

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

Other proposals**A. Proposal**

Elimination of the zero quota for trade in cloth made from wool from the shearing of live animals under the name Vicuña-Bolivia originating in populations listed in CITES Appendix II in accordance with a decision taken at the 10th meeting of the Conference of the Parties in Harare (Zimbabwe), 9 to 20 June 1997.

B. Proponent

Bolivia

C. Supporting Statement

Justification of this proposal is based on the demands of the communities managing the vicuñas found in the pilot centres for the conservation and management of the vicuña at Ulla Ulla, Mauri-Desaguadero and Sud Lípez, whose populations are included in Appendix II of CITES.

After approval of the transfer to Appendix II of the three populations of vicuña, workshops were held for promoting awareness of the regulations for conservation and management of the vicuña (Decreto Supremo 24529) in and outside of the pilot centres. Information was given on use by the rural communities but there was no trade or export during two years (the duration of the experimental stage).

Although the local communities have accepted regulation and the CITES decisions, they have requested the designation of new pilot centres for promoting use of the vicuña. Most of the local communities show little interest in protecting the vicuña, because they do not receive the benefits that this wildlife species could produce and because of the damage resulting from the increase in vicuña populations.

In the region where the pilot centres are located, the level of poverty is the highest in Bolivia. The vicuña represents an economic alternative for increasing the income of the rural communities.

1. Taxonomy

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|--------------------------|---|
| 1.1 Class: | Mammalia |
| 1.2 Order: | Artiodactyla |
| 1.3 Family: | Camelidae |
| 1.4 Scientific name: | <i>Vicugna vicugna</i> Molina 1872 |
| 1.5 Scientific synonyms: | |
| 1.6 Common names: | <div>English: Vicuña</div> <div>French: Vigogne</div> <div>Spanish: Vicuña</div> <div>Aymara: Huari</div> <div>German: Vikunja</div> <div>Quechua: Vicuña</div> |

1.7 Code numbers	CITES	A.119.004.002.002
	ISIS	5301419004002002001
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	RDB-1	19.123.2.1.V

2. Biological parameters

2.1 Distribution

2.1.1 Distribution in South America

The vicuña lives in the high Andes in southeastern Peru, western Bolivia, northeastern Chile and northwestern Argentina (San Martín and Bryant, 1987); an area that lies between 7° and 34° south latitude (Hofmann, 1971), between 3,800 and 4,600 metres above sea level (Glade, 1982), with temperatures ranging between 5° and 15° C above zero and 18° C below zero, with less oxygen and very dry, variable humidity in the summer period and very high humidity during the rainy season (Calle, 1982) (see map 1). Nonetheless, the current range in distribution of the vicuña, extends between 9°30' and 29° south latitude (Torres, 1992).

Two geographical subspecies have been described (Torres, 1992): the first, *Vicugna vicugna* Molina 1872, or southern, is found south of 18° south latitude. It is larger and lighter in colour than the second, the northern, *Vicugna vicugna mensalis* (Thomas, 1917). Nevertheless, the taxonomic difference still is not completely accepted. Because of this, during the seminar on "Caracterización poblacional, morfología y genética de la vicuña", the signatory countries to the Vicuña Convention agreed to use the term "geographical races" (MACA, 1989).

This species became extinct in Ecuador, but thanks to co-operation among the signatories to the Vicuña Convention it was reintroduced in 1988 with specimens donated by Peru and Chile, followed by a donation from Bolivia in 1993.

2.1.2 Distribution in Bolivia

In Bolivia, the vicuña is distributed throughout the altiplano and the high Andean regions in the departments of Cochabamba, La Paz, Oruro, Potosí and Tarija, between 3,800 and 5,000 metres above sea level. The area of distribution is between 14° 42' and 22° 54' south latitude and 64° 50' and 69° 38' west longitude (see map 2).

The vicuña is usually found where there is still communal land, namely where there are fewer cultivated fields in relation to natural grazing area. In the northern Altiplano, the vicuña shares the habitat primarily with alpacas and sheep; in the central Altiplano with llamas, sheep, cattle and alpacas, in addition to Andean crops such as potato, *cañahua*, barley, oats; and in the southern Altiplano with llamas and sheep or alone (DNCEB, 1997).

The vicuña's range is determined by human settlement (cities and villages), the presence and abundance of domestic livestock and the type of habitat.

The presence of two geographical races has been confirmed, and a preliminary description has been made. The northern race, has been recorded in the northern and central Altiplano up to approximately 20° south latitude in the departments of Cochabamba, La Paz, Oruro and part of Potosí. There, there is a transition to the southern race, found in the southern Altiplano in the departments of Potosí and Tarija.

2.2 Habitat availability

2.2.1 The natural environment

In Bolivia, the vicuña lives in two main ecological regions: the high Andes and the puna (see map 3). The differences are described in *Regiones Ecológicas de Bolivia* (Ribera, 1992).

The high Andean region

The high Andean region includes the more humid eastern cordillera and the drier western cordillera, which surrounds the altiplano. It extends between 4,200 and more than 5,000 metres above sea level. This region has very low temperatures, with frost throughout the year. There is little precipitation, less than 700 mm, usually in the form of snow or hail. In the eastern cordillera, the dry season can extend from one to four months per year, and in the desert regions south of Potosí all months are dry.

The vegetation is formed by low grass with a predominance of hard and siliceous Gramineae such as *Stipa ichu* and *Festuca dolichophylla* and rosettes, creeping or in compact clumps. Certain areas, "bofedales", remain under water all year round, but are of excellent quality for grazing ruminants. Clumps of *Azorella compacta* and *Werneria aretioides* are representative. There are also thickets of "thola" (*Parastrephia* spp and *Baccharis* spp) as well as relics of small groves of *queñua* (*Polylepis* spp). There are large areas of cold desert, with larger areas of sandy and bare soil.

This region is practically unpopulated; human settlements are small and dispersed. Climatic limitations do not permit agriculture, and, therefore, the only possible activity is the raising of ruminants.

The high Andean wildlife is characterized by a paucity of species, which is even more obvious because of its proximity to the Yungas, one of the richest areas in the world in terms of species. A few highly specialized species have adapted to this rude and hostile environment. Among the characteristic species are the Andean condor (*Vultur gryphus*), Darwin's rhea (*Rhea pennata*), the cougar (*Puma concolor*) and the Andean cat (*Oreailurus jacobita*). There are many high Andean freshwater lakes in the north and saltwater lakes in the south, where there is abundant birdlife, including the flamingo. There are three species of the very numerous flamingos (*parihuanas*): *Phoenicopterus jamesi*, *Phoenicopterus andinus* and *Phoenicopterus chilensis*, as well as the *choca de copete* (*Fulica cornuta*). This region is characterized by the outstanding beauty of its landscapes.

The puna

The puna corresponds to the high plateau on the altiplano, surrounded by the above-mentioned cordilleras (see map 3). Its altitude ranges between 3,700 and 4,200 metres above sea level. Humidity decreases from north to south, with two categories of puna: one humid and one dry, with variations in average annual precipitation of 700 mm in the north and about 50 mm or less in the south.

The vegetation is similar to that of the high Andean region, with pasture of tough Gramineae in clumps and formations of "thola" bushes. In the south, there is evidence of the influence of soil salinity because of the presence of halophilic species.

Human intervention is intense, and the natural vegetation is heavily altered. On the other hand, the fauna is similar to that of the high Andes, but is less frequent and locally extinct. There are also characteristic species such as the partridge (Tinamidae) and the Andean hairy armadillo (*Chaetophractus nationi*).

In this region, human settlement is abundant with density decreasing from north to south, owing to the harsh weather and low soil productivity.

2.2.2 Land use in the vicuña range

The system of land tenure and social organization of the local communities in the regions of the altiplano and high Andes have made it possible to promote the development of vicuña populations with relative ease. Vicuña are usually found in areas of communal land.

The agrarian reform initiated in 1953 provided for two ways to grant land to the local inhabitants. One way was the consolidation of communal land for existing communities that continue to use the land, the usual situation in the high Andean region. The other way was the granting of land that was under the control of a large landowner to local communities; the most frequent situation in the puna, especially in the northeast where the best land is found. Land ownership in a local community can be individual or collective.

In both cases, the local Aymara and Quechua communities maintain solid structures of communal organization that, among other things, make it possible to plan land use, identifying areas for agriculture and grazing. They are defined each year by the community. This system makes it possible to regulate the entry of livestock into cultivated fields without using fencing.

The extreme climatic conditions, especially the cold, act as significant limiting factors for agricultural production, while frequent frosts and low precipitation hinder photosynthesis and contribute to a very low level of productivity. High winds, a concentration of rain in a short period and a high level of solar radiation affect not only productivity but also make the soil highly vulnerable.

In addition, most of the soil is inapt for agriculture. Classification by land use capacity shows that the soils considered untilled, without productive capacity, cover about 50 per cent of the area around Lake Titicaca and more than 70 per cent of the area south of Potosí.

These very fragile and low productive soils have been overexploited by the use of inappropriate technology and have suffered high levels of degradation from erosion, salinization and other means with the result being a decrease in natural usable productivity for domestic livestock. Under these conditions, the vicuña is perceived as an enemy competing for scarce available pasture and tending to be displaced to less productive areas. Under the current system of total protection of the vicuña, together with the permanent increase in the size of the populations, the local inhabitants begin to see them as competitors for the use of grazing land and water resources.

2.3 Population status

2.3.1 International

Based on data presented in the reports of the meetings of the Comisión Técnico Administradora of the Vicuña Convention, the current size of the populations in the range States have been compared (table 1). As a reference, the population reported by each range State at the initiation of the convention is given based on estimates (INFOL, 1981a; INFOL, 1981b).

Table 1: Size of vicuña populations by range State

Country	Population 1981	% of total	Population 1998-1999	% of total	Source
Argentina	8,155	10	33,414	17	Report XVIII meeting (Peru, 1998)
Bolivia	4,493	5	45,162	22	Game warden report 1998-1999 and survey 1996
Chile	7,990	10	19,848	9,8	Report XVI (CONAF, 1996)
Ecuador	0	0	712	0.3	Report XVIII meeting (Peru, 1998)
Perú	61,896	75	103,161	50.9	1997 survey (Peru, 1998)
TOTAL	82,534	100	202,297	100	

(Source: INFOL and DGB, 1999)

It can be seen that the vicuña populations in South America continue to increase at both the national and regional levels in relation to 1996 when there were 153,056 specimens.

2.3.2 Vicuña population status in Bolivia

Surveys of vicuña populations in Bolivia have been made since 1965 in the area that is now the Reserva Nacional de Ulla Ulla. Beginning in 1979, the former Instituto Nacional de Fomento Lanero (INFOL) was given the responsibility for protecting the vicuña. This strengthened implementation of the Vicuña Convention and led to more and more complete surveys. In addition, INFOL set up a monitoring system using game wardens who constantly monitored the wild vicuña populations and submitted monthly reports.

As a result of the Convenio para el Manejo y Conservación de la Vicuña, the populations of this species recovered throughout the area of distribution. The information provided by the surveys and periodical studies since 1980 show a continuing increase in populations throughout the country.

For 1999, reports have been received on the survey carried out by game wardens and communal rangers in order to update information on vicuña populations. In areas without staff, data from the 1996 survey was used.

For administrative aspects of monitoring and constant protection of the populations, protection areas have been created in nine Unidades de Conservación y Manejo de la Vicuña. Their location is indicated on map 2. The distribution of the population in these units is shown in table 2.

Table 2: Distribution of vicuña populations in Bolivia

Vicuña conservation and management units	Department	Estimated area (ha)	Vicuña population	%	Density
A. Ulla Ulla	La Paz	100,000	7,522	17	0.075
B. Mauri-Desaguadero	La Paz	nd	11,202	25	nd
C. Patacamaya - La Malla	La Paz	65,100	444	1	0.006
D. Mauri – Sabaya	La Paz-Oruro	510,911	3,788	8	0.007
E. Desaguadero Poopo	Oruro	447,300	2,535	6	0.005
F. Altamachi-Morochata	Cochabamba	23,300	790	2	0.033
G. Uyuni	Potosí-Oruro	483,200	3,597	8	0.007
H. Lípez-Chichas	Potosí	nd	14,192	31	nd
I. Tupiza-Sama	Potosí-Tarija	127.700	1,092	2	0.008
TOTAL			45,162	100	

(Source: DNCB, 1997. Censo Nacional 1996 and reports by game wardens)

The surveyed areas have been adjusted in accordance with maps prepared during the national census, which made it possible to make a rough estimate of the density of vicuñas in seven conservation units.

Seven protected areas with recognized legal status are included in these conservation units, representing 24 per cent (10,843 vicuñas) of the total vicuña population in Bolivia. Table 4 shows the number of vicuñas in the protected areas where vicuñas are found.

Currently, three protected areas have been included in the Sistema Nacional de Areas Protegidas (SNAP) under the responsibility of the Servicio Nacional de Areas Protegidas (SERNAP). The SNAP includes all of the areas that, because of their nationally important ecology, are under special joint administration, with the fundamental objective of conserving representative samples of the most important ecosystems of Bolivia.

Table 4: Vicuña populations in protected areas

PROTECTED AREA	AREA (ha.)	VICUÑA POPULATION	% NATIONAL TOTAL
Reserva Nacional de Fauna Ulla Ulla	240,000	7,522	16.65
Parque Nacional Sajama	120,000	1,500	3.32
Reserva Nacional de Fauna E. Avaroa	714,745	378	0.83
Refugio de Vida Silvestre Huancaroma	8,000	430	0.95
Reserva Nacional de Fauna Yura	10,000	207	0.45
Reserva Nacional Incakasani Altamachi	23,300	790	1.74
Parque Nacional Llica	13,100	16	0.03
TOTAL	1,129,145	10,843	23.97

(Source: SERNAP, DGB and personal communication, 1999)

These protected area are staffed with park wardens responsible for the protection of the resources, field and communications equipment and vehicles, used to promote conservation of the vicuña. The rest of these areas are being studied for reclassification and later inclusion in SNAP.

2.3.3 Population status in the pilot centres

The vicuña populations in the three vicuña conservation units have been transferred to CITES Appendix II in order to permit the initiation of sustainable use of this species within the framework of the Programa Nacional de Conservación de la Vicuña. These conservation units have been designated as pilot centres for the conservation and management of the vicuña and are staffed with game wardens for monitoring and protecting the vicuña populations with the help of communal guards (volunteers designated by the indigenous communal officials) and park wardens (the case of Ulla Ulla).

The game wardens prepare monthly reports for the vicuña survey and monitor the reserves with the help of the communal guards. Based on this information, the number of vicuñas in each pilot centre is known. Table 5 shows the size of the population in each of the pilot centres and its relationship to the national total.

Table 5: Evolution of vicuña populations in the pilot centres

VICUÑA POPULATION BY PILOT CENTRE				
Year	Ulla Ulla	Mauri. Desaguadero	Sud Lipez	Total Bolivia(*)
1965	97	na	na	1,097
1969	124	na	na	
1972	246	na	na	
1974	399	na	na	
1976	546	na	na	
1977	713	na	na	
1978	820	na	na	
1979	1,139	na	na	
1980	1,516	na	na	4,493
1981	1,885	1,232	1,644	7,150
1983	2,878	1,736	1,675	9,506
1985	2,556	3,101	2,786	
1986	2,900	3,065	3,021	11,706
1995	5,729	6,168		
1996	6,536	7,800	9,057	33,844
1997	6,593	na	na	
1998	6,442	na	na	
1999	7,522	11,202	13,044	45,162

na: not available

(*) data at the national level

Source : Reports from DGB, DNCB and INFOL

Centro Piloto for the Conservación y Manejo de la Vicuña Ulla Ulla

This centre is in the high Andean region, with abundant *bofedales*, excellent grazing sites for alpacas that share the area with the vicuñas.

This unit is formed by the Reserva Nacional de Fauna de Ulla Ulla (RNFUU) and the surrounding areas with populations of vicuña. The protected area was created in 1972 through Law 10070, and in 1977 was recognized by UNESCO as a biosphere reserve. This represents a category compatible with the management of natural resources. The management plan provides for the experimental use of the vicuña. As a complement, because of its character of a protected area, it offers facilities and guarantees for basic and applied research.

The local population has expressed interest in participating actively in the management of the vicuña. The local authorities are members of the RNFUU management committee, which is the organ for discussion, monitoring and follow-up of the work being carried out in the protected area and which has the responsibility for decisions on the organization and planning of activities.

The Reserva Nacional de Fauna de Ulla Ulla is by far the best known area, in which protection and monitoring were begun more than 30 years ago. Between 1965 and 1999, there were regular population surveys (see table 5) that show a continuous increase in population, slightly faster than in the earlier years. According to data from the past three years, this population is apparently stabilizing.

The area occupied by the vicuña has increased. In fact, vicuñas have expanded towards the foothills in the cordillera, as well as toward areas near the reserve in which vicuñas were absent only a few years ago, primarily in neighbouring Peru. There are 25 local communities and approximately 7,000 families that benefit from the use of the vicuña.

In 1999, the reserve began to benefit from the additional support for the next five years of the Agencia Española de Cooperación Internacional (AECI) through the Programa ARAUCARIA for training local communities in the management of the vicuña and in the organization of the Asociación Regional de Manejadores de Vicuña. This assistance will ensure implementation of activities of supervision, regulation and monitoring of the vicuña populations.

Centro Piloto Mauri-Desaguadero

This centre is located in the department of La Paz, near Lake Titicaca, which creates a less harsh climate because of the moderating effect of the lake. The local communities raise llamas, sheep and cattle and to a lesser degree practice agriculture. There, a large population of vicuñas moves about among the cultivated fields and as far as the foothills on the border with Peru.

Frequent population surveys of the vicuña have been made since 1981 (see table 5) which, similar to the case of the other unit, show a constant increase in population. In the areas of influence of the pilot centre, the increase of vicuñas is the result of the natural migration of populations.

The pilot centre now has 18 game wardens and 50 communal guards for monitoring and protecting vicuña populations. In the pilot centre, there are approximately 150 local communities distributed in three provinces.

For the year 1999, training courses are being carried out on the management of vicuñas and the organization of the Asociaciones Regionales de Manejadores de Vicuña, with assistance from the Unidad Ejecutora del Proyecto Camélidos (UNEPCA) and implementation by the Unidad de Vida Silvestre of the DGB.

Centro Piloto Sud López

This pilot centre is located within the López-Chichas unit in southern Bolivia in the department of Potosí on the border with Argentina, where the main economic activities are mining and the raising of llamas and sheep on relatively poor natural pastures. There has been an excellent recovery of vicuña populations, and this is one of the poorest areas in Bolivia, because of less direct productive activity, which is limited to the production of wool and modest mineral extraction because of the low market price of the minerals.

The increase observed comes from the inclusion of new sites in the most recent survey carried out by the game wardens. This explains the rapid growth observed in relation to the other two pilot centres.

Of the three centres, this is the poorest area and includes 14 rural communities. Because it is a poor area, the former PROQUIPO and other institutions support the formation of regional associations of breeders of ruminants for the production of llamas on a commercial scale. This also makes possible the purchase of equipment and material for capturing and shearing vicuñas.

2.4 Population trends

Table 2 shows the increases in domestic population resulting from an increase in vicuñas and from the gradual incorporation of new areas into the system of protection. (Between 1996 and 1999 there was an increase of 11,318 specimens.)

Before the 1996 national survey, reports existed on the presence of vicuñas in areas not included in the records of the DGB. These reports came from local inhabitants and officials interested in protecting the vicuña as a resource. To the extent that there is a budget to carry out a new census at the national level, this information will be checked and incorporated in the Unidades de Conservación y Manejo de la Vicuña.

2.5 Geographic trends

As is shown in map 2 on distribution, the potential area for the presence of vicuñas is estimated to be approximately 10 million hectares (INFOL, 1985); much greater than what is currently the area occupied by this species (3 million hectares). It is hoped that the opening of legal trade will favourably reduce pressure on the displacement of the vicuña to marginal areas in order to avoid competition with domestic livestock. Nonetheless, it will never be possible to occupy all of the area because there are settlements, cultivated fields and other types of land use incompatible with the presence of the vicuña.

On the other hand, the Programa Nacional de Conservación de la Vicuña provides for the possibility of repopulating areas using populations that have reached an equilibrium, by moving them toward areas that were formerly available to vicuñas and that no longer have them.

As mentioned, the data available on the area in the conservation units with vicuña are imprecise, but as advances are made in the managed use of the vicuña information will increase. The mapping of the information from the survey and the process of registering the vicuña populations and the local communities responsible for trusteeship will make it possible to follow geographical trends closely.

2.6 Role of the species in its ecosystem

The vicuña, like the other species of domesticated ruminants, the llama and the alpaca, has evolved in adapting to the high Andean ecosystems because of the secondary production capacity under the extreme conditions of this region. The form of its upper lip allows it to select what it eats and to cut leaves without tearing out the rooted plants as occurs with introduced livestock (sheep). Furthermore, its hoofs have pads in the toes that do not damage the soil as occurs with the hoofs of the other ungulates.

Its use combined with current promotion programmes for the raising of ruminants will make it possible to replace part of introduced livestock with vicuñas and create an alternative for the recovery of soils and habitat. This will have favourable consequences for other very threatened species that share the vicuña's habitat such as the long-tailed chinchilla (*Chinchilla lanigera*), the Andean cat (*Oreailurus jacobita*), the north Andean deer (*Hippocamelus antisensis*), Darwin's rhea (*Rhea pennata*) and the condor (*Vultur gryphus*), listed in CITES Appendix I, as well as several Appendix II-listed species.

2.7 Threats

There are three main types of threats: illegal hunting, competition for land use and the attraction of markets in neighbouring countries. In order to reduce these threats, it is planned to authorize legal use under controlled conditions and to guaranty access to the international market.

An important threat is poaching. Reports from the game wardens reveal isolated cases of hunting of 3 to 20 specimens. It is thought that this is a question of survival and not a practice carried out by groups associated with smuggling or large-scale illegal trade.

Although the characteristics of land tenure mentioned in paragraph 2.2.2 are advantageous for the natural evolution of this species, it is also a risk, because major environmental limitations lead to more intense competition between the vicuñas and the agricultural activities for use of the space. Along these lines, an increase of vicuña populations under conditions of a total ban represents an important threat, because this causes increased disturbance of local inhabitants, who prefer domesticated livestock because it provides direct benefits.

Authorization for the sustainable use of vicuña by the government of Bolivia should be associated with elimination of the CITES zero export quota, because this will be the only way to guaranty to the local population that it will be possible to have access to the international market and obtain tangible benefits from the vicuña.

3. Utilization and Trade

3.1 National utilization

Traditionally, the use of vicuña wool was restricted to the Incas or chiefs, who had extremely fine clothes made from them. Its use during the Inca period was quite limited (Torres, 1992).

Today in Bolivia, however, this tradition is still partially in use, but it is common to see the "jilacatas" or "mallcus" (the traditional authorities) and other important persons differentiated by the use of vicuña ponchos and shawls.

This use has now also been extended to the authorities established by the government. In some of the celebrations of patron saints and folkloric events, there are women ("cholitas") seen wearing articles in vicuña.

These products are manufactured by hand on a small scale from the spinning of the wool to weaving, producing high-quality products. In spite of its cultural importance, the local market is very small. At the present time, wool is obtained illegally from animals that are killed (by poaching) or found dead.

3.2 Legal international trade

There is currently no international trade from Bolivia because there is no authorization to trade in vicuña products, plus the fact that the vicuña populations are listed in CITES Appendix I.

There has been export only of live specimens for repopulating within the framework of the Convenio de la Vicuña and CITES, namely the export of a donation of 77 vicuñas to Ecuador in 1993.

The current stocks of wool and skins are: 3.0 kg of high quality, 6.0 kg of medium quality and 6.5 kg of low quality wool. All of this comes from the experimental shearing carried out at the Estación Experimental de Patacamaya, where there are 62 vicuñas in semi-captivity.

The following wool was obtained from the shearing of live animals at the pilot centres of Ulla Ulla and Sud Lípez, between 1998 and 1999: Sud Lípez, 6 kg and Ulla Ulla, 22 kg.

A total of 196 whole skins, 89 medium-sized skins, 25 skins from juveniles and 83 pieces of skin are held at the Reserva Nacional de Fauna Ulla Ulla. Ten skins are held by the Direction General de Biodiversidad (adults and juveniles), and 200 skins are at the Reserva Nacional de Fauna Eduardo Avaroa.

These skins were obtained from animals that died from natural causes, accidents or illegal hunting.

3.3 Illegal trade

No accurate information is available on illegal trade.

There are no reports of confiscation of vicuña products from Bolivia in application of CITES regulations. There is small-scale smuggling, primarily in the personal effects of tourists. No existence of large-scale smuggling exists.

The traditional use described in paragraph 3.1 encourages domestic illegal trade in light of the current ban in Bolivia, but it is difficult to regulate because of deep-rooted cultural traditions.

3.4 Actual or potential trade effects

Current market trends for South American ruminants and products show a preference for breeding stock, rather than for finished products. In other words, there is a market for breeding stock in consumer countries. Any export of breeding stock is impossible in the case of the vicuña, however, because the signatories to the Convenio de la Vicuña have agreed to prohibit the export of fertile specimens outside the range States. In this way, these countries will be the only producers of wool for the international market.

The positive effects are the possibility of offering an alternative to improve the living conditions of the local inhabitants, increase protection, reduce the impact on the populations through live shearing and the possibility of intensifying the regulation of domestic use of vicuña products.

The main negative effect of trade comes from the risk of increasing the killing of vicuñas for trade in neighbouring countries mentioned in paragraph 2.7.

As already stated, the vicuña can live in very marginal areas for agriculture and on the other hand produce one of the finest wools in the world. These two facts combined with the abject poverty of the local inhabitants who live in the areas with vicuñas, require that an economic alternative be found to improve the living conditions of the local population on the altiplano and in the high Andes.

The action plan prepared by ruminant specialists of the IUCN recognize that "...the long-term conservation of this species will be possible only if tangible benefits are provided to the local communities on whose land the vicuña are found." (Torres, 1992).

If to this we add that the proposal is based on use through the shearing of live animals, in other words, it does not require the killing of specimens, the impact will be positive on all sides. Currently, in spite of the use of less wool, a greater impact is produced because it is based on the killing of animals.

By allowing authorized legal use, it will be possible to intensify the regulation of illegal use. As was indicated, this responds in large part to deep-rooted cultural beliefs of the local population, which can be managed only when there is an alternative of legal use.

3.5 Captive breeding

The existence of a captive breeding operation in Great Britain has been reported, but there is no detailed information on its characteristics or operating conditions. No new breeding operations will probably be started because the range States have signed the Convenio de la Vicuña, which in Article 4 prohibits the export of fertile specimens.

4. Conservation and management

Management of the conservation of biological diversity in Bolivia has improved significantly in recent years, especially in the fields of setting policy, approval and implementation of norms and administration of biological resources.

The structural reforms made in Bolivia since 1993 have introduced debate about natural resources in public policy and have created the possibility in the provincial administration for setting up processes that reward the management and sustainable use of resources of biological diversity.

In 1993, the Ministerio de Desarrollo Sostenible y Medio Ambiente (MDSMA) was created as the agency responsible for the management of all renewable natural resources. Within this ministry, the Secretaría Nacional de Recursos Naturales y Gestión Ambiental (SNRNGA) has the responsibility of identifying natural resources and of studying and monitoring the activities that affect the environment by applying incentives and sanctions and by promoting participation and local training on the wise use of natural resources.

The Direction General de Biodiversidad (DGB) is the technical branch of the Viceministerio de Medio Ambiente, Recursos Naturales y Desarrollo Forestal that drafts and implements policies for the conservation of biological diversity. This agency has drafted and is responsible for implementation of the Programa Nacional de Conservación de Vicuña (PNCV).

The competent authority at the regional level in Bolivia for the conservation of biological diversity is the Direction Departamental de Medio Ambiente y Recursos Naturales, which in turn is responsible to the regional governments.

The government of Bolivia has concentrated on fulfilling two policies for the conservation of the vicuña:

- The creation of conditions for the sustainable use of this species, using the shearing of live animals, with the participation of local communities, with the intention of promoting local participation in the sustainable use of this resource. It has been decided to provide local communities with alternatives for improving their standard of living.
- The protection and repopulation of the vicuña within and outside the protected areas.

4.1 Legal status

4.1.1 National

Among the most important legislation relative to the conservation of wildlife are:

- The **Ley del Medio Ambiente** (Law 1333, passed in 1992), providing for the obligation of ensuring the sustainable use of authorized species, based on technical, scientific and economic information. At the same time, this law establishes competent agencies to regulate, check and apply procedures and requirements, including the authorization of use or bans whenever necessary.
- The **Ley de Vida Silvestre, Parques Nacionales, Caza y Pesca** (Law 12301, passed in 1975). At the time when it was approved it did not incorporate some of the more recent terms and concepts. Nonetheless, it is based on the principle of sustainable use and the obligation of the government to regulate and administer the use of wildlife resources.

In light of the authority granted by these dispositions in 1990, the government passed Decreto Supremo No. 22641 which declares a complete and indefinite ban on the killing of all wildlife species and sets forth that it can be lifted only through legislation indicating the species and conditions that have led to the lifting of this step.

Under this legislation, a draft regulation for the conservation and management of the vicuña was prepared and approved by Decreto Supremo No. 24529 (March 1997). This regulation contains the following general provisions:

- Declares that the vicuña is a species of wildlife and as such constitutes a natural heritage within the government's jurisdiction. Its conservation is of cultural, social, economic and ecological interest. This confirms what is stated in the constitution and the environmental law.
- Grants to the local communities trusteeship of existing vicuñas in the areas under communal jurisdiction for their protection and recovery. It recognizes the effort and the dedication with which local communities have defended this resource.
- Concedes to these local communities the exclusive right to the use of the vicuñas under their trusteeship. In other words, no person or institution can request authorization to use the vicuña. Only the local communities that exercise trusteeship of the vicuñas within their power can be authorized to use the wool from live shearing and within the norms established by regulations.

- Trusteeship does not imply that the government cedes its property rights to the local community over the vicuña populations. The vicuñas continue to be the property of the government which, in turn, entrusts the local community with their care.
- Contains articles requiring that the use of the wool be carried out under the following conditions: a) the use of vicuña wool is to be used for the benefit of local communities, but without neglecting respect for the conservation of biodiversity; b) the shearing of live specimens of vicuñas and the transformation of wool into cloth is authorized only for experiments, for a minimum period of two years (1997-1999); c) experimental shearing is authorized only for wild populations at designated pilot centres within the three vicuña conservation and management units of Ulla Ulla, Mauri-Desaguadero and Lipez-Chichas; d) after the minimum period of two years of the experimental stage and if the acquired experience is sufficient, the commercial use of the wool can begin and new areas incorporated in the process; e) use will be strictly regulated as provided for in the regulations; and f) all other activities related to the pursuit, capture, shearing, hunting, transport, trade and any other handling of this species is subject to a ban throughout the country.
- Establishes an institutional framework with jurisdictions, attributions and functions for each of the public and private agencies.
- Creates and sets up the Sistema de Vigilancia de la Vicuña and the Registro Unico de la Vicuña.

This regulation has been made compatible with current legislation in the other range States, complementing agreements signed within the framework of the Convenio de la Vicuña.

Under Decreto Supremo 25458 of 21 July 1999, the general and indefinite ban established by Law 22641 was ratified, modifying Articles 4 and 5 of this law, which establishes the lifting of the ban for a specific species through ministerial resolution, reducing in this way the relative paperwork.

There are other legal provisions that do not apply specifically to wildlife but that are very important for the conditions under which management must be carried out. These are:

- The **Ley de Descentralización Administrativa** (Law 1654) attempts to deconcentrate executive power at the level of each of the nine departments in Bolivia and provides resources for promoting regional development, making it possible to link the municipal governments and the departmental administrations with the national government, and to encourage greater participation of the departments in the achievement of the strategic objectives of national development.
- The **Ley del Instituto Nacional de Reforma Agraria** (Law 1715, passed in October 1996) modifies and updates the 1953 agrarian law. This law broadens the economic and social concept and function of land defining it as "... the sustainable use of land for the development of agriculture, forestry and other productive activities, as well as those of conservation and protection of biodiversity and those of research and ecotourism, taking into account their capacity for greater use, in benefit of society, the general interest and that of the owner." In this way, the persons who use part or all of their agricultural property for purposes of conservation will not lose the right to ownership of the land. In other words, their land will not be subject to redistribution. This law also provides for the need to regulate and monitor land use, in support of the preparation and implementation of the Planes de Uso del Suelo (PLUS).
- The **Ley de Participación Popular** (Law 1551, passed in 1994), among other provisions, recognizes the traditional social organizations, granting them legal status and power to intervene in the public sector. This disposition is in agreement with the reform of Article 1 of the constitution of Bolivia, which defines Bolivia as federal, republican, multiethnic and multicultural. This determines that it is possible to create

management mechanisms based on traditional organizations and concepts which remain in force, in spite of the many years since Spanish colonization.

- The **Ley Forestal** (Law 1700 of July 1996) created the Sistema de Regulación de los Recursos Naturales Renovables (SIRENARE) as the operational agency responsible for the granting of rights for the use of renewable natural resources and the regulation of the fulfilment of the regulations established for the exercise of these rights. This system provides for a Superintendencia Forestal y Agraria, which has already been established. In the draft law on Conservación de la Biodiversidad (now being considered by congress), it is proposed to create a specific agency. This organ has only a technical operational role and is separated from the political and regulatory authority, which is the Ministerio de Desarrollo Sostenible y Medio Ambiente. This will make it possible to avoid having a single institution as both judge and party to lawsuits; a situation that has caused serious problems in Bolivia in the past.

4.1.2 International

In 1969, Bolivia and Peru signed the Tratado de La Paz, which was later converted into the current Convenio de la Vicuña of indefinite duration. The signatories are all the range States with natural populations of vicuña, that join efforts to promote conservation of this species. The Convenio de la Vicuña forms a basic international instrument for the conservation of this species.

Initially, the convention was oriented to the strict protection of the vicuña in order to allow recovery of populations that were in serious danger of extinction in all countries. As a result, of its application, vicuña populations have remarkably recovered throughout its range. This has led the signatories to gradually begin the process of using the fibre.

This convention is a means of monitoring, but, above all, a means of co-operation and exchange of experiences for strengthening management capacity in each country and improving benefits from the use of this species.

Furthermore, all of the range States have ratified CITES, which regulates all activities of use and international trade. Bolivia has taken important steps in the past few years to improve the application of this Convention.

4.2 Species management

The government of Bolivia's policy is to promote the use of vicuña wool through the management of natural populations and from the shearing of live animals. This requires significantly strengthening the social and administrative organization for the monitoring of populations and control of current legal dispositions.

The experience of Bolivia in the capture and shearing of animals is gradually increasing, using technology developed in other countries, especially in Peru.

For these reasons, vicuña management activities have placed emphasis on improving administrative capacity for organization and procedures and not so much on experimental shearing, which is considered to be well known.

In accordance with the Reglamento de Conservación y Manejo de la Vicuña, emphasis is being placed on registering areas of communal management and in the organization of Asociaciones Regionales de Manejadores de Vicuña. So far, it has been decided to form initially an association in Ulla Ulla, four associations in Mauri-Desaguadero and one in Sud Lípez, and then in other regions in the country.

4.2.1 Population monitoring

Monitoring of vicuña populations is being carried out under the monitoring subprogramme of the Programa Nacional de Conservación de la Vicuña. Monitoring consists in permanent

evaluation of the vicuña and its habitat, providing adequate and timely information for taking decisions on the management of populations.

The permanent monitoring of this species is one of the main management concerns, especially now that the use phase has begun.

Monitoring of populations is based on the following measures:

1. The local communities responsible for the custody of vicuña populations are beginning to register them, taking into account the geographical environment of the jurisdiction of the organized local community and of the vicuña populations.
2. The Ministerio de Desarrollo Sostenible y Planificación through ministerial decree will declare areas with natural populations of vicuña under custody of one or more local communities as an Área de Manejo Comunal (AMC). It records the name of the AMC, its limits, the number of animals there and the name of the communities responsible for this area.
3. Game wardens designated by the ministry and communal guards designated by the communities handling the vicuña, with technical support of the departamental governments, will carry out regular follow-up of vicuña populations, making monthly reports on the number of vicuñas and the conditions in which they are living.
4. Once a year, if there is provision in the budget, the Direction General de Biodiversidad, in co-ordination with the departamental government and with the support of game wardens and communal guards will carry out a survey, total or by sampling, in order to determine variation in size and structure of the population.
5. All information will be processed and analyzed in the Registro Unico de Vicuña (RUV) that annually provides information necessary for defining protection requirements and authorization of use quotas.

Responsibility for periodical studies will be delegated to the five departamental governments within the framework of administrative decentralization. This measure represents an important increase in the operating capacity of the government for the regular monitoring of vicuña populations that until now has been carried out from La Paz for the rest of the country.

4.2.2 Habitat conservation

The Programa Nacional de Conservación de la Vicuña is developing based on the management of natural populations and has no plans for any captive or semi captive breeding activity. Maintenance and improvement of the natural habitat is a basic requirement and three types of steps are planned:

- Vicuña management plans (PMV), which will be prepared for each Área de Manejo Comunal (AMC), provide for designation of zones for the administration of territory, guarantying sustainable use of the vicuña and compatibility with other activities and conservation of the habitat.
- The Planes de Uso del Suelo (PLUS), prepared at the departamental level, follow the same principles and designate the space necessary for the vicuña on a larger scale. The importance of the PLUS is their regulatory character and their mandatory nature. There already are five PLUS approved in the country in the departments of Beni, Cochabamba, La Paz, Pando and Santa Cruz.
- Several programmes that include steps for the recuperation of ecosystems on the altiplano have already begun; for example, the Programa Nacional de Lucha contra la Desertificación y la Sequía (PRONALDES), sponsored by the United Nations, and the Plan de Action Forestal para Bolivia, sponsored by FAO and other agencies.

The AMC system of registration will make it possible to identify land tenure in areas with vicuñas and possibilities of finding areas that remain government property under the responsibility of the local communities.

4.2.3 Management measures

The overall management of vicuña in Bolivia is based on the Programa Nacional de Conservación de la Vicuña. This programme has a use subprogramme.

The development of use of the vicuña in Bolivia is based on the gradual incorporation of populations in the productive process. Activities began in the three authorized pilot centres permitted to carry out trials and develop management capacity, with the intention of expanding later to other range areas. Shearing activities, which will make it possible to make adjustments to regulations and procedures, will begin in these areas, before applying them to new areas.

Use of vicuña wool is allowed only from natural wild populations through live shearing. After registering the communal management area, in accordance with what is laid out in point 4.2.1, the local communities in the pilot areas can join the process of use, which includes the following steps:

1. Preparation of a five-year Plan de Manejo de la Vicuña (PMV), with support from the DGB and community participation. The PMV will have the following points:
 - a) Management objectives for vicuña populations
 - b) Description of the AMC, area, boundaries and registration number
 - c) Description of the environment and the community participation, specifically in the management of pastures, livestock and crops
 - d) Size, structure and distribution of the vicuñas and an analysis of its population dynamics and habitat
 - e) Proposal for zoning the area indicating the uses assigned to each space, taking into account the management of vicuña, cattle raising, farming and other activities
 - f) Planing of monitoring activities to be implemented by the community
 - g) Planing of monitoring activities for the periodic evaluation of population status and the habitat
 - h) Planing of use activities, including the number of animals sheared, dates, selection and washing of the wool and health measures to be applied
 - i) Description of other activities, especially agricultural and livestock raising, to be carried out in the areas and their compatibility with the management of vicuña
 - j) Proposal for the distribution of benefits and investment in the conservation of vicuña
 - k) Economic studies
 - l) Other activities complementary to the management of the vicuña such as ecotourism and research
2. Organization of the economy of the communities for the management of use, processing and marketing.
3. Experimental shearing and promotion of training for a greater number of local inhabitants.
4. Transformation of wool into cloth in order to test quality and register a trademark.

5. Shearing for international trade in cloth. Organization of the selling of the wool to textile companies for the manufacture of cloth.
6. Sale of cloth and distribution of benefits among the communities.

These activities will not be carried out simultaneously in all pilot areas. It is planned to incorporate the vicuña populations gradually into the productive process. This will depend on strict monitoring of population status for decision taking.

The Programa Nacional de Conservación de la Vicuña is financed by the Unidad Ejecutora del Proyecto Camélidos (UNEPCA) for training and organization of associations.

4.3 Control measures

4.3.1 International measures

At the domestic level, the capacity for implementing CITES has been reinforced through training activities and the production of teaching materials. A plan has been prepared for training Customs officials in the recognition of CITES-listed species.

Steps are being co-ordinated at the level of the vicuña convention. Furthermore, the government of Bolivia has the obligation to present periodic progress reports and reports on the results of shearing activities, processing and sale, as well as population status to regular meetings of the technical and administrative commission of the Convenio de la Vicuña.

4.3.2 Domestic measures

At the present time, there are 38 game wardens and 70 communal guards, and monitoring capacity has been strengthened in the protected areas (Ulla Ulla, Sajama and Eduardo Avaroa). A process of promoting awareness for better conservation and management of the vicuña has begun. Within this process, special attention has been given to the promotion of the application of CITES through the use of teaching material. Public officials and the national police are being trained for Customs inspections and the identification of specimens subject to CITES regulations.

Likewise, contacts for the signing of conventions have been established that will create procedures for the participation of local government and the armed forces in the regulatory process.

The Sistema de Vigilancia de la Vicuñas (SVV) has the following provisions:

- Game wardens designated by the DGB, responsible for guarding and monitoring the populations in each protection area.
- Communal guards, designated by the communal officials, are responsible for the caring and co-operate with the work of the game wardens in each area of protection or area of communal management.
- Park wardens are responsible for the regulation and protection of vicuña populations found in the protected areas.
- The national police and the armed forces (FFAA) will back up inspection, confiscation and other activities in rural areas and cities.
- Customs inspectors will check CITES documentation at entry points and airports.
- The DGB, as technical advisor to the CITES Management Authority, is responsible for the regulation and co-ordination of the activities of all participants in the Sistema de Vigilancia de la Vicuña.

5. Information on Similar Species

Vicuñas are clearly distinguished from the domesticated species of llama and alpaca. The closest species is the guanaco, apparently absent from the Bolivian altiplano, although in a personal communication, the director of the Reserva Ulla Ulla reports having seen three guanacos during a survey of vicuñas. There are unverified reports of its presence in the south, outside of the areas concerned by this proposal.

6. Other Comments

The requirements of Resolution Conf. 8.21 of the 8th meeting of the CITES Conference of the Parties has been complied with. This resolution recommends that all proposed amendments to the Appendices be made in consultation with the range States for that species. As a result, at the XVIII meeting on the vicuña, a proposal was presented which obtained the backing of the signatories. (See resolution 197/98 in the appendix).

7. Additional Remarks

Summarizing the information in this document, it is considered that the following socioeconomic considerations justify the proposal:

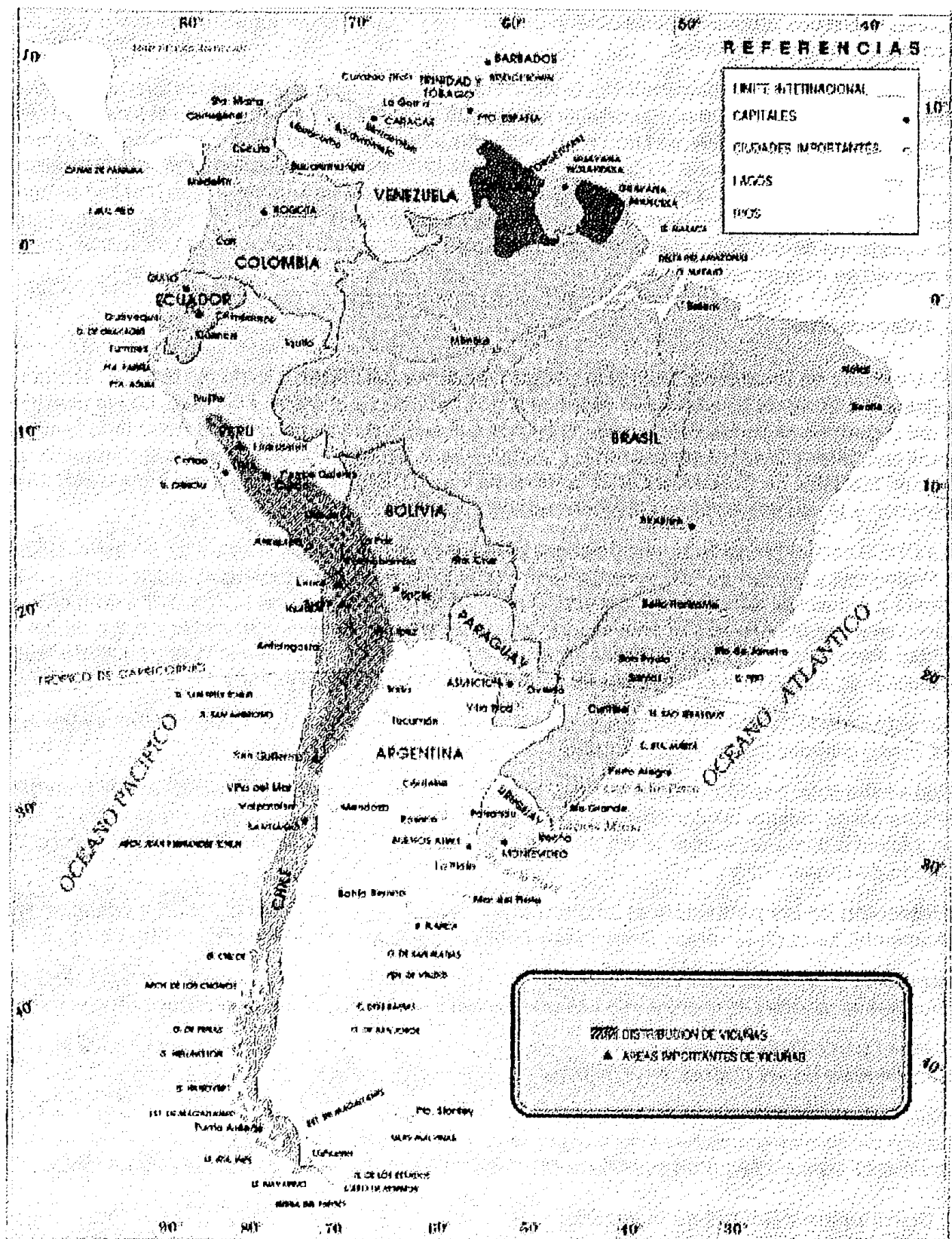
- In Bolivia, like in the other range States, the vicuña's distribution coincides with areas where the local inhabitants live in poverty and where most of the land is marginal for agriculture and livestock production.
- The information provided by the surveys and periodic studies since 1980 show a continuous increase in vicuña populations throughout the country. A large part of the success in the recovery of these populations is the result of the effort and commitment of local communities, who do it with the expectation of obtaining tangible short-term benefits.
- Initiation of use activities in Peru and Chile has generated high expectation in the local communities, increasing pressure to begin use in Bolivia.
- In addition, the increase in vicuña population has produced an increase in competition between the vicuña and other farming and live-stock raising activities that share the habitat. This situation will quickly become untenable if the expectation of obtaining economic benefits from the vicuña continue to be delayed.
- It is urgent to give a clear signal to the communities that after the use phase, marketing will begin. This signal should also show that there exists the possibility of gaining access to international markets for vicuña products.

The approval of regulations for the use of the vicuña adopted by the government of Bolivia should be backed up by the transfer to CITES Appendix II of the remaining 30 per cent of the vicuña populations still in Appendix I.

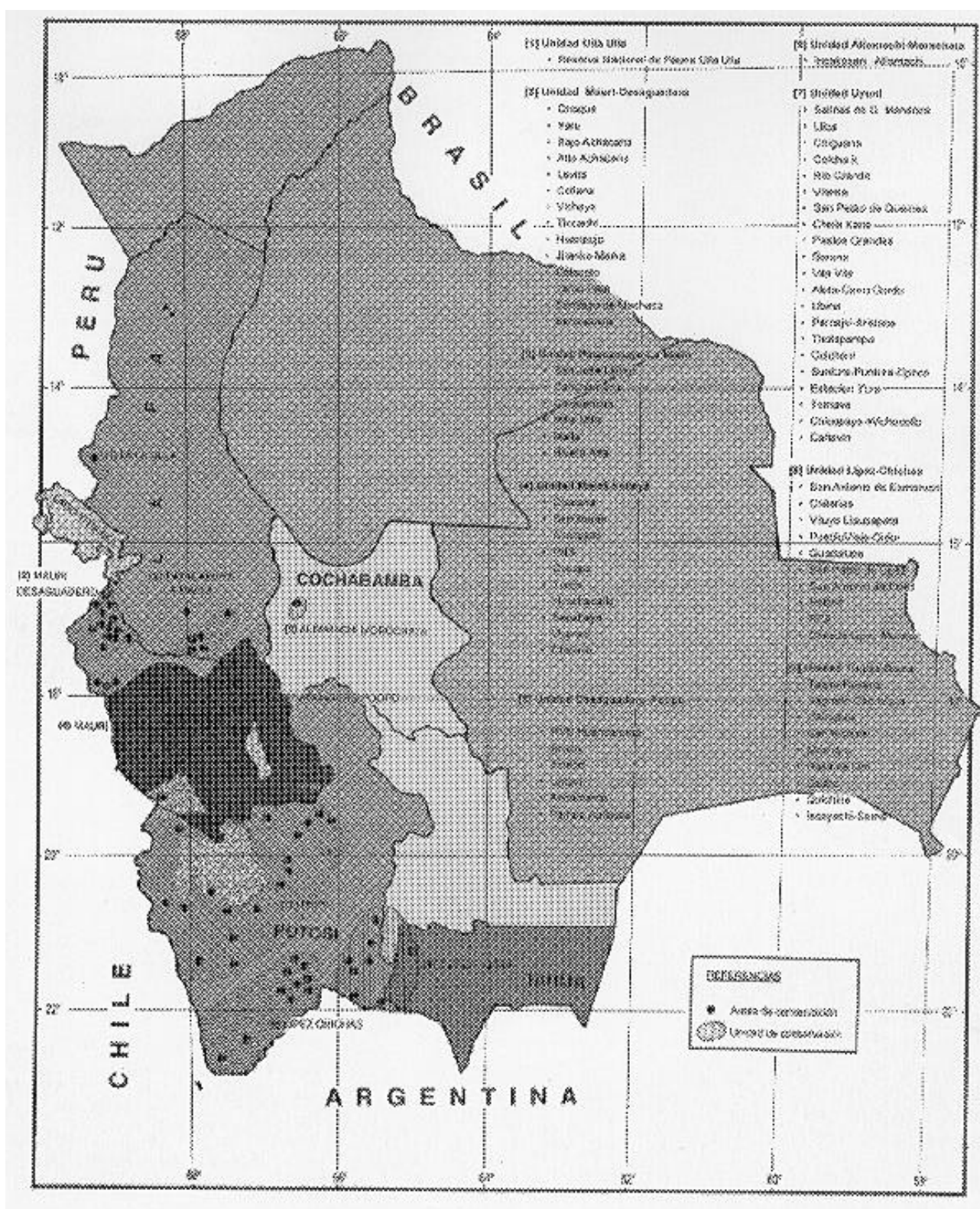
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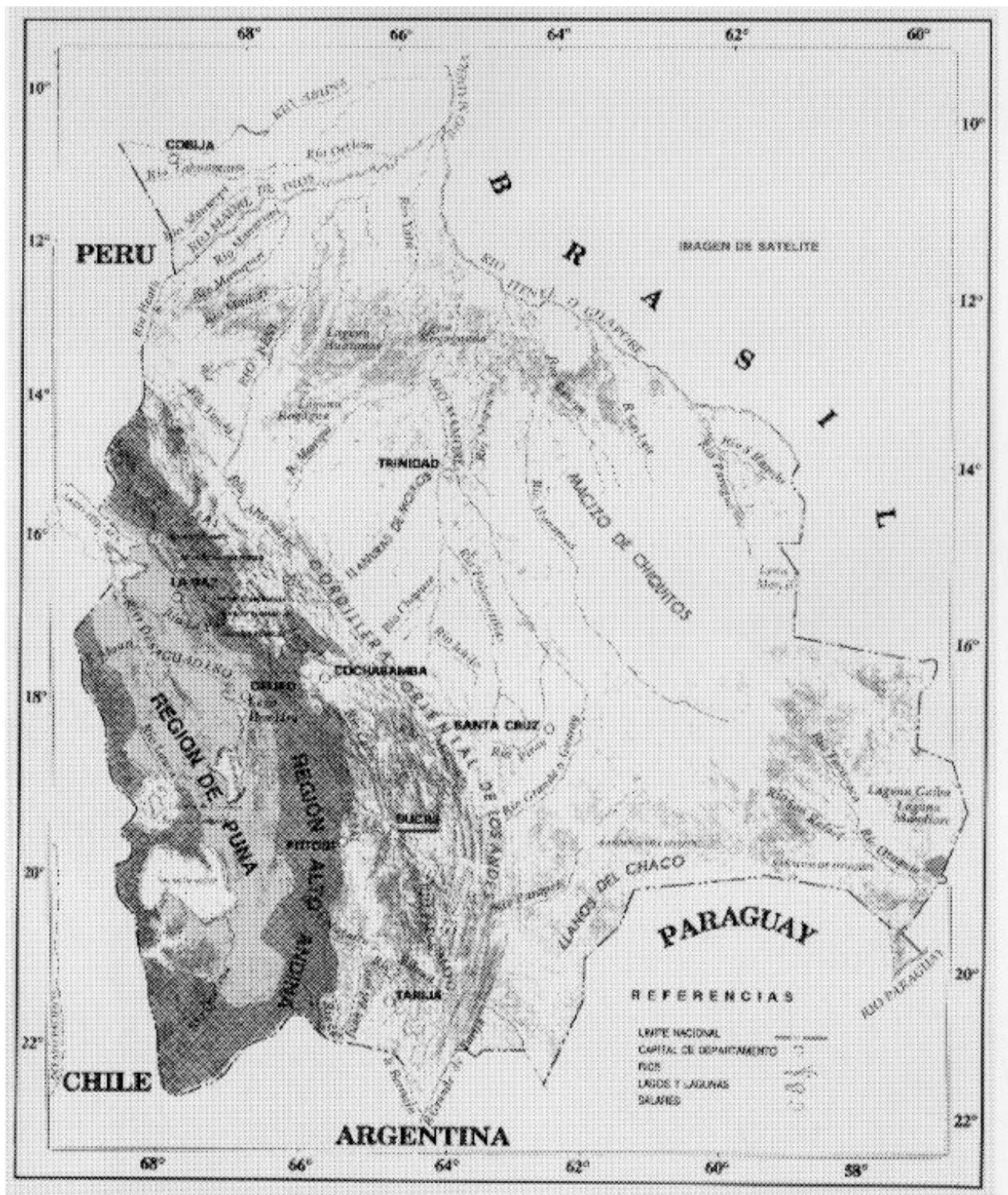
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Map 1. Habitat of vicuña in South America



Map 2. Distribution of vicuña in Bolivia



Map 3. Regions Alto Andina and Puna in Bolivia