

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



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and twenty-fifth meeting of the Plants Committee
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RAPID ASSESSMENT OF APPENDIX-I TAXA
THAT COULD POTENTIALLY BENEFIT FROM FURTHER CITES ACTION

The attached information document has been submitted by the Secretariat on behalf of UNEP-WCMC and IUCN in relation to agenda item 9 of the 31st meeting of the Animals Committee and agenda item 10 of the 25th meeting of the Plants Committee.*

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

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.

This Information document provides the results of a rapid assessment of all 1130 Appendix I-listed species and subspecies to identify taxa that could potentially benefit from further CITES action and thus contribute to Decision 18.28. **It is intended to accompany and supplement AC31 Doc. 9 and PC25 Doc. 10**, which provide the context and details of the methodology. For ease of reference, a summary of the methodology is also provided again here as an Annex (see Table A.1 in Annex).

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 were not subject to existing management efforts. Based on these categories, datasets were collated and scoring criteria were developed for individual taxa.

The results output, provided in Excel (Annex 1), presents three different scoring approaches for consideration by the Animals and Plants Committees, with each approach providing a slightly different final list of scored taxa depending on specific weightings. It is envisioned that the Committees would decide on a preferred approach to prioritise and select species for more detailed assessments, as well as, potentially, for future iterations of this rapid assessment process. The Excel output can also be used as a tool for filtering and ranking taxa to address different priorities based on individual criteria or contextual information of interest.

Proposed weighting approaches

Based on discussion with the Secretariat and an informal advisory group¹, it was agreed that “threat from trade” (category 2, see Annex 2) was the key category that CITES could influence, and that weighting the overall scoring of taxa in favour of trade threats should be explored. The Excel output therefore provides three different scoring options: one unweighted (**Option 1**) and two potential weighting approaches for consideration (see Table 1). **Option 2** multiplies the taxa scores for category 2 (“threat from trade”) by a factor of two (i.e. doubles the individual scores for the criteria “threat from use”, “in legal trade” and “in illegal trade”). **Option 3** also applies a two times multiplication factor to the “threat from trade” criteria, as well as to “existing measures under CITES” (i.e. weighting in favour of taxa that are not subject to existing Decisions or Resolutions).

¹ Informal advisory group members in attendance were Mexico and the United Kingdom, in addition to the CITES Secretariat.

Table 1: Overview of the three different **scoring approaches** under consideration

Scoring Option	Description	Excel output column reference
1	<i>Unweighted</i> : no multiplication factors applied to any score	Columns AB-AC
2	<i>Weighting by "threat from trade" (category 2)</i> : a multiplication factor of two was applied to the scores for criteria 2.1-2.3 (see Annex 2) prior to the final mean score being taken. This prioritises taxa that are considered threatened by intentional use and are in trade (legal and/or illegal).	Columns AD-AE
3	<i>Weighting by "threat from trade" (category 2) and "existing CITES measures" (criterion 4.2)</i> : a multiplication factor of two was applied to the scores for criteria 2.1-2.3 and 4.2 (see Annex 2) prior to the final mean score being taken. This prioritises taxa that are considered threatened by intentional use and are in trade (legal and/or illegal) and which are not currently covered by CITES measures.	Columns AF-AG

All final scoring approaches (those provided in columns AB-AG) were based on the mean score across individual criteria that could be assigned a score (see AC31 Doc 9/PC25 Doc 10 for details). Weightings were applied ahead of the final mean score being calculated for Options 2 and 3.

Scoring is not possible for all criteria due to (a) missing data (e.g. a Red List assessment does not yet exist or data for fields such as "generation length" have not been provided); (b) data reported as unknown or insufficient (e.g. taxa considered "Data Deficient" or with "unknown" population trends); or (c) data are not yet available (e.g. taxa that were listed in Appendix I at CoP18). The conditions under which taxa would not be scored for a specific criterion are detailed in the "not scored" field in Annex 2. In the output provided here, taxa were assigned scores for between two and ten (i.e. all) criteria depending on data availability.

Annex 1 (Excel output) considered an integral part of this Information document, contains the following information:

- **Taxonomic details** for each Appendix I taxon (columns A – F);
- Unweighted **score for each criterion** (see Annex 2 for criteria), together with the data underpinning each criterion score, where possible² (columns G-AA);
- **Final scores** for each taxon based on three proposed weighting approaches along with the associated **ranking** in comparison with other Appendix I taxa (columns AB-AG); and
- **Metadata**: Non-scoring **contextual information**, including: the year listed in Appendix I; Appendix I Reservations; the year of the most recent IUCN Red List assessment; the number of range States; estimated population size; and number of criteria for which a score could be given.

The species are presented in unweighted rank order (i.e. according to the Option 1 ranking). The Excel file also contains an overview of the taxonomic breakdown by group for each scoring approach, and a separate tab detailing the upper and lower order-specific thresholds calculated for scoring criteria 2.2 (in legal trade) 3.1 (range size) and 3.2 (gestation length).

² Only where these data are publicly available.

Provisional results and next steps

The three scoring approaches presented in this document each address slightly different priorities in ranking Appendix I taxa. Option 1 considers extinction risk, threat from trade, biological vulnerability and management effort to all be of equal importance; Option 2 prioritises taxa that are considered threatened by trade; and Option 3 prioritises taxa considered threatened by trade that are not currently subject to CITES management attention. Despite these varying priorities, there was notable consistency between the results of the different scoring approaches, with 34 taxa being ranked in the top 50 using all three approaches (Table 2). For example, *Scleropages formosus* (Arowana) ranked 1, 2 and 3, and *Encephalartos lehmannii* (Karoo cycad) ranked 5, 11 and 9 for Options 1, 2 and 3, respectively.

Despite the relatively high level of consistency in the top 50 taxa from each approach, the differences also need to be considered when deciding on a scoring approach to take forwards.

Option 1 takes the mean of all criteria that could be scored. However, because this option doesn't prioritise threat from trade, some traded taxa (e.g. *Manis tricuspis* (Three-cusped pangolin) and *Euphorbia decaryi* (Wrinkled leaf spurge)) might be ranked lower than taxa that are less threatened by trade, but which scored highly for biological vulnerability or extinction risk (e.g. *Neophocaena phocaenoides* (Black finless porpoise)). Given that the purpose of the rapid assessment is to identify taxa that may benefit from CITES action, taxa that are in legal/illegal trade or are considered threatened by use, might warrant higher prioritisation.

Option 2 weights the final score in favour of taxa that are in trade or that are considered threatened by intentional use (category 2). However, because the Red List threat classifications for intentional resource use do not differentiate between international and domestic/subsistence use (criterion 2.1), this may elevate taxa that are threatened primarily by domestic consumption. Furthermore, the seizure data used in criterion 2.3 may be more complete for certain taxa (e.g. those more easily identifiable or prioritised by law enforcement), leading to more recognisable taxa being weighted higher, resulting in an overall higher rank.

Option 3 aims to identify taxa that are both threatened by trade (i.e. Option 2) and that have received less CITES attention to date (e.g. through CoP Decisions or specific Resolutions). The approach aims to elevate taxa at risk that may be completely "under the CITES radar", by weighting them more than taxa that are subject to existing CITES measures. However, it is important to note that some CITES measures may be at a higher taxonomic level (e.g. Decisions 18.210-18.217 cover all marine turtles and Resolution 13.4 (Rev. CoP18) covers all great apes). In addition, some existing Decisions may not have been funded, and therefore may not have been actioned. Because criterion 4.2 (CITES measures) is one of the few criteria for which all Appendix I taxa receive a score, Option 3 is particularly notable for the presence of several taxa in the top 50 that were ranked much lower under the other two options (e.g. the eight taxa at the bottom of Table 2 that ranked 24 under Option 3). This may genuinely represent taxa in need of further attention, however many of these taxa had few scored criteria so this may also be an artefact of disproportionately weighting criterion 4.2.

In general, weighting specific criteria (as with Options 2 and 3) may disproportionately amplify scores amongst taxa with fewer scored criteria, leading them to be ranked more highly than other taxa with more data available. This needs to be acknowledged when interpreting the final scores. Ultimately, a minimum threshold for the number of scored criteria when identifying taxa for further assessment could be applied. These data-poor taxa may, however, be priorities for research and primary data collection in order to better understand their biology, ecology and the impact of trade.

Table 2: Appendix I taxa ranked within the top 50 of at least one scoring approach³. The taxa are listed in the table according to their rank under Option 1 (unweighted); ranks exceeding 50 under any scoring approach are in grey (meaning they did not rank in the top 50 for the corresponding option). The individual criteria scores are coloured from high (dark) to low (light) score, and criteria that could not be assigned a score remain white (see Annex 2 for criteria).

Group	Order	Taxon	Rank			Criteria scoring									
			Option 1	Option 2	Option 3	1.1	1.2	2.1	2.2	2.3	3.1	3.2	4.1	4.2	4.3
Fish	Osteoglossiformes	<i>Scleropages formosus</i> (Arowana)	1	2	3										
Mammals	Pholidota	<i>Manis gigantea</i> (Giant ground pangolin)	2	1	1										
Birds	Psittaciformes	<i>Amazona finschi</i> (Lilac-crowned amazon parrot)	3	3.5	4										
Birds	Psittaciformes	<i>Cacatua goffiniana</i> (Goffin's cockatoo)	4	33	42										
Plants	Cycadales	<i>Encephalartos lehmannii</i> (Karoo cycad)	5	11	9										
Mammals	Sirenia	<i>Trichechus senegalensis</i> (African manatee)	6	13.5	6										
Mammals	Carnivora	<i>Lontra longicaudis</i> (Long-tailed otter)	7	9	7										
Plants	Orchidales	<i>Aerangis ellisii</i>	8	6	2										
Reptiles	Crocodylia	<i>Crocodylus siamensis</i> (Siamese crocodile)	9	16	11										
Reptiles	Sauria	<i>Gonatodes daudini</i> (Grenadines clawed gecko)	10	44	40										
Mammals	Primates	<i>Pan troglodytes</i> (Chimpanzee)	11.5	7	10										
Birds	Psittaciformes	<i>Amazona auropalliata</i> (Yellow-naped amazon parrot)	11.5	22	32										
Birds	Psittaciformes	<i>Psittacus erithacus</i> (Grey parrot)	13	3.5	14										
Reptiles	Testudines	<i>Eretmochelys imbricata</i> (Hawksbill turtle)	14	5	8										
Mammals	Primates	<i>Pongo pygmaeus</i> (Bornean orangutan)	15	10	24.5										
Birds	Psittaciformes	<i>Cacatua sulphurea</i> (Lesser sulphur-crested cockatoo)	16	35	43										
Mammals	Primates	<i>Lemur catta</i> (Ring-tailed lemur)	17	17	13										
Reptiles	Crocodylia	<i>Tomistoma schlegelii</i> (False gavia)	18	23	33										
Mammals	Artiodactyla	<i>Addax nasomaculatus</i> (Addax)	20	52	49										
Birds	Psittaciformes	<i>Amazona oratrix</i> (Yellow-headed amazon parrot)	21	24	39										
Mammals	Carnivora	<i>Ursus thibetanus</i> (Asian black bear)	22	8	12										
Fish	Cypriniformes	<i>Probarbus jullieni</i> (Esok)	24.5	20	24.5										
Plants	Liliales	<i>Aloe pillansii</i> (Bastard quiver tree aloe)	24.5	40.5	24.5										
Mammals	Artiodactyla	<i>Hippotragus niger variani</i> (Giant sable antelope)	24.5	40.5	24.5										
Reptiles	Sauria	<i>Cophotis dumbara</i> (Knuckles pygmy lizard)	24.5	121	24.5										
Reptiles	Testudines	<i>Astrochelys radiata</i> (Radiated tortoise)	27	43	71										
Reptiles	Sauria	<i>Brachylophus fasciatus</i> (Fiji banded iguana)	28	61	62										
Birds	Psittaciformes	<i>Anodorhynchus hyacinthinus</i> (Hyacinth macaw)	29.5	31.5	44.5										
Birds	Psittaciformes	<i>Ara militaris</i> (Military macaw)	29.5	31.5	44.5										
Birds	Psittaciformes	<i>Cacatua moluccensis</i> (Moluccan cockatoo)	31	54	61										
Mammals	Artiodactyla	<i>Oryx leucoryx</i> (Arabian oryx)	32	29.5	34										

³ When multiple taxa had the same score, the mean score was taken.

Group	Order	Taxon	Rank			Criteria scoring									
			Option 1	Option 2	Option 3	1.1	1.2	2.1	2.2	2.3	3.1	3.2	4.1	4.2	4.3
Mammals	Carnivora	<i>Lutra lutra</i> (Common otter)	33	25	37.5										
Reptiles	Testudines	<i>Astrochelys yniphora</i> (Ploughshare tortoise)	34	36	66										
Mammals	Carnivora	<i>Panthera pardus</i> (Leopard)	36.5	12	51										
Mammals	Carnivora	<i>Lutrogale perspicillata</i> (Indian smooth-coated otter)	36.5	49.5	51										
Mammals	Cingulata	<i>Priodontes maximus</i> (Giant armadillo)	36.5	49.5	51										
Mammals	Proboscidea	<i>Elephas maximus</i> (Asian elephant)	36.5	15	55.5										
Mammals	Carnivora	<i>Helarctos malayanus</i> (Malayan sun bear)	39	21	48										
Mammals	Primates	<i>Alouatta pigra</i> (Guatemalan howler)	40.5	26.5	16.5										
Mammals	Primates	<i>Hylobates pileatus</i> (Capped gibbon)	40.5	26.5	16.5										
Mammals	Cetacea	<i>Neophocaena phocaenoides</i> (Black finless porpoise)	42	116.5	130										
Reptiles	Sauria	<i>Cyclura cornuta</i> (Rhinoceros iguana)	43.5	45.5	55.5										
Birds	Psittaciformes	<i>Eos histrio</i> (Red-and-blue lory)	43.5	45.5	55.5										
Mammals	Carnivora	<i>Panthera tigris</i> (Tiger)	45	47	92										
Birds	Psittaciformes	<i>Ara macao</i> (Scarlet macaw)	46	51	58										
Mammals	Cetacea	<i>Physeter macrocephalus</i> (Sperm Whale)	47	18	37.5										
Plants	Orchidales	<i>Paphiopedilum dayanum</i> (Day's slipper orchid)	48.5	81.5	76.5										
Plants	Orchidales	<i>Paphiopedilum rothschildianum</i> (Rothschild's slipper orchid)	48.5	81.5	76.5										
Reptiles	Crocodylia	<i>Crocodylus cataphractus</i> (African sharp-nosed crocodile)	50.5	62.5	71										
Birds	Gruiformes	<i>Grus leucogeranus</i> (Siberian crane)	50.5	62.5	71										
Mammals	Primates	<i>Gorilla gorilla</i> (Gorilla)	52.5	40.5	68										
Mammals	Sirenia	<i>Dugong dugon</i> (Dugong)	54.5	38	36										
Mammals	Pholidota	<i>Manis tricuspis</i> (Three-cusped pangolin)	58	19	46										
Reptiles	Testudines	<i>Chelonia mydas</i> (Green turtle)	61	48	63										
Mammals	Perissodactyla	<i>Ceratotherium simum</i> (White Rhinoceros)	63	13.5	35										
Mammals	Primates	<i>Pygathrix nemaeus</i> (Red-shanked douc)	65	37	41										
Mammals	Perissodactyla	<i>Ceratotherium simum simum</i> (Southern white rhino)	70	28	47										
Plants	Euphorbiales	<i>Euphorbia decaryi</i> (Wrinkled leaf spurge)	85.5	34	15										
Plants	Liliales	<i>Aloe bakeri</i> (Baker aloe)	105	68	5										
Mammals	Proboscidea	<i>Loxodonta africana</i> (African elephant)	125	29.5	82.5										
Reptiles	Serpentes	<i>Boa constrictor occidentalis</i> (Argentine boa constrictor)	211	81.5	24.5										
Plants	Orchidales	<i>Dendrobium cruentum</i>	211	81.5	24.5										
Reptiles	Serpentes	<i>Python molurus molurus</i> (Indian python)	211	81.5	24.5										
Reptiles	Sauria	<i>Varanus nebulosus</i> (Clouded monitor)	211	81.5	24.5										
Inverts	Lepidoptera	<i>Achillides chikae hermeli</i> (Mindoro peacock swallowtail)	211	228.5	24.5										
Reptiles	Sauria	<i>Ceratophora erdeleni</i> (Erdelen's horn lizard)	211	228.5	24.5										
Reptiles	Sauria	<i>Ceratophora karu</i> (Karunaratne's horn lizard)	211	228.5	24.5										
Reptiles	Sauria	<i>Cophotis ceylanica</i> (Pygmy lizard)	211	228.5	24.5										

Of the 1130 taxa listed in Appendix I, 200 (18%) were reported in wild-sourced legal and/or illegal international trade (under the criteria 2.2 and 2.3 data parameters; see Annex 2 for full details). Almost all taxa featuring in the top 50 of one or more scoring options were also in wild-sourced legal and/or illegal trade; the only exceptions were six taxa (one butterfly and five reptiles) that were listed at CoP18 and did not yet have any CITES trade data available.

The number of taxa by taxonomic groups (i.e. the number of taxa) within the top 50 of each scoring approach roughly reflected their representation in wild-sourced legal and/or illegal trade (Table 3). For example, mammals accounted for 45% of Appendix I taxa in trade (89 of the 200 Appendix I taxa recorded in trade) and were also the main taxonomic group in the top 50 for each scoring approach (accounting for between 42% and 52% of the top 50 taxa depending on the scoring option). Whilst plants have the most taxa listed in Appendix I (36%, 411 species), only 22 of these were in wild-sourced legal and/or illegal trade (accounting for 11% of the Appendix I taxa in trade). Proportionally, this aligns with the 4-6 plant taxa in the top 50 (8-12% of taxa depending on the scoring option).

Table 3: Taxonomic breakdown of Appendix I taxa ranked in the top 50 of each scoring approach. The total number of Appendix I taxa in each group, along with the number of taxa in legal trade (based on CITES trade data reported for the parameters outlined in criterion 2.2; Annex 2) or illegal trade (based on seizure data used in criterion 2.3; Annex 2) is also provided for context.

Group	Number of Appendix I taxa		Number of Appendix I taxa in trade**		Top 50* taxa under different scoring approaches					
					Option 1		Option 2		Option 3	
	No of taxa	%	No of taxa	%	No of taxa	%	No of taxa	%	No of taxa	%
Mammals	338	30%	89	45%	21	42%	26	52%	23	46%
Birds	162	14%	42	21%	12	24%	10	20%	8	16%
Reptiles	103	9%	43	22%	10	20%	8	16%	11	22%
Amphibians	24	2%	0	0%	0	0%	0	0%	0	0%
Fish	16	1%	4	2%	2	4%	2	4%	2	4%
Inverts	76	7%	0	0%	0	0%	0	0%	1	2%
Coral	0	0%	0	0%	0	0%	0	0%	0	0%
Plants	411	36%	22	11%	5	10%	4	8%	6	12%
Total	1130		200		50		50		*51	

* Due to several taxa receiving the same score, 51 were included under Option 3.

** Either in legal trade (based on CITES trade reported for the data parameters outlined in criterion 2.2) or illegal trade (based on seizure data used in criterion 2.3). Full details of criteria in Annex 2.

Next Steps

The methodology presented in Annex AC31 Doc. 9/ PC25 Doc. 10, together with the provisional results presented in this Information document provide several potential approaches for prioritising Appendix I taxa that may benefit from further CITES action. The Animals and Plants Committees are invited to review these documents and identify whether any of these scoring approaches could be taken forward to prioritise species for more detailed assessment as directed by Decision 18.28.

Annex 1: Appendix I rapid assessment results output

Annex 1 provides the complete results output containing scores and rankings for all Appendix I taxa under the different scoring options as an accompanying Excel document (AC31 PC25 Inf doc Annex 1). The following information is included in the Excel document:

- **Taxonomic details** for each Appendix I taxon (columns A – F);
- Unweighted **score for each criterion** (see Annex2 for criteria), together with the data underpinning each criterion score, where possible⁴ (columns G-AA);
- **Final scores** for each taxon based on three proposed weighting approaches along with the associated **ranking** in comparison with other Appendix I taxa (columns AB-AG); and
- **Metadata: Non-scoring contextual information**, including: the year listed in Appendix I; Appendix I Reservations; the year of the most recent IUCN Red List assessment; the number of range States; estimated population size; and number of criteria for which a score could be given.

The species are presented in unweighted rank order (i.e. according to the Option 1 ranking). The Excel file also contains an overview of the taxonomic breakdown by group for each scoring approach, and a separate tab detailing the upper and lower order-specific thresholds calculated for scoring criteria 2.2 (in legal trade) 3.1 (range size) and 3.2 (gestation length).

⁴ Only where these data are publicly available.

Annex 2: Appendix I rapid assessment scoring methodology

Table A.1: 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. Further details on methodology provided in documents AC31 Doc. 9 and PC25 Doc. 10.

Criteria	Data source	Methods	Scoring criteria	Not scored ⁵
Extinction risk				
1.1 Red List status category	IUCN Red List ⁶	<i>Taxa considered globally threatened are prioritised.</i> 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	<i>Taxa with declining population trends are prioritised.</i> Population trend according to IUCN Red List assessment. <i>This aligns with biological criterion in Annex 1 C (i-ii) of Res. Conf. 9.24 (Rev. CoP17) on "marked decline".</i>	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 Lis ⁶	<i>Those taxa where "trade/use" is a documented threat are prioritised.</i> 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. Threats considered "Past, Unlikely to Return" were excluded.	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 negligible, slow or no 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. Version 2020-1. Data accessed on 23 March 2020. Subspecies that did not have their own Red List assessments were scored based on the species-level Red List assessment where this was available.

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>. Version 3.2.

Criteria	Data source	Methods	Scoring criteria	Not scored ⁵
2.2 In legal trade	CITES Trade Database ⁹	<p><i>Taxa documented to be in international trade (as reported by CITES Parties) are prioritised.</i></p> <p>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.</p> <p>The total level of trade for each Appendix I taxon¹⁰ was scored against these thresholds.</p> <p>Data parameters: Direct trade only Report type: Gross exports¹¹ Year range: 2014-2018 Trade terms¹²: baleen, bark, bodies, bones, bone carvings, bone pieces, carapaces, carvings, caviar, chips, cloth, cultures, derivatives (<i>Moschus</i> and plants only), dried plants, eggs, eggs (live), extract, fingerlings, fins, flowers, flower pots, fruit, furniture, gall, gall bladders, horn carvings, horn pieces, horns, ivory pieces, ivory carvings, ivory jewellery, jewellery, leaves, live, logs, meat, musk, piano keys, 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 (m²) and volume (m³ and l) Source codes¹³: ranched (R), unknown (U), wild (W) and no source reported Purpose codes⁷: all except scientific (S) 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").</p>	<p>0: Not considered a threat</p> <p>1: > upper threshold 0.66: Between upper and lower threshold 0.33: < lower threshold 0: no trade in data parameters or total trade in data parameters <1/year -1: no evidence of wild-sourced legal (criterion 2.2) or illegal (criterion 2.3) trade in any term or unit</p>	Trade data not yet available (i.e. taxa first listed at CoP18)

⁹ Available at trade.cites.org/. Data accessed on 13 May 2020.

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. 2019/072](#).

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
		<i>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.</i>		
2.3 In illegal trade	CITES illegal trade reports ¹⁴ TRAFFIC wildlife trade portal ¹⁵	<i>Taxa documented to be in international trade (as reported by CITES Parties or in the TRAFFIC wildlife trade portal) are prioritised.</i> One or more seizure(s) reported at species or subspecies level only ¹⁶ in the most recent five years of CITES data (2014-2018) ¹⁷ and most recent seven years of TRAFFIC data (2014-2020). 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 ⁶	<i>Taxa with comparatively small range sizes prioritised.</i> 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. <i>This aligns with biological criterion in Annex 1 B (i-iv) of Res. Conf. 9.24 (Rev. CoP17) on "restricted area of distribution"</i>	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 ⁶	<i>Taxa with longer generation lengths (e.g. those that are slow-growing and slow to mature) are prioritised as likely to be more vulnerable.</i> Upper (top 33%) and lower (bottom 33%) thresholds were calculated for each order based on the generation length for each taxon	1: > upper threshold 0.5: Between upper and lower threshold 0: < lower threshold	Generation length not available. Taxon not yet assessed by IUCN.

¹⁴ Data received from UNODC (via the CITES Secretariat) January 2020.

¹⁵ TRAFFIC International (2020). Wildlife Trade Portal. Available at www.wildlifetradeportal.org. Data accessed on 11 May 2020. 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
		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	<i>Taxa with trade linked with potential compliance issues are prioritised.</i> 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	<i>Taxa without CITES measures are prioritised.</i> 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 ⁶	<i>Taxa where no or little conservation action is taking place are prioritised.</i> Whether IUCN Red List assessments considered conservation actions to be in place for the following IUCN conservation action classifications: Action Recovery Plan; systematic monitoring scheme; harvest management plan; ex-situ conservation; and/or recent education or awareness programmes.	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.

¹⁸ Available at trade.cites.org/. Data accessed on 13 May 2020.

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.