species, water, the presence of other large carnivore species, human population levels and suitability of breeding sites (proximity to water, presence of suitable boulder structures and sufficient prey).

2.4 Migrations - Movements

The hunting range of a pack of Dhole is about 40 km² (15sq mi). Pack living on border's areas should regularly cross international frontiers.

3. Threat data

3.1 Actual and potential threats

Main threats to the species include ongoing habitat loss, depletion of prey base, interspecific competition, persecution and possibly disease transfer from domestic and feral dogs.

3.2 Depletion of prey base

Across almost all of Cambodia, Laos, and Viet Nam, as well as within protected areas, ungulates occur at levels well below natural. All species of ungulate except muntjacs (*Muntiacus spp.*), pigs (*Sus spp.*) and in some areas southern serow (*Naemorhedus sumatraensis*) are ecologically or fully extinct across extensive parts of the region. Only a few of the largest wildernesses support nearly intact species assemblages and even in these, the larger species (*Bos spp.*, *Cervus spp.*, hog deer *Axis porcinus*) are very rare. This situation will likely hinder any possibility of recovery by the region's dhole populations, even if the other issues could be addressed. While not as depressed as in Indochina, prey levels in Indonesia also exist at levels much below carrying capacity (because of illegal hunting and habitat degradation). In protected areas in southern and central India, where dhole numbers are stable, prey densities are high. In north-east India, prey densities are very low in protected areas with dholes.

3.3 Exploitation and persecution

There is no widespread exploitation for fur or other purposes, though medicinal use should be investigated in China.

Persecution certainly occurs in Indochina, although it is unclear how often. In Indonesia, too, it is a threat but again its significance is unknown. In India, such persecution can play a serious role in limiting local populations. Dholes living outside or on the edge of core protected areas are particularly vulnerable to human kleptoparasitism, snaring (non-selective) and direct persecution. For example, during a radio-tracking study in 2000, in the buffer zone of Kanha Tiger Reserve, central India, at least 16 out of 24 dholes in one pack died from a sudden strychnine poisoning (L. Durbin, pers. obs). In southern India, such persecution is moderate to low and often occurs indirectly when cattle graziers and others inadvertently go close to dhole dens and disturb adults and pups, disrupting breeding and rearing (A. Venkataraman, pers. obs.). "By-catch" in snares and other traps is probably a significant threat to dholes across Indochina at least.

3.4 Habitat degradation/loss

Currently, extensive areas of natural or semi-natural vegetation remain in Laos and Cambodia, some areas encompassing many hundreds of square kilometres of potential dhole habitat. However, habitat conversion and fragmentation are proceeding apace. In Viet Nam, very few natural areas of over 50 km2 remain. Habitat loss and fragmentation is a major threat to protected areas in Indonesia, particularly those on Sumatra. Habitat loss and degradation are also serious threats to dholes in South Asia and the disappearance of dholes from many of the forested tracts in India has been attributed in large part to loss of habitat.

3.5 Competition with others species

Apparently, free-living dogs have been seen and/or camera trapped in many parts of Indochina, but there is no evidence for existence of large populations. Undoubtedly, the main competitor for prey species in Indochina is people. There is no evidence that feral dogs are significant competitors with dholes in Indonesia. In many parts of their range, dholes are sympatric with tigers and leopards and so the potential for significant interspecific competition for prey exists, especially if the prey populations are reduced as a result of hunting by people.

3.6 Other threats

Disease and pathogens: Particularly those transmitted by feral and/or domestic dogs (e.g., mange, canine distemper, parvovirus and rabies). The significance of disease is unclear in Indochina, but diseases are a significant threat in South Asia and probably in parts of Indonesia.

4. Protection status and needs

4.1 National protection status

In Cambodia, the current wildlife decrees give the Dhole protection from all hunting, A new forestry law is under preparation, and a proposal to list the species as a fully protected species is under discussion. In India the Dhole is protected under Schedule 2 of the Wildlife act of 1972 (permission is required to kill any individual unless in self defence or if an individual is a man killer). In the former Russian Federation, Dholes received the status of proteted animal in 1974. In Vietnam the Dhole is protected by Decree 18/HDBT (17/01/1992) and the amendment Decree 48/2002/ND-DP (22/04/2002) under category HB, which limits extraction and utilisation.

4.2 International protection status

The species is listed at the Appendix II of the CITES regulation (2003)

4.3 Additional protection needs

5. Range States

Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Kazakhstan, Democratic People's Republic of Korea, Republic of Korea, Kyrgyzstan, Lao People's Democratic Republic, Malaysia, Mongolia, Myanmar, Nepal, Russian Federation, Tajikistan, Thailand, Turkey, VietNam

6. Comments from Range States

7. Additional Remarks

8. References

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

Proposal to add in Appendix I

Capra falconeri

Document largely based on the species information provided in IUCN Redlist of Threatened Species database (2006)

IRSNB

February 2007

1. Taxon

1.1 Classis: MAMMALIA
1.2 Ordo: ARTIODACTYLA
1.3 Familia: BOVIDAE
1.4 Genus and Species: *Capra falconeri* (Wagner, 1839)
1.5 Common names:

English – MARKHOR
French – MARKHOR
German – SCHRAUBENZIEGE
Italian – CAPRA DI FALCONER; MARKOR
Spanish – MARKHOR

2 Biological data

Markhor stand 140 to 180 centimetres at the shoulder and weigh from 40 to 100 kilograms. Females are tan in colour with a white underbelly and a pattern of black and white on the legs. Males are a lighter tan with the same white underbelly and pattern on the legs, they also have black faces and a large amount of long shaggy white fur on their neck and chest. Both sexes have (corkscrew) horns, in males, they can grow up to 160 cm long, and up to 25 cm in females.

Three subspecies have been described with *falconeri* and *megaceros* present in India and Pakistan and *heptneri* in Tadjikistan, Turkmenistan, Uzbekistan and probably extinct in Afghanistan.

2.1 Distribution (current and historical)

The range of the markhor historically extended from Turkmenistan, Afghanistan, Pakistan, Tajikistan, India and Uzbekistan in mountain ranges at altitudes of (500-) 700 to 3500 (-4000) metres.

Currently its distribution runs from the mountains north of the Amur Darya River in Turkmenistan, east through Afghanistan and Pakistan, just into the extreme northwestern part of India. Within this area, markhor populations are usually very small (<100 individuals) and isolated from each other.

2.2 Population estimates and trends

Considered as Endangered (EN - A2cde) in the 2006 IUCN Redlist.

Reduced to small, fragmented populations in isolated areas. No recent population estimate is available, but numbers are suspected to be in the low thousands. An estimated 700 Markhor of the subspecies *C. f. heptneri* occurred within the former USSR in the 1980s (Tadjikistan 500, Uzbekistan 180, Turkmenistan 20) (Prisjazhnyuk, 1994).

In 1997, Shakleton estimated the World population at probably not more than 5500 individuals.

2.3 Habitat

The markhor occupies arid cliffside habitats in sparsely wooded mountainous regions at altitudes ranging from (500) 700 m from November to May up to 4000 m in the summer. It avoids deep snow.

2.4 Migrations – movements

Altitudinal movements. The markhor occupies arid cliffside habitats in sparsely wooded mountainous regions at altitudes ranging from 700 m from November to May up to 4000 m in the summer.

3 Threat data

3.1 Actual and potential threats

The reasons for the markhor's decline include intensive hunting (for trophies, meat and the Asian medicine market), disturbance and loss of habitat due to expanded human settlement, and competition from domestic livestock.

3.2 Exploitation

A highly-valued trophy species. Markhor horns are used in Oriental traditional medicines. In China, horns have reportedly fetched up to $US1,000 per kilogram, twice as much as Saiga Saiga tatarica horns. Local villagers will hunt them intensively during the winter months when the Markhor descend to the more accessible hillsides and fresh meat is in very short supply.

3.3 Habitat degradation/loss

Much of the region where they live has been degraded by overgrazing, leading to a serious risk of erosion. In parts of their range the Markhor also face competition from domestic goats and other livestock for limited food supplies.

3.4 Impact of Conflict

Even more seriously much of the species' range is in areas which have been politically sensitive for many years and, in the case of Afghanistan, have seen large scale armed conflict. The abundance of weapons available under these circumstances has led to many populations being hunted to extinction or near extinction.

3.5 Other threats

Because the cliffs the species inhabits are scattered throughout its range, the Markhor has probably always had a discontinuous distribution. As populations are exterminated or severely reduced by man, there is little chance of these areas being recolonised by other Markhor. The populations become ever more scattered and diminished.

There is also the possibility that the Markhor will hybridise with feral goats, leading to dilution of stock and the loss of pure-bred populations of the species.

4 Protection status and needs

4.1 National protection status

Markhor are present in around 20 of Pakistan's protected areas; poaching in the Chital Gol National Park has been successfully controlled. Markhor are reported from three Nature Reserves in the CIS : Kugitang (Turkmenistan); Surkhan (Uzbekistan); and Dashti Jum (Tadjikistan). In Afghanistan, there are no Markhor in any of the few protected areas which have been set up.

4.2 International protection status

Markhor is listed in Appendix I of CITES.

4.3 Additional protection needs

There is an urgent need to establish more properly protected reserves for this species.

5 Range States

Afghanistan (not recently confirmed), India, Pakistan, Tajikistan, Turkmenistan and Uzbekistan.

6 Comments from Range States

7 Additional Remarks

8 References

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

Proposal to add in Appendix II

Saiga tatarica

Document based on:
The proposal report submitted by Uzbekistan to CMS in 2002
Data provided by Mongolia

IRSNB

June 2005
Updated February 2007

1. Taxon

1.1.	**Classis**	Mammalia
1.2.	**Ordo**	Artiodactyla
1.3.	**Familia**	Bovidae
1.4	**Genus or Species**	*Saiga* Gray, 1843
	Subspecies	*Saiga tatarica tatarica* (Linnaeus, 1766) and *Saiga tatarica mongolica* Bannikov, 1946
1.5.	**Common names**	English: Saiga French: Saïga Italian: Antilope delle steppe Russian: Saigak Spanish: Antílope saiga; Saiga

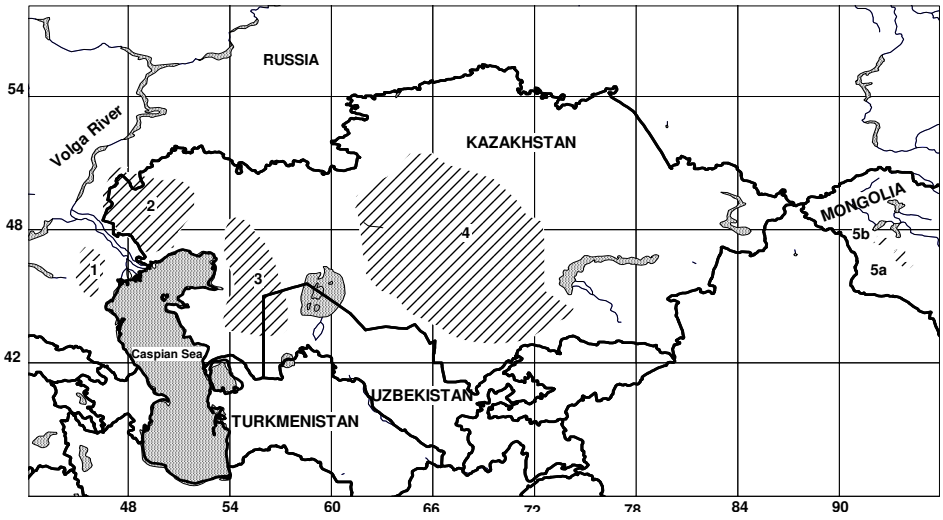
2. Biological data

2.1. Distribution (current and historical)

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 (estimates and trends): (CR A2a, IUCN 2004)

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's (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 estimate. 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). However, the last survey carried out in March 2005 showed that about 1050 individuals inhabit the Shargiin Gobi and Khuisiin Gobi.

2.3 Habitat

The main habitats of the *Saiga tatarica tatarica* 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 (kinds of movement, distance, proportion of the population migrating)

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 of threat of the population (factors, intensity)

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 favorable 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 (quality of changes, quantity of loss)

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 (eolian?) 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 threats

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

3.4 Threats especially associated 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.

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.

5. Range States

Kazakhstan, Russia, Uzbekistan, Turkmenistan, Mongolia; recently extinct in China and Ukraine.

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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%