

**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 Mongolian gazelle *Procapra gutturosa* to the CMS Convention's **Appendix II**

B. PROPONENT: Mongolia

C. SUPPORTING STATEMENT

1. Taxon

- 1.1. Classis: Mammalia
- 1.2. Ordo: Artiodactila
- 1.3. Familia: Bovidae
- 1.4. Subfamiliae: Gazellinae
- 1.5. Genus: Procapra
- 1.6. Species: *Procapra gutturosa* Pallas, 1777
- 1.7. Common names: English: Mongolian or White-tailed gazelle
French:
German: Mongolei-Gazelle
Russian: Dzeren or Zobastaya gazel'
Spanish:
Mongolian: Tsagaan dzeer

2. Biological data

2.1. Distribution

At the beginning of XX century, Mongolian gazelles were noted around the north-eastern border of Kazakhstan in the Ili Basin and Irtysh Valley (Antipin 1941), but they later disappeared there completely (Afanasiev et al., 1953, cited in Bekenov et al. 2001). Mongolian gazelles were formerly found at three localities in Russian Federation along the border with Mongolia: the Chuya or Chuiiskaya steppes of the Kosh-Agach Region in the Altai; the southern part of Tuva Autonomous Republic south of the Tannu-Ula Range and the northern edge of the Uvs Nuur Basin; and southeast Transbaikalia, on the steppes between the rivers Onon and Arguni, penetrating north to about 50° 30' (Heptner et al. 1961, cited in Zhirnov 2001). They now only occur in very small numbers as sporadic visitors to one of these localities, the steppes of southeastern Transbaikalia (Zhirnov 2001, Lhagvasuren and Milner-Gulland, 1997). Former distribution of Mongolian gazelle in China extended through seven provinces of northern and northeastern China: Gansu, Ningxia, Shaanxi, Hobei, Inner Mongolia, Heilongjiang, and Jilin (Jiang and Sung 2001). Mongolian gazelle reached the Beijing plains at the beginning of this century, but they had disappeared from south of the Great Wall by 1950 (Bannikov 1954). Distribution is now limited to the province of Inner Mongolia and consists of a narrow band along the international border with Mongolia, from 43° 30' to 48° 48'N and 110° 30' to 119° 10' E (Wang et al. 1997). Today, the majority of the Mongolian gazelle population is concentrated in the easternmost provinces (*Aimags*) of Dornod, Sukhbaatar, Khentii, Dornogobi and Umnugobi (Lushchekina et al. 1983, Lhagvasuren and Milner-Gulland 1997, Lhagvasuren 2000) and small populations found in Dundgobi, Uverkhangai, Bayankhongor, Gobi-Altai and Dzavkhan provinces of Mongolia from 42° 30' to 50° 20' N and 92° 00' to 119° 00' (Lhagvasuren and Milner-Gulland 1997, Lhagvasuren 2000, Lhagvasuren et al. 2001).

2.2. Population

Mongolian gazelle is extinct in Kazakhstan (Bekenov et al. 2001). There is no longer a permanent population of Mongolian gazelle in Russia. They disappeared from Tuva and Chuya Steppe as their

range in Mongolia contracted and, in recent years, they have only occurred in Transbaikalia (Zhirnov 2001). They were most numerous in Transbaikalia, where in a few winters (e.g., 1925-26 and 1944-45) several thousand were seen (Bannikov 1954; Heptner et al. 1961, cited in Zhirnov 2001). By the mid-1970s, total numbers reaching Transbaikalia were at most 200 and, from 1975 to 1981, only small groups and individual animals were seen between the Onon and Arguni Rivers (Borodin 1984, cited in Zhirnov 2001, Kiriluk 1997). In 1995 in China the Mongolian gazelle estimated to be about 250.000 (Wang et al.). The Chinese population was estimated at 800.000 – 1.000.000 gazelles in the early 1960s (Anonymous 1994), 2.000.000 in the 1950s-1970s, and at least 500.000 in the 1980s (Wang et al, 1997). Gao (1955) estimated about 200.000 in winter 1992 and 300.000 in winter 1993. Wang et al. (1997) reported 250.000 Mongolian gazelles during winter 1994-95, and estimated that one-third of these remained on Chinese territory (i.e., 80-85.000 are permanently present in China). Numbers have been greatly reduced by excessive hunting for their meat. About 2.500.000 were killed in China from 1956-61 and, until the late 1980s, hundreds of thousands of Mongolian gazelles were slaughtered annually for their meat (Wang et al. 1997). Average annual harvest was c. 100.000 in 1987-1989 in Xinbaragyouqi County alone, and the actual number killed was doubtless much higher than the official harvest (Jiang and Sung 2001).

The present size of the Mongolian gazelle population in Mongolia is 2 million (Mix et al., 1996, Lhagvasuren 2000). Bannikov (1954) estimated the population at about 1.000.000 in the 1940s. Recent estimates have put their numbers at 250.000-270.000 in 1978 (Tsagaan 1980), 180-200.000 in 1975-1976, 250.000 in 1979, and 300.000-400.000 in 1982 (Luschekina 1990). From an aerial survey in 1989, Mongolian zoologists estimated a population of about 400.000. However, another aerial survey in 1994 carried out jointly by Nature Conservation International, the UNDP Mongolian Biodiversity Project, and Mongolian zoologists, estimated a population of about 2.000.000 gazelles (Lhagvasuren and Milner-Gulland 1997; Lhagvasuren 2000).

2.3. Habitat.

Mongolian gazelles inhabit plains, hilly steppes, semideserts, intermontane basins, and broad valleys. They avoid rocky or broken terrain, narrow valleys, high-altitude steppes, forests, shrub thickets, and sand dunes, unless driven there by exceptional circumstances. The dry steppes of eastern Mongolia form the optional habitat for Mongolian gazelles. This consists of level or undulating, arid steppes at altitudes of 800-1000m, with average annual precipitation of 200-300mm and low levels of human disturbance (Sokolov et al. 1982; Luschekina et al 1985, cited in Lhagvasuren et al 2001). Vegetation is typically dominated by feather grasses (*Stipa spp.*) with *Artemisia frigida*, *Anabasis brevifolia*, *Nanophyton erinaceum*, and *Allium polyrrhiza* (Bannikov 1954; Luschekina et al. 1985, cited in Lhagvasuren et al. 2001). The main food plants are *Allium polyrrhizum*, *Stipa capillata*, *S. gobica*, *Agropyrum pseudoagropyrum*, *Kochia prostrata*, *Koeleria gracilis* and *Artemisia spp.* (Luschekina 1990).

2.4. Migrations

Distinct seasonal east-west migrations of the Mongolian gazelle were reported in the 1940s (Bannikov 1961), however, in the past few decades these migrations have not taken place (Sokolov et al. 1982).

A large portion of the population is believed to migrate south into Chinese territory during the winter (Lhagvasuren and Milner-Gulland 1997, Schaller 1998). During the summer, migratory movement has been assumed to be related to regional fluctuations in the quality of range conditions (Lushchekina et al. 1983). Little is known about the direction, frequency and other features of today's migratory patterns (Sokolov et al. 1982, Lhagvasuren and Milner-Gulland 1997). Some populations are believed to be migratory while others may make only extensive local movements (Schaller 1998).

3. Threat data

3.1. Direct threat of the population

Direct harassment and intensive poaching by local people, borderguards, oil and mining companies are the leading causes of diminishing distribution and numbers of Mongolian gazelles (Sokolov and Lushchekina 1997, Milner-Gulland and Lhagvasuren 1998,). Relevant climatic factors

are drought and, in particular, the set of severe winter conditions known as *dzud*, when a frozen ice-crust covers the ground, hindering or preventing access to forage. *Dzuds* occur irregularly, with the average interval being seven years since records began in 1932 (Milner-Gulland and Lhagvasuren 1998). These factors affect the Mongolian gazelle, causing the death of thousands of animals. Periodic epidemics also influence the Mongolian gazelle population. In 1974, for example, an unknown disease killed about 140.000 gazelles in eastern Mongolia (Lhagvasuren 2000). The same type of epizootic has occurred regularly since then, but with fewer deaths. A major die-off of gazelles occurred in summer 1998 following and outbreak of bacterial infection (Schaller and Lhagvasuren 1998).

3.2. Habitat destruction

Animal husbandry is a very important part of the economy of regions where the Mongolian gazelle is distributed. There are more than 30 mln head of livestock in Mongolia, for example, which compete for grazing and access to water with gazelles. An increase in the number of herding families has occurred, as well as an increase in livestock numbers and the use of many new areas for grazing (Honhold 1995, cited in Lhagvasuren et al. 2001).

3.3. Indirect threat

Intensifying agriculture and mining activities, increasing human population density, competition with livestock, irregular steppe fires and other human related activities are the main indirect threats to the Mongolian gazelle population. Distribution is also influenced by plagues of the vole *Lasiopodomys Brandti*. Over the last two decades, a sharp increase in the vole population has degraded pastures over a huge area of Dornod and Sukhbaatar provinces, and the gazelles have left these areas and moved north (Lhagvasuren and Milner-Gulland 1997).

3.4. Threat connected especially with migrations

A large portion of population is believed to migrate into Chinese territory during the winter, where they suspected to face heavy poaching pressure (Lhagvasuren and Milner-Gulland 1997, Schaller 1998). High barbed wires along the national borders during the migration are causing threats to Mongolian gazelles. Many of them die during the migration hanging on wires. The Ulaanbaatar-Beijing Railway that runs through the habitat of Mongolian gazelles has been fenced on both sides to prevent livestock straying onto the track. This has effectively divided Mongolian gazelle range in Mongolia, preventing movement between populations and hindering recolonisation of former range to the west. In China, problems which have already adversely affected migrations of the Mongolian gazelles include ... cultivation of rangelands, habitat degradation, and desertification, increasing competition with domestic livestock, road building, and economic development, as well as growth of the human population (Jiang and Sung 2001).

3.5. National and international utilisation

Mongolian gazelles are an important economic resource in all range states and have always been hunted for their high quality meat, tongue, skin, horn, and sub-products (liver, heart, lungs, kidneys and fat). The durable skin is used for making good quality box-calf and chamois. Previously, in Mongolia, most of the meat was exported, but in 1993 and afterwards all of it remained in Mongolia. Hunting has been state controlled since 1932. The government hunting organizations carried out an annual harvest during the official hunting season, from 15-20 November until 1 December, stopping just before the peak of the rutting season (Lhagvasuren et al. 2001). Currently, even without a true grasp of the population movements, large scale harvesting occurs in the absence of a management plan for the sustained harvest of this keystone species.

4. Protection status and needs.

4.1. National protection status

Unlicensed hunting is prohibited by law. In 2000, a new hunting law set a fine of 200.000-400.000 tugrics (\$220-\$330) for each gazelle killed illegally. In 1992, the Eastern Mongolia Strictly Protected Area was established in part for the protection of habitat for the Mongolian gazelles (Finch

1996). Unfortunately, because of the lack of accurate knowledge at the time of migratory corridors, traditional calving and breeding grounds, gazelles are only seasonal visitors to some reserves (Lhagvasuren and Milner-Gulland 1997). An attempt to re-establish Mongolian gazelle in the west of the country was made in 1978, when several adults were transferred by air to an area in Uverkhangai Province, but the outcome is unknown. A second, successful project was carried out in 1988-1990, when a total of 600 gazelles were transported by air from eastern Mongolia to the Khomin tal steppe in Dzavkhan province, where the local gazelle population had decreased to about 600 animals. Numbers of Mongolian gazelle there exceeded 3,500 in 1996 (Lhagvasuren and Milner-Gulland 1997). Biological and Ecological research on the Mongolian gazelle is carried out by the Institute of Biology of the Mongolian Academy of Sciences. From 1975 to 1985, it was studied by a team from the Joint Biological Expedition of the Mongolian and Soviet Academies of Sciences.

4.2. International protection status

Global status is Lower Risk/near threatened. The Antelope Survey classifies Mongolian gazelle as Endangered in Russia, Vulnerable in China, and Satisfactory in Mongolia (IUCN 1996). In 1990, the Mongolian and Chinese Governments signed an environmental protection agreement, in which protection of the natural habitat of Mongolian gazelle was of special concern.

In China, the Mongolian gazelle is a Category II protected species and has had limited legal protection since 1989. Since 1991, some field surveys have been conducted (Jiang et al. 1993; Wanhg et al. 1997). Some actions have been taken at a local level. In the Xinbaragyouqi region, the local authorities have implemented measures to eliminate illegal hunting of Mongolian gazelle and in Dongwuqi, the other main population centre, the local authorities have also established a series of regulations to protect the species (Wang et al. 1997). Protected areas for Mongolian gazelle have not yet been established in Inner Mongolia (Jiang and Sung 2001).

In Russia, the Mongolian gazelle is listed as Endangered in the national Red Data Book (Borodin 1984) and protected by law. A nature sanctuary was created in Gorno-Altai Autonomous *oblast* (region) for conservation of this species, though it no longer occurs there.

4.3. Additional protection needs

Russian scientists and managers are suggesting to strengthen the enforcement of the ban on hunting, which will safeguard animals wandering from Mongolia, and may eventually allow the establishment of a permanent population (Zhirnov 2001).

For China, the most important measure is to establish the Xinbaragyouqi Mongolian gazelle Nature Reserve (115°32'-117°32'E, 47°38'-48°40'N) to protect a core population of Mongolian gazelle and its natural habitat. A proposed area has also been proposed in Dongwuqi Vounty, where another large population has been identified (Wang et al. 1997). Additional protection measures would include implementation of the trans-border agreement with Mongolia and strict enforcement of the laws on hunting. The Inner Mongolia Wildlife Department does not have sufficient funds to protect Mongolian gazelle in the remaining portion of Mongolian steppe ecosystem in China; thus, international co-operation and support will be necessary to provide these resources (Wang et al. 1997).

Probably the most important long-term measure is to strengthen anti-poaching activities not only in Mongolia, but in all range States, and ensure that hunting of gazelles in Mongolia is managed on a sustainable basis. This should be carried out through creation of a management programme for the major populations of Mongolian gazelle, and should include information and education about the gazelle for local people. An extensive northwestward extension corridor to the Dornod-Mongol National Park has been proposed in order to protect migration routes and especially calving grounds. The proposed Kherlen-Menen Nature Reserve on the eastern border is situated in an area important for Mongolian gazelle, and it could form the basis of trans-border reserve. Joint agreements between Mongolia, China, and Russia on the conservation of Mongolian gazelles in areas where their range is adjacent to or crosses national borders are also important. Protective measures are especially needed in rutting and calving areas. Aerial surveys should be conducted twice a year (before young are born and at the start of the hunting season). Detailed research on migration routes, using satellite telemetry, and investigation of epidemics and their causes should be conducted. An understanding of gazelle movement patterns and social system will be essential in minimizing such impacts as economic

development of the Mongolian eastern steppe intensifies. Further translocations of gazelles to areas of former habitation in western and central Mongolia may be appropriate, if factors which caused the original decline have been addressed (Lhagvasuren et al. 2001).

5. Range States: Mongolia, China and Russia.

6. Comments from Range States

Russia and China, where the Mongolian gazelle occurs, are not the Parties to CMS. Although requests for comments on inclusion of this species have been made, no answer received until submission of this proposal to CMS.

7. Additional Remarks

Not applicable.

8. References

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