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

Joint sessions of the 31st meeting of the Animals Committee and
the 25th meeting of the Plants Committee
Geneva (Switzerland), 17 July 2020

Strategic matters

APPENDIX-I LISTED SPECIES

1. This document has been prepared by the Secretariat.

2. At its 18th meeting (CoP18, Geneva, 2019), the Conference of the Parties adopted Decisions 18.28 and 18.29 on *Appendix-I listed species* as follows:

    18.28   *Directed to the Secretariat*

    Subject to available resources, the Secretariat shall:

    a) *contract consultants, as appropriate, to undertake the following:*

        i)   *conduct a rapid assessment of the conservation status of, and legal and illegal trade in, species included in Appendix I;*

        ii) *in consultation with range States, produce detailed assessments on the conservation status, threats, relevance of trade, ongoing* in situ *and* ex situ *conservation strategies or recovery plans and funding/resources available or required for the species concerned and selected; and*

        iii) *produce a report identifying and prioritizing those Appendix-I species that could potentially benefit from future action under CITES; and*

    b) *produce a report with its recommendations to the Animals and Plants Committees for consideration at their 32nd and 26th meetings, respectively.*

    18.29   *Directed to the Animals and Plants Committees*

    The Animals and Plants Committees shall review the report and recommendations submitted by the Secretariat pursuant to Decision 18.28, paragraph b), and formulate recommendations, as appropriate, for communication to the range States and consideration of the Conference of the Parties at its 19th meeting.

Implementation of Decision 18.28

3. As directed in paragraph a) i) of Decision 18.28, and thanks to a financial contribution from Switzerland, the Secretariat contracted the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) to conduct a rapid assessment of the conservation status of, and legal and illegal trade in, species and subspecies included in Appendix I. This assessment was undertaken by UNEP-WCMC in collaboration with the International Union for Conservation of Nature (IUCN).

4. An informal technical advisory group was previously formed at the joint session of the 29th meeting of the Animals Committee and of the 23rd meeting of the Plants Committee (AC29/PC23, Geneva, July 2017) to assist the Secretariat in the implementation of Decision 17.22 on *Appendix-I listed species*. The membership was decided as follows: 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. Because the Secretariat was unable to identify any donors interested in partially or fully funding the large research project envisaged under Decision 17.22, it did not enlist the advisory group's assistance.

5. Following the adoption of Decision 12.28 at CoP18, the Secretariat reached out to the members of this advisory group on behalf of UNEP-WCMC and IUCN, seeking their assistance with the development of the methodology for the rapid assessment. A virtual meeting with the informal technical advisory group, the Secretariat, UNEP-WCMC and IUCN took place in May 2020 to discuss the overarching aims of the rapid assessment, and the proposed suite of criteria and their individual scoring.

6. The methodology developed by UNEP-WCMC in collaboration with IUCN is outlined in the Annex to the present document. The provisional results of the rapid assessment of Appendix-I listed species, including details of taxa and their corresponding score ranked in order, will be presented in an information document for consideration at the present meeting.

Next steps

7. Following a review of the methodology used and the outputs provided, the next step will be to produce a shortlist of priority taxa where international trade appears to be a threat, management efforts do not yet exist or are insufficient, and where more could be done under CITES to improve the conservation status of the taxa in the wild. It is proposed to select two subsets of species (one for fauna and one for flora) for further attention.

8. Subject to the availability of additional funding, detailed assessments of the conservation status, threats, relevance of trade, ongoing *in situ* and *ex situ* conservation actions or recovery plans, and funding/resources available or required to carry out the conservation measures required for the species concerned and selected, will be produced in consultation with range States.

9. In compliance with paragraph c) of Decision 18.28, the Secretariat will produce a report on the implementation of this Decision, including its recommendations for future work to the Animals and Plants Committees, for consideration at their 32nd and 26th meetings, respectively.

Recommendations

10. The Animals and Plants Committees are invited to:

    a) review the criteria and methodology used for the rapid assessment presented in the Annex to the present document, and consider the provisional results of the assessment; and

    b) provide guidance to the Secretariat on its further implementation of Decision 18.28, as outlined in paragraphs 7 to 9 of the present document, and the prioritization of species that could benefit from targeted action by CITES.

UNEP-WCMC Technical Report

RAPID ASSESSMENT OF APPENDIX I TAXA THAT COULD POTENTIALLY BENEFIT FROM FURTHER CITES ACTION

UN environment programme WCMC IUCN

Rapid assessment of Appendix I taxa that could potentially benefit from further CITES action

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Contents

Overview

The CITES Vision Statement, adopted at CoP18, aims to ensure the long-term conservation of taxa in trade, thereby contributing towards halting biodiversity loss and the wider goals of the post-2020 global biodiversity framework. Within this context, Decision 18.28 was adopted to develop a framework that could be used to improve the conservation status of CITES-listed Appendix-I taxa. Specifically, the Decision calls for a rapid assessment of Appendix-I taxa, detailed assessments of selected taxa, and identification and prioritization of those Appendix-I taxa that could potentially benefit from future CITES action.

To address part a) i) of Decision 18.28, the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) was requested by the CITES Secretariat to conduct a **rapid assessment** of the conservation status of, and legal and illegal trade in, species and subspecies included in Appendix I. This assessment was subsequently undertaken by UNEP-WCMC in collaboration with IUCN.

Based on the initial method proposed by the Secretariat in Paragraph 11 of CoP18 Doc. 92, this document presents a detailed methodology for conducting the first rapid assessment of Appendix I species and subspecies for potential further action. The results of the rapid assessment, including details of all 1130 Appendix I taxa and their corresponding "scores" in ranked order, will be available as an information document to AC31/PC25 for consideration by the Committees. These outputs, provided in Excel, should be seen as a tool to assist taxa prioritization; the outputs can be filtered by different parameters to address different questions and priorities.

Noting that limited time was available to conduct the rapid assessment, the results should be seen as a first step. Further data considerations related to the underlying datasets and criteria are provided in the final section (which may be of particular relevance if the process is periodically repeated, similar to the Review of Significant Trade and the Review of animal specimens reported as produced in captivity). Nevertheless, the approach taken aims to fit with the overarching aims of Decision 18.28, namely to prioritise Appendix I taxa for future CITES action. It is anticipated that the next steps will be to review the methods proposed and outputs provided, as well as to identify a short list of priority taxa where international trade appears to be a threat, management efforts do not yet exist or are insufficient, and where more could be done to improve conservation status in the wild under CITES.

UNEP-WCMC and IUCN are ready to support the Secretariat and the Animals and Plants Committees with finalisation of a short list of priority taxa, as well as with conducting the detailed assessments of the selected taxa and further prioritisation called for in parts ii) and iii) of Decision18.28.

Rapid Assessment

Introduction and scope

The rapid assessment methodology was developed by UNEP-WCMC and IUCN, with advice from the Secretariat and the informal advisory group referred to in AC31 Doc. 9/PC25 Doc. 10. From the outset, it was assumed that Appendix I taxa should be prioritised most highly if they were facing a real extinction risk, were threatened by international trade, were vulnerable to trade due to biological factors, and no existing management efforts were targeting the taxon, or any in place were ineffective. Based on these assumptions, a list of potentially useful datasets was compiled in order to inform the prioritisation process. Following a review of these potential datasets by UNEP-WCMC and IUCN, a framework of four overarching categories and a proposed list of 10 criteria was developed.

Datasets that were considered but were not ultimately included on the basis of either availability, relevance or overlap with other criteria included: population size, reproduction rate and certain other life history characteristics, genetic distinctiveness, listing in other multi-lateral environmental agreements such as CMS, or national aspects such as national red list status, CITES legislation category or management efforts.

A virtual meeting with the informal advisory group[1] took place in May 2020 to discuss the overarching aims of the rapid assessment and the proposed suite of criteria. Specifics around individual criterion scoring, as well as additional datasets and potential future criteria were also discussed. There was agreement that the rapid assessment process should prioritise Appendix I taxa that were either known to occur within international trade (legal or illegal), or that were considered threatened by trade. The results of the rapid assessment, including details of taxa and their corresponding "score" in ranked order, are available in an AC31/PC25 information document to aid the Committees with their considerations on next steps.

Methodology

Within the four overarching categories, ten criteria are proposed (Table 1). These criteria utilise publicly available datasets (Species+, CITES Trade Database, The IUCN Red List of Threatened Species[TM] and TRAFFIC seizure data), as well as seizure data provided by UNODC from the CITES annual illegal trade reports. Together, these aim to assess risk to Appendix I taxa based on intrinsic traits, and those related to conservation status, trade and management. Details of the data and methodology for each criterion are described in Table 2.

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[1] Advisory group members in attendance were Mexico and the United Kingdom, in addition to the CITES Secretariat.

Table 1: Criteria proposed based on available datasets, under each of four categories.

Category	Criteria
1. Extinction risk	1.1 Red List status
	1.2 Population trend
2. Threat 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

Each taxon is scored for each criterion, subject to data availability. A single final score is then calculated for each taxon based on the mean score across all criteria for which a score could be assigned. Criteria for which a score could not be assigned for an individual taxon would not be included in that taxon's final score to avoid skewing the score: this includes instances where taxa do not yet have an IUCN Red List assessment, where data were unknown or not available, for example.

Based on discussion with the Secretariat and the informal advisory group, "threat from trade" (category 2) was considered to be the key category that CITES could influence, and therefore it was agreed that weighting the overall scoring in favour of trade threats should be explored.

Data included

Further to providing a score for each criterion and, where possible, the data underpinning that score[2], non-scoring contextual information are provided to support the Animals and Plants Committees in identifying the highest priority taxa, including:

- The **year listed** in Appendix I;
- Where **Appendix I Reservations** exist;
- The year of the most recent IUCN **Red List assessment** (from which the Red List data in the relevant criteria derive);
- The **number of range States** according to distribution records in Species+[3] (additionally listing the range States by ISO2 code); and
- The **estimated population size** based on the number of mature individuals in the most recent Red list assessment[4].

Results from the analysis, as well as the final Appendix I rapid assessment output will be provided in an information document to AC31/PC25.

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[2] Only where these data are publicly available.
[3] Species+ is a database maintained by UNEP-WCMC and accessible from speciesplus.net.
[4] Where a range of population size estimates are provided, the mean will be taken. The estimated population size according to the Red List assessment could not be included as a scored criterion because it is a key factor in assigning Red List status and so the two are highly correlated.

Table 2: **Overview of Appendix I rapid assessment scoring criteria to address stage a) i) of Decision 18.28.** Where data were available, all criteria were scored between 1 (high) and -1 (low). Each taxon was assigned a final score based on the mean score across all criteria that could be assessed; criteria with missing or incomplete data were not scored to avoid distorting the final outcome.

Criteria	Data source	Methods	Scoring criteria	Not scored[5]
Extinction risk				
1.1 Red List status category	IUCN Red List[6]	*Taxa considered globally threatened are prioritised.* Red List status according to IUCN Red List assessment.	1: CR & EW[7] 0.8: EN 0.6: VU 0.4: NT 0: EX -1: LC	Red List status: DD (Data Deficient). Taxon not yet assessed by IUCN.
1.2 Population trend	IUCN Red List[6]	*Taxa with declining population trends are prioritised.* Population trend according to IUCN Red List assessment. *This aligns with biological criterion in Annex 1 C (i-ii) of Res. Conf. 9.24 (Rev. CoP17) on "marked decline".*	1: Decreasing 0.5: Stable 0: Increasing	Population trend: unknown. Taxon not yet assessed by IUCN.
Threat from trade				
2.1 Threat from use	IUCN Red List[6]	*Those taxa where "trade/use" is a documented threat are prioritised.* Whether the IUCN Red List assessments considered **intentional biological resource use** to be a threat (threat classifications: 5.1.1, 5.2.1, 5.3.2, 5.4.2)[8], and if so, how severe those threats were considered to be. Where there were multiple threats and severity, the highest score was taken.	1: Considered a threat (severity: very rapid decline or rapid decline) 0.66: Considered a threat (severity: unknown or fluctuating) 0.33: Considered a threat (severity: decline	Red list status: LC. Taxon **not** assigned a threat classification. Taxon not yet assessed by IUCN.

[5] When a criterion could not be scored for a given taxon, it was excluded to avoid skewing the taxon's final score.
[6] Available at www.iucnredlist.org.
[7] Extinct in the Wild (EW) was given an equal score to CR on the assumption that re-introductions of taxa that are extinct in the wild would have small population sizes, and these taxa may still be vulnerable to trade threats (e.g. *Cyanopsitta spixii*).
[8] Available at https://www.iucnredlist.org/resources/threat-classification-scheme.

Criteria	Data source	Methods	Scoring criteria	Not scored[5]
		Threats considered "Past, Unlikely to Return" were excluded.	negligible, slow or no decline) 0: **Not** considered a threat	
2.2 In legal trade	CITES Trade Database[9]	*Taxa documented to be in international trade (as reported by CITES Parties) are prioritised.* Upper (top 33%) and lower (bottom 33%) thresholds were calculated for each order based on the annual mean level of trade for each taxon (across all Appendices) using the data parameters below. The total level of trade for each Appendix I taxon[10] was scored against these thresholds. **Data parameters:** Direct trade only Report type: Gross exports[11] **Year** range: 2014-2018 **Trade terms**[12]: baleen, bark, bodies, bones, bone carvings, bone pieces, carapaces, carvings, caviar, chips, cloth, cultures, derivatives (*Moschus* and plants only), dried plants, eggs, eggs (live), extract, fins, flowers, flower pots, fruit, furniture, gall, gall bladders, horn carvings, horn pieces, horns, ivory pieces, ivory carvings, leaves, live, logs, meat, musk, plates, plywood, powder, raw corals, roots, sawn wood, scales, seeds, shells, skin pieces, skins, skeletons, skulls, stems, teeth, timber, timber carvings, timber pieces, trophies, tusks, veneer, wax, wood product **Units of measure**: number (unit = blank) and weight (kg); additionally, for plants: length (m), area (m^2) and volume (m^3 and l) **Source codes**[13]: ranched (R), unknown (U), wild (W) and no source reported **Purpose codes**[7]: all except scientific (S)	1: > upper threshold 0.66: Between upper and lower threshold 0.33: < lower threshold 0: no trade in data parameters -1: no evidence of wild-sourced legal (criterion 2.2) or illegal (criterion 2.3) trade in any term or unit	Trade data not yet available (i.e. taxa first listed at CoP18)

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[9] Available at https://trade.cites.org/.

[10] Where populations were split listed, only trade exported from the populations listed in Appendix I were included. For taxa transferred from Appendix II to Appendix I during the time period, only trade in or after the year of Appendix I listing was included.

[11] Gross exports: the quantities reported by the exporter and importer were compared and the larger quantity was used.

[12] A full list and description of "trade terms" (i.e. descriptions of specimens in trade) is available in the Annex to Notif. 2017/006.

[13] A full list and description of source and purpose codes is specified in Res. Conf. 12.3 (Rev. CoP18).

Criteria	Data source	Methods	Scoring criteria	Not scored[5]
		Taxa with no reported trade from wild sources (sources 'R', 'U', 'W' and unreported) in **any** term or unit, and which were not reported in seizures under criterion 2.3, were deprioritised (see "scoring criteria"). *The trade terms, units of measure, source codes and report type used align with methods used for selection of taxa in Stage 1 of Res. Conf. 12.8 (Rev. CoP18) on Review of Significant Trade.*		
2.3 In illegal trade	CITES illegal trade reports[14] TRAFFIC wildlife trade portal[15]	*Taxa documented to be in international trade (as reported by CITES Parties or in the TRAFFIC wildlife trade portal) are prioritised.* One or more seizure(s) reported at species or subspecies level only[16] in the most recent five years of CITES data (2014-2018) and most recent seven years of TRAFFIC data (2014-2020)[17]. Only data reported as "seizure" or "smuggling/illegal trade" were included from the TRAFFIC wildlife trade portal.	1: Taxon seizure reported	No seizure reported for the taxon
Biological vulnerability				
3.1 Range size	IUCN Red List[3]	*Taxa with comparatively small range sizes prioritised.* Upper (top 33%) and lower (bottom 33%) thresholds were calculated for each order based on the **Extent of Occurrence** (EOO) for each taxon assessed by IUCN. Where EOO was provided as a range, the mean value was used. The mean EOO for each Appendix I taxon was scored against these thresholds. *This aligns with biological criterion in Annex 1 B (i-iv) of Res. Conf. 9.24 (Rev. CoP17) on "restricted area of distribution"*	1: < lower threshold 0.5: Between upper and lower threshold 0: > upper threshold	EOO data not available from IUCN. Taxon not yet assessed by IUCN.
3.2 Generation length	IUCN Red List[3]	*Taxa with longer generation lengths (e.g. those that are slow-growing and slow to mature) are prioritised as likely to be more vulnerable.*	1: > upper threshold 0.5: Between upper and lower threshold 0: < lower threshold	Generation length not available. Taxon not yet assessed by IUCN.

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[14] Data received from UNODC January 2020.
[15] TRAFFIC International (2020). Wildlife Trade Portal. Available at www.wildlifetradeportal.org. Only direct taxonomic mapping between accepted names was included.
[16] Seizures reported at higher taxonomic level were excluded.
[17] Due to the CITES reporting cycle, data from the CITES illegal trade reports are only available for the years 2014-2018.

Criteria	Data source	Methods	Scoring criteria	Not scored[5]
		Upper (top 33%) and lower (bottom 33%) thresholds were calculated for each order based on the **generation length** for each taxon assessed by IUCN. Where generation length was provided as a range, the mean value was used. The mean generation length for each Appendix I taxon was scored against these thresholds.		
Management effort				
4.1 Compliance with CITES	CITES Trade Database[18]	*Taxa with trade linked with potential compliance issues are prioritised.* Whether there was evidence of at least one of the following during the most recent five years of trade data as reported by either importers or exporters (2014-2018): (a) direct and/or indirect commercial trade (purpose 'T') in wild-sourced (source 'W') specimens[19]; and/or (b) direct trade exceeding CoP-approved quotas (defined as quotas in Resolutions or listing annotations)	1: potential compliance issue(s) 0: no potential compliance issue(s)	Trade data not yet available (listed at CoP18).
4.2 Existing measures under CITES	CITES[20]	*Taxa without CITES measures are prioritised.* Whether Appendix I taxa were currently covered by at least one of the following CITES measures: CITES Resolution(s); CITES Decision(s); CITES Task Force; and/or had CoP-approved quotas in place (quotas defined in Resolutions or listing annotations).	1: No existing measures 0.5: Measures exist at higher taxonomic level 0: Dedicated measures exist for the taxon	
4.3 Conservation actions in place	IUCN Red List[3]	*Taxa where no or little conservation action is taking place are prioritised.* Whether IUCN Red List assessments considered conservation actions to be in place for the following IUCN conservation action classifications: Action Recovery Plan; systematic monitoring	1: Where classified, all are No 0.5: Where classified, more No than Yes 0: Where classified, all or most are Yes	All Conservation Actions "unknown". Taxon not yet assessed by IUCN.

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[18] Available at https://trade.cites.org/.
[19] For split listed and recently uplisted taxa, this only applies to populations and years when listed in Appendix I.
[20] Available at www.cites.org.

Criteria	Data source	Methods	Scoring criteria	Not scored[5]
		scheme; harvest management plan; ex-situ conservation; and/or recent education or awareness programmes.		

Data considerations

While compiling the methods, UNEP-WCMC and IUCN together with the informal advisory work group identified several areas where data improvements could be made in relation to the underlying datasets that could improve potential future iterations of this process:

- **Comprehensiveness of IUCN Red List assessments:** approximately 470 CITES Appendix I taxa have not yet been assessed by the IUCN or have assessments that are now over 10 years old and require updating. IUCN recognises the importance of prioritising assessments for these taxa (and other CITES species and subspecies) given their contribution to key CITES processes. To further these shared goals, Parties may wish to provide support to IUCN to ensure that Appendix I taxa are comprehensively and regularly (re-)assessed.
- **Taxonomic mapping:** Differences in taxonomy between datasets can make comparisons challenging. Species/subspecies data (e.g. from IUCN Red List and TRAFFIC) were mapped to CITES data using CITES taxonomy as the central backbone. Wherever possible, taxonomic matching has been done (e.g. crossmatching accepted names with corresponding accepted names and synonyms). Developing a standardised system for taxonomic mapping across these key datasets would benefit future analyses and processes that bring these complementary datasets together.
- **Potential additional datasets:** The informal advisory working group considered that another possible criterion for inclusion in a rapid assessment method could focus on demand of taxa in trade, which could include aspects of captive breeding. Captive breeding can have direct impacts on wild populations (e.g. through the acquisition of founder breeding stock, or through laundering of wild specimens). A metric of captive breeding may indicate a lower risk to wild populations (if a species/subspecies is successfully captive bred and widely available), but conversely it may indicate high demand (and a risk from laundering). The development of an additional criterion that encapsulates demand should be further explored.