



IUCN-CEM-SUME



# Wildlife conservation through sustainable use in South America

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# Sustainable use

- The use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. (Art. 2 Convention on Biological Diversity)

# Sustainable use

- According to the United Nations Food and Agriculture Organization, 40% of the world's economy is based directly and indirectly on the use of biological resources.
- It is therefore not surprising that sustainable use of biological diversity is one of the three objectives set out in the Convention's first article, and that Decision V/24 frames sustainable use as one of the Convention's cross-cutting issues.
- As underlined in the Plan of Implementation of the World Summit on Sustainable Development, sustainable use is also an effective tool to combat poverty, and, consequently, to achieve sustainable development.

# **Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity.**

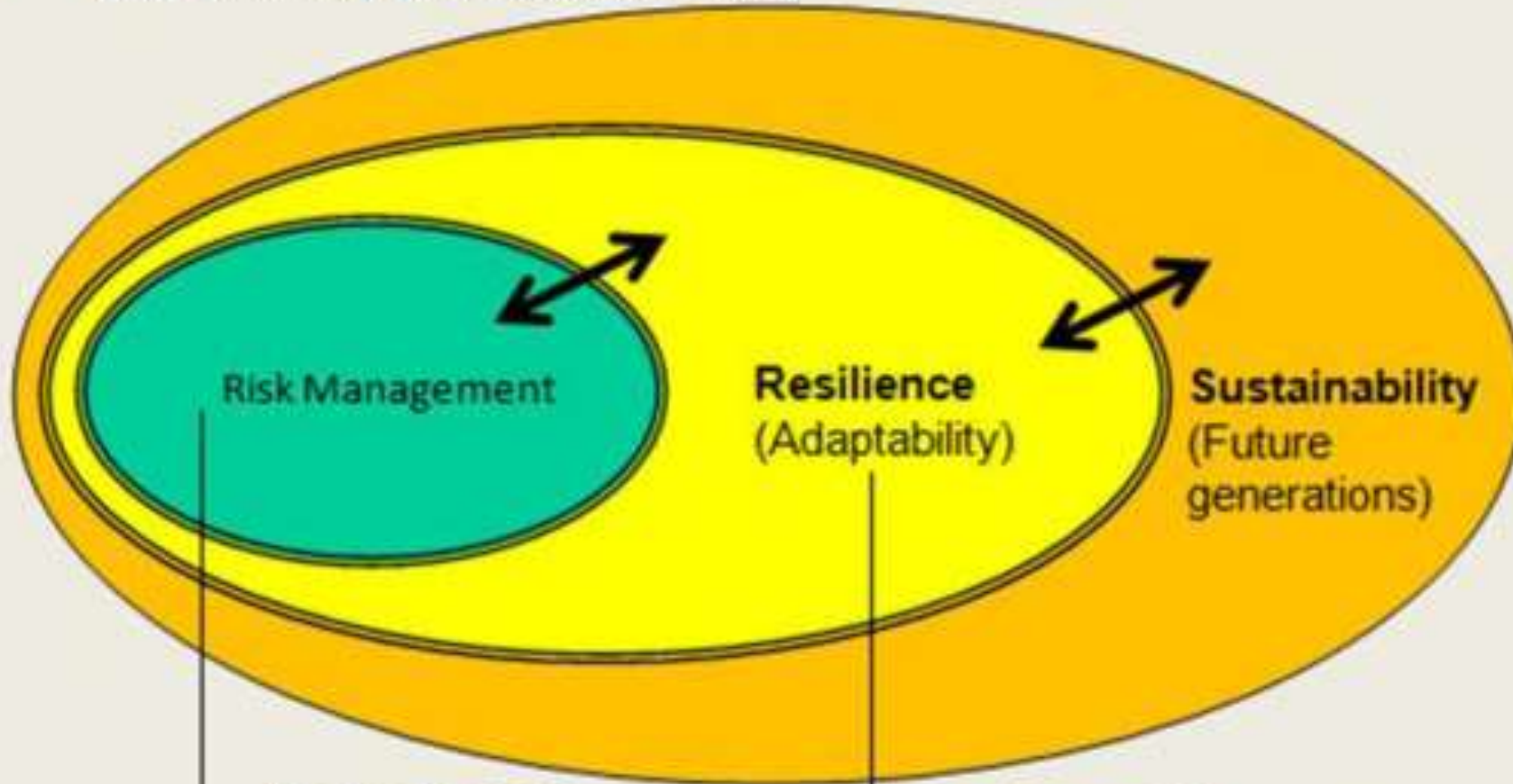
- Decision VII/14 adopted the One of the challenges ahead for the CBD's activities under the theme of sustainable use is to develop a set of critical indicators for the monitoring of sustainable use in each category of use, both at the local and global levels.
- The Addis Ababa Principles and Guidelines for the Sustainable use of Biodiversity consist of fourteen interdependent practical principles, operational guidelines and a few instruments for their implementation that govern the uses of components of biodiversity to ensure the sustainability of such uses.

# The SATOYAMA Initiative

- The goal of the SATOYAMA Initiative is to collect and disseminate information on Satoyama like sustainable management practices worldwide, as well as to develop and propose a model of sustainable management of natural resources in secondary nature. In an effort to create further awareness of the SATOYAMA Initiative and exchange information on sustainable use of biological resources in secondary ecosystems.
- The SATOYAMA Initiative can play an important role in further implementing the CBD and make usage of the tools developed under the convention such as the ecosystem approach and the Addis Ababa Principles and Guidelines (AAPG) for the Sustainable Use of Biological Diversity.

# Risk, Resilience & Sustainability

(Linking to Treasury's Living Standards Framework)



## Known Knowns

- Variability can be readily described

## Known Unknowns

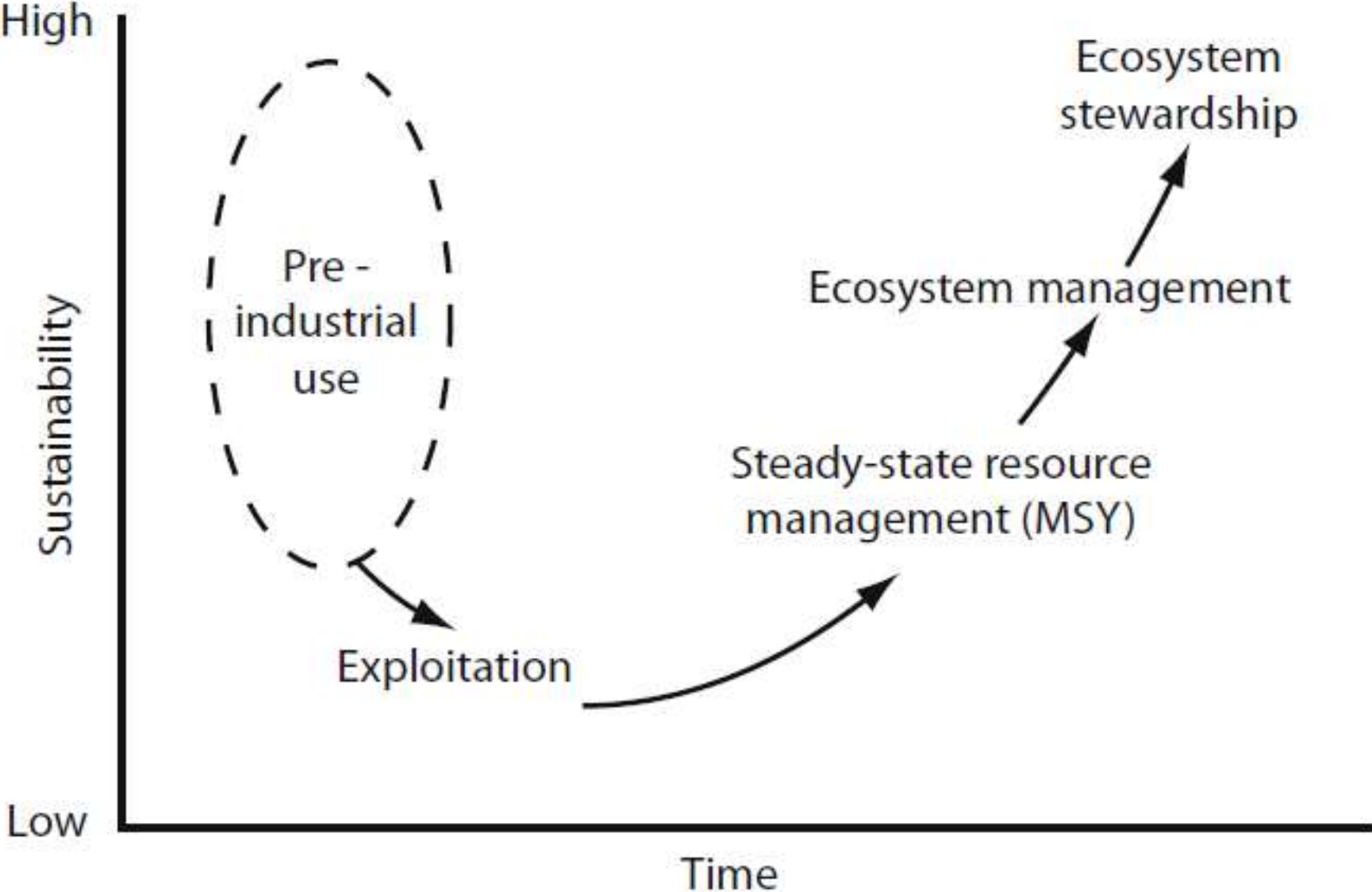
- Limitations, assumptions

## Unknown Unknowns

- Black swan
- Threats where you have adversary
- Complex system risks with dynamic interdependencies

Evolution of resource-management paradigms and their focus on the balance between exploitation and sustainability.

Arrows at the bottom show the history (up to the present) in representative locations and the chapter (Ch) in which each is described. A major opportunity for developing nations is to “leap-frog” from pre-industrial or exploitative phases directly to ecosystem stewardship.



# Amazon river turtles (*Podocnemis unifilis* and *Chelonoidis carbonarius*)

- The highest volumes related to the export of yellowspotted Amazon river turtles (*Podocnemis unifilis*) from Peru from the success of local community-led conservation and ranching programmes for the species in the Peruvian Amazon.
- The vast majority of this trade was reported by Peru as ranched (source R) and captive born (source F) individuals (approximately 80% and 20% of exports, respectively). The increase in exports reflects an increase in populations through ranching (harvesting of eggs and release back into the wild of a proportion of hatchlings) of turtle populations through local community-led management programmes, which has taken place in Peru since the mid-1990s with positive results. For example, releases of managed *P. unifilis* in the Peruvian Amazon increased from around 40 000 in 2005 to over 500 000 in 2014.
- Exports of the red-footed tortoise (*Chelonoidis carbonarius*), mainly captive-bred in Brazil, Venezuela and Colombia, and exported also to Asia, as well as to the United States, showed a more stable trend averaging 16 000 live tortoise per year.

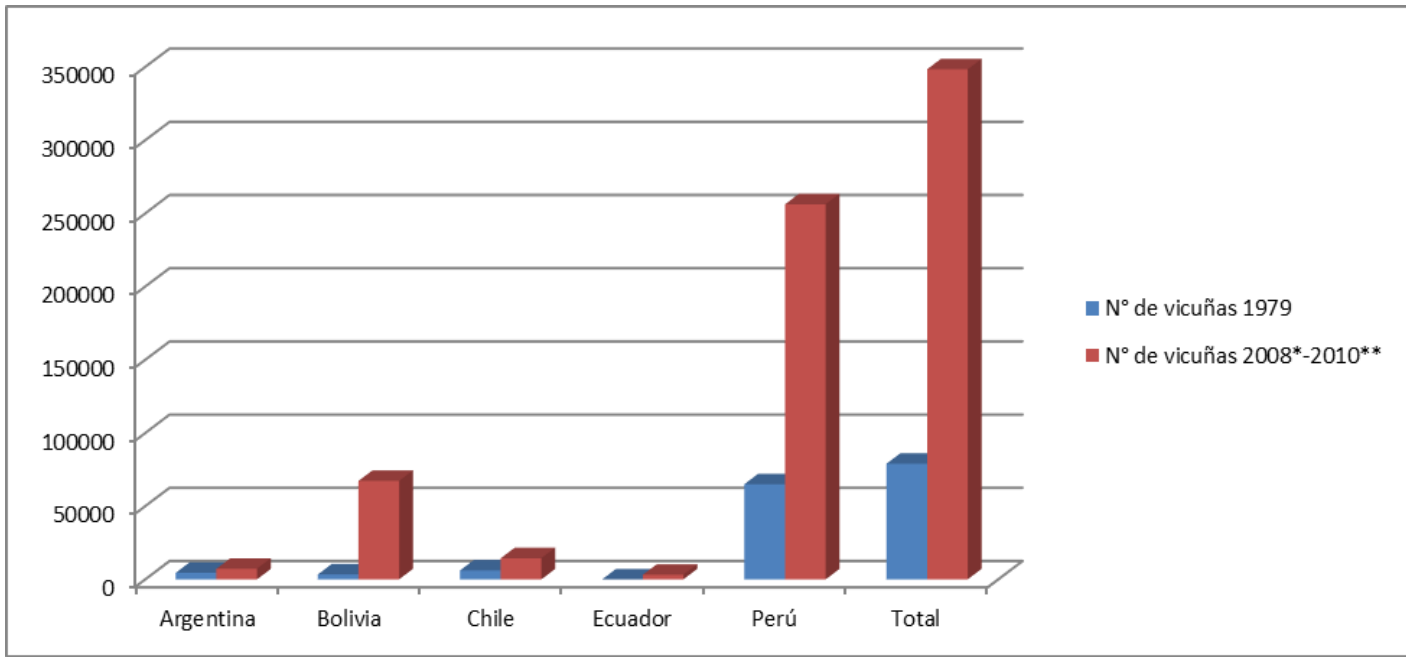




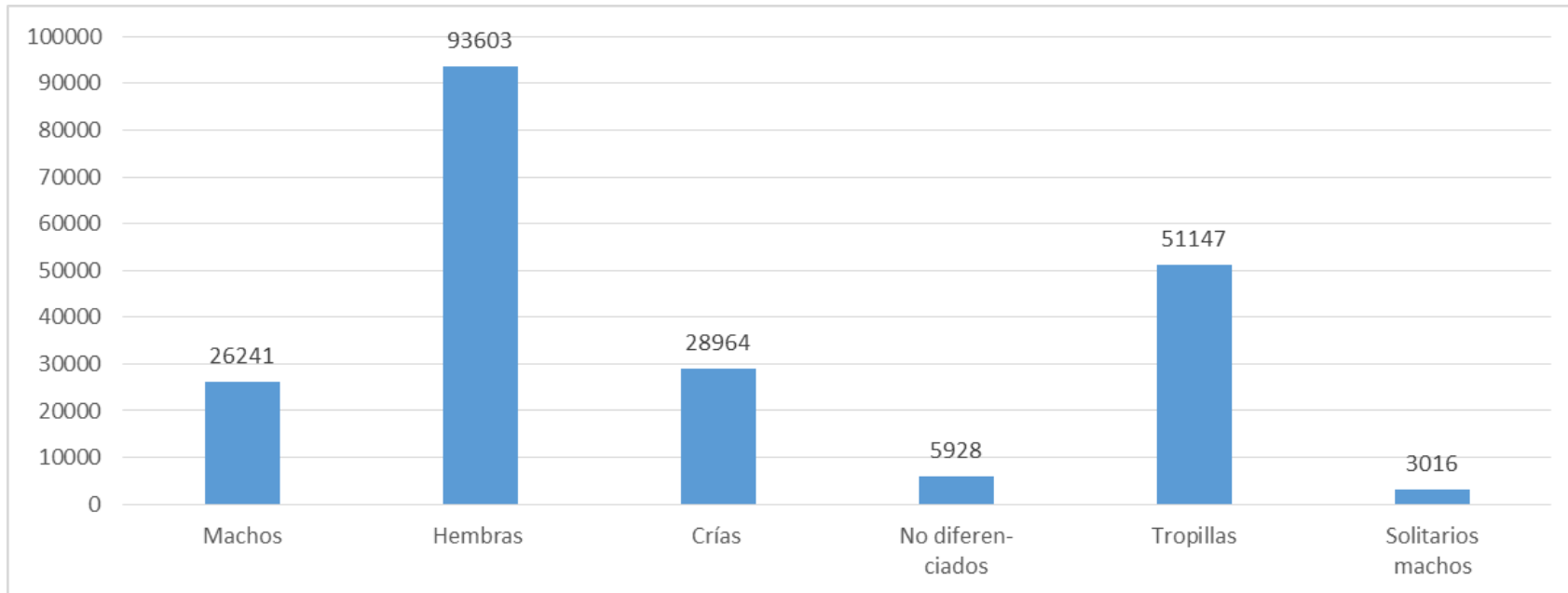
# Vicuna (*Vicugna vicugna*)

- The vicuna fiber has come from wildlife management and modules of sustainable use (fences).

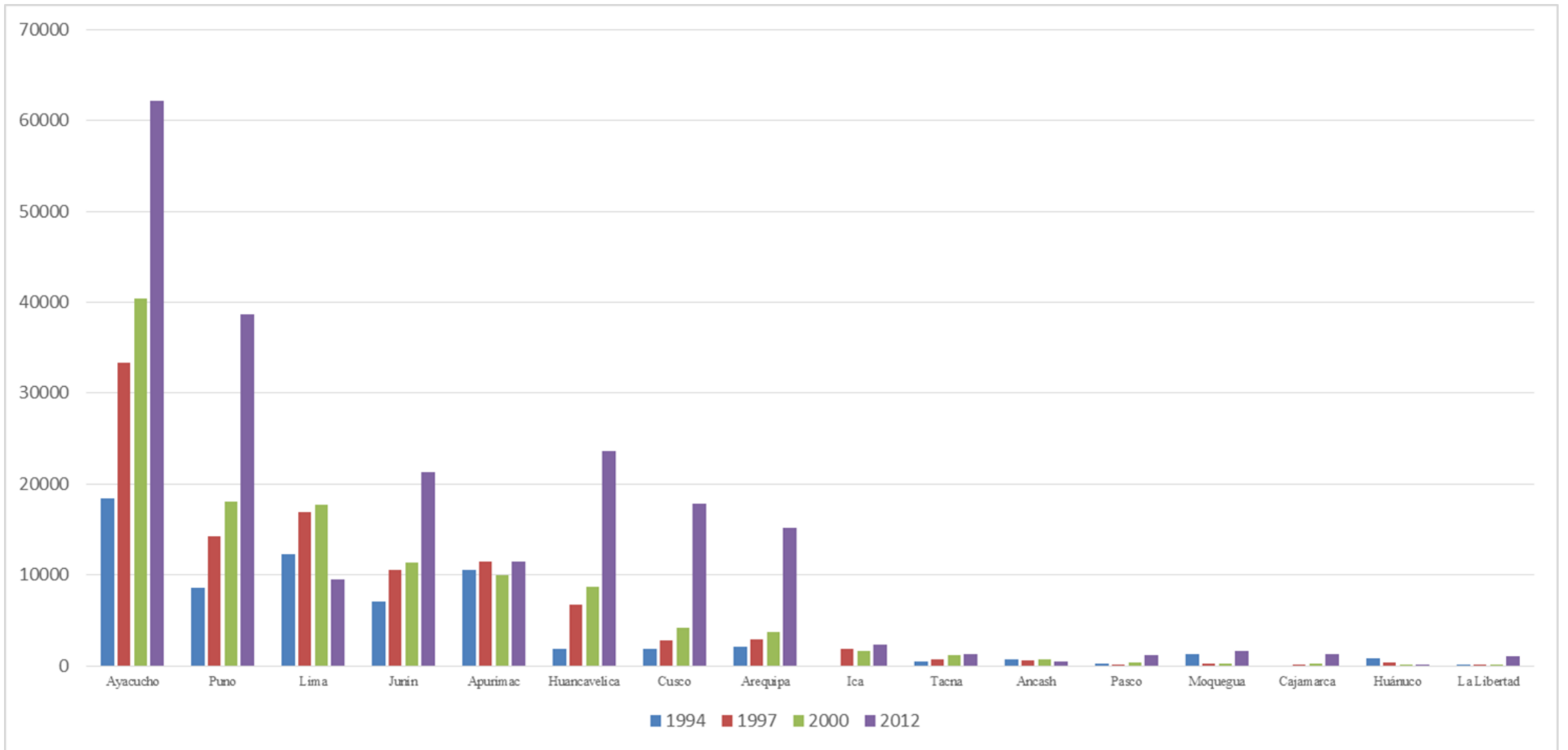
Países	Nº de vicuñas	%	Nº de vicuñas	%	Tasa de Crecimiento
	1979	1979	2008*-2010	2008-2010	
Argentina	4500	5.7	7274	2.09	0.62
Bolivia*	3384	4.3	67278	19.31	18.88
Chile	6124	7.8	14455	4.15	1.36
Ecuador	--	--	3197	0.92	
Perú	65000	82.3	256216	73.54	2.94
Total	79008	100	348420	100	3.41



Source: Rosales, 2014

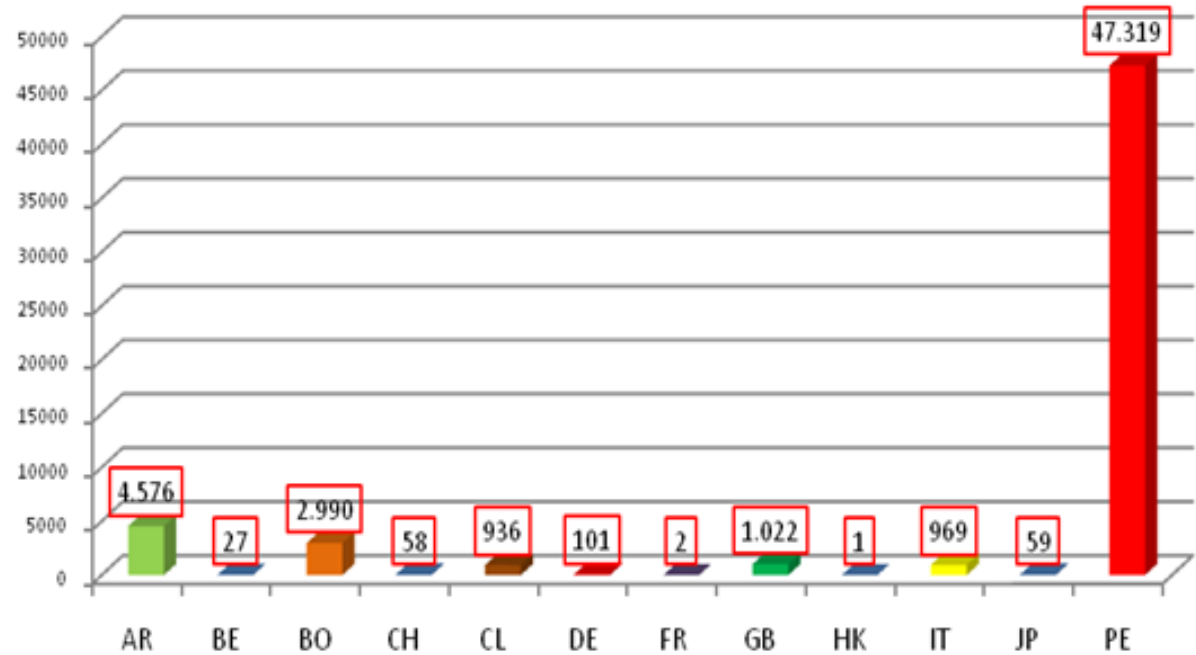


Source: Rosales, 2014



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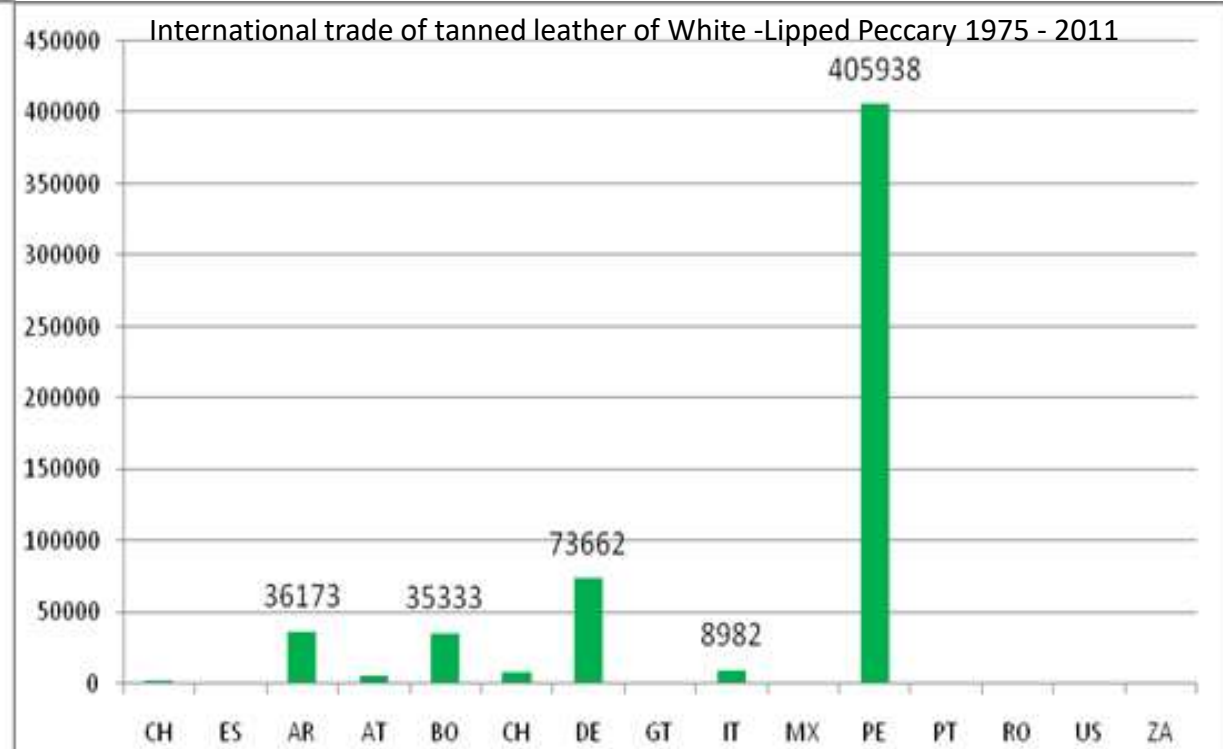
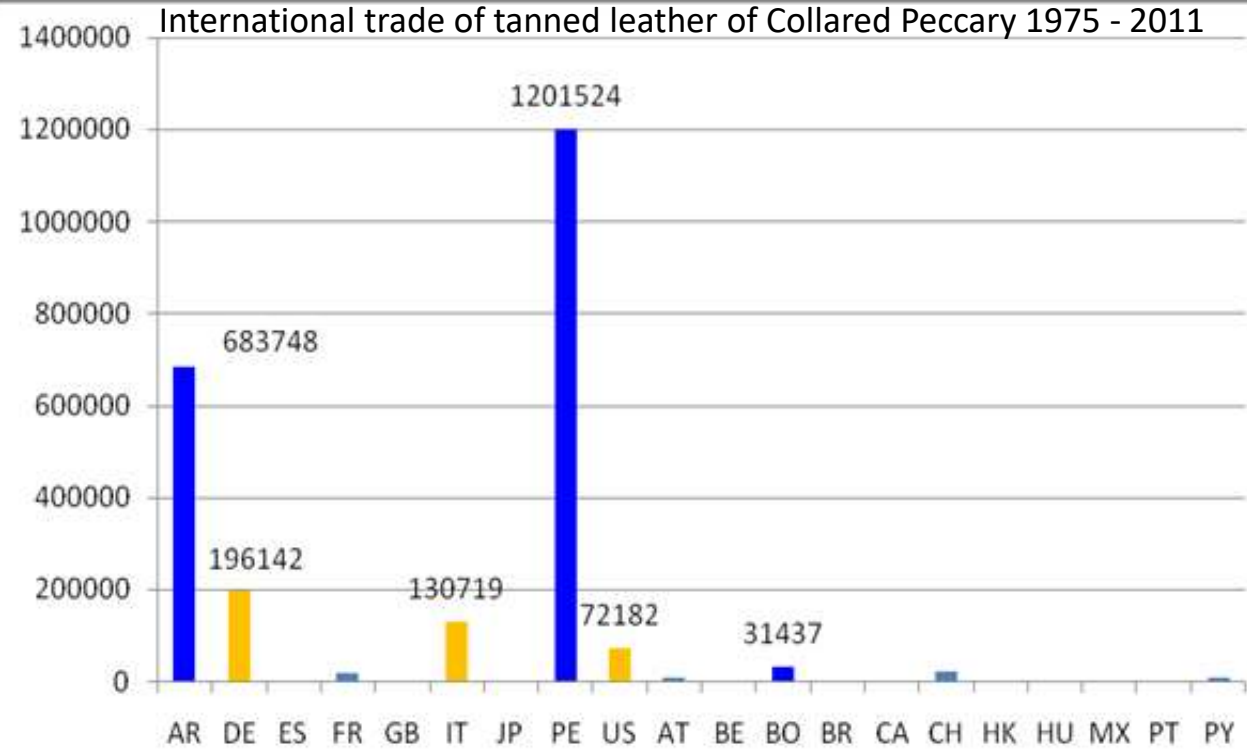
Exports by country of fiber (kg) of vicuna 1975-2011



Source: Rosales, 2014

# Collared peccary (*Pecari tajacu*) White-lipped peccary (*Tayassu pecari*).

- The majority of trade in peccaries was in wildsourced skins and garments.
- On average, approximately 41 000 peccary skins exported for the fashion industry annually, predominantly collared peccary (*Pecari tajacu*) skins, during 2005-2014, 80% of which were *Pecari tajacu* and the remainder *Tayassu pecari*.



Source: Rosales (2014)

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Photograph: Rosales, Marina

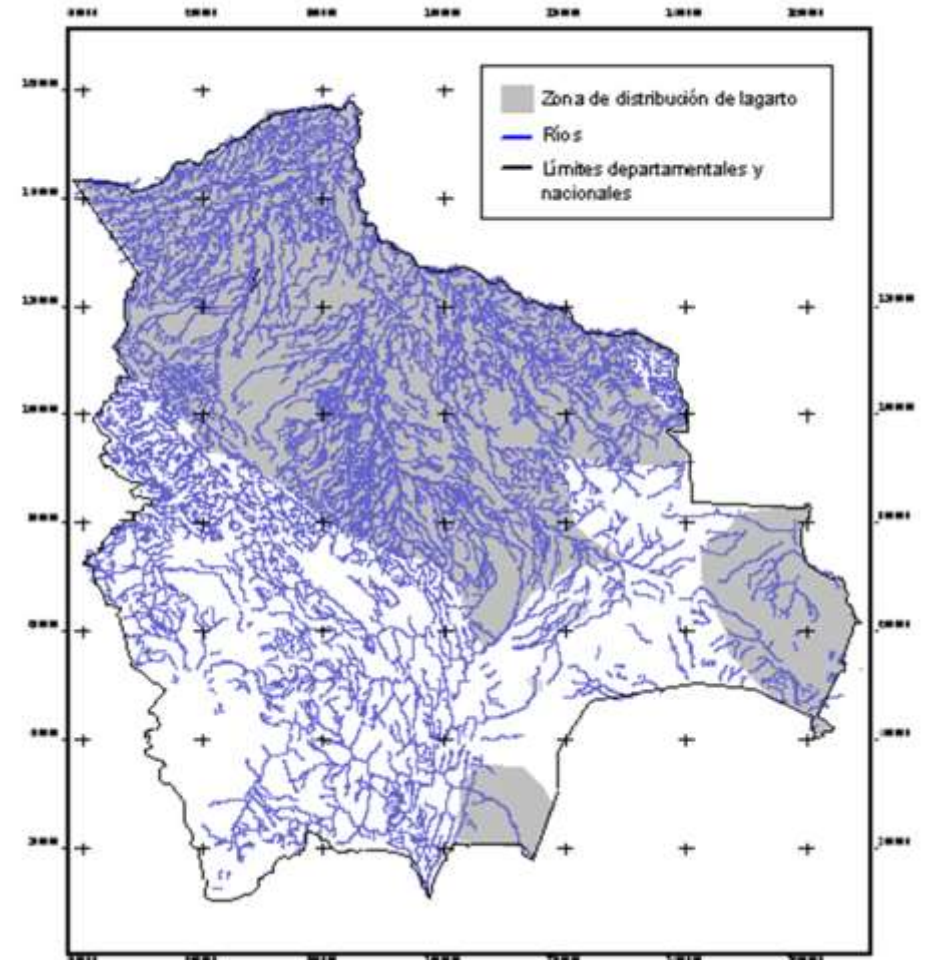
# Spectacled caiman (*Caiman crocodilus*)

- On average, around 770 000 skins were exported per year over the ten-year period for the fashion industry, mainly as captive-bred from Colombia, but with smaller amounts of captive-bred exports also from Brazil and wild-sourced exports from Bolivia, Guyana and Venezuela.
- Majority (87%) reported as captive-bred *C. c. fuscus* from Colombia. Most of the remainder of the trade from the region was in wild-sourced *C. c. yacare* from Bolivia and wild-sourced *C. c. crocodilus* from Venezuela and Guyana.
- Caiman meat, often a by-product of the skin industry, was also exported from the region, albeit only during 2005-2007 from Bolivia and Colombia.

# Lagarto (*Caiman yacare*) - Bolivia



Distribución de Lagarto en Bolivia





# Green iguanas (*Iguana iguana*),

- Primarily captivebred in Colombia and to a smaller extent wild sourced in Suriname, were the main live lizard export, although exports of captive-bred green iguanas from Colombia.



Source: Sinovas et al, 2017.

# *Boa constrictor* “snake”

- Snake exports were dominated by captive-bred from Colombia, at an average of 10 500 individuals per year. A variety of other wild-sourced Boid species were also exported at lower volumes from Guyana and Suriname.



Source: Sinovas et al, 2017.

# Arapaima (*Arapaima gigas*)

- Arapaima is a large fish from the Amazon basin that is increasingly valued in international markets for its meat and as an ornamental species.
- The increase in exports appears to be related to the recent development of arapaima aquaculture that can feed international demand.



# Orchids

- Orchids were one of the groups exported in highest quantities from the region, with an average of over 150 000 plants exported per year. The vast majority (over 99%) were reported as artificially propagated and exported from Brazil and Ecuador: *Cattleya*, *Laelia*, *Masdevallia*, *Oncidium* and *Pleurothallis* were the most exported genera.



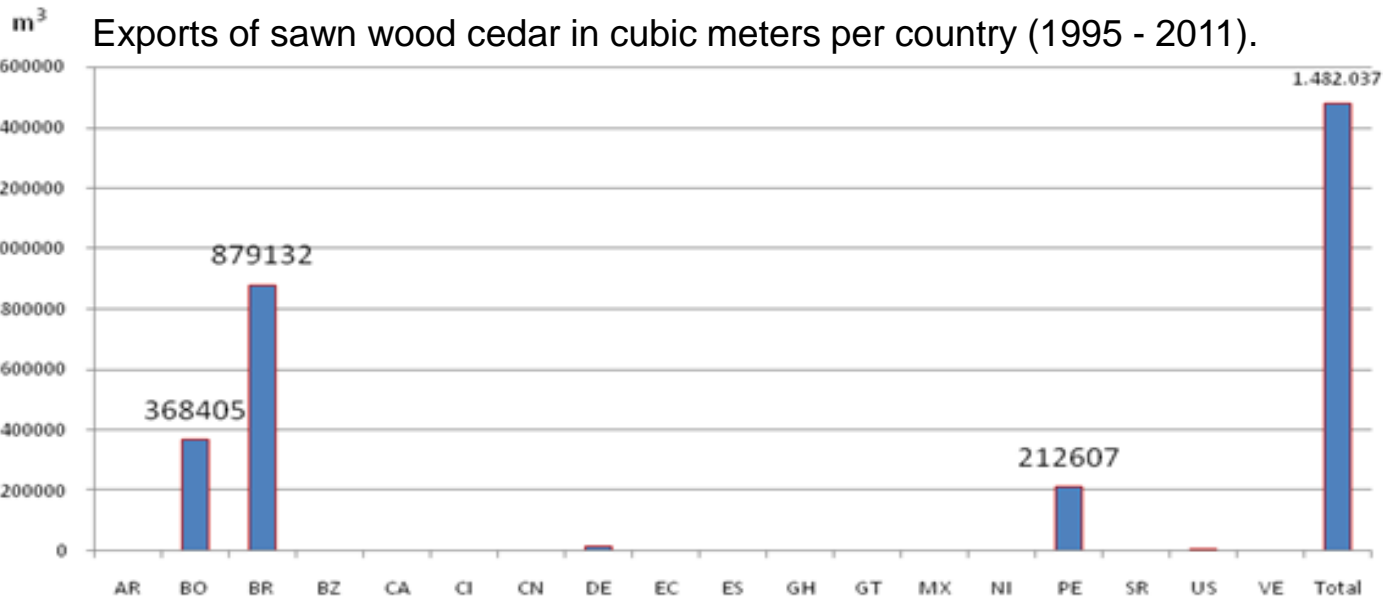
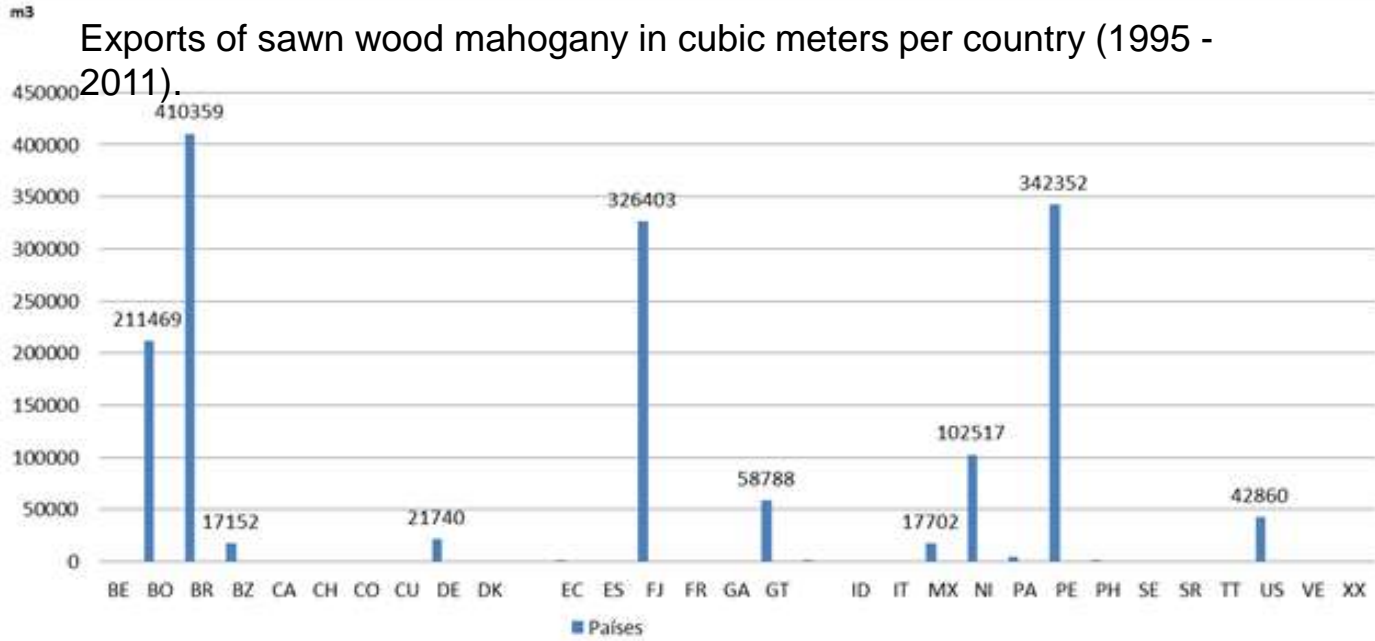
Photograph: Rosales, Marina
















# Spanish cedar (*Cedrela odorata*) and big-leaf mahogany (*Swietenia macrophylla*),

- Exports of CITES-listed timber comprised of predominantly two species: Spanish cedar (*Cedrela odorata*) and big-leaf mahogany (*Swietenia macrophylla*), exported mainly from Bolivia, Brazil and Peru to the United States and Mexico. Export volumes declined over the ten-year period as a result of the introduction of national level stricter controls and trade restrictions, including a zero export quota for mahogany set by Bolivia since 2011, following concerns over sustainability.









Photograph: Rosales, Marina



Exporter	Taxon	Top Importer(s)
Bolivia		Italy
		USA
Brazil		Netherlands
		Mexico & USA
Colombia		Singapore
		USA
Ecuador		China
		Germany & USA
Guyana		Mexico
		Singapore & Thailand
Peru		Hong Kong, SAR
		Italy
Suriname		USA
		Russia
Venezuela		Germany
		USA

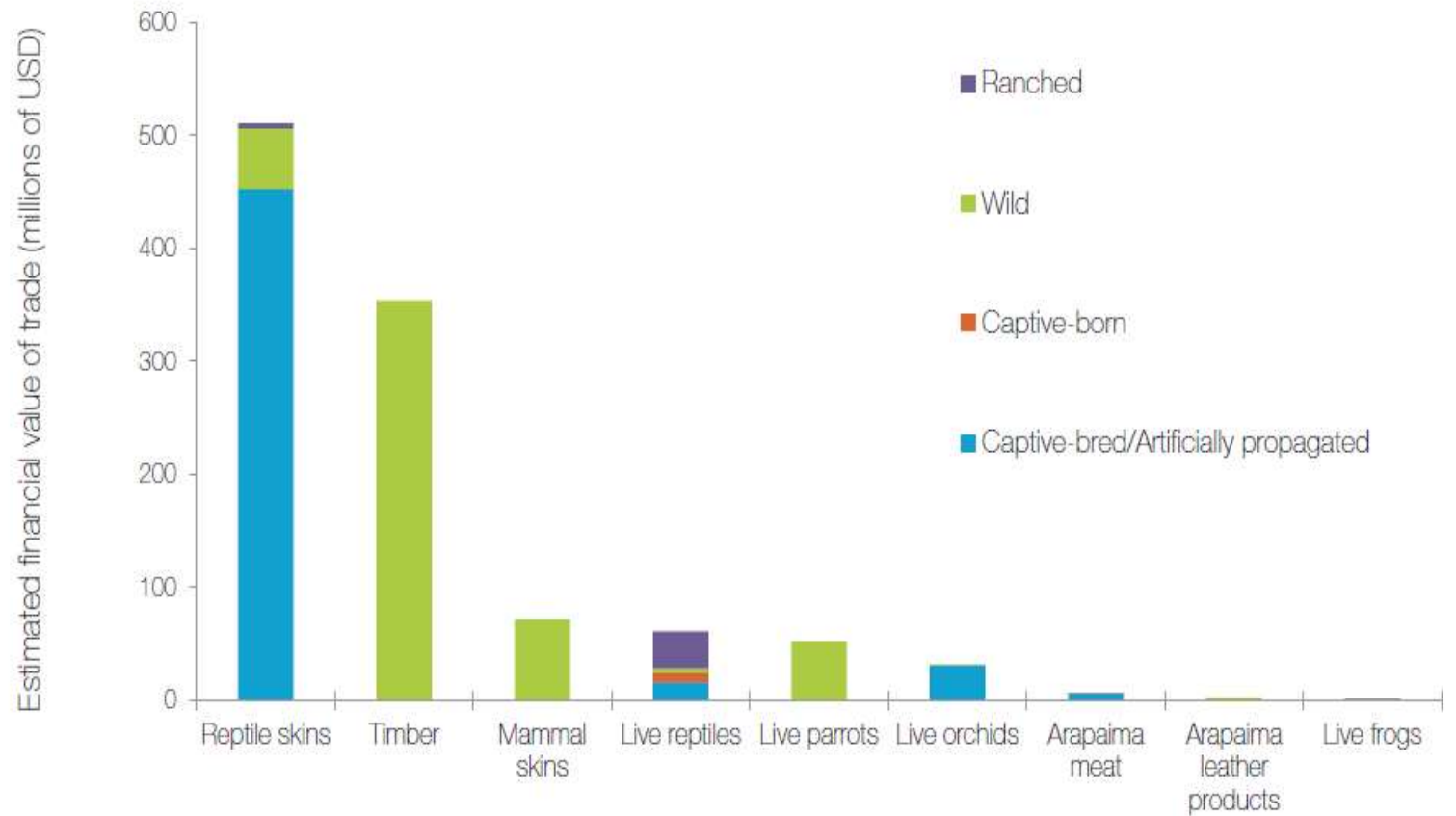
  

	Spectacled caiman		Queen conch		Peccaries
	Mahogany and cedar		Brown sea cucumber		Green iguana
	Orchids		Parrots		Yellow-spotted river turtle

Source: Sinovas et al, 2017.

The two main groups exported and major importers, by country of export, 2005-2014.

The total financial value of international endangered species - CITES is estimated to be USD128 million per year on average (USD1.3 billion over the ten-year period).



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