

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Twenty-sixth meeting of the Plants Committee
Geneva (Switzerland), 5 – 9 June 2023

Thirty-second meeting of the Animals Committee
Geneva (Switzerland), 19 – 23 June 2023

Species conservation and trade

ASSESSMENT OF APPENDIX-I LISTED SPECIES

1. This document has been prepared by the Secretariat.
2. At its 19th meeting (CoP19; Panama City, 2022), the Conference of the Parties adopted Decisions 19.184 and 19.185 on *Assessment of Appendix-I listed species* as follows:

Directed to the Secretariat

19.184 *The Secretariat shall:*

- a) *in consultation with relevant range States and relevant experts, produce detailed assessments on the conservation status, threats, impacts of legal and illegal trade, ongoing in situ and ex situ conservation strategies or recovery plans and funding/resources available or required for at least the ten Appendix-I listed species from those listed in the table in paragraph 15 of document CoP19 Doc. 11, and others; and*
- b) *submit a report, including these assessments, and recommendations on possible actions within the CITES mandate which could contribute to the implementation of the CITES Strategic Vision 2021-2030 and link to any global biodiversity monitoring framework which may be adopted as part of a post-2020 Global Biodiversity Framework with draft recommendations, for consideration by the Animals and Plants Committees.*

Directed to the Animals and Plants Committees

19.185 *The Animals and Plants Committees shall:*

- a) *review the report and draft recommendations prepared by the Secretariat under paragraph a) of Decision 19.184;*
- b) *taking into account paragraph a) of this Decision, information document AC31 Inf. 6/PC25 Inf. 8 and the suggestions in document AC31/PC25 Com. 1 (Rev. by Sec.) and its Annex, refine the methodology and its criteria for carrying out an assessment of species listed in Appendix I that might benefit from measures adopted by the Conference of the Parties; and*
- c) *formulate recommendations, as appropriate, for communication to the range States and consideration at the 20th meeting of the Conference of the Parties.*

3. At the 17th meeting of the Conference of Parties (CoP17; Johannesburg, 2016), a set of Decisions on *Appendix-I listed species* was adopted to identify the contribution by CITES to the achievement of the Strategic Plan for Biodiversity 2011-2020 and the relevant Aichi Biodiversity Targets adopted by the Parties to the Convention on Biological Diversity (CBD), specifically Target 12.
4. Taking into consideration the fact that 623 (63%) of CITES Appendix-I listed species are classified in a threatened category by IUCN and 429 (44%) of the threatened species are experiencing population declines ([CoP17 Doc. 79](#)), Decisions were adopted to acknowledge the need to obtain information about the status of Appendix-I species. The original aim of the Decisions was to assess the conservation status of, and legal and illegal trade in, species included in Appendix I, with an indication of conservation priorities based on levels of threats caused by trade and resource availability to address these threats. In this way, CITES could potentially contribute to the recovery of Appendix-I species and the implementation of Aichi Target 12.
5. Due to delays in securing funding to conduct a rapid assessment as mandated under the CoP17 Decisions, the Decisions on *Appendix-I listed species* were renewed at the 18th meeting of the Conference of Parties (CoP18; Geneva, 2019) taking into account the steps proposed by the Secretariat at the joint session of the 30th meeting of the Animals Committee and 24th meeting of the Plants Committee ([AC30 Doc. 8/PC24 Doc. 8](#); AC30/PC24; Geneva, July 2018). The CoP18 Decisions included in the assessment any ongoing *in situ* and *ex situ* conservation strategies or recovery plans for Appendix-I species in addition to the original goals of the CoP17 Decisions, with the aim to identify Appendix-I species that could potentially benefit from future action under CITES, though it was not clear what sort of action this might entail.
6. In fulfilment of the CoP18 Decisions, a rapid assessment of the conservation status of, and legal and illegal trade in, species and subspecies included in Appendix I was conducted in consultation with an informal technical advisory group [Animals Committee representative of Europe (Mr. Fleming); Brazil, Mexico, South Africa, United Kingdom of Great Britain and Northern Ireland, United States of America, and Zimbabwe]. Appendix-I species were assessed against the following 10 criteria in four overarching categories using publicly available datasets as well as data from the annual illegal trade reports:

Category	Criteria
1. Extinction risk	1.1 Red List status
	1.2 Population trend
2. Threats from trade	2.1 Threat from use
	2.2 In legal trade
	2.3 In illegal trade
3. Biological vulnerability	3.1 Range size
	3.2 Generation length
4. Management effort	4.1 Compliance with CITES
	4.2 Existing measures under CITES
	4.3 Conservation actions in place

7. The provisional results of the rapid assessment were presented to the joint session of the 31st meeting of the Animals Committee and 25th meeting of the Plants Committee (AC31/PC25; online, June 2021). The details of the methods and scoring criteria can be found in the Annex to document [AC31 Doc. 9/PC 25 Doc. 10](#) and information document [AC31 Inf. 6 / PC25 Inf. 8](#). To identify and select species for detailed assessments, the following three approaches were used to score 1,130 Appendix-I listed taxa on the categories of extinction risk, threat from trade, biological vulnerability and management effort:

Type	Scoring option	Description	Results
Unweighted	1	no multiplication factors applied to any score	extinction risk, threat from trade, biological vulnerability and management effort to all be of equal importance
Weighted	2	multiplies the taxa scores for category 2 (“threat from trade”) by a factor of two	prioritizes taxa that are considered threatened by trade
	3	multiplies the taxa scores for category 2 (“threat from trade”) and category 4.2 “existing measures under CITES” by a factor of two	prioritizes taxa considered threatened by trade that are not currently subject to CITES Resolution and Decisions

8. This identified 31 species that were consistently ranked high across the three approaches and could be considered for detailed assessments.
9. At AC31/PC25, Mexico proposed an alternate approach for identifying and selecting Appendix-I species for detailed assessments. This approach used the scores for the 10 criteria from the rapid assessment and calculated the average of the five trade related criteria scores (criteria 2.1, 2.2, 2.3, 4.1 and 4.2) and the average of the five biological criteria scores (criteria 1.1, 1.2, 3.1, 3.2 and 4.3). Based on these two averages, species were assigned into one of four quadrants.
10. Having reviewed the methodology and preliminary results of the rapid assessment, the Animals and Plants Committee agreed to conduct detailed assessments on a subset of species that ranked highly in the rapid assessment and also fell into the different quadrants as proposed by Mexico.
11. A list of ten species for detailed assessments were presented at CoP19 in document [CoP19 Doc. 11](#). The list included two flora and eight fauna species and nine of the ten species are included in the top 31 species as identified by the rapid assessment. The Secretariat has conducted preliminary detailed assessments for the ten species in the following table:

FAUNA		
Mammalidae		
Scientific name	Common name	Range States (from Species+)
<i>Caprolagus hispidus</i>	Assam Rabbit	Bangladesh, Bhutan, India, Nepal
<i>Helarctos malayanus</i>	Malayan Sun Bear	Brunei Darussalam, Cambodia, China, India, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Thailand, Viet Nam
<i>Hippotragus niger variani</i>	Giant Sable Antelope	Angola, Zambia
<i>Lontra longicaudis</i>	Neotropical River Otter	Argentina, Belize, Bolivia (Plurinational State of), Brazil, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana [FR], Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, Venezuela (Bolivarian Republic of)
Aves		
<i>Anodorhynchus hyacinthinus</i>	Hyacinth Macaw	Bolivia (Plurinational State of), Brazil, Paraguay
Reptilia		
<i>Crocodylus siamensis</i>	Siamese Crocodile	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Thailand, Viet Nam
<i>Eretmochelys imbricata</i>	Hawksbill Turtle	Albania, American Samoa, Anguilla (United Kingdom), Antigua and Barbuda, Aruba, Australia, Bahamas, Bahrain, Bangladesh, Barbados, Belize, Benin, Bermuda (United Kingdom), Brazil, British Virgin Islands (United Kingdom), Brunei Darussalam, Cabo Verde, Cambodia, Cameroon, Cayman Islands (United Kingdom), China, Colombia, Comoros, Congo, Cook Islands, Costa Rica, Côte d'Ivoire, Cuba, Curaçao, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Fiji, France, French Guiana [FR], French Polynesia, French Southern and Antarctic Territories, Gabon, Gambia, Ghana, Grenada, Guadeloupe, Guam, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Jamaica, Japan, Jordan, Kenya, Kiribati, Kuwait, Liberia, Macau, Madagascar, Malaysia, Maldives, Malta, Marshall Islands, Martinique,

		Mauritania, Mauritius, Mayotte, Mexico, Micronesia (Federated States of), Montserrat (United Kingdom), Mozambique, Myanmar, Namibia, Netherlands Antilles, New Caledonia, New Zealand, Nicaragua, Nigeria, Northern Mariana Islands, Oman, Pakistan, Palau, Panama, Papua New Guinea, Peru, Philippines, Pitcairn Islands (United Kingdom), Portugal, Puerto Rico, Qatar, Réunion, Saint Helena and Dependencies (United Kingdom), Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Saudi Arabia, Senegal, Seychelles, Sierra Leone, Singapore, Sint Maarten, Solomon Islands, Somalia, South Africa, Spain, Sri Lanka, Sudan, Suriname, Taiwan, Province of China, Thailand, Togo, Tokelau, Tonga, Trinidad and Tobago, Turks and Caicos Islands (United Kingdom), Tuvalu, United Arab Emirates, United Republic of Tanzania, United States of America, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam, Virgin Islands of the USA, Wallis and Futuna Islands, Yemen.
<i>Gonatodes daudini</i>	Union Island gecko	Saint Vincent and the Grenadines
FLORA		
Orchidaceae		
<i>Aerangis ellisii</i>		Madagascar
Liliaceae		
<i>Aloe pillansii</i>	Bastard Quiver Tree Aloe	Namibia, South Africa

12. As indicated in paragraph 10, the ten species selected for detailed assessments are dispersed amongst the four quadrants as shown in Figure 1.

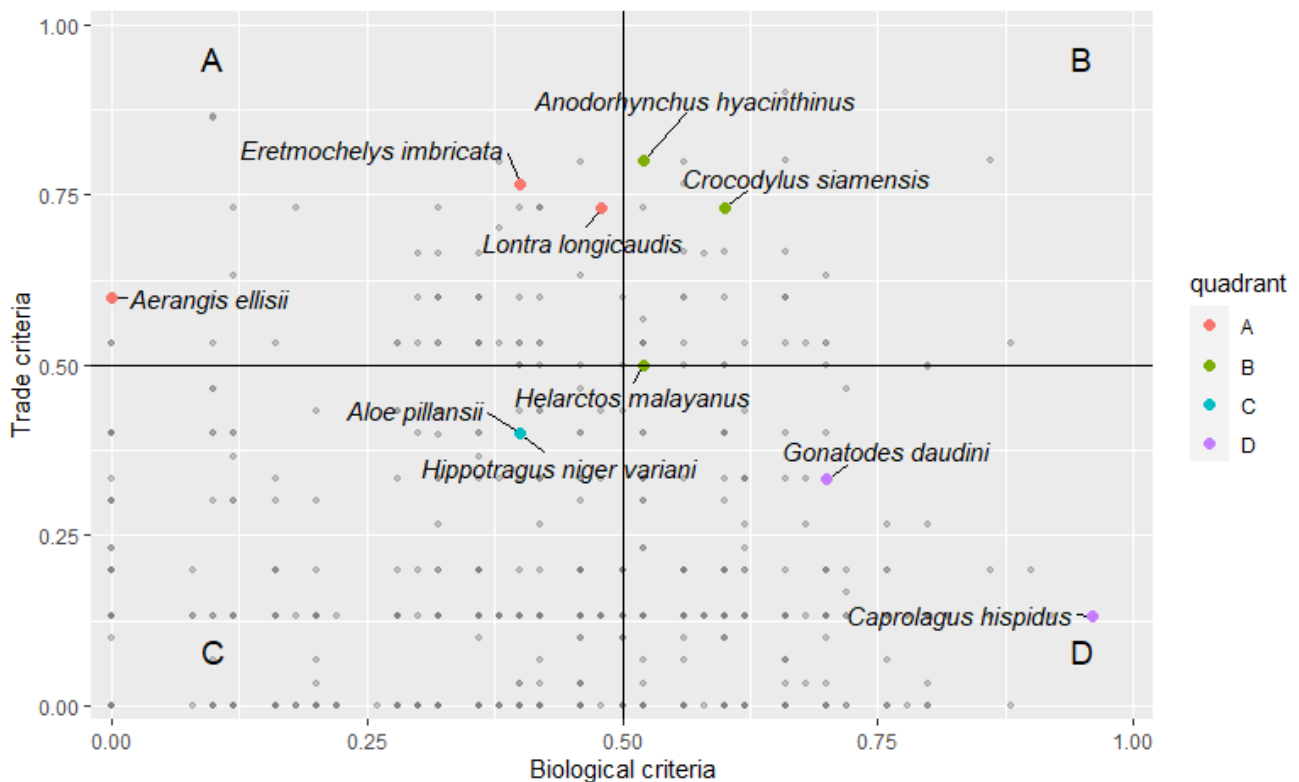


Figure 1. Position of the 10 selected taxa on the 4 quadrants are highlighted amongst the 1,130 Appendix-I listed species that were reviewed. The ten selected taxa are shown in coloured points with its species name.

13. The original aim of the Decisions on *Appendix-I species* was to conduct a rapid assessment of Appendix I species to identify those that could potentially benefit from concerted action under CITES to prevent extinction and improve the status of those species facing population decline. The detailed assessments for the 10 taxa serve to provide examples of Appendix-I species across different categories of conservation status, threats and levels of legal and illegal trade, with a view to investigating what actions under CITES, if any, could be taken to improve the status of the species. A summary of the information included in the preliminary detailed assessments collected to date is presented in the Annex to the present document.

Next steps

14. The Secretariat will share the preliminary detailed assessments with the range States concerned and prepare a questionnaire inviting these Parties and relevant experts to provide information on the species that cannot be found in publicly available scientific literature. They will also be asked to provide information relating to ongoing *in situ* and *ex situ* conservation strategies or recovery plans and funding/resources available or required by range States to implement conservation measures.
15. The Secretariat will update and finalize the detailed assessments based on the responses from the range States and relevant experts and prepare a report, including these detailed assessments, and recommendations for consideration by the Animals and Plants Committees on possible actions within the CITES mandate which could contribute to the implementation of the *CITES Strategic Vision 2021-2030* and the Kunming-Montreal post-2020 Global Biodiversity Framework and its monitoring framework.

Recommendations

16. The Animals and Plants Committees are invited to establish a joint intersessional working group to:
 - a) review the results of the rapid assessment in information document [AC31 Inf. 6/ PC25 Inf. 8](#) on *Rapid assessment of Appendix-I taxa that could potentially benefit from further CITES action*, the suggestions in document [AC31/PC25 Com. 1 \(Rev. by Sec.\)](#), the Annex to the present document, the case studies and responses from range States on the 10 species selected for detailed assessments;
 - b) refine the methodology and its criteria for carrying out an assessment of species listed in Appendix I that might benefit from measures adopted by the Conference of the Parties; and

- c) formulate draft recommendations for consideration at the joint session of the 33rd meeting of the Animals Committee and 27th meeting of the Plants Committee.

TABLE 1. SUMMARY OF THE TEN TAXA REVIEWED FOR DETAILED ASSESSMENTS.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Assam rabbit (<i>Caprolagus hispidus</i>)	1 July 1975	Endangered, decreasing (2018); population estimate unknown	Habitat loss, degradation and fragmentation, grazing, flooding.	1 record (1986); for purpose S	No evidence apart from reports of small-scale hunting for subsistence and local consumption in north India	No evidence.	Main issue for this species seems to be related to habitat loss and fragmentation both anthropogenic and natural.	Habitat conservation.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Bastard quiver tree (<i>Aloe pillansii</i>)	1 July 1975	Critically endangered, decreasing (2022); 5935-9000 mature individuals	Habitat loss and degradation due to mining activities, grazing, illegal collection, drought and climate change	109 records (1981-2019). 100 direct trade records (73% from SA, 19% Germany); 9 re-exports. Purpose: T (89), P (10); Source codes: A (62), D (39), I (2). Highest year (1999): 15 records.	Anecdotal evidence of seedlings being removed from the wild in 60s and 70s.	No recent incidents of poaching have been recorded, despite previous records of illegal collection.	Main issue for this species seems to be related to habitat loss and climate change.	Habitat conservation, research on population trends, life history patterns and causes of mortality

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Giant sable antelope (<i>Hippotragus niger variani</i>)	1 July 1975	Critically endangered, decreasing (2016); 70-100 mature individuals	Poaching, snares, illegal capture, habitat loss, hybridisation with roan antelope (<i>H. equinus</i>) and low genetic diversity	61 total records (1982-2021), 37 direct exports and 24 re-exports. Purpose codes: T (10), H (10), Q (6), S (6), 21 without purpose code. Source codes: O (14), W (11), U (5), and 24 without source code.		Evidence of poaching with linked to bushmeat trade.	Need update on Species+ to remove Zambia as range State. Main issues seem to be poaching and hybridization.	Habitat conservation, continued enforcement measures and management of population to avoid hybridization.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Hyacinth macaw (<i>Anodorhynchus hyacinthinus</i>)	22 October 1987 [genus listing <i>Anodorhynchus</i> spp.] NB. Added to Appendix II first, 6 June 1981 [order listing <i>Psittaciformes</i> spp.]	Vulnerable, decreasing (2016); 4300 mature individuals	Illegal trade for pet trade (domestic and international), habitat loss and fragmentation.	1027 records of App I (1987-2021) and 119 records of App II. Majority of trade is in live, captive-bred specimens (711 records) followed by F (106 records).		Historically high levels of international illegal trade particularly in live individuals	Main issue for this species seems to be habit loss and fragmentation and capture for illegal trade. Only one facility is registered for captive breeding of the species, but source code "C" specimens recorded from multiple countries.	Habitat conservation and enforcement measures.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Orchid (<i>Aerangis ellisii</i>) with Annotation.	13 February 2003 NB. Added to Appendix II first, 1 July 1975 [FAMILY listing Orchidaceae spp.]	No IUCN assessment.	Lack of information on threats specific to the species. General treats to Malagasy orchids include habitat loss and trade.	247 records (1983-2021). Majority of trade records are of live specimens (242 records) of source code A (101) and W (91).		No specific information available on the species.	Information on this species is lacking and research is required to assess the species.	Research on the species.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Siamese crocodile (<i>Crocodylus siamensis</i>)	1 July 1975	Critically endangered, decreasing (2012); 500-1000 mature individuals	Habitat loss and fragmentation, incidental capture in fishing equipment, human-wildlife conflict, illegal capture for stocking of farms, and low genetic diversity. Commercial hunting for skin was main cause for decline but is less of an issue in recent years.	7179 records (1975 – 2021) of which 4515 direct trade records and 2664 re-export records. Most common trade is of source code D with leather products (small; 2722), skins (1306), and bodies (571).		Extensive poaching to stock farms has been reported.	Main issue for the species seems to be habitat loss and fragmentation couple with low population size, hybridization due to escaped hybrid individuals and poaching.	Habitat conservation; research and survey on the remaining wild populations.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Union Island Gecko (<i>Gonatodes daudini</i>)	26 November 2019	Critically endangered, stable (2019); population estimate unknown.	Habitat loss and fragmentation, collection for live pet trade, predation by feral cats and invasive species and habitat loss and fragmentation.	No records.		Prior to listing, online trade has been found in this species (2014-2018).	Main issues for the species seem to be potential illegal trade in the species and habitat loss.	Research into illegal trade, habitat protection.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Hawksbill turtle (<i>Eretmochelys imbricata</i>)	4 February 1977 NB. The subspecies <i>E. i. imbricata</i> was listed in Appendix I 1 July 1975 prior to the listing of the full species	Critically endangered, decreasing (2008); population estimate unknown.	Targeted take, bycatch, habitat loss, egg collection, domestic and international trade and human disturbance.	4389 records (1977 – 2022), which include 2117 direct trade records and 2272 in-direct records. Pre-convention carvings (581), scientific specimens (383) are the most commonly recorded trade.	Legal domestic use occurs in several countries.	High levels including online trade, includes meat and eggs but main international illegal trade is in raw shell or products.	Main issues for the species seem to be continued illegal trade and habitat loss.	Demand reduction enforcement, alternative livelihoods, awareness raising, habitat protection.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Long-tailed otter (<i>Lontra longicaudis</i>)	1 July 1975	Near threatened, decreasing (2020); population estimate unknown.	Habitat loss/fragmentation, conflict with fishermen and pollution. Hunting was a major threat until the 1970s but does not appear to be a concern in recent years.	148 records (1975-2021, which includes 38 direct trade records and 110 re-export records. Majority of trade is recorded without a purpose or source code. Recent trade is for scientific purposes.	Historically high levels of commercial hunting and trade, particularly in pelts in 20th century	Some illegal hunting may be ongoing.	Main concern for the species seems to be habitat loss and fragmentation.	Habitat conservation.

Species	Date of App I listing	IUCN Status (year of assessment; population estimate)	Threats	CITES Trade database	Legal trade (literature)	Illegal trade	Preliminary conclusions	Most important areas for future focus
Malayan sun bear (<i>Helarctos malayanus</i>)	28 June 1979 Added to Appendix II 1 July 1975	Vulnerable, decreasing (2016); population estimate unknown.	Poaching for trade, snares, habitat loss, and human-wildlife conflict.	274 records (1980-2021), which includes 207 direct trade records and 67 re-export records. Most common trade records are for live specimens for purpose Z of source code C (41) and W (13) .		High levels of illegal trade in parts and derivatives - high demand for parts for traditional medicine.	Main issues for the species seem to high levels of illegal trade, snaring, and habitat loss.	Demand reduction and enforcement measures.