

# FrogLog

[www.iucn-amphibians.org](http://www.iucn-amphibians.org)  
[www.amphibians.org](http://www.amphibians.org)

Promoting Conservation, Research and  
Education for the World's Amphibians



Research, Education and Art United for the  
Conservation of Harlequin Toads

Building Partnerships and Ponds for  
Anamalai Flying Frog in Western Ghats

Using Conservation Needs Assessments to  
Help Develop National Conservation Plans

... and so much more!

# Using Conservation Needs Assessments to Help Develop National Conservation Plans

By Kevin Johnson<sup>1</sup>, Luis Carrillo<sup>1</sup>, Federico Kacolicris<sup>2</sup>, Borja Baguette Pereiro<sup>3</sup>, Cybele Lisboa<sup>4,5</sup> and Iberê Machado<sup>4,6</sup>



Recent Conservation Needs Assessment workshops have been held virtually, mostly due to covid-related travel restrictions. Photo: Cybele Lisboa

The conservation needs of amphibians have been assessed and prioritized using Amphibian Ark’s Conservation Needs Assessment (CNA) process for the past 12 years, with 4,168 assessments now completed for 3,511 species in 48 countries. These assessments allow us to maximize the impact of limited conservation resources, and to guide the development of national and species-level action plans (1). The Amphibian Ark (AArk) was formed in 2006 as a joint effort of three principal partners: the IUCN SSC Conservation Planning Specialist Group (CPSG), IUCN SSC Amphibian Specialist Group (ASG) and the World Association of Zoos and Aquariums (WAZA) and its role is to support the implementation of the *ex situ* component of the Amphibian Conservation Action Plan (ACAP, 2, 3).

The CNA process was described in the December 2021 edition of FrogLog (Volume 28, number 2, Issue 123), and further information is available on the Conservation Needs Assessment website, [www.conservationneeds.org](http://www.conservationneeds.org).

The CNA process helps to evaluate and prioritize amphibian species to determine those with the most pressing conservation needs and to generate high-level recommendations for both *in situ* and *ex situ* actions. It fulfils the first stage in the IUCN Species Survival Commission (SSC) framework for the Species Conservation Cycle of **Assess - Plan - Act** (*Assess: Understand and inform the world about the status and trends of biodiversity*), with the recommendations arising from the assessments forming the basis of the second stage (*Plan: Develop collaborative, inclusive and science-based conservation strategies plans and policies*).

Working closely with the IUCN Red List of Threatened Species™ assessments, the CNAs allow a more holistic view of the threats facing species in the wild, along with identifying existing conservation actions which might be underway and developing recommendations for future conservation actions. The CNAs are a valuable

resource for directing and prioritizing amphibian conservation planning and action at the national level.

During 2020, AArk staff facilitated CNA workshops for 50 threatened and previously unassessed species in Argentina, and 67 threatened species in Brazil. Assessment consultation sessions were held virtually in both countries. The Argentinean assessments were developed by 31 field experts and experts in conservation breeding and reintroduction programs, and 50 experts contributed to the assessments in Brazil. From these 117 assessments, 343 recommendations for conservation action were generated, as outlined in Table 1.

Recommended conservation action *	Argentina	Brazil
<i>Ex situ</i> rescue	14	13
<i>In situ</i> conservation	35	25
<i>In situ</i> research	51	66
Husbandry analog	6	5
Applied <i>ex situ</i> research	8	15
Mass production	0	0
Conservation education	30	48
Supplementation	0	0
Biobanking	14	13

Table 1. Number of recommended conservation actions generated from Conservation Needs Assessments for Argentina and Brazil. Definitions of the conservation actions are available at <https://conservationneeds.org/Help/EN/ConservationActions.htm>.

The data contained in these assessments, and the recommendations generated from them are now being used in both countries to help guide national priorities and to develop plans for both *in situ* and *ex situ* amphibian conservation actions.

## Argentina

Participants in the virtual assessment workshop included experts from all over the country, whose experience and knowledge contributed greatly to the assessment questions, objectively and consistently identifying priority species and immediate conservation needs for both *in situ* and *ex situ* actions. There are ten conservation actions which are not mutually exclusive, that can be attributed to each species: Rescue, *In Situ* Conservation, *In Situ* Research, Husbandry Research, Applied *Ex Situ* Research, Mass Production in Captivity, Conservation Education, Supplementation, Biobanking or No Action Required. These categories are generated from the information in each assessment, which includes the current conservation status, threats, presence in protected habitat, previous *ex situ* management experience, potential population recovery capacity, and if required, feasibility of obtaining authorization to collect founder animals.

During the workshop, fifty species were assessed by thirty-one specialists, representing universities, non-government organizations, technicians from local zoos and independent researchers. The assessments have now all been reviewed and approved for publication, with the conservation actions shown in Table 1 being

<sup>1</sup>Amphibian Ark. <sup>2</sup>University of La Plata. <sup>3</sup>Ecoparque de Buenos Aires.

<sup>4</sup>AmphIUCN SSC Amphibian Specialist Group, Brazil (ASG Brazil).

<sup>5</sup>Reserva Paulista - Zoológico de São Paulo. <sup>6</sup>Instituto Boitatá



The Casque-headed Frog (*Nyctimantis pomba*) from the southeast of Brazil is the highest priority amphibian species in Brazil for conservation action. Photo: Cybele Lisboa.

recommended.

Some of the priority species being considered for *ex situ* programs include Darwin's Blackish Toad (*Melanophryniscus nigricans*), El Rincon Stream Frog (*Pleurodema somuncurense*), Patagonia Frog (*Atelognathus patagonicus*), *Alsodes neuquensis*, Rivera Redbelly Toad (*Melanophryniscus devincenzii*), *Melanophryniscus estebani* and Pehuenche Spiny-chest Frog (*Alsodes pehuenche*). It is worth mentioning that the first three species are already being managed in *ex situ* conservation breeding programs in Argentina, with all of them supported by AArk.

Over the coming months, the conservation actions identified for each species will be compiled into a planning document, to have a summary and a template for developing an action plan and a research-needs guide for each of the evaluated species. The CNAs for Argentina, along with more information about the process itself is available on the assessment web site at [www.conservationneeds.org](http://www.conservationneeds.org).

## Brazil

In 2020, ASG Brazil and AArk organized a CNA workshop with Brazilian experts to assess the conservation needs of amphibian species in Brazil (see AArk Newsletter 52, 2020, [www.amphibi-anark.org/Newsletters/AArk-newsletter-52.pdf](http://www.amphibi-anark.org/Newsletters/AArk-newsletter-52.pdf)). The assessment workshop took place between August and November 2020, however the review and approval process of the assessments wasn't completed until April 2021, when they became publicly available on the CNA website [www.conservationneeds.org](http://www.conservationneeds.org).

As Brazil is a megadiverse country, which currently has 1,213 known amphibian species, and to make the CNA process more focused on species which most need action, we chose to assess only those species which were listed in one of the Red List 'threatened' categories (Critically Endangered, Endangered or Vulnerable). We used the last national Red List provided by the RAN/ICMBio (Brazilian government agency) as a reference for this, and although the Red List evaluations took place in 2018, the results are yet to be published.

Sixty-seven species were evaluated, of which thirteen were listed as high priority for *ex situ* rescue conservation actions. Table 1

shows the recommendations arising from these assessments. Of the thirteen high priority rescue species, one is from the southern region of Brazil (*Pithecopus rusticus*), nine occur in the southeast (*Bokermannohyla napolii*, *Hylodes mertensi*, *Ischnocnema garciai*, *I. karst*, *Melanophryniscus setiba*, *Nyctimantis pomba*, *Physalaemus soaresi*, *Proceratophrys palustris* and *Sphaenorhynchus canga*), one in the mid-west (*Boana buriti*), one in the north (*Atelopus manauensis*) and one in the northeast (*Chiasmocleis alagoanus*).

To disseminate the results of the CNA to the wider conservation community, ASG Brazil organized the 3rd ANFoCO (Amphibians in Focus) – Brazilian Symposium on Amphibian Conservation (<https://asgbrasil.wixsite.com/asg-brasil>), which took

place from November 30 to December 2, 2021, as a virtual symposium. The idea behind ANFoCO is to provide a platform that generates contacts, connects different actors, promotes debate and which results in taking action that effectively contributes to the conservation of amphibians in Brazil.

The central theme of the 3rd ANFoCO was the reality of Brazilian endangered species, with emphasis on the thirteen species that are high priority for *ex situ* conservation. The objective was to discuss the current situation of these species and what paths should be taken to conserve them. Therefore, the slogan for the event was: "Where are we, why are we here and where do we want to go?"

The 3rd ANFoCO included speakers with different areas of expertise, including members of institutions which are important for conserving amphibians, both in the Brazilian and global context. Speakers also focused on the most important threats in the context of Brazilian endangered species, and on conservation strategies for amphibians, including strategies to search for missing species, implement *ex situ* conservation actions, disseminate scientific information and protect amphibian habitat.

The completion of the CNA and the 3rd ANFoCO were important steps towards directing and publicizing the actions necessary to help conserve endangered Brazilian amphibians. ASG Brazil's next steps will be focused on the development of specific action plans for the thirteen high priority species, and will engage all the necessary stakeholders from academia, zoos, governmental and non-governmental organizations.

## References:

1. K. Johnson *et al.*, A process for assessing and prioritizing species conservation needs: going beyond the Red List. *Oryx*. doi:10.1017/S0030605317001715. [www.amphibi-anark.org/wp-content/uploads/2018/07/A-process-for-assessing-and-prioritizing-species-conservation-needs-goingbeyond-the-red-list.pdf](http://www.amphibi-anark.org/wp-content/uploads/2018/07/A-process-for-assessing-and-prioritizing-species-conservation-needs-goingbeyond-the-red-list.pdf) (2018).
2. C. Gascon *et al.*, Eds., Amphibian Conservation Action Plan. (IUCN/Species Survival Commission Amphibian Specialist Group. Gland, Switzerland, and Cambridge, UK, 2007).
3. S. Wren *et al.*, Eds., Amphibian Conservation Action Plan. IUCN Species Survival Commission Amphibian Specialist Group. <https://www.amphibians.org/resources/> (2015).