

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Fourteenth meeting of the Conference of the Parties
The Hague (Netherlands), 3-15 June 2007

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Amendment of the annotation to the Bolivian population of *Vicugna vicugna* as follows.

Replace the existing text:

Population of Bolivia (listed in Appendix II):

For the exclusive purpose of allowing international trade in: a) wool and products derived therefrom sheared from live animals of the populations of the Conservation Units of Mauri-Desaguadero, Ulla Ulla and LÍpez-Chichas; and b) products made from wool sheared from live animals of the rest of the population of Bolivia. The reverse side of the cloth must bear the logotype adopted by the range States of the species, which are signatories to the *Convenio para la Conservación y Manejo de la Vicuña*, and the selvages the words 'VICUÑA-BOLIVIA'. Other products must bear a label including the logotype and the designation 'VICUÑA-BOLIVIA-ARTESANÍA'.

All other specimens shall be deemed to be specimens of species included in Appendix I and the trade in them shall be regulated accordingly.

With the following text:

Population of Bolivia (listed in Appendix II):

For the exclusive purpose of allowing international trade in wool sheared from live vicuñas, and in cloth and items made thereof, including luxury handicrafts and knitted articles.

The reverse side of the cloth must bear the logotype adopted by the range States of the species, which are signatories to the *Convenio para la Conservación y Manejo de la Vicuña*, and the selvages the words 'VICUÑA-BOLIVIA'. Other products must bear a label including the logotype and the designation 'VICUÑA-BOLIVIA-ARTESANÍA'.

All other specimens shall be deemed to be specimens of species included in Appendix I and the trade in them shall be regulated accordingly.

**XXV MEETING OF THE
TECHNICAL COMMISSION ADMINISTERING THE VICUÑA CONVENTION
(COMISION TÉCNICO ADMINISTRADORA DE LA CONVENIO DE LA VICUÑA).
Quito, Ecuador. November 2006**

RESOLUTION No. 294/06

WHEREAS:

Resolution No. 281/05 of the Vicuña Convention acknowledged and assessed the proposal to amend the CITES annotation to be presented by the Republic of Bolivia at the next meeting of the Conference of the Parties to CITES, for authorization of a single mode for the domestic trade in vicuña wool and derived products, relating to of all of the populations thereof;

Furthermore, during this Ordinary Meeting, the Republic of Bolivia repeated its decision to present at CITES CoP14 its proposal to amend the current annotation in the terms set forth in Resolution 281/05 of the Convention, to which end it has included the documents supporting said proposal in its national report for the present Ordinary Meeting of the Convention;

THE COMMISSION

HEREBY RESOLVES TO:

Endorse the final proposal to amend the CITES annotation that the Republic of Bolivia presented at this Meeting of the Convention, to be submitted at CITES CoP14.

(Four signatures)

B. Proponent

Bolivia

C. Supporting statement

1. Taxonomy

1.1 Class: Mammalia

1.2 Order: Artiodactila

1.3 Family: Camelidae

1.4 Genus, species or subspecies, including author and year: *Vicugna vicugna*, Molina 1872

1.5 Scientific synonyms: none.

1.6 Common names:

English:	Vicuña
French:	Vigogne
Spanish:	Vicuña
German:	Vikunja
Aymara:	Huari
Quechua:	Vicuña

1.7 Code numbers:	CITES	A.119.004.002.002
	ISIS	5301419004002002001
	FAO	1.19.031.001
	RDB-1	19.123.2.1.V

2. Species characteristics

2.1 Distribution

2.1.1 Distribution in South America

The vicuña inhabits the high Andes of southeastern Peru, western Bolivia, northeastern Chile and northwestern Argentina (San Martín and Bryant, 1987), a region that lies between latitudes 7° and 34° south (Hofmann, 1971), between 3,800 and 4,600 m above sea-level (Glade, 1982). Temperatures in this region range between 5°-15° C and -18° C, with a low concentration of oxygen and very dry, variable humidity during the dry season and very high humidity during the rainy season (Calle, 1982). However, at the present time the vicuña's distribution extends between latitudes 9° 30 and 29° 00 south (Torres, 1992).

Two geographical subspecies have been described (Torres, 1992): the southern vicuña, *Vicugna vicugna vicugna* (Molina, 1872), is found south of the 18° south parallel and is larger and lighter in colour than the northern vicuña, *Vicugna vicugna mensalis* (Thomas, 1917). However, the taxonomic differentiation is not definitive, which is why, during the seminar on "Populational, Morphological and Genetic Characterization of the Vicuña" (*Caracterización poblacional, morfología y genética de la vicuña*), the countries signing the Vicuña Convention agreed to use the term 'geographical breeds' (MACA, 1989).

2.1.2 Distribution in Bolivia

The distribution and number of vicuñas is affected by human settlements (cities, communities and farms), the presence and numbers of domestic livestock, the type of native meadows and the presence of bodies of water (rivers, lakes, etc.).

In Bolivia, the vicuña is distributed over the Altiplano and high Andean region of the departments of La Paz, Oruro, Potosí, Cochabamba and Tarija, between 3,800 and 5,000 m above sea-level, and may even extend into part of the department of Chuquisaca, according to information yet to be confirmed on the ground (personal communication). The range is between latitudes 14° 42' and 22° 54' south and 64° 50' and 69° 38' west (Map 2). This region covers 167,000 km² (Alzerreca, 1982), of which the vicuña currently occupies 34,283.56 km², with the net habitable area for the vicuña calculated as 99,703.72 km² (National Biodiversity Conservation Department (*Dirección Nacional de Conservación de la Biodiversidad* – DNCB), 1997).

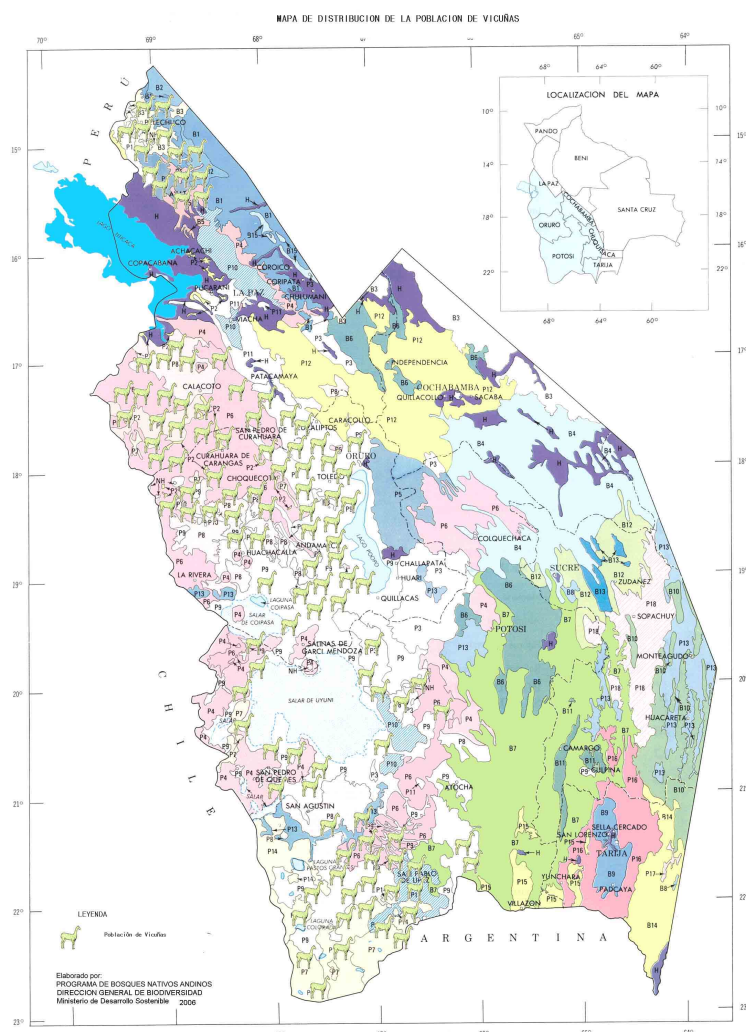
In general, the vicuña is found on land where communal ownership still exists, meaning where there are fewer cultivated parcels of land relative to the amount of natural pastureland.

In the northern Altiplano, the vicuña shares its habitat primarily with alpaca and sheep.

In the central Altiplano, it coexists with llamas, sheep, cattle and alpacas, and in this area Andean crops are grown, such as potatoes, *cañahua*, barley and oats. And in the southern Altiplano, it coexists with llamas and sheep, or else has exclusive use of the habitat (DNCB, 1997).

On a preliminary basis, the presence of the two geographical breeds has been confirmed and described: the northern breed, recorded in the northern and southern Altiplano up to latitude 20° south, approximately, in the departments of La Paz, Oruro, Cochabamba and part of Potosí, with the point of transition to the southern breed located on the southern Altiplano, in the departments of Potosí and Tarija.

Map 1. Distribution of the vicuña in Bolivia



2.2 Available habitat

2.2.1 Description of natural environment

Andean region

The high Andean region comprises the eastern cordillera, which have higher humidity, and the western, which surrounds the Altiplano plateau. It extends between 4,200 and more than 5,000 m above sea-level. This region has very low temperatures, with frost year-round, and low precipitation (less than 700 mm), generally in the form of snow or hail. The eastern cordillera may have one to four dry months per year and, in the desert regions in southern Potosí, every month is dry.

High Andean wildlife is characterized by a paucity of species, a fact even more obvious because of the region's proximity to the Yungas (warm valleys), one of the species-richest regions of the world.

Among the characteristic species are the condor (*Vultur gryphus*), the suri or lesser rhea (*Pterocnemia pennata*), the cougar (*Felis concolor*) and the Andean cat (*Oreailurus jacobita*). There are abundant freshwater lakes to the north and saltwater lakes to the south, which are home to abundant birdlife, such as the flamingo. There are three species of flamingo: *Phoenicoparrus jamesi*, *Phoenicoparrus andinus* and *Phonicopterus*

chilensis as well as the *choca de copete* or horned coot (*Fulica cornuta*). This region is characterized by the beauty of its landscapes.

Puna region

The Puna corresponds to the Altiplano plateau, with altitudes ranging from 3,700 to 4,200 m above sea-level. Humidity decreases as one travels north to south, and the area divides into a humid puna and a dry one, with variations in the average annual precipitation of 700 mm to the north and some 50 mm or less to the south. Moreover, vegetation is similar to that of the high Andean region, with pastures of tough Gramineae growing in clumps and formations of *thola* bushes. To the south, the influence of soil salinity is evident from the presence of halophilic species.

2.2.2 Land use in vicuña protection areas

The landholding and social organization conditions of rural communities have made it possible for vicuña populations to develop with relative freedom.

The Aymara and Quechua rural communities maintain a solid community structure that, among other things, makes it possible to plan land use, delineating areas for grazing and farming, which are defined each year by the community on a collective basis.

Current conditions for the protection and use of the vicuña, in tandem with population growth, mean that countrymen perceive the vicuña as competing with domestic livestock for limited food supplies.

2.3 Vicuña population status

2.3.1 International

Based on the data presented in the reports from meetings of the Technical Commission Administering the Vicuña Convention, the current size of vicuña populations in the different countries has been compared to that of 1981 (Table 1). Here one may see that the vicuña populations in Argentina, Bolivia, Chile, Ecuador and Peru total **306,680** animals, which indicates progressive increase, both regionally and generally, compared to 1981, when there were 82,534 animals.

Table 1. Size of Vicuña populations in South America

Country	Population in 1981	% of total	Population in 2006	% of total	Source of vicuña population data
Argentina	8,155	10	50,100	16.35	Report- XVIV meeting (Jujuy, Argentina 2005)
Bolivia	4,493	5	62,869	20.52	Report- XVV meeting (Quito, Ecuador 2006)
Chile	7,990	10	16,351	5.34	Report- XVV meeting (Quito, Ecuador 2006)
Ecuador	0	0	2,683	0.88	Report- XVV meeting (Quito, Ecuador 2006)
Peru	61,896	75	174,377	56.92	Report- XVIV meeting *** (Argentina 2005)
TOTAL	82,534	100	306,680	100.00	

Source: Prepared by the Directorate-General for Biodiversity and Protected Areas (*Dirección General de Biodiversidad y Áreas Protegidas*) 2006

*** Estimated at 8 % for population growth, not including redoubling.

2.3.2 Vicuña population status in Bolivia

As a result of the Vicuña Convention, the population of this species has recovered throughout its range. In 1965, 1,097 vicuña were recorded while, in 1981, the vicuña population increased to 4,493 (Table 1). Table 2 shows the increase that occurred between 1996 and 2006.

The increase recorded between the 1966 and 2006 management years is 57,122 animals, due both to the increase in the vicuñas themselves and in the extent of the vicuña protection areas.

Table 2. Number of vicuñas in Bolivia 1996-2006

Protection Area Management and Conservation Units	Vicuña 2001	Vicuña 2002	Vicuña 2004	Vicuña 2005	Vicuña 2006
I. Ulla Ulla Unit	8299	8599	10280	10135	10350
II. Mauri Desaguadero Unit	14117	13677	14708	15405	15405
III. Patacamaya La Malla Unit	487	547	708	736	736
IV. Mauri Sabaya Unit	7084	7015	6851	7369	7810
V. Desaguadero Poopó Unit	2126	3682	5577	5895	5895
VI. Altamachi Morochata Unit	790	790	790	790	790
VII. Uyuni Unit	3460	3704	3564	3643	3643
VIII. Lipez Chichas Unit	18297	18297	15470	15722	16078
IX. Tupiza Sama Unit	1423	1594	1730	1920	2162
TOTAL	56083	57905	59678	61615	62869

Source: National Programme for the Conservation and Sustainable Use of Vicuña (*Programa Nacional para la Conservación y Aprovechamiento Sostenible de la Vicuña* – DGBAP)

2.4 Population trends

Vicuña populations are distributed over the departments of La Paz, Oruro, Potosí, Cochabamba and Tarija.

2.5 Geographic trends

As shown on Map 1, the potential area for the presence of vicuñas is estimated at 99,703.72 km² (DNCB, 1997); much larger than the area currently occupied by this species (34,283.56 km²). Due to the ongoing increase recorded in the animal population and the scope of the habitat, it may be concluded that the Altiplano provides room for the numbers of vicuña to continue increasing.

Taking censuses and including new vicuña management communities for the protection and sustainable use of the species, with the new laws that facilitate the access by the native peoples and communities, will make it possible to determine the scale of geographical trends.

2.6 Role of the species in its ecosystem

The vicuña, like the other species of domesticated camelids, the llama and alpaca, has evolved to adapt to the high Andean ecosystems. The shape of its upper lip allows it to select what it eats and to bite off leaves without tearing up the rooted plants, as occurs with introduced livestock (sheep). Furthermore, its hoofs have pads on the toes that do not damage the soil the way the hoofs of other ungulates do.

The ecological, economic and social importance of the vicuña makes it a key species within the high Andean ecosystem, and it may be considered an 'umbrella' species since actions taken to protect it have also served, in general, to protect wildlife such as the Andean cat (*Oreailurs*

jacobita), the *taruca* or north Andean deer (*Hippocamelus antisensis*), the *suri* or lesser rhea (*Pterocnemia pennata*) and the condor (*Vultur gryphus*), listed in CITES Appendix I, as well as other species in Appendix II.

2.7 Threats

Threats to wild populations of the vicuña, by degree of severity, are: poaching, natural predators and diseases transmitted by external parasites (DGBAP, 2006).

2.7.1 Poaching

In Bolivia, poaching and local markets exist where wool and handmade products made from vicuña wool are traded. Both activities are illegal and are part of a complex situation caused by different factors ranging from competition for food between domestic species and vicuñas to the extreme poverty of some rural and native communities.

Figure 1. Vicuña attacked by dogs (11 November, 2006)



Source: Vicuña Programme – DGBAP 2006

However, the greatest problem related to poaching is due to the **indifference** of the Vicuña Management Communities (*Comunidades Manejadoras de Vicuñas*), as they have not seen favourable economic results from the capturing and shearing work carried out over eight years.

In some areas, there are many domestic dogs that hunt vicuñas, on the pretext of scaring away the vicuñas that eat the forage of domestic animals, as shown in the photo to the left.

Hunting is for profit and is done by groups of hunters who market vicuña wool at various locations where other fibres and wool are sold.

Illegal hunting of the vicuña is the starting point for the illegal trafficking, both domestic and international, of vicuña wool, with little control at Customs and border stations.

To a certain extent, attempts have been made to stop this illicit and increasing activity by giving custody of the vicuñas to the rural communities, together with the exclusive right to make use of them.

2.7.2 Predators

Due to its opportunistic feeding habits, the cougar (*Felis concolor*) has been classified historically as vermin preying on livestock of the Altiplano sector. Producers' complaints show that the cougar's predation of domestic camelids is growing every year, which means that the vicuña population must be suffering greater unreported damage.

The fox (*Pseudolopex culpaeus*) is another natural predator that primarily affects vicuña young, whose death toll is unrecorded.

Figure 2. Vicuña killed by predators



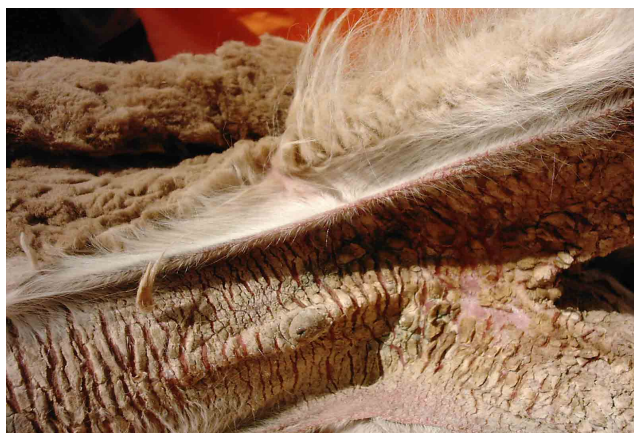
Source: Vicuña Programme – DGBAP 2006

There are no quantitative estimates of the impact that these predators have on vicuña populations. For domestic livestock, reports are extremely high, given that in one night a cougar may kill between eight to 12 camelids of different ages in order to teach hunting to its own offspring.

2.7.3 External parasites

Morbidity/mortality in vicuñas is caused by external parasites, primarily by scabies (*Sarcoptes* sp.). The greater incidence can be noted in vicuña that are shorn. In the department of Oruro, covering the municipality of Santiago de Andamarca and those of San Andrés de Machaca, Provinces Ingavi of the department of La Paz, the presence of disease has been observed in some 3 to 5 % of the captured population.

Figure 3. Photograph of vicuña with *Sarcoptes* sp. in the ventral region



Source: Vicuña Programme – DGBAP 2006

3. Utilization and trade

3.1 National utilization

To begin marketing vicuña wool in its different forms – raw, pre-combed and combed wool, yarn and/or cloth – vicuña wool obtained from shearing live animals, listed in CITES Appendix II, is being collected and stored.

Bidding for a total of 791,835 kilos of vicuña wool is planned, to be marketed according to procedures established in the Mechanism for Marketing Vicuña Wool set forth in Supreme Decree No. 28593.

Table 5. Wool stored from 1998 to 2006

REGION	TYPE OF WOOL							TOTAL BY REGION	
	FLEECE FROM THE TRUNK			FLEECE FROM THE LIMBS, TAIL AND HEAD		PRE-COMBED			
	No	(Kg)	%	(kg)	%	(kg)	%	(kg)	%
ARCMV – APOLOBAMBA	2,584	352,755	48.48	21,690	43.13	13,990	100	388,435	49.06
ARCMV – PN SAJAMA	657	136,545	18.77	14,490	28.82		0	151,035	19.07
ARCMV - LIPEZ	135	58,055	7.98	705	1.40		0	58,760	7.42
CMV – MAURI DESAGUADERO	633	136,855	18.81	0	0.00		0	136,855	17.28
ARCMV – QURI QARWA	295	43,350	5.96	13,400	26.65		0	56,750	7.17
TOTAL	4,304	727,560	100.00	50,285	100.00	13,990	100	791,835	100.00

Source: National Programme for the Conservation and Sustainable Use of the Vicuña (*Programa Nacional para la Conservación y Aprovechamiento Sostenible de la Vicuña* – DGBAP), 2006

Hides

There is a stock of vicuña hides obtained during various activities involving capture and shearing of vicuñas that die and others recovered from animals that have died of natural causes or parasite-related diseases. Many of the hides were burnt, with a record of their destruction being made by the Legal Department of the Ministry, and the rest was stored in its warehouses.

3.3 Illegal trade

Because there is an illegal trade in vicuña wool (from animals killed by firearms), carried out at popular fairs or markets, and because the trade is camouflaged by the sale of wool from domestic camelids (llama and alpaca), obtaining data on the amount of illegal wool sold is very complicated and difficult.

There are ongoing actions on the part of departmental governments (Prefectures) and the local police to stop poachers, but these are ineffective due to the fact that rural communities do not provide information, or refrain from collaborating with the relevant authorities in identifying the hunters, since they do not receive benefits from the presence of the vicuña in their communal areas.

3.4 Actual or potential trade impacts

Positive effects relate to the possibility of making vicuña an alternative to improve the living conditions of native and rural inhabitants, increasing protection, reducing the impact on the populations (through shearing of live animals rather than killing) and potentially intensifying the control of domestic use of vicuña products.

Since use based on shearing live animals in the wild does not entail the removal of individuals (the impact of which would be negative), mortality is minimal and care for the animal's well-being is relatively good, with a tendency to improve. Thus a lower impact is achieved when usage is based on capturing, shearing and returning the animal to its natural environment.

Through the new legal provisions, the way is opened for legally-authorized use in different modes of marketing, thereby making it possible to reduce the illicit trade in wool and handcrafted products. Therefore, rural communities and native peoples organized as Vicuña Management Communities that receive economic benefits will become conscientious guardians of the vicuña; moreover, sheared vicuñas will not be attractive to poachers.

3.5 Captive breeding

In Bolivia, the trend is towards conservation and sustainable use of the vicuña in the wild.

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, approving and implementing legal provisions and managing biological resources.

In 1993, the Ministry for Sustainable Development and the Environment (*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 National Department for Natural Resources and Environmental Management (*Secretaría Nacional de Recursos Naturales y Gestión Ambiental* – SNRNGA) was given the role of identifying natural resources and evaluating and directing the activities that affect the environment, by application of incentives and sanctions and promotion of local training and participation, aimed at the rational use of natural resources.

In February 2006, with the new Executive Branch Organization Act (*Ley Orgánica del Poder Ejecutivo* – LOPE), the Directorate-General for Biodiversity and Protected Areas (DGBAP), a technical branch then under the Vice-Ministry for Biodiversity, Forest Resources and the Environment (*Viceministerio de Biodiversidad, Recursos Forestales y Medio Ambiente*) came under the Ministry for Rural Development, Agriculture and the Environment (*Ministerio de Desarrollo Rural, Agropecuario y Medio Ambiente* – MDRAYMA). This department is responsible for implementing the National Programme for the Conservation and Sustainable Use of the Vicuña (PNCASV). At the departmental level, the conservation of biological diversity is the responsibility of the Departmental Offices for the Environment and Natural Resources (*Direcciones Departamentales de Medio Ambiente y Recursos Naturales*).

The Government of Bolivia has focused its efforts on directly supporting, as one of its central elements, the sustainable use of biodiversity, thereby accomplishing two points of the policy for vicuña conservation:

- The creation of conditions for the sustainable use of this species, based on the shearing of live animals, with the participation of local communities, directed towards promoting local participation in the sustainable use of this resource. Additionally it is intended to make this resource an alternative for local communities to improve their standard of living.
- The protection of the vicuña inside and outside the protected areas.

4.1 Legal status

4.1.1 National

The principal legal provisions governing wildlife conservation include:

- The **Environment Act** (*Ley del Medio Ambiente* – Law 1333, enacted in 1992), establishing the obligation to ensure the sustainable use of the authorized species, based on technical, scientific and economic information. At the same time, this law provides for control and monitoring by the relevant authorities.

This law includes approval for the **Mechanism for the Marketing of Vicuña Wool and General Guidelines for the Species Programme** (*Mecanismo de Comercialización de Fibra de Vicuña y Lineamientos Generales del Programa de la Especie* - Supreme Decree No. 28593 of January 17, 2006). This law contains the following, general provisions:

- It declares that the vicuña is a wildlife species and, as such, constitutes a part of the natural heritage under the Government's jurisdiction. Its conservation is of cultural, social, economic and ecological interest. Thus, this law ratifies the provisions of the constitution and the Environment Act.

- It grants rural communities the custody of existing vicuñas in areas under communal jurisdiction with a view to their protection and recovery. Thus, this law acknowledges the effort and dedication with which the communities have defended this resource.
- Use of vicuña wool through the shearing of live animals constitutes an alternative for improving the income of the Andean peoples and a way of ensuring the survival of the species.
- The rural communities living in the vicuña's range are the principal parties responsible for the resurgence of the populations of this species and they therefore deserve, as just compensation, to be the beneficiaries of their use.
- It grants authorization to market the wool sheared from live vicuñas, in any of its various forms: **raw wool, pre-combed, combed, yarn and/or cloth.**
- With regard to certification and issuance of a CITES certificate, it indicates that all wool to be marketed must have the **Certificate of Origin** stating that the wool gathered was sheared from live vicuñas within the framework of the Programme. This Certificate shall be issued by the proper national authority.
- All products prepared using vicuña wool, marketed both domestically and abroad, must have the marks and labels stipulated in the Vicuña Convention, CITES and the National Programme for the Conservation and Sustainable Use of the Vicuña.

4.1.2 International

In 1969, Bolivia and Peru signed the La Paz Treaty, which subsequently became the current Vicuña Convention, which has an indefinite term. The signing countries are all those having native vicuña populations and that have joined forces to preserve the species. Thus, the Vicuña Convention constitutes an essential international instrument for the preservation of the species.

By virtue of the Agreement and on the basis of its quality of multilateral cooperation, the Bolivia Commission endorsed the Agreement to amend the CITES annotation at its XXV Ordinary Meeting. Resolution 294/06 is part of this proposal.

4.2 Species management

The Bolivian Government's policy is to promote the use of vicuña wool through the management of natural populations and through the shearing of live animals. This policy significantly strengthens social and administrative organization for monitoring populations and supervising compliance with legal provisions in force.

4.2.1 Population monitoring

Ongoing monitoring of the species is one of the principal concerns of the National Programme for the Conservation and Sustainable Use of the Vicuña, especially now that the way has been opened for capturing and shearing vicuñas by establishing Vicuña Management Communities.

Monitoring of populations is based on the following measures:

- a) Vicuña Management Communities are responsible for the custody of vicuña populations within their geographical jurisdiction. They record these populations during capture and shearing.
- b) Game wardens from the Prefectures having vicuña populations, SERNAP park rangers and community monitors appointed by Vicuña Management Communities provide ongoing monitoring and tracking of vicuña populations, making monthly

reports on the number of vicuñas, complaints of poaching and the status of the populations.

4.2.2 Habitat conservation

The National Programme for the Conservation and Sustainable Use of the Vicuña operates on the basis of the management of native populations and has no plans for any captive or semi-captive breeding activity.

4.2.3 Management measures

Vicuñas in Bolivia are managed on a comprehensive basis according to the National Programme for the Conservation and Sustainable Use of the Vicuña. Use of vicuña wool is only allowed in natural wild populations through the shearing of live animals. Vicuña Management Communities, after completing registration of their communal management area, may join the utilization process.

4.3 Control measures

4.3.1 International trade

On the domestic level, the ability to implement CITES has been reinforced through training and the production of teaching materials. There are plans to implement a programme to control and monitor the vicuña population and its by-products beginning in January 2007.

4.3.2 Domestic measures

When vicuña wool is sold, the Prefectures, through the established Vicuña Units, will draw revenues equal to 5 % of the transaction amount, which will allow them to implement better control and local monitoring.

In addition, the more than 100 community monitors of the Vicuña Management Communities, in the process of sustainable use, will be supported through training in control and monitoring. Within this process, special attention will be given to increasing awareness of the scope of CITES.

The Directorate-General for Biodiversity and Protected Areas (DGBAP) is responsible for regulating and coordinating the activities of all participants in the Vicuña Monitoring System (*Sistema de Vigilancia de la Vicuña*) as a technical offshoot of the CITES Management Authority.

5. References

- ALZERRECA, H.A., 1982. Áreas de distribución y centros de protección de vicuñas en Bolivia. Comunicaciones de la Vicuña (La Paz, Bolivia) No. 4:13-16
- ARGENTINA, 1998. Evaluación Poblacional de Vicuñas; A ser presentado en la XVIII Reunión Ordinaria de la Comisión Técnico Administradora del Convenio de la Vicuña. Comisión Regional de Provincias Vicuñeras. Pag irr.
- CONACS, 2002. Informe Nacional a la XXI Reunión Ordinaria del Convenio de la Vicuña. Oruro, Bolivia Pag irr.
- CONAF, 2002. Informe de Gestión a la XXI Reunión de la Comisión Técnico Administradora del Convenio de la Vicuña. Oruro, Bolivia.
- DNCB. Censo Nacional de la Vicuña en Bolivia: Gestión 1996. La Paz. 60 p. [Ed.-1997].
- DIRECCIÓN NACIONAL DE CONSERVACIÓN DE LA BIODIVERSIDAD, 1997. Censo Nacional de la Vicuña en Bolivia; Gestión 1996. La Paz, Bolivia. 60 p.
- ECUADOR, 2002. Informe del Gobierno del Ecuador. Oruro, Bolivia pag irr.

- Galaz, J.L. y González, G. (1996) "Conservación y Manejo de la Vicuña en Sudamérica" Actas del I Seminario Internacional Aprovechamiento de la fibra de vicuña en los Andes Argentina, Bolivia, Chile y Perú. Arica - Chile.
- Galaz, J.L. y González, G. (2003) "Plan Nacional de Conservación y Manejo de la Vicuña en Chile" CONAF, Chile.
- GLADE, 1982. Antecedentes ecológicos de la vicuña (*Vicugna vicugna* Molina) para su manejo en el Parque Nacional Lauca. Santiago de Chile, CONAF. 111 p.
- HOFMANN, 1971. Estado Actual de la Vicuña y Recomendaciones para su Manejo. In Conferencia Internacional sobre la Conservación y Manejo Racional de la Vicuña. Lima, UICN /WWF. 118 p.
- Huallata, C.; Viscarra, R.; Rushton, J. y Canedo, M.E. (1999) Priorización de las enfermedades animales en el departamento de Oruro. MAGDR-UNIVEP, Santa Cruz, Bolivia.
- Huallata, C. y Jáuregui, L. A. (2004) "Mecanismo de comercialización de la Fibra de Vicuña en Bolivia" Ministerio de Desarrollo Sostenible/ Viceministerio de Recursos Naturales y Medio Ambiente. Programa Nacional de Biocomercio Sostenible [La Paz- Bolivia; Diciembre].
- INFOL (Ed). 1981a. 2da Reunión de la Comisión Técnico Administradora del Convenio para la Conservación y Manejo de la Vicuña. Arica, Chile - La Paz, Bolivia 1 al 6 de mayo de 1981. 8p. y anexos.
- INFOL. (Ed). 1981b. 1ra Reunión de la Comisión Técnico Administradora del Convenio para la Conservación y Manejo de la Vicuña. Convenio Argentino-Boliviano de Conservación y Preservación de la Vicuña. La Paz, Bolivia, 20-24 de junio de 1981. 11 p. y anexos.
- Ministerio de Desarrollo Sostenible/ Viceministerio de Recursos Naturales y Medio Ambiente. Informe XXII de la Reunión Ordinaria Comisión técnica Administradora del Convenio de la Vicuña: Elaborado por la Dirección General de Biodiversidad [La Paz- Bolivia Septiembre 2003 pags 6: 8].
- Ministerio de Desarrollo Sostenible/ Viceministerio de Recursos Naturales y Medio Ambiente. "Propuesta Preliminar para el diseño del mecanismo para comercialización de la Fibra de Vicuña en Bolivia". [La Paz- Bolivia; Agosto 2004].
- Ministerio de Desarrollo Sostenible/ Viceministerio de Recursos Naturales y Medio Ambiente., Dirección General de Biodiversidad. Fundación Bolivia Exporta –Programa Nacional de Biocomercio Sostenible 2004. Diagnóstico sobre Biocomercio en Bolivia y Recomendaciones para la puesta en marcha del Programa nacional de Biocomercio Sostenible. [La Paz- Bolivia Mayo 2004].
- Ministerio de Desarrollo Sostenible/ Viceministerio de Recursos Naturales y Medio Ambiente. Informe XXIV de la Reunión Ordinaria Comisión Técnica Administradora del Convenio de la Vicuña, Jujuy - Argentina: Elaborado por la Dirección General de Biodiversidad [La Paz- Bolivia Noviembre 2005 pags 6: 12].
- Marconi, M. El Marco Legal para el Manejo de la Vicuña en: Plan de Manejo de Vicuña en ANMIN Apolobamba (2003). SERNAP-ICIB/ANCB (eds.). La Paz. 3 – 7 pp. [Ed.-2002].
- MDSMA, DNCB, CECI. Plan de Manejo de la Reserva Nacional de Fauna Ulla Ulla. La Paz. [Ed.-1997].
- Rushton J.; Viscarra, R.E.; Baptista, R.; Huallata, C.; Viscarra, R.C.; Ordóñez, O. (2003) Las Actividades, éxitos de 2002/03 y los planes por 2003/04. Informe para el proyecto de investigación "Análisis e implementación de vías a favor de los pobres: acciones concertadas en ganadería y pobreza" Universidad de Londres, Reino Unido. 93 pages Villegas, F.; Guerra, M.; Cardoso, G.; Camacho, E.; Rushton, J. Sonco, M. y las comunidades de San Pedro de Buena Vista, Toro Toro-Acasio, Sacaca, Karipuyo (2000) La priorización de las enfermedades animales en la zona norte del Departamento de Potosí. MAGDR-UNIVEP, Santa Cruz, Bolivia.
- Vilá, V. (2006) Investigación, Conservación y Manejo de las Vicuñas. Proyecto MACS – Universidad Nacional de Lujan.
- Villalba, M.L. (1996) DNCB. Programa Nacional de Conservación de la Vicuña. Ministerio de Desarrollo Sostenible y Medio Ambiente.

- Viscarra, R.E.; Rushton, J.; González, A.; López, T. (In Press) Validación de la Prueba Serológica para Sarcocistiosis en Llamas del Altiplano Boliviano. Academia de Ciencias Veterinarias del Perú.
- Viscarra, R.E.; Rushton, J.; González, A.; López, T. (2003) Validation of a Serological Test for Sarcocystiosis in Llamas found in the Bolivian High Andes. Las memorias del 10 Symposium Internacional de Epidemiología y Economía Veterinaria. Viña del mar, Chile, 17 al 21 de noviembre de 2003. No 284 in the CD.
- Viscarra, R.; Huallata, C. and Rushton, J. (2000) Sarcocystiosis in the Bolivian Altiplano – A case study in Oruro. In The Society of Veterinary Epidemiology and Preventive Medicine Web Page.