

Conservation Needs Assessments for Indian amphibians

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For several years now, Amphibian Ark staff, and Program Officers from the IUCN Amphibian Red List Authority have co-facilitated joint Red List (RLA, www.iucnredlist.org) and Conservation Needs Assessment (CNA, www.conservationneeds.org) workshops for amphibians. Both types of assessments generally draw on the same groups of species experts, and holding separate workshops for each of the assessment types is not the best use of resources, such as funding to cover workshop expenses, staff time and travel costs, or use of the experts' time. The two assessment types complement each other, and when combined, give an overall picture of the history of the species, the current threat status, and priorities for various types of conservation actions which might be required to ensure each species is ultimately self-sustaining, in safe and protected habitats.

In 2018, the first joint assessment workshop was held in Penang, Malaysia, and over a five-day period, we completed CNAs for 167 species from Peninsular Malaysia and Malaysian Borneo. This joint assessment workshop was a great opportunity for both organizations to observe each other's processes, as well as the outcomes from each set of assessments. This approach to assessments was very successful, and the participants were happy to see recommendations being made for future conservation actions.

As a result of this first joint workshop, the data being collected for each of the two assessment types was compared and a single set of questions, which combine the data required for both assessments within a logical framework was prepared. In 2018 and 2019, additional joint assessment workshops were held in Honduras, Costa Rica and Papua New Guinea, with the process for each workshop being slightly tweaked to improve and streamline the joint process. The process is now working well, and we certainly plan to continue with joint workshops where the priority countries for each organization overlap.

Discussions for holding Red List and Conservation Needs Assessment workshops for Mainland South Asia had been underway for quite some time, and in late 2019, planning for holding physical assessment workshops for the region began in earnest. Unfortunately, with the arrival of the global COVID-19 pandemic, plans for a physical workshop were no longer feasible, and the focus switched to how we could hold the first joint, virtual assessment workshop. Online CNA workshops had been held in the past for a couple of quite small regions, and likewise, RLAs had previously been completed outside of physical workshops. But assessments for Mainland South Asia involved bringing together up to eighty species experts, and facilitators from four different time zones, to assess over 480 species. This would be a very large undertaking for physical workshops, but the complexity for completing these assessments was even greater since we needed to develop a new process for working in the virtual world!

Discussions between AArk staff and Amphibian Red List Authority Program Officers resulted in a plan to use the cloud-based video conferencing service Zoom, to run a series of virtual consultation sessions. Mainland South Asia was broken down into twelve different sub-regional and taxonomic groups, so that the number of species and species experts was more manageable across smaller sessions. This resulted in several smaller groups (e.g. Eastern Ghats and Central India, Islands, Caecilians), and two large groups (Western Ghats, and Eastern Himalayas and North-east). The preliminary schedule to include all of these groups was around thirty-five three-hour sessions, however the end result was more than fifty three-hour sessions!

We held an initial online Zoom meeting with all participants in August, for initial introductions, to explain the proposed virtual workshop process, and to determine a schedule that could best meet all participants' needs. This was followed by assessing two example species, so the process and questions could be explained more fully.

The image shows a Zoom meeting interface on the left with five participants: Louise Hobin, Kevin Johnson, Gururaja K.V., Janice Chanson, and Karthik. On the right is a web browser displaying the 'Conservation Needs Assessments' website. The page title is 'Conservation Needs Assessments' with the subtitle 'Identifying priority species for conservation actions'. The URL is <https://conservationneeds.org/Assessment/AssessmentSingle?spec>. The page features a navigation menu with links for Home, View Assessments, Reports, Logout, Help, Add Assessments, and My Dashboard. The main content area is titled 'Edit Assessment' and shows details for the species *Minervarya agricola* (Granular Fejervarya). It includes a photo of the frog, a world map with 'View Map' button, and IUCN Red List assessment information. The assessment status is 'Not Evaluated (NE)'. The page also lists recommended conservation actions: In Situ Research and Husbandry Research. At the bottom, there are sections for 'Taxonomy', 'Distribution', 'Population', and 'Habitats and ecology', each with a 'Research needed' or 'Assessment' status. A 'Save Assessment' button is visible at the bottom right.

More than fifty three-hour online consultations sessions were required to complete Red List and Conservation Needs Assessments for over 350 amphibian species in India.



The False Malabar Gliding Frog (*Rhacophorus pseudomalabaricus*) is one of highest priority amphibian species for conservation action in India, and has been recommended for *ex situ* rescue, *in situ* conservation, further *in situ* research and for conservation education purposes. Photo: Benjamin Tapley.

Assessment consultation sessions began in late August, and ran until late October, with around fifty sessions being held. Despite a few minor teething problems with the new virtual format, the assessment sessions ran extremely well, with fantastic participation from the species experts. When possible, the sessions were scheduled to fit in with the availability of the experts, with morning, afternoon, late afternoon and evening sessions being scheduled. Over the two-month period, experts contributed to 345 Conservation Needs Assessments. Of these, fifteen still require further input from additional experts, and most of the remainder have been circulated for final review and feedback, before being approved and made available on the CNA web site, www.Conservation-Needs.org.

Although the final review is not yet complete, recommendations have been generated from most of the assessments, and they are unlikely to change a great deal after the final reviews. The preliminary results suggest:

- 75 species recommended for *ex situ* rescue
- 109 species recommended for *in situ* conservation
- 323 species recommended for *in situ* research
- 109 species recommended potential husbandry analogs
- 127 species recommended for conservation education
- 2 species recommended for supplementation

Each species can be recommended for more than one conservation action, as is shown by the figures above. Most assessments (323 or 94%) show that additional information about wild populations or their habitats is required to fully assess those species, with 75 species (22%) being recommended for *ex situ* rescue. The definitions of each of the conservation action types is available on the CNA web site, at www.conservationneeds.org/Help/EN/ConservationActions.htm. Some of the highest priority species for conservation action are: *Blythophryne beryet*, *Melanobatrachus indicus*, *Raorchestes jayarami* and *Rhacophorus pseudomalabaricus*.

AArk staff hope to continue working with the Indian experts to develop lists of species which potentially could be suitable for developing amphibian husbandry capacity in Indian zoos and academic institutions. Eventually the skills acquired could be used to

manage *ex situ* conservation programs for some of the species which have been recommended for *ex situ* rescue.

The most difficult aspect of the virtual workshop was probably scheduling the sessions to meet the availability of the majority of experts, but in combination with providing a format for experts to contribute to the assessments online, outside of the consultation sessions, all experts were able to contribute their knowledge. Likewise, with all assessments available for review by all experts, additional information can be contributed after the consultation sessions.

Although the virtual assessment process for Indian amphibians involved a little over two months of consultations, followed by an additional couple of months of review and finalizing, this new format of consultation via Zoom has proven to be quite successful, and will no doubt be used again over the coming year or so, until international travel is once again a safe option. There are some disadvantages of running virtual assessment workshops, which include difficulties scheduling sessions around experts' other commitments, shorter consultation times (three hours is probably the maximum that people can commit to an online call) and the lack of interactions and discussions between participants outside of the consultation sessions. However, there are definitely some advantages to virtual assessment workshops including almost no travel and accommodation costs, much lower environmental impact due to not needing to fly facilitators and experts to a central location and the ability to include a much larger group of experts during the consultations. These factors will be considered for future assessment workshops on a case-by-case basis.

Acknowledgements

We would like to thank the following experts who participated in the Conservation Needs Assessments:

Mohammad Firoz Ahmed, Ashana Archanagodbole, Gopalakrishna Bhatta, S.D. Biju, Mohini Mohan Borah, Prof. Sabitry Choudhury Bordoloi, Dr. Tutul Bortamuli, Basundhara Chettri, Neelesh Dahanukar, Nikhil Dandekar, Abhijit Das, Sandeep Das, Kaushik Deuti, KP Dinesh, Sushil K. Dutta, Lilly Margaret Eluvathingal, Nikhil Gaitonde, Sonali Garg, Akshay Gawade, Bhakta Bdr. Ghalle, Subarna Ghimrie, Varad Bhagwan Giri, Ninad Gosavi, Venu Govindappa, David Gower, Prudhvi Raj Harikrishnan S, Gunturu, Priti Hebbur, Amit Hegde, Nzano Humtsoe, Dr. Trupti Jadhav, Rachunliu G Kamei, Girish KG, R.D. Kanamadi, Krishna Komanduri, Ramachandran Kotharambath, Rajkumar KP, Keerthi Krutha, Seshadri KS, Gururaja KV, HT Lalremsanga, Lilly E. Linden, Stephen Mahony, Nikhil Modak, Pratyush P. Mohapatra, Sanjay Molur, Madhushri Mudke, N.A. Aravind, Annemarie Ohler, Dr. Anand Padhye, Harshil Patel, Naitik Patel, Sonam Phuntsho, Nameer PO, Sant Prakash, Jayaditya Purkayastha, Pooja Rathod, Jayanta Roy, Srinivas Kishanrao Saidapur, Saipari Sailo, Vishnu-priya Sankararaman, P. Santhoshkumar, Keerthikrutha Seetharaman, Saibal Sengupta, Kartik Shanker. Yogesh Shouche, Dr. Tej Kumar Shrestha, SR Chandramouli, SR Ganesh, Gayathri Sreedharan, Chelmala Srinivasulu, Barkha Subba, Shauri Sulakhe, Abhin M Sunil, Harikrishnan Surendran, Robin Suyesh, Jigme Tenzin, Dr. Chatoan Tesia, Sanjay Thakur, Ashish Thomas, Karthikeyan Vasudevan, Raju Vajubhai Vyas, S.P. Vijaykumar, Jigme Tshelthrim Wangyal.