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ASSESS TO PLAN: CONSERVATION ACTION PLANNING FOR THE SNAKES AND LIZARDS OF SRI LANKA

Report from the IUCN Red List Assessment, Key
Biodiversity Areas and Assess to Plan workshop

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Wattegama, Sri Lanka



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Implementation of the actions recommended within this report are being managed by a working group, established by participants of the workshop. For further details, please contact Ansem de Silva kalds@sltnet.lk and Suranjan Karunarathna dmsameera@gmail.com, who are coordinating this working group.

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CONTENTS

Executive Summary

Introduction

- 1.1 Reptile diversity of Sri Lanka
- 1.2 The climatic, altitudinal and ecological zones of Sri Lanka
- 1.3 1.3 Scope of workshop

2. Workshop Process

- 2.1 IUCN Red List assessments
- 2.2 Key Biodiversity Area assessments
- 2.3 Assess to Plan

3. Workshop Results

- 3.1 IUCN Red List assessment provisional results
- 3.2 Summary of major threats to Sri Lankan reptiles
- 3.3. Key Biodiversity Areas
- 3.4 Assessing to Plan
 - 3.4.1 Allocation of threatened species to A2P conservation planning buckets
 - 3.4.2 Allocation of Data Deficient species to A2P conservation planning buckets
 - 3.4.3 Identifying multi-species bundles within the A2P threatened species buckets

4. Site-based conservation action planning

- 4.1 Wilpattu Complex
- 4.2 Ritigala Strict Nature Reserve
- 4.3 Knuckles National Conservation Forest
- 4.4 Gannoruwa Forest Reserve
- 4.5 Nilgala Complex
- 4.6 Peak Wilderness Sanctuary Complex
- 4.7 Kalupahana (Uva Province)
- 4.8 Morningside and Handapan Ella Plains (Sinharaja IBA)
- 4.9 Enasalwatta
- 4.10 Rammalekanda Forest Reserve

5. Threat-based conservation planning

- 5.1 Persecution of snakes
- 5.2 Collection of reptiles for the international pet trade

6. Intensive care-based conservation planning

- 6.1 Intensive care for *Aspidura ravanai*
- 6.2 intensive care for *Nessia layardi*

7. Summary of actions and further work

8. References

Appendix I: List of the 169 species assessed during the Sri Lankan snakes and lizards' workshop

Appendix II: Participants of the IUCN Red List Assessment, KBA and A2P workshop

Appendix III: Summary of the 33 Key Biodiversity Areas

Appendix IV: Summary of A2P species buckets for threatened snakes and lizards

Appendix V: A2P conservation planning buckets and multi-species bundles

Appendix VI: Medically important snakes of Sri Lanka in a nutshell – snake Identification guide sheet by Ansem de Silva

EXECUTIVE SUMMARY

In September 2019, the IUCN/CI Biodiversity Assessment Unit held a workshop to complete IUCN Red List assessments for 169 species of snakes and lizards of the 230 currently (September 2019) described reptile species known from Sri Lanka, as part of the Global Reptile Assessment. Additionally, a preliminary Key Biodiversity Area (KBA) assessment was conducted and the IUCN SSC Conservation Planning Specialist Group facilitated the Assess to Plan (A2P) process to identify the next steps towards conservation action for all species assessed as threatened.

Of the 169 species assessed during the workshop, 102 (60%) were categorised as threatened (Critically Endangered, Endangered or Vulnerable), with 100 (98%) of these being endemic to Sri Lanka. Additionally, 17 species (10%) were assessed as Data Deficient, all of which are Sri Lankan endemics.

The main overarching threats to Sri Lankan snakes and lizards identified during the workshop were habitat loss, fragmentation, alteration and degradation. The principal underlying causes included forest clearance for plantation agriculture, tourism and urban development. Collection of animals for the international pet trade and persecution of snakes were also recognised as significant threats to certain species. Additionally, road traffic mortality, pollution, invasive species and predation from an increasing number of domestic animals including cats and poultry were identified as contributing to the threatened status of species. Droughts attributed to climate change and forest die-back (the cause of which remains poorly understood but has been linked to lead pollution (Ranasinghe *et al.*, 2009), were also considered current or potential threats to reptile species that are found in affected forest habitats.

During the workshop, 114 species were preliminary identified as Key Biodiversity Area trigger species, 101 of which were assessed as threatened. Additionally, three Near Threatened and three Data Deficient species also qualified as KBA trigger species because of their restricted ranges (<10,000 km²). A total of 33 KBA sites were either adopted (from existing KBAs) or newly delineated for 102 of the trigger species. Adequate information was available for 96 of the threatened trigger species, which were included in one or more of the KBA sites.

The Assess to Plan (A2P) process carried out by participants during the workshop determined that site-based conservation action planning was considered necessary for all 102 threatened species. KBA sites identified during the workshop were used as the focal sites for multi-species conservation planning bundles and next steps were mapped out for 10 of the 33 KBA sites. Habitat-based conservation action planning was identified as a requirement for 41 species dependant on and/or restricted to a specific habitat type (the specific habitat type could occur at multiple sites). Key habitats for which conservation action planning was recommended included montane tropical / sub-tropical forest characterised by numerous mid height (up to 8m) canopy trees, lowland rainforest, dry evergreen forest, sand dunes and coastal scrubland and also specific areas that have quality, thick leaf litter and humus layer on which a number of threatened fossorial species depend. Threat-based conservation action planning was recommended for 26 species. Threat bundles included species impacted by collection for the international pet trade, persecution and predation. Intensive care conservation action planning was recommended as one of the planning priorities for two species, in conjunction with site and habitat planning. Details of the A2P conservation action planning sessions and next steps are presented in this report, along with multi-species conservation action planning summary tables.

5. Threat-based conservation planning



Collection of reptiles for the international pet trade

A2P PROJECT LEADS

Anسلم de Silva, Dinal Samarasinghe, A. A. Thasun Amarasinghe

ISSUES

Wild collection for the international pet trade was identified as a specific threat to 11 reptile species assessed as threatened during the workshop (three Critically Endangered, five Endangered and three Vulnerable): *Ceratophora aspera*, *Ceratophora karu*, *Ceratophora stoddartii*, *Cophotis dumbara*, *Cnemaspis rammalensis*, *Calotes liocephalus*, *Calotes pethiyagodai*, *Ceratophora tennentii*, *Cophotis ceylanica*, *Lyriocephalus scutatus* and *Cyrtodactylus yakhuna*.



Ceratophora stoddartii
© Panduka de Silva



Lyriocephalus scutatus
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Ceratophora aspera
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Collection and trade of reptile species is prohibited, with a few exceptions. However, there is evidence of organised trafficking and there are growing concerns that considerable numbers of reptiles are being smuggled through or out of the country annually (Janssen & de Silva, 2019).

Reptile collection for the international per trade is particularly an issue in the Knuckles Ranges and the Central Highlands. Target reptile species are mostly agamids and the Sri Lankan pit viper *Trimeresurus trigonocephalus* (currently assessed as Least Concern) is also particularly targeted. *Lyriocephalus* is a monotypic genus, endemic to Sri Lanka and *Cophotis* and *Ceratophora* species are all endemic to Sri Lanka. Reptile collectors are both local and international (who come to Sri Lanka to collect species to top up breeding populations in their home countries. Few local people are extremely knowledgeable on the local habitat and where to find species of interest to international collectors. Collectors also target frogs, insects (particularly butterflies and stick insects) and spiders and contribute to the destruction of good habitat.

The table below lists the reptile species of most interest for the pet trade

<i>Lyriocephalus scutatus</i> Hump nose lizard	CITES Appendix II	Captive-bred in Japan.
<i>Calotes pethiyagodai</i> Pethiyagoda's crestless lizard	CITES listing is recommended	This species is known from the international pet trade and is advertised at higher prices than the related <i>C. liocephalus</i> (although it is thought that this species is included in this trade). The species is not known to be captive-bred, and so all animals in

		trade are presumed to have been illegally exported from Sri Lanka.
<i>Ceratophora stoddartii</i> Rhino horn lizard	CITES Appendix II	Possibly breeding in captivity. Often seen in trade under Southeast Asian species names, <i>Thaumatorhynchus brooksi</i> and <i>Hylagama borneensis</i>
<i>Cophotis ceylanica</i> Pygmy lizard	CITES Appendix II	Possibly breeding in captivity, however a 2019 CITES proposal indicates that "doubt has been cast over the veracity of these claims".
<i>Calotes liocephalus</i> Crestless lizard	CITES listing is recommended	This species is not thought to be captive-bred, so all animals in trade are presumed to be wild-caught. It is thought that animals are included in trade under the name <i>C. pethiyagodai</i> .
<i>Ceratophora aspera</i> Rough horn lizard	CITES Appendix II	High value in the international pet trade. Most animals are believed to be wild-caught.
<i>Ceratophora karu</i> Karunaratne's horn lizard	CITES Appendix I	This species has been reported in the online pet trade since 2017.
<i>Ceratophora tennentii</i> Leaf-nose lizard	CITES Appendix II	This species has been recorded in the US pet trade since 2016, including imports from Europe of animals advertised as both wild-caught and captive-bred.
<i>Cophotis dumbara</i> Knuckles pygmy lizard	CITES Appendix II	Reported in the European pet trade since 2015 and advertised for sale in the USA in 2018 (with claims these were the first imports of this species into the country). The scale of wild offtake is unknown, but the 2019 CITES proposal noted that the numbers of animals reported in trade suggest that animals are still being removed from the wild to supply this trade.
<i>Cnemaspis rammalensis</i> Rammale day gecko		Currently, there is not thought to be any substantial trade in this species. This is however Sri Lanka's largest day gecko and might be of increasing interest to the pet trade in the future, which would represent a major threat to this highly restricted, uncommon gecko.
<i>Cyrtodactylus yakhuna</i> Blotch bow-finger gecko		This is the most expensive gecko in the pet trade from Sri Lanka.
<i>Chrysopelea ornata</i> Ornate flying snake		NB. This species was not assessed during the workshop but is native to Sri Lanka and was mentioned in A2P discussions. It is a high value species and an increasing number of animals are being recorded in trade.

Challenges:

- New taxonomic descriptions drive interest for new species in trade and increase trade prices.
- There is no enforcement of permitted entry to National Parks.
- Reptiles are transported internationally through shipping lines and so go undetected by customs and government agencies.
- Small-scale exportation is possible through airline transport as not everyone who travels by air is security screened.

- Several reptile species were proposed for CITES Appendix I, however were adopted under CITES Appendix II. This has been heavily criticised as it is considered worse for the species to have them listed under Appendix II, than not at all, because if these species have a quota for a number of individuals of these species to be collected for trade, it may increase their popularity.

CONSERVATION NEEDS IDENTIFIED DURING A2P DISCUSSIONS

- Prioritise increasing effective conservation, including effective laws and regulations that are effectively enforced, within the Knuckles Conservation Area.
- Integrate all stakeholders, including the private sector, NGO's (EFL), public sector and local communities through Community Board Organisations.
- All airline travellers (including airline staff) should be security screened

A2P IMMEDIATE NEXT STEPS

Plan a workshop for 2020 to develop an integrated strategy for the effective management of the illegal Sri Lankan pet trade, involving all relevant stakeholders.

ACTION LEAD

Dinal Samarasinghe with BDS (Ms. Chanuka)

POTENTIAL EXTERNAL COLLABORATORS AND STAKEHOLDERS

- Museum Zoology Department
- Customs: Dedicated biodiversity related branch: Biodiversity Unit of Customs. Responsible for checking boarders for imports and exports: airport and shipping – legal shipments
- Samantha Gunasekara (writes CITES proposals)
- Wildlife Department – Park Rangers (including buffer zone). Responsible for carrying out raids within the park and at private property locations
- Forest Department – Rangers receive information from villagers and carry-out checks
- Biodiversity section of the Ministry for Environment – mediators for species conservation, focal point for Convention on Biological Diversity and reporting on Sri Lanka's National Biodiversity Strategy
- Police Department, Environment Unit – carry out raids at private properties
- Navy and coastguard – monitor boat activity around the periphery of Sri Lanka (Yala and Wilpattu have coastal boarders)
- NGO: Environmental Foundation Limited (EFL) [Dinal]: pass information to Wildlife Department (and customs), provide information for CITES listing proposals
- UNDP GEF small grant programme
- Ministry of Mahaweli Development and Environment
- Vincent Nijman – author on pet trade (activist and scientist, Oxford Brookes University)
- A relevant stakeholder group is already loosely in existence, developed for CITES COP (2019)