

WHO'S SLOW? THE SLOTH ACTION PLAN:

BROAD CONSERVATION STRATEGIES AND FUTURE PLANS



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Who are we?

The IUCN/SSC Anteater, Sloth and Armadillo Specialist Group (ASASG) is a network of mammalogists and conservationists who work to understand and protect the thirty-one known species of sloths, anteaters and armadillos (xenarthrans). As a IUCN Species Survival Commission Specialist Group, the ASASG's primary responsibility is to evaluate the conservation status of all xenarthran species, working with current information from experts in the field. Furthermore, the ASASG promotes research and conservation of xenarthrans through a variety of activities, such as providing scientific and technical advice to governments and conservation organizations.

The ASASG considers the development of action plans as one of its highest priorities.

These species conservation strategies are range-wide blueprints for saving species or groups of species that face similar threats and, hence, require similar conservation responses.

This process will be initiated by developing the **Sloth Action Plan**. Sloths were selected as there is already a well coordinated group, which met for the First International Sloth Meeting in Medellin, Colombia in November 2010. The Anteater and the Armadillo Action Plans will be developed subsequently using the experience acquired.



Why a Sloth Action Plan?

Action Plans assess the conservation status of species and their habitats and outline conservation priorities. They provide guidelines for governments, conservation specialists, and other stakeholders interested in contributing to the long-term survival of species.

Sloths are arboreal mammals that only exist in the Neotropics. Together with armadillos and anteaters, they are the last living representatives of one of the four major clades of placental mammals. This unique concentration of evolutionary history marks the xenarthrans as invaluable; should they be lost, some of the earliest chapters of mammalian evolution will remain forever unread. Furthermore, sloths are key players in nutrient recycling and seed dispersal, and as such, they are vital to the functioning of tropical ecosystems.

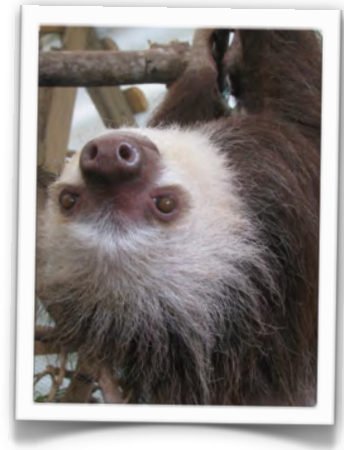
The six extant sloth species are classified in two genera, *Bradypus* and *Choloepus*. Hunting, illegal pet trade, accidental mortality on roads, and habitat degradation and fragmentation constitute threats to the long-term survival of all of them. The fact that only two species are classified as threatened according to the IUCN Red List of Threatened Species – the pygmy sloth *Bradypus pygmaeus* is listed as Critically Endangered, and the maned sloth *Bradypus torquatus* as Vulnerable¹ – may lead to the false conclusion that most of them are doing fine and do not require any conservation actions. It is important to note that information on the natural history of all sloths is still insufficient and their taxonomy needs further research, which makes a realistic assessment difficult. Furthermore, the IUCN Red List reflects the conservation status of assessed species at the international level, which may not coincide with the regional or national threat status. For instance, the brown-throated three-toed sloth *B. variegatus* has already vanished from Paraná State, Brazil, and may soon disappear from other parts of its range due to habitat fragmentation, hunting and exploitation.

Similarly, ongoing deforestation is already pushing the northern, disjunct population of the Hoffmann's two-toed sloth *Choloepus hoffmanni* to threatening levels, and others may soon follow.

¹ Superina, M., Plese, T., Moraes-Barros, N., and Abba, A. M. 2010. The 2010 Sloth Red List Assessment. *Edentata* 11(2): 115-134.

What does the Sloth Action Plan include?

The Sloth Action Plan will consist of the following sections:



1) Range-wide status review: The Status Review will reflect the current knowledge on sloths. It will include, among others, detailed information on their natural history, phylogeny, past and current distribution and population trends, and habitat and resource requirements. This information will be used to carry out a Population and Habitat Viability Analysis (PHVA), which will allow developing detailed recommendations for conservation actions. In the case of species for which insufficient data are available to run a PHVA, we will define the most pressing gaps in knowledge to perform this analysis at a later stage. GIS analyses will be done to assess present time species occurrence and, in combination with additional data, to infer habitat trends and identify potentially suitable habitats. This section will also reflect the threats sloths are facing, review the value of sloths to people and their role within their ecosystem, and describe how the current conservation status arose. It will conclude with a description of current conservation measures and national and international legislation.

2) Vision and Goals: This section will describe our vision of the future range-wide state for sloths and the long-term goals that need to be achieved to save them from extinction.

3) Objectives: We will perform a problem analysis to develop realistic and traceable objectives that ensure the conservation of sloths in their entire range. These objectives will address the main threats identified in the Status Review.

4) Actions: In this section, the objectives will be translated into detailed short-term, medium-term, and long-term steps that lay out what needs to be done, where, by whom, and on what timescale. They will be classified according to their priority. Actions will include, among others, recommendations for public policy and legislation that define the essential legal basis for the conservation of sloths and their habitat; habitat management strategies for private and public lands that take into account the ecological needs of sloths and aim at reducing habitat fragmentation and further isolation of subpopulations; management strategies to maintain the genetic diversity of

ex situ populations and allow active participation of captive care specialists in sloth conservation; indications for rehabilitation and reintroduction of confiscated or captive-bred sloths; conflict resolution; and environmental education strategies to raise awareness for the conservation problems of sloths and the ways to help saving them from extinction. This chapter will also define research priorities to obtain the necessary scientific knowledge to support decision-making and ensure implementation of the actions foreseen in the Action Plan. Furthermore, we will include measurable



and precise indicators of success that will allow monitoring whether a particular action has been implemented successfully.

How are we going to proceed?

We will follow the Handbook on Strategic Planning for Species Conservation, which was published by the Species Conservation Planning Task Force of the IUCN Species Survival

Commission (www.cbsg.org/cbsg/content/files/scptf_handbook.pdf) to guide Specialist Groups in the process of developing Species Action Plans. The process will be inclusive and participatory to improve prospects for implementation and, ultimately, sustained conservation success. We will emphasize multi-stakeholder participation by inviting researchers, rehabilitators, government representatives, local communities, and conservation specialists to contribute to the development of the Sloth Action Plan.

We plan to work as much as possible by email and through virtual meetings. We will, however, also carry out regional workshops in Colombia, Peru, Panama, Surinam, and Brazil to ensure inclusion of all stakeholders. We plan to hold these workshops in combination with national congresses to ensure ample participation.

Parallel to the development of the Sloth Action Plan, we will disseminate the acquired knowledge in scientific and popular publications and raise awareness for the Sloth Action Plan in the general public through the news media.

What is our timeline?

We aim at concluding the development of the Sloth Action Plan within 36 months after the first regional workshop. The length of the implementation phase will depend on the identified actions and the policy coordination in each range country.



How much will it cost?

We will reduce costs by using email and virtual meetings as much as possible. We anticipate costs of US\$ 10'000 for each of the five workshops. Additional expenses include, among others, printing and distributing the Sloth Action Plan.

The costs of the implementation phase will be determined based on the necessary actions.

How do we plan to fund the development of the Sloth Action Plan?

We will seek financial support from government authorities in range countries, such as the ministries of environment, and zoological institutions, e.g. through AZA and EAZA. We will also apply for grants from international, national and state institutions, such as the Mohamed Bin Zayed Species Conservation Fund, the Zoological Society of London, CNPQ, CONICET, and FAPESP.

Is this project feasible?

Yes, by all means! We are a team of enthusiastic, dedicated conservation specialists from Colombia, Brazil and Argentina. Our background lies in sloth research and rehabilitation, conservation biology, and ecology. Wildlife conservation is our passion, and we are all committed to the development of this Action Plan to ensure the long-term survival of these charismatic species. We have already identified key players, such as sloth researchers, rehabilitators, and government representatives, in several range countries, some of which actively participated in the First International Sloth Meeting in Medellin, Colombia in November 2010. We will make this project work with your help and support!

How can you contact us?

To learn more about our Specialist Group and xenarthrans, we invite you to visit our website <http://www.xenarthrans.org>.

If you would like to receive additional information or support this ambitious project, you are welcome to contact us by email at contact@xenarthrans.org. You can also get in touch with one of the members of the Organizing Committee:

- Dr. Mariella Superina, Chair ASASG, CCT CONICET Mendoza, C.C.855, Mendoza (5500), Argentina. Phone [+54-261-5244160](tel:+54-261-5244160), email: mariella@superina.ch
- MSc. Flávia Miranda, Deputy Chair ASASG, Projeto Tamanduá, Brazil. fmiranda@wcs.org
- Dr. Agustín M. Abba, Red List Authority ASASG, Universidad Nacional de La Plata, Argentina. abbaam@yahoo.com.ar
- Dr. Nadia Moraes-Barros, Universidade de São Paulo, Brazil. namoraes@gmail.com
- MSc. Tinka Plese, Fundación AIUNAU, Colombia. unau@une.net.co

