



Harvest and trade of Vicuña fibre in Bolivia

Introduction: Species, Use and Trade

Vicuña (*Vicugna vicugna*) are wild South American camelids that live in high-altitude Puna and Altiplano (high steppe) regions of Argentina, Bolivia, Chile, Peru and Ecuador. Since pre-Colombian times, vicuña fibre has been an important resource for communities of the region. Vicuña fibre is of extremely high softness and warmth while being light weight, and is particularly valued for high-end luxury clothing.

Vicuña populations were decimated in the middle decades of the twentieth century, suffering uncontrolled and indiscriminate exploitation for trade in fibre. There were no clear user rights at this time, so the population was effectively treated as an open-access resource.

In 1969, Peru and Bolivia agreed to ban all hunting and sale of vicuña for a period of ten years. Later they and other range states agreed the Convention for the Conservation and Management of Vicuna (the Vicuna Convention; 1979), which provides in Article I for use of the species “for the benefit of the Andean people”. This Convention remains an important framework for cooperation among range states on vicuna conservation and management.

Populations have steadily grown across range countries since the late 1960s (see Fig 1). Bolivia holds almost one third of the global population of vicuña, and its population has likewise increased steadily, from approximately 3,000 in 1969 to an estimated 163,331 in 2018 (see Fig 1).

While the vicuña was included in Appendix I of CITES in 1975, national or sub-national populations across the Andes have been progressively downlisted to Appendix II over subsequent years as populations have recovered, allowing for sustainable use and trade. As of 2017, Appendix II includes the whole populations of Ecuador, Peru and Bolivia, certain of Argentina’s populations, and the population of the Primera Region in Chile, with other populations remaining in Appendix I. The species is now listed as Least Concern in the IUCN Red List.

Between 2007 and 2016, global trade in vicuña products (exports from all producer countries) increased by 78% (by volume) with a value in 2016 of approximately USD3.2 million per annum. Italy is the main destination market, and also the major re-exporter of vicuña items sold mainly to China, Switzerland and the US.

Bolivia commenced trade in 2007, after communities had gathered and stockpiled fibre for a number of years, and now accounts for approx. 20% of all exports.

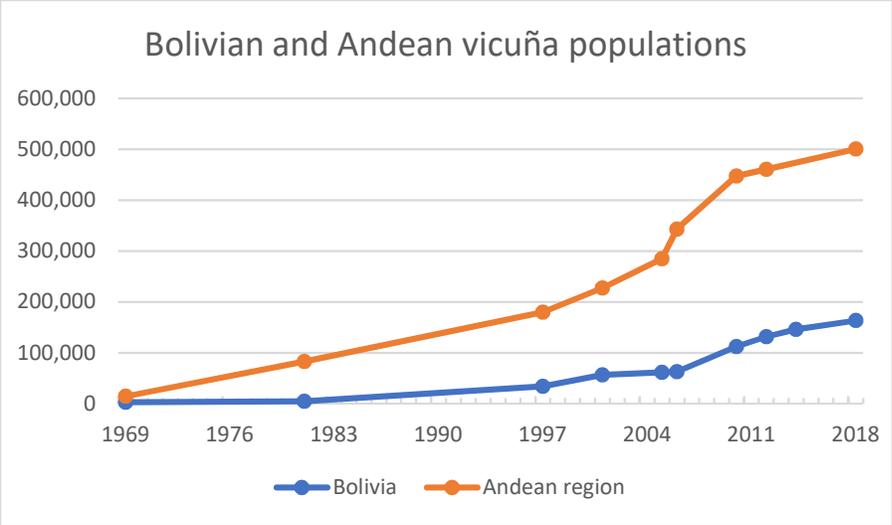


Fig 1. Vicuña population trends in Bolivia and other Andean countries by year (1969 to 2018). Bolivia commenced export of vicuña fibre in 2006. Bolivian data are estimates based on surveys of sub-sets of the total vicuna range, except for years 1996 and 2009 when national censuses were conducted. Population estimates for other countries reflect a range of sources and levels of accuracy: see Acebes et al. (2018). Sources: Acebes et al., (2018); Castillo (2009), Kasterine & Lichtenstein (2018), Lichtenstein et al (2008), MMAyA (2011, 2012a, 2014).

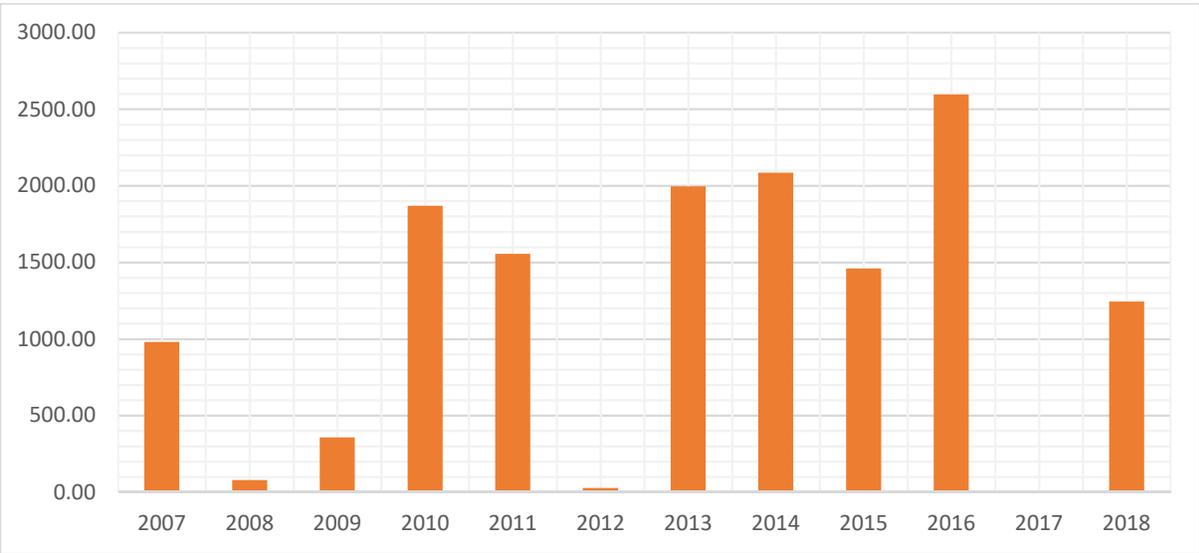


Fig 2: Exports of vicuna fibre from Bolivia (kg). Data from CITES Trade database (exporter-reported values; exporter=Bolivia; source=W; taxon = *Vicugna vicugna*) showing value of trade returned to communities each year. 2017 data removed as likely erroneous. Returns to communities/sale price shown where available.

Despite the impressive population increases under the sustainable use program, poaching remains a threat to vicuña, alongside disease spread from livestock and rangeland degradation due to livestock grazing.

All vicuna fibre from Bolivia is harvested by local rural communities from the wild on their communal lands. While the government officially “owns” vicuña, local communities have been given the legal right to use wild vicuna for shearing the fibre. The income from vicuña harvest is generally complementary to other economic activities such as rearing domestic camelids (alpaca and llama), other livestock such as sheep, or small-scale farming, with some tourism in some areas.

Communities are organised into 100 registered Vicuna Manager Communities (CMVs) authorised to capture, shear and release wild vicuñas, with support from government institutions and NGOs. 87 of these are grouped into 11 Regional Associations of Managers of Vicuña (ARMV), including one Quechua and one Aymara (both indigenous peoples). CMVs capture and shear vicuña each year from September to November. The capture and shearing of vicuña involves a modified form of the *chaku* (chaccu), a traditional practice from Incan times with religious and ceremonial aspects. The chaku involves creating a funnel with nets and wires, into which the vicuna are slowly herded by long lines of people. After shearing the vicuña are released back into the wild.

The fibre is then stockpiled for sale as a single batch across all CMVs, the documentation is assembled, and the government's authorization is requested for the commercialization (sale) of the fiber. A community organisation ACOFIVB is responsible for marketing all vicuña fiber. In April each year, a public invitation is launched to international and national companies to make their offers for the previous years’ fibre. Assuming a buyer is found, the fibre is exported from around May to July. Benefits are then distributed to communities. There is no processing capacity in Bolivia – fibre is exported either to Argentina for processing (and then to Italy) or directly to Italy.

Women participate actively in every stage of the process, and in planning and coordination.

Livelihood Benefits

Vicuna management brings economic and social benefits to communities involved. The number of CMVs shearing fibre varies considerably year to year (see Table 1). While all the families that live in the communities can participate and benefit in the vicuña's management, each year the number involved varies.

Table 1. Number of CMVs actively involved in vicuña harvest, and people participating in vicuna shearing and trade, 2014-2018

Year	No of CMVs	Men	Women	Total people	No. of families
2014	65	10,833	7,195	18,028	3,005
2015	65	10,679	7,280	17,959	2,993
2016	45	5,147	4,377	9,429	1,572
2017	69	8,070	5,571	13,641	2,274
2018	64	5,167	4,275	9,442	1,574

Communities stockpiled vicuna fibre from shearing from 1996 to 2006, before exports were permitted, and first gained benefits from sale of fibre in 2006 and 2007. This direct sale benefitted a total of 1,858 participating families from 28 VMCs. In 2018 the number of active VMCs harvesting fibre had grown to 64 (see Table 1).

Income from sale of vicuña fibre is distributed according as follows:

- 8% royalty payment to the government;
- 3% payment of tax on profits;
- 3% operational costs of marketing to ACOFIVB;
- 85% to benefit families in the communities.

While legal support for the payment of royalties to the government has been questioned, it has to date proved impossible to question or reverse this payment.

In total, communities have gained over USD 3,720,000 (taking purchasing power parity¹ into account, equating to approx. Int\$ 11,535,000) from sale of vicuna fibre from the time community management was started up until 2014.

This constitutes an important source of income to these mountain communities, who are amongst the poorest and most isolated in Bolivia. The vicuña manager communities live in the highest areas (3,800 m to 4,000 m) of Bolivia, where the climate is cold and arid, the habitat is unproductive in agricultural terms, the towns are far from the important cities, basic services are poor, there is little opportunity for income generation, and the population has the lowest socioeconomic indicators in the country. The concentration of income sources in a few activities make communities vulnerable to droughts, frosts or negative drops in the price of products they sell. The collection and sale of vicuña fiber obtained through shearing of wild animals is a complement to other economic activities in this region, with the benefit of stimulating species and habitat conservation and improving social and ecological resilience to climate change and other shocks.

There have been further important natural resource governance and institutional benefits in terms of strengthening communities' claims over land and natural resources, defining their territories, maintaining people on traditional lands rather than migrating to urban areas, establishing the Regional Associations of Vicuña Managers and linkages with other regional associations, and fostering engagement and participation in wildlife management. Communities have through these institutional developments developed much stronger visibility and voice within their national policy and government contexts.

Taking part in management and sustainable use of vicuna has also led to revitalisation of ancient traditions and local knowledge.

The potential to expand these benefits is very considerable. In 2018, at most only 6% of the vicuña population was harvested for its fibre (6,447 vicuñas of a population of at least 112,249, using the most conservative 2009 countrywide census figure). Peru, by contrast, has reached a harvest rate of 20%.

¹ Using PPP conversion factor for Bolivia 2017 of 3.1. See https://data.worldbank.org/indicator/PA.NUS.PPP?name_desc=false&view=map

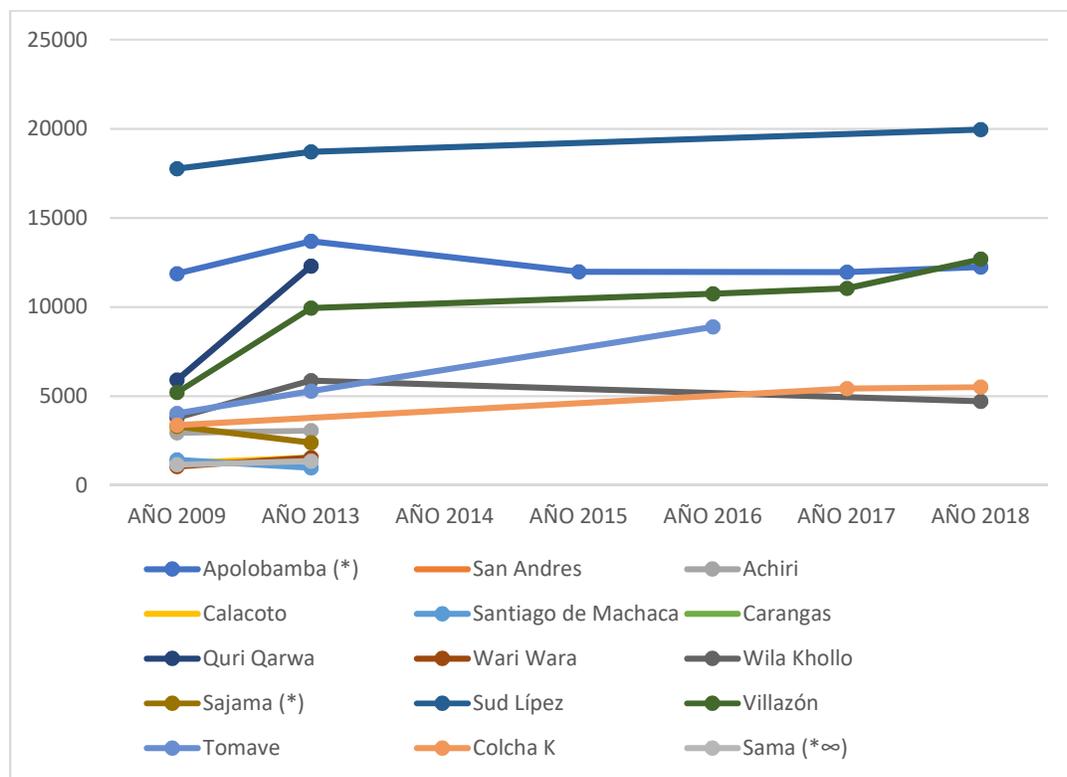
Benefits to these communities could be improved by expanding the number of animals used, adding value to the fiber, and diversifying to complementary wildlife-based activities such as tourism.

The reasons that more communities have not yet participated in managing vicuña fibre include lack of information about the benefits from sustainable use, problems of organization within the communities, lack of tools and materials to carry out the conservation and use of the vicuña, lack of specialized technical assistance, and lack of motivation due to delays in sale of vicuña fibre and return of its benefits to communities.

Without this trade, vicuna manager communities would lose important income, and lose the important role they have developed in wildlife management, along with its associated skills, capacities and culture.

Conservation Impacts

Assigning use rights to communities and enabling them to benefit through international trade has underpinned a conservation success story for vicuña in Bolivia: populations have increased dramatically since this approach was first initiated (Fig 1). At a finer scale, population surveys available for community-managed areas over the last decade indicates that in most, populations continue to increase, although populations have slightly declined over this period in several (see Fig 2), due possibly to poaching, climatic factors, or stochastic fluctuations in generally stable populations.



* these areas are both protected areas and community-managed areas

∞ part of the population is outside of the protected/community-managed area.

Fig 3. Vicuña populations in community-managed areas in Bolivia 2009-2018.

Vicuñas have become an economic asset to local communities, rather than only a competitor for pasture with their livestock, motivating communities to carry out anti-poaching and protection activities. These benefits have spread as benefits from vicuña management have motivated more communities in the Andean region to unite and form additional community associations, get training and manage the vicuña resource. Vicuñas have a level of protection from engaged communities extending over a region that it would be impossible for central governments to effectively police, curbing poaching dramatically from previous levels. There are broader habitat conservation benefits (including for some sensitive habitats such as peatland), and benefits for other flora and fauna.

However, poaching (for fibre) still occurs, and levels have recently increased in response to high prices, relatively weak controls and light penalties. The relatively low numbers (in proportion to the total population) suggests the legal trade of vicuña remains relatively resilient to external shocks, and is successfully “crowding out” or outcompeting the illegal trade. Improved enforcement and penalties are required to safeguard conservation gains.

International trade underpins this conservation model for vicuna and the fragile ecosystems of the Andes, and is vital to its continued success. Without trade in vicuna fibre, communities would lose motivation and the abilities to conserve and manage the vicuna. This would lead to greater poaching and spark renewed decline of a species that was previously approaching extinction.

Lessons Learnt for CITES Implementation: Challenges, Successes and Failures

Harvest and trade of vicuna fibre has reduced poaching from historical levels, reversed decline, and enabled the recovery of vicuna populations in Bolivia, and livelihood benefits underpin these gains.

The work of NGOs and international cooperation has been fundamental to the success of this program, through initiating pilot projects on vicuña management and scaling up approaches. The long-term commitment of government authorities has been important, including through the identification and establishment of an international platform of buyers and supporting the selling process; and provision of technical training to communities in the management of wild vicuñas on animal welfare, disease prevention and improvement of livestock health and production management. Currently, however, there are stakeholder concerns that there is reduced government support for vicuña management, particularly in relation to enabling the work of NGOs and international cooperation in providing technical and financial support.

The program faces a number of other challenges. In certain parts of the country populations have not yet recovered. Some communities have lacked motivation, or lost motivation due to long delays experienced in gaining benefits from harvest of vicuña fibre (often approaching – or over – a year). Poaching has been resurgent in recent years.

This has been exacerbated by the difficulty of Bolivia in applying the changes to the Annotation of the vicuña listing made at CoP 17 in Johannesburg in 2016, particularly section i), which reads "Any person or entity processing vicuña fibre to manufacture cloth and garments must request authorization from the relevant authorities of the country of origin to use the "vicuña country of origin" wording, mark or logo adopted by the range States of the species that are signatories to the Convention for the Conservation and Management of the Vicuña". Implementing this requirement has delayed the commercialization of fiber in the international market by Bolivia for two years, discouraging many communities from continuing to manage the vicuña.

CITES and traceability requirements make permit issue slow, undermining business requirements for reliable delivery – these requirements can impede conservation effectiveness.

Further challenges the program must tackle include:

- Community-based organisations such as ACOFIVB face a regulatory environment (the Commercial Code, the Tax Code and the export regulations) geared toward mainstream commercial companies, which they find difficult to navigate and comply with. As a result, they have faced significant fines and other problems. For example, in 2016, the Registry of Exporters institution annulled the ACOFIVB registry only because that year it had no commercial operation.
- Boosting the voice, institutional strength, bargaining power and technical capacity of communities, and increasing their share of the final value of the product;
- Promoting integrated management of ecosystems including wildlife and livestock management, including avoiding overgrazing and soil degradation, improving pasture quality for vicuna, reducing conflicts between wild vicuña and livestock, disease control, and improving livestock quality while decreasing livestock numbers;
- Addressing ongoing poaching and illegal trade, through increasing benefits to communities, strengthening patrolling, and strengthening environmental regulations; and
- Regulating mining activities in the highlands of Apolobamba, which is damaging peatlands where vicuñas and livestock graze.

Key References

Acebes P, Wheeler J, Baldo J, Tuppia P, Lichtenstein G, Hoces D & Franklin WL (2018) *Vicugna vicugna*. The IUCN Red List of Threatened Species 2018: e.T22956A18540534. <http://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T22956A18540534.en>. [14 March 2019]

Castillo D (2009) Distribución e impacto de los beneficios de la fibra de vicuña. Trabajo dirigido, Facultad de Ciencias Económicas y Financieras, Carrera de Economía, Universidad Mayor de San Andrés, La Paz, Bolivia.

GECS SSC UICN (2015) *La caza furtiva de la vicuña y comercialización ilegal de fibra: un problema que persiste*. News Nro. 5 (Febrero, 2015). Grupo de Especialistas en Camélidos Sudamericanos perteneciente a la Comisión de Supervivencia de Especies de la Unión Internacional para la Conservación de la Naturaleza. Available at http://camelid.org/wp-content/uploads/2016/04/caza_furtiva.pdf [14 March 2019]

Kasterine A & Lichtenstein G (2018) *Trade in Vicuna Fibre: Implications for Conservation and Rural Livelihoods*. Technical Report. United Nations International Trade Centre, Geneva. Available at http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Vicuna_trade_final_Low-res.pdf [14 March 2019]

Lichtenstein G (2010) Vicuña conservation and poverty alleviation? Andean communities and international fibre markets. *International Journal of the Commons* 4(1): 100-121.

MMAyA (2011 – 2017). Annual reports to meetings of the Vicuna Convention. Ministerio de Medio Ambiente y Agua, Viceministerio de Medio Ambiente, Biodiversidad, Cambios Climáticos y de Gestión y Desarrollo Forestal. Dirección General de Biodiversidad y Áreas Protegidas. La Paz, Bolivia.

MMAyA (2012) Estrategia del programa nacional para la conservación y manejo sustentable de la vicuña. Ministerio de Medio Ambiente y Agua, Viceministerio de Medio Ambiente, Biodiversidad, Cambios

Climáticos y de Gestión y Desarrollo Forestal, Dirección General de Biodiversidad y Áreas Protegidas. La Paz, Bolivia.

Wheeler JC (2006) Historia natural de la vicuña. In Vilá B. (ed.). *Investigación, conservación y manejo de vicuñas*. Proyecto MACS. Buenos Aires, Argentina.

Case study prepared by Rosie Cooney, IUCN CEESP/SSC Sustainable Use and Livelihoods Specialist Group, with information submitted by Germán Fernández Villcarana and Hilarión Chugar, Servicio Nacional de Áreas Protegidas (SERNAP), Ministerio de Medio Ambiente y Agua (MMAyA), Dirección de Monitoreo Ambiental (DMA), supplemented with literature review and information supplied by Daniel Maydana. Edited by Rosie Cooney, IUCN CEESP/SSC Sustainable Use and Livelihoods Specialist Group.