

## Transfer of the Ecuadorian population of Vicuña *Vicugna vicugna* from Appendix I to Appendix II

### Proponent: Ecuador

**Summary:** The Vicuña *Vicugna vicugna* is a wild camelid, prized for its fine quality wool. It is native to the high Andes of Argentina, Chile, Plurinational States of Bolivia, and Peru. There is debate over whether the species was originally native to Ecuador or not; no archeological or paleontological evidence has been found to date that Vicuñas historically existed in Ecuador. The current population in Ecuador is derived from animals donated by Chile, Peru and Bolivia in 1988, 1993 and 1999. Three hundred animals were introduced into the Chimborazo Fauna Reserve (585.6 km<sup>2</sup>) and another 57 into 20 km<sup>2</sup> of suitable habitat surrounding the village of San José de Tipín, 70 km south of the reserve. Periodic population surveys have been carried out between 2000 and 2012, with marked increases between each and an overall increase from around 1700 to almost 5000 animals, almost all of these within the Chimborazo Faunal Reserve. In addition to an increase in population size, habitat within the Chimborazo Fauna Reserve has reportedly improved.

The global Vicuña population decreased to a few thousand during the mid-1960s due to over-exploitation, leading to the establishment of the *Convenio para la Conservación y Manejo de la Vicuña* (The Vicuña Convention) in 1969. The species was included in Appendix I in 1975. With improving management, the population has increased and was estimated in 2008 at around 350 000 individuals. Several populations have been transferred to Appendix II—all Bolivian and Peruvian populations and select populations from Argentina and Chile. Each Appendix-II population of Vicuña has been accompanied by an annotation stating that it is for “the exclusive purpose of allowing international trade in wool sheared from live vicuñas”, also stating the products that can be traded and the system with which products will be labelled and that “all other specimens shall be deemed to be specimens of species included in Appendix I and the trade in them shall be regulated accordingly”. The products currently exported from those countries are fleece, fibre, wool, yarn and/or clothes and the main countries of destination are Australia, China, Germany, Italy, the USA and the United Kingdom, with Italy importing over 90% of all Vicuña fibre/products.

A five year FAO-funded project to protect the natural resources of Chimborazo (PROMAREN) began in 2012. Staff numbers in the reserve have increased to 16 park wardens (from only seven in 2011), an environmental education and capacity building programme has been started and meetings have been held with the local communities to discuss the management of the reserve.

Currently in Ecuador the only commercial use of the species is to attract tourists to the Chimborazo Fauna Reserve. The proponents have estimated that sustainable commercial trade of Vicuña fibre and other products derived from Ecuador’s Vicuña population has an annual yearly potential production of 190 kg (from shearing 28% of the 2009 population, namely 886 animals), worth between USD20 000 and USD75 000. Products would be marked “VICUÑA-(Country of origin)-Artesania” as required by the Vicuña Convention. Local communities will be the beneficiaries of any commercialisation of Vicuña fibre/products.

Illegal killing of Vicuña is not currently considered to be a threat in Ecuador, however, conflicts of land use for grazing domestic animals are apparent and ongoing conservation of the introduced and increasing Vicuña population is likely to be reliant on local communities receiving economic benefits from these animals in the near future.

As required under the Vicuña Convention (ratified by Ecuador in 1982), prior to submitting a proposal for transfer of its Vicuña populations from Appendix I to Appendix I, Ecuador has prepared a management plan. This was published by the Environment Ministry in December 2010 and approved by the Ecuadorian Government in March 2011. However, details of the plan are not provided in the supporting statement to the proposal. The plan describes the communities and organizations involved in the programme and methods used for capture and shearing. Planned actions focus on developing institutional and technical capacity (with the support of other Vicuña Convention member countries), carrying out social and ecological research (including annual population monitoring) and strengthening community organisation and participation.

The current proposal does not include any annotation.

**Analysis:** The Ecuadorian population of Vicuña could be considered to have a fairly restricted range and to have a small population, according to the guidelines in Annex 5 to *Resolution Conf. 9.25 (Rev. CoP15)*. However, the population and range have been increasing since the founding animals were introduced in 1988 and the population appears to be neither excessively fragmented nor highly concentrated geographically, nor to show marked fluctuations or be highly vulnerable to extrinsic or intrinsic factors. The population therefore does not appear to meet the biological criteria for inclusion in Appendix I.

Ecuador has stated that its intention is to initiate international trade in products derived from its Vicuña population. The proposal notes specifically that precautionary measures in A 2c of Annex 4 to *Resolution Conf. 9.24 (Rev. CoP15)* will be met. These state that “an integral part of the amendment proposal is an export quota or other special measure approved by the Conference of the Parties, based on management measures described in the supporting statement of the amendment proposal, provided that effective enforcement controls are in place.” However, no quota is stated in the proposal nor are any other special management measures detailed. A management plan has been prepared but has not been included as part of the proposal.

The addition of an annotation similar to those covering the Vicuña populations currently included in Appendix II would bring the proposed listing into line with that of these other populations.

Supporting Statement (SS)	Additional information
<p><u>Range</u></p> <p>Range States of <i>Vicugna vicugna</i> are: Argentina, Plurinational States of Bolivia, Chile and Peru. Ecuador has a (re-)introduced population.</p> <p><u>IUCN Global Category</u></p>	<p><i>Introduced into Ecuador (Lichtenstein et al., 2008).</i></p> <p><i>Least Concern (Assessed 2008).</i></p>
<p><b>Biological criteria for inclusion in Appendix I</b></p>	
<p><b><u>A) Small wild population</u></b>  <b>(i) Population or habitat decline; (ii) small sub-populations; (iii) concentrated geographically during one or more life-history phases; (iv) large population fluctuations; (v) high vulnerability</b></p> <p>In Ecuador, the re-introduction of <i>Vicugna vicugna mensalis</i> started in 1988 with 200 specimens donated from Chile and Peru and then in 1993 another 100 specimens were donated by Bolivia.</p>	<p><i>According to the Ecuadorian report submitted to the Technical-Administrative Commission of the Vicuña Convention in 2011, Bolivia donated only 77 specimens to Ecuador in December 1993. An additional 96 Vicuñas were donated directly to the community of San José de Tipín by the Peruvian Government in 1999. Fifty-seven of the animals survived the quarantine period and were introduced into the surrounding area (Hermida Garcia, 2011).</i></p> <p><i>There is no archaeological or paleontological evidence that Vicuñas ever existed in Ecuador and therefore this could be considered an introduced population (G. Lichtenstein, in litt., 2012).</i></p>

Supporting Statement (SS)	Additional information
<p>Population numbers for 2012 were derived from direct counts of animals over a 22-day consecutive period and individuals were divided into categories according to censuses carried out in Chile. Total sub-population size in Ecuador is currently 4824 individuals. There are 667 family groups composed of 667 males, 2728 females and 475 juveniles (3880 animals in total), 32 “singles” herds composed of 903 animals and 41 solitary animals.</p> <p>Population structure according to numbers of groups is 90% family groups, 4% “singles” herds and 41 solitary animals.</p>	<p><i>Family groups are generally composed of 5–10 animals, with one dominant male and several females and juveniles. Family groups are closed, with immigration generally prevented by the dominant male. Juveniles of both sexes—young males at 4–9 months and females at 10–11 months of age—are evicted from the group by the dominant male.</i></p> <p><i>Eighty per cent of all individuals counted in the 2012 census were living in family groups, 19% in “singles” herds and 1% as solitary animals. Ninety-six per cent of the Ecuadorian sub-population is found within the Fauna Reserve and the largest proportion (44%) in the most isolated area of the reserve—the humid paramo of Razurku—Templo Machay. Only 183 animals (156 in family groups, 26 in “singles” herds and one solitary animal) were found outside the protected area, in the humid paramos of San Jose de Tipin.</i></p> <p><i>The methodology used for the surveys in previous years was not provided. Surveys between 2000 and 2004 were carried out in different months: in October (2000) in January (2004) and in February (2002) (Lasso, 2004). In its CoP10 proposal, Bolivia reported that birthing usually occurred between February and April and a census should be done at least one month after any perinatal deaths had occurred, in order not to over-estimate population numbers.</i></p> <p><i>Total population across all range States was estimated at 347 273 individuals by Lichtenstein et al., (2008). They noted, however, that it was difficult to assess the confidence of the estimate, as data from different countries were obtained using different methodologies.</i></p>
<p><b><u>B) Restricted area of distribution</u></b>  <b>(i) Fragmented or localized population; (ii) large fluctuations in distribution or sub-populations; (iii) high vulnerability; (iv) decrease in distribution, population, area or quality of habitat, or recruitment</b></p> <p>Vicuña were re-introduced into a 20 km<sup>2</sup> area of suitable habitat in San José de Tipín in Chimborazo province and into a protected area of 585.6 km<sup>2</sup>, the “Fauna Reserve”, bordering the provinces of Bolívar and Tungurahua.</p>	<p><i>In Ecuador, the species’s range is restricted to approximately 600 km<sup>2</sup>, comprising two areas 70 km apart. Vicuñas additionally occur at altitudes of 3200 to 4800 m asl in an area of approximately 250 000 km<sup>2</sup> in the Puna and Altoandina biogeographic provinces of Peru, Bolivia, Argentina and Chile (Lichtenstein et al., 2008).</i></p> <p><i>According to the 2011 Ecuadorian report to the Vicuña Convention, the animals donated to San José de Tipín in 2000 were released into an area of 48 ha (0.48 km<sup>2</sup>). This population has extended its range to include Gusay, San José de Tipín, San Juan de Tipín, San Carlos de Tipín, San Vicente de Tipín and Galte Jatun Loma. However, the majority of the population is still found in San José y San Carlos de Tipin.</i></p>

Supporting Statement (SS)	Additional information
<p><b>C) Decline in number of wild individuals</b>  <b>(i) Ongoing or historic decline; (ii) inferred or projected decline due to decreasing area or quality of habitat, levels of exploitation, high vulnerability, or decreasing recruitment.</b></p> <p>Population surveys have been carried out in 2000, 2004, 2006, 2009 and 2012. A percentage increase in numbers ranging from 15 to 50% has been registered for each survey period and overall the sub-population has increased in size nearly three-fold (188%), from 1676 to 4824 individuals between 2000 and 2012.</p> <p>Re-introduction has been considered a success, and in addition to an increase in population size, habitat within the Chimborazo Fauna Reserve has improved, and migration of Vicuña to the altiplano wetlands in the dry season to feed further allows for the regeneration of its ecosystems.</p>	<p><i>~200 animals were originally introduced into the Chimborazo Fauna Reserve in 1988, and another ~100 were introduced in 1993. According to the CoP9 Peruvian proposal, in 1994, 552 specimens were counted in Ecuador. Another 57 animals were introduced to San José de Tipín in 1999, and in 2000 a total Ecuadorian population of 1 676 was counted.</i></p> <p><i>In 2012, 183 animals were counted in San Carlos de Tipín, suggesting that despite being outside a reserve this sub-population has trebled in size over the last 12 years.</i></p>

### Trade criteria for inclusion in Appendix I

#### The species is or may be affected by trade

The Ecuadorian population is currently listed in Appendix I and the only “commercial” use of the species is to attract tourists to the Chimborazo Fauna Reserve. After the down-listing of the Ecuadorian population, sustainable commercial trade of Vicuña fibre and other products derived from this population is envisaged. Products would be marked as required by the Vicuña Convention—“VICUÑA-(Country of origin)-Artesanía”.

The products currently exported from Chile, Argentina, Bolivia and Peru are fleece, fibre, wool, yarn and/or clothes and the countries of import are Germany, Italy, Australia, the USA, China, UK, and Argentina.

The proponents have estimated Ecuador’s potential production from the 2009 census numbers (3197 animals) and current production in other countries. 66% of the animals are captured (2110) and 42% of these (886) are sheared. With an average 215 g of wool obtained from each Vicuña, this would produce 186 kg. Using average 2011 prices from Peru (USD139.35/kg), Bolivia (USD350.95/kg) and Chile (USD385/kilo), a financial gain of between USD19 779.43 and USD65 455.87 has been estimated.

*According to the CITES Trade Database, between 2007 and 2011, direct exports from the four range States with Vicuña populations in Appendix II (Argentina, Bolivia, Chile and Peru) amounted to 18 990 kg of hair, fibres, cloth and skins. In addition, 665/659 individual items and ~100 m/m<sup>2</sup> (garments, clothes etc.) were traded. Italy, Argentina, the UK and Germany were the principal importers, with Italy importing over 90% of all fibre/products. Fibre imported into Argentina from Chile and Bolivia is re-exported to Italy and Germany (G. Lichtenstein, in litt., 2012).*

*215 g obtained from each of the 886 animals would result in total production of 190 kg (presumably per year). Using this figure and minimum (from Peru) and maximum potential prices (from Chile), a larger financial gain between ~USD26 500 and USD73 150 is derived. However, this is gross income and excludes costs associated with management activities, such as investing in infrastructure and ongoing costs such as transport, salaries, capacity-building, etc. (Vila and Lichtenstein, 2006).*

*Lasso (2004) reported that during a pilot project in Ecuador, 4.536 kg of wool was obtained from shearing 23 animals (197 g per animal) and estimated that 300 Vicuñas would produce 60 kg of fibre for commercial use. Shearing in the Chimborazo Fauna Reserve would take place once a year between July and October, with an aim of capturing 70% of the population.*

*Average production according to reports by other Vicuña range States to the CITES Secretariat (the last of these submitted at CoP13 (Doc. 20)) were: Argentina (340 g per animal), Bolivia (169 g–230 g) and Chile (238 g). The proposal does not mention*

Supporting Statement (SS)	Additional information
<p>Ongoing work with communities in all member countries of the Vicuña Convention is leading to a reduction in illegal poaching with guns, and in Ecuador this problem is non-existent.</p>	<p><i>there being any “stocks” of Vicuña wool in Ecuador, unlike those reportedly held in Bolivia and Chile.</i></p> <p><i>In previous transfer proposals by Vicuña range States, illegal poaching was considered a serious problem and Appendix-II listings were deemed necessary to provide an economic incentive to local communities to preserve this species.</i></p>
<p><b>Precautionary Measures</b></p> <p>The proposal notes that the transfer of the population would meet the precautionary measure A 2c of Annex 4.</p>	<p><i>The species is known to be in demand for trade, with all other range States exporting products every year. Annex 4 A 2c requires that “an integral part of the proposal is an export quota or other special measures approved by the CoP, based on management measures described in the SS..., provided that effective enforcement controls are in place”. General management measures are described in the proposal, and there is mention of the development of an action plan for the management of Vicuña in Ecuador as requested by the Vicuña Convention. However, the details of this plan are not provided and it is unclear whether the Vicuña Convention was provided with this at any point.</i></p> <p><i>Specific information on enforcement measures are not provided, apart from the fact that staff capacity to protect the Fauna Production Reserve was doubled in 2011, with there now being one guard per 36 km<sup>2</sup> of reserve area.</i></p>
<p><b>Other information</b></p>	
<p style="text-align: center;"><b><u>Threats</u></b></p>	
<p>In Ecuador there are no reports of poaching of Vicuña and the main threat to the species is road accidents. Since January 2012 there have been 12 registered Vicuña deaths from such collisions and the Government is taking measures to prevent such accidents in the future.</p>	<p><i>Ash from the Tungurahua volcano, which has been erupting since 2000, has resulted in Vicuñas migrating to the south-east of the Chimborazo Fauna Production Reserve and competition between domestic animals grazing on the reserve land and predation by foxes and dogs has been reported (Hermida Garcia, 2011). Vicuñas in other range States reportedly suffer from other threats, including external parasites, such as scabies. The promotion of Pacovicuña (a hybrid resulting from crossing Alpaca and Vicuña), and commercialization of its fibre is also a potential threat (Lichtenstein et al. 2008).</i></p>
<p style="text-align: center;"><b><u>Conservation, management and legislation</u></b></p>	
<p>All Bolivian and Peruvian populations and some of Argentina’s and Chile’s populations have been transferred to Appendix II of CITES at previous CoPs. The Ecuadorian population is currently listed in Appendix I of CITES.</p> <p>Ecuador ratified the Vicuña Convention in 1982. In order to evaluate the potential transfer from CITES Appendix I to Appendix II, member countries of the Vicuña Convention required Ecuador to develop a management plan to be presented at the</p>	<p><i>The Vicuña Convention is the fundamental instrument for the conservation of the species. From the proposal text, it is not clear whether the management plan requested by the Vicuña Convention was presented to the member countries at any point for their approval, or whether the action plan was approved at a national level only.</i></p> <p><i>Details of the management plan that was published by the Environment Ministry in</i></p>

Supporting Statement (SS)	Additional information
<p>next meeting of the Convention (Resolution 292/06, 24<sup>th</sup> November 2006). A “National Action Plan for the Conservation and Management of Vicuña in Ecuador” was approved by the Ecuadorian government in March 2011 and published in the Official Register No. 434. The National Department of Biodiversity, together with the focal point from the Vicuña Convention and the Provincial Department of Chimborazo are in charge of implementing this action plan.</p> <p>An agreement has been signed between the Provincial Department of Chimborazo and the Environmental Ministry in relation to the implementation of a five year FAO-funded project to protect the natural resources of Chimborazo (PROMAREN) commencing in 2012. This project will focus on protecting the paramo ecosystems and river basins of the region and support the management of the conservation of Vicuña in the Chimborazo Fauna Production Reserve.</p> <p>Until May 2011 seven park wardens and one manager were in charge of patrolling and securing the Chimborazo Fauna Reserve. This was considered inadequate due to the large area that needs to be monitored and all protected areas in Ecuador were declared as being in a State of Emergency due to a lack of personnel in 2011. Since then staff numbers in the Chimborazo Fauna Reserve have increased to 16 park wardens, a technician and a manager.</p> <p>An environmental education programme for school children living in the area was initiated in September 2011, and a second phase as part of the Vicuña National Action Plan will include the development of education materials commencing in November 2012. Public awareness raising and capacity building for all ages commenced in November 2011, in preparation for the 2012 population census. In preparation for establishing the role of the Management Committee of the Reserve in implementing the National Action Plan, a meeting with the local community was held in August 2012.</p> <p>The Regulation for Management and Conservation of the Vicuña in Ecuador falls under Legislative Decree No 2093, which was published in the Official Register No 430 of 28<sup>th</sup> September 2004. This will regulate the use of Vicuña products after the transfer of its population to CITES Appendix II. According to the proposal any use of Vicuña would be at a low level and under strict control of the State. As required by the Convention, any Vicuña cloth or products derived from Ecuador’s population would be marked “VICUÑA-Ecuador-Artesania”. Local communities living in the areas where Vicuña have been re-introduced will be the beneficiaries of any commercialisation.</p> <p>The Technical and Administrative Commission of the Vicuña Convention “expressed their agreement with regards the intention of Ecuador to ask for a change of Appendix at CITES” at their 29<sup>th</sup> Meeting in August 2012 in the form of Resolution 341/2012.</p>	<p><i>December 2010 are not provided in the proposal. The document describes the population status and habitats of the Vicuña in Ecuador, the communities and organizations that will be involved in the conservation and management programme and methods used for capture and shearing. This is followed by an action plan composed of four main components: 1) developing institutional and technical capacity (including sharing experiences with other Vicuña Convention member countries and creating infrastructure); 2) carrying out social and ecological research (including annual population monitoring, genetic and health studies), 3) strengthening community organisation and participation and 4) commercialisation of the fibre (Ministerio del Ambiente del Ecuador, 2010).</i></p> <p><i>Animal welfare protocols are not clearly described - the IUCN SSC South American Camelid Specialist Group has developed a Protocol for Vicuña Management Practices (GECS, 2012).</i></p> <p><i>The plan proposes treatment of diseases. Lichtenstein (in litt. 2012) noted it is important to stress that vicuñas should not receive vaccinations nor veterinary care (other than attending injuries during shearing).</i></p> <p><i>The proposal, however, not the management plan, was presented to the Technical and Administrative Committee of the 29<sup>th</sup> Meeting of the Vicuña Convention (G. Lichtenstein, in litt., 2012).</i></p>

Supporting Statement (SS)	Additional information
	<p data-bbox="1032 228 1205 252" style="text-align: center;"><b><u>Similar species</u></b></p> <p data-bbox="1140 288 2047 368"><i>Vicuñas are easily distinguished from the other three species of South American camelid. The fur of Guanacos and some Alpacas is similar to that of Vicuñas, but can be readily differentiated by measuring the hair.</i></p> <p data-bbox="898 400 1339 424" style="text-align: center;"><b><u>Artificial Propagation/Captive breeding</u></b></p> <p data-bbox="1140 456 2018 480"><i>There are no captive-breeding programmes for Vicuñas in Ecuador (GECS, 2012.)</i></p> <p data-bbox="1025 512 1211 536" style="text-align: center;"><b><u>Other comments</u></b></p> <p data-bbox="1140 568 1921 592"><i>The existing annotations for the Appendix-II listed Vicuña populations are:</i></p> <p data-bbox="1140 624 1671 647"><b><u>Population of Argentina (listed in Appendix II):</u></b></p> <p data-bbox="1140 651 2033 839"><i>For the exclusive purpose of allowing international trade in wool sheared from live Vicuñas, in cloth, and in derived manufactured products and other handicraft artefacts. 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-ARGENTINA'. Other products must bear a label including the logotype and the designation 'VICUÑA-ARGENTINA-ARTESANÍA'.</i></p> <p data-bbox="1140 871 1951 919"><i>All other specimens shall be deemed to be specimens of species included in Appendix I and the trade in them shall be regulated accordingly.</i></p> <p data-bbox="1140 951 1928 975"><b><u>Population of the Plurinational State of Bolivia (listed in Appendix II):</u></b></p> <p data-bbox="1140 978 2051 1058"><i>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.</i></p> <p data-bbox="1140 1090 2047 1254"><i>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.</i></p> <p data-bbox="1140 1286 1626 1310"><b><u>Population of Chile (listed in Appendix II):</u></b></p> <p data-bbox="1140 1313 2051 1420"><i>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</i></p>

Supporting Statement (SS)	Additional information
	<p><i>Manejo de la Vicuña, and the selvages the words 'VICUÑA-CHILE'. Other products must bear a label including the logotype and the designation 'VICUÑA-CHILE-ARTESANÍA'.</i></p> <p><i>All other specimens shall be deemed to be specimens of species included in Appendix I and the trade in them shall be regulated accordingly.</i></p> <p><b><u>Population of Peru (listed in Appendix II):</u></b>  <i>For the exclusive purpose of allowing international trade in wool sheared from live Vicuñas and in the stock extant at the time of the ninth meeting of the Conference of the Parties (November 1994) of 3249 kg of wool, 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-PERÚ'. Other products must bear a label including the logotype and the designation 'VICUÑA-PERÚ-ARTESANÍA'.</i></p> <p><i>All other specimens shall be deemed to be specimens of species included in Appendix I and the trade in them shall be regulated accordingly.</i></p>

**Reviewers:** G. Lichtenstein, J. Wheeler, B. Gonzalez.

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