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

Joint sessions of the 33rd meeting of the Animals Committee and
the 27th meeting of the Plants Committee
Geneva (Switzerland), 12 - 13 July 2024

Strategic matters

CITES STRATEGIC VISION

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 19.11 to 19.14 on *CITES Strategic Vision*, in particular Decision 19.14 as follows:

   Directed to the Standing Committee, in consultation with the Chairs of the Animals and Plants Committee

   19.14 *The Standing Committee shall, in consultation with the Chairs of the Animals and Plants Committees, make recommendations on new or revised indicators for objective 1.4 of the* CITES Strategic Vision: 2021-2030*, for consideration by the 20th meeting of the Conference of the Parties.*

3. At the 26th meeting of the Plants Committee (PC26; Geneva, June 2023) and the 32nd meeting of the Animals Committee (AC32; Geneva, June 2023), the Secretariat proposed different possible indicators for objective 1.4 (The Appendices correctly reflect the conservation status and needs of species) in document PC26 Doc. 9 / AC32 Doc. 9. The Committees encouraged Members and Parties to submit their comments on potential indicators for objective 1.4 to the Secretariat prior to the document deadline for the 77th meeting of the Standing Committee, i.e., before 7 September 2023 (see summary records PC26 SR and AC32 SR).

4. Based on the feedback received, the Secretariat then proposed three possible indicators to the Standing Committee in document SC77 Doc. 16. At its 77th meeting, the Standing Committee agreed to submit to the Conference of the Parties the indicator below for objective 1.4 of the CITES Strategic Vision (see summary record SC77 SR):

   Indicator 1.4.1 The number and proportion of species listed in Appendices that have been found to meet the criteria for each Appendix contained in Resolution Conf. 9.24 (Rev. CoP17) or its successors as part of the Periodic Review process or of amendment proposals;

5. The Standing Committee further invited the Secretariat, in collaboration with the Animals and Plants Committees, to review and revise the following draft indicators for objective 1.4, taking into consideration the comments made on the floor and in writing following the meeting, and to report to SC78:

   Indicator 1.4.2 The number and proportion of species listed in the Appendices identified as likely to be threatened by international trade on the basis of information in the IUCN Red List of Threatened Species (i.e., Near Threatened, Vulnerable, Endangered, Critically Endangered, Extinct in the Wild and Extinct)

   Indicator 1.4.3 The number and proportion of species listed in the Appendices identified as unlikely to be threatened by international trade on the basis of information in the IUCN Red List of Threatened Species (i.e., Near Threatened, Vulnerable, Endangered, Critically Endangered, Extinct in the Wild and Extinct).

6. During the discussion of these proposed indicators at SC77, New Zealand (Committee Member for Oceania), the United Kingdom of Great Britain and Northern Ireland (Committee Member for Europe), the United States of America (Committee Member for North America), speaking on behalf of the North American region, Bahrain, the European Union and its Member States and Nigeria considered that these indicators would benefit from further refinement and cautioned against overreliance on data from the Red List by the International Union for Conservation of Nature (IUCN). More specifically, New Zealand, echoed by Nigeria, supported the expansion of these indicators to include species threatened by international trade that are not yet listed in the CITES Appendices. In addition, New Zealand queried the relevance of indicator 1.4.3, given that the indicator as proposed would refer to lookalike species that are not listed on the basis of being threatened by international trade. Kenya (Committee Member for Africa) suggested that the indicators 1.4.2 and 1.4.3 could be covered outside of the CITES framework, such as through National Biodiversity Strategies and Action Plans (NBSAPs), while Bahrain noted that the use of IUCN data to facilitate the periodic review process as per Resolution Conf. 14.8 (Rev. CoP17) on *Periodic Review of species included in Appendices I and II* could eliminate the need for draft indicators 1.4.2 and 1.4.3 (see summary record SC77 SR).

7. After the conclusion of SC77, the Secretariat published Notification to the Parties No. 2023/130 of 24 November 2023 on *Invitation to provide comments on SC77 documents and agenda items*. China, the European Union and its Member States, Nigeria and the Republic of Korea provided comments on indicators 1.4.2 and 1.4.3, briefly summarized below.

   a) China did not support indicators 1.4.2 and 1.4.3 because they "lack scientific rigor, potentially escalating the challenges in fulfilling the responsibilities of CITES."

   b) The European Union and its Members States supported indicators 1.4.2 and 1.4.3

   b) Nigeria proposed that indicators for objective 1.4 should ask whether CITES is meeting the needs of all species (emphasis in the original), not just CITES-listed species: "This interpretation provides an opportunity for CITES to review the extent to which CITES is keeping pace with the scale of the species extinction crisis." Nigeria proposed to review the purpose of objective 1.4 with regards to alignment with the Kunming-Montreal Global Biodiversity Framework (GBF) and to amend the proposed text for indicator 1.4.2 as follows:

      Indicator 1.4.2 The number and proportion of species ~~listed in the Appendices~~ identified as ~~likely to be threatened by international trade~~ 1) threatened with extinction that are or may be affected by trade; or 2) not yet threatened with extinction but may become so if not regulated by CITES, on the basis of information in the IUCN Red List of Threatened Species ~~(i.e., Near Threatened, Vulnerable, Endangered, Critically Endangered, Extinct in the Wild and Extinct)~~ and/or relevant sources, that are included in the CITES Appendices

   c) The Republic of Korea drew attention to information document SC77 Inf. 20 on the Global Species Action Plan that can be useful for developing the *CITES Strategic Vision* and "aligning the implementation of each GBF target and national strategies or policies for species conservation."

8. Based on the latest feedback received, including the opposing views on proposed indicators 1.4.2 and 1.4.3, and the remarks made by Parties that CITES criteria for amending the Appendices differed from the criteria used by the IUCN Red List of Threatened Species, the Secretariat has taken into consideration the following three factors in its development of further indicators for objective 1.4:

   a) Potential indicators looking at species at risk of extinction affected by international trade (as proposed by Nigeria) should only be put forward after conclusion of the intersessional work undertaken by the Animals, Plants and Standing Committees to address Decisions 19.186 to 19.188 on *Identifying information on species at risk of extinction affected by international trade* (see document PC27 Doc. 24 / AC33 Doc. 29).

   b) Any additional indicator(s) should not differentiate between Appendix I and II since it is the Conference of the Parties that decides whether a taxon meets the criteria for inclusion in Appendix I or II. This is covered by indicator 1.4.1.

   c) IUCN data should only be used for those taxonomic groups that have been fully assessed. For instance, the IUCN Red List comprehensive assessment has been completed *inter alia* for mammals, birds,

reptiles and amphibians. However, only 2,023 orchidaceae have been assessed, while 29,349 orchidaceae are included in the CITES Appendices. The Annex to the present document shows the number of species in the IUCN Red List as of the 2023-1 update, the number of CITES-listed species in Appendices I, II and III (from Species+) and the number and proportion of CITES-listed species assessed on the IUCN Red List (noting the caveat below). The final column indicates which major groups of organisms are comprehensively assessed for the IUCN Red List. One caveat in providing figures for the number of CITES-listed species assessed on the IUCN Red List is that it relies on an exact match between the CITES and IUCN Red List taxonomies. As such, the figures represented in the Annex to the present document represent an underestimate.

9. Furthermore, the Secretariat recalls that, at AC32 and PC26, the Committees "requested the Secretariat to follow the work of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) and any work related to the monitoring framework of the Kunming-Montreal Global Biodiversity Framework; and to provide data from relevant Strategic Vision indicators (such as indicator 1.1.1 on the National Legislation Project) and possible indicators for objective 1.4 to the CBD Secretariat, if requested" (see summary records PC26 SR and AC32 SR).

10. As requested, the Secretariat has followed the work of SBSTTA on the GBF indicators and noted that, at its last meeting (SBSTTA-26) in Nairobi, Kenya, from 13 to 18 May 2024, the CITES-related indicator for Target 4 "Conservation status of species listed in the CITES Appendices has stabilized or improved" as proposed in Decision 15/5 on *Monitoring framework for the Kunming-Montreal Global Biodiversity Framework* was no longer included in the draft recommendation submitted by the Chair on the Monitoring framework for the Kunming-Montreal Global Biodiversity Framework (CBD/SBSTTA/26/L.10). On the other hand, SBSTTA maintained the Red List Index as headline indicator for Target 4.

Possible use of the Red List Index

11. As an additional indicator for objective 1.4 (The Appendices correctly reflect the conservation status and needs of species), the Secretariat is therefore proposing the use of the Red List Index as an indicator that focuses on genuine change in conservation status and is used in other monitoring frameworks. Specifically, the Red List Index is SDG indicator 15.5.1 and headline indicator for Goal A and Target 4 of the Kunming-Montreal Global Biodiversity Framework.

    SDG Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

        Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

            Indicator 15.5.1: Red List Index.

    GBF Goal A: The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050; Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels; The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.

        Headline indicator A.3: Red List Index

    GBF Target 4: Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.

        Headline indicator A.3: Red List Index

12. The United Nations Statistics Division defines the Red List Index as follows:

    a) Definition: The Red List Index is an index that measures changes in aggregate extinction risk across groups of species. It is based on the number of species in each category of extinction risk on the IUCN Red List of Threatened Species (IUCN 2015) is expressed as changes in an index ranging from 0 to 1. This is an indicator that is monitored at the global level.

    b) Concepts: Threatened species are those listed on The IUCN Red List of Threatened Species in the categories Vulnerable, Endangered, or Critically Endangered (i.e., species that are facing a high, very high, or extremely high risk of extinction in the wild in the medium-term future).

    c) Rationale and interpretation:

        i) The world's species are impacted by a number of threatening processes, including habitat destruction and degradation, overexploitation, invasive alien species, human disturbance, pollution and climate change. This indicator can be used to assess overall changes in the extinction risk of groups of species as a result of these threats and the extent to which threats are being mitigated.

        ii) The Red List Index value ranges from 1 (all species are categorized as 'Least Concern') to 0 (all species are categorized as 'Extinct'), and so indicates how far the set of species has moved overall towards extinction. A downward trend in the Red List Index over time means that the expected rate of future species extinctions is worsening (i.e., the rate of biodiversity loss is increasing). An upward trend means that the expected rate of species extinctions is abating (i.e., the rate of biodiversity loss is decreasing), and a horizontal line means that the expected rate of species extinctions is remaining the same, although in each of these cases it does not mean that biodiversity loss has stopped.

        iii) The name "Red List Index" should not be taken to imply that the indicator is produced as a composite indicator of a number of disparate metrics (in the same way that, e.g., the Multidimensional Poverty Index is compiled). The index is compiled from data on changes over time in the Red List Category for each species, excluding any changes driven by improved knowledge or revised taxonomy.

    d) Data sources and collection methods:

        i) National agencies producing relevant data include government, non-governmental organizations (NGOs), and academic institutions working jointly and separately. Data are gathered from published and unpublished sources, species experts, scientists, and conservationists through correspondence, workshops, and electronic fora.

        ii) Data are submitted by national agencies to IUCN or are gathered through initiatives of the Red List Partnership. From 2023-2025, the Red List Partnership encompassed: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; Missouri Botanical Gardens; NatureServe; New Mexico BioPark Society; Re:wild; Royal Botanic Gardens, Kew; Sapienza University of Rome; Senckenberg Society for Nature Research; Texas A&M University; and Zoological Society of London.

    RLIs have been calculated for mammals, birds, amphibians, corals and cycads (all of which have been comprehensively assessed at least twice), using genuine changes in threat status for species in each of the groups. Sharks and rays (Elasmobranchii) should be added to the RLIs within the next two years. For details about the method of computation and other methodological considerations: see https://unstats.un.org/wiki/display/SDGeHandbook/Indicator+15.5.1. The indicator can also be disaggregated by ecosystems, habitats, and other political and geographic divisions, by taxonomic subsets, by suites of species relevant to particular international treaties or legislation, by suites of species exposed to particular threatening processes, and by suites of species that deliver particular ecosystem services or have particular biological or life-history traits.

13. The Animals and Plants Committees could consider two different ways to disaggregate the Red List Index.

    a) Thematic disaggregation: "Internationally traded species": this covers species IUCN has identified as internationally traded as part of its assessment. The IUCN Red List Threats Classification Scheme (Version 3.3) outlines the biological resource use threat categories. For each threat, there is

supplementary information including whether international trade is a significant driver (yes/no/unknown). This is how the disaggregated "internationally trade species" RLI categorizes species as internationally traded, or not. The threat classification scheme is a mandatory section of the Red List assessment and the international trade selection is a key assessment check.

b) Disaggregation by international treaties: CITES vs non-CITES species. The Red List Index would be calculated separately for CITES-listed species and for non-CITES listed species. At the time of writing the present document, the Secretariat is consulting with IUCN in order to assess the feasibility and the amount of work such a disaggregation would entail.

14. The use of the Red List Index comes with both advantages and drawbacks:

a) Advantages: Whether a thematic disaggregation or a CITES vs non-CITES disaggregation is preferred, it would allow Parties to compare the RLI of this subset against the global RLI that is SDG indicator 15.5.1. RLIs are also considered as indicators for the Global Biodiversity Framework. The thematic "internationally traded species" RLI monitors species that are subject to international trade, aligning directly with the CITES mandate, and will help track trends and threats specific to species significantly affected by international trade.

b) Drawbacks: The taxonomic coverage of the Red List Index is limited. RLIs have been calculated for mammals, birds, amphibians, corals and cycads (all of which have been comprehensively assessed at least twice). It will increase as additional groups are comprehensively assessed multiple times. The Secretariat notes however that the Red List Index only cover 347 cycad species, while flora species represent around 85% of species listed in the Appendices and the vast majority of trade recorded in individuals and weight in the CITES Trade Database (see page 6 of the World Wildlife Trade Report). Additionally, changes in values can be driven by factors other than international trade. Furthermore, drawbacks vary depending on the choice of disaggregation.

i) For the thematic RLI "internationally traded species", there may be some concerns about the methodology used to qualify "internationally traded". It is unclear whether "international trade is a significant driver" has been applied consistently throughout the different assessments, noting in particular the difficulty of gathering information on international trade in species that are not CITES-listed.

ii) For the disaggregation CITES vs. non-CITES, the absence of exact match between the CITES and IUCN Red List taxonomies is a limitation, even though IUCN and the United Nations Environment Programme – World Conservation Monitoring Centre are working on reconciling the taxonomies. For the taxa included in the RLI, a minimum of 88.4% of CITES-listed mammals have been assessed on the IUCN Red List version 2023-1; 85.6% for birds, 96.1% for amphibians; 36.5% for corals and 97.1% for cycads, noting that these proportions are most likely higher (see Annex).

Recommendations

15. The Animals Committee and the Plants Committee are invited to provide advice to the Secretariat on the possible indicators for objective 1.4 of the *Strategic Vision*, as proposed in paragraph 13 above.

NUMBER AND PROPORTION OF CITES-LISTED SPECIES ASSESSED ON THE IUCN RED LIST

The IUCN Red List is updated two to three times a year; it is important to note that the whole list is not updated each time. Instead, with each update, some species are reassessed and there are a large number of new additions to the Red List due to the drive to expand the geographical and taxonomic coverage of the List to make it more representative of biodiversity.

The intention of this Annex is to provide Parties with a summary of the number of species assessed for the IUCN Red List and the comprehensive assessment status of specific taxonomic groups, both overall and for CITES-listed species.

The table below shows the number of species in the IUCN Red List as of the 2023-1 update, the number of CITES-listed species in Appendices I, II and III (from Species+) and the number of CITES-listed species assessed on the IUCN Red List (noting the caveat below). The final column indicates which major groups of organisms are comprehensively assessed for the IUCN Red List.

IUCN and the United Nations Environment Programme – World Conservation Monitoring Centre (UNEP-WCMC) are collaborating on an initiative to cross-map the Red List taxonomy to the CITES taxonomy. This cross-mapping exercise is complex because simple name matching does not mean that they are the same taxonomic concept. A CITES-listed species might relate to multiple species on the IUCN Red List (or vice versa), likewise a CITES-listed subspecies might be a full species on the IUCN Red List or it might be treated as a synonym. The cross-mapping requires extensive ongoing investigation and maintenance because taxonomy is changing all the time and the work is still in its early stages.

For the purposes of this exercise, cross-mapping was carried out on species whose names matched exactly. As such, the figure displayed in the column *Number of species on CITES assessed (IUCN Red List version 2023-1)** represents an underestimate of the number of possible matches.

Taxonomic Groups	Number of species assessed (IUCN Red List version 2023-1)	Number of species in CITES Appendices I, II and III	Number of species in CITES assessed on the IUCN Red List version 2023-1	Proportion of CITES-listed species assessed on the IUCN Red List version 2023-1	Status of IUCN Red List comprehensive assessment (completed, underway, pending)
FAUNA (ANIMALS)					
Mammalia (mammals)	5,980	905	800	88.4%	completed
Aves (birds)	11,197	1,512	1,295	85.6%	completed
Reptilia (reptiles)	10,254	1,184	1,064	89.9%	completed
Amphibia (amphibians)	8,020	380	365	96.1%	completed
Elasmobranchii (sharks & rays)	1,188	170	152	89.4%	completed
Actinopteri (fishes)	25,675	85	82	96.5%	underway
Arachnida (scorpions & spiders)	591	42	22	52.4%	pending
Insecta (insects)	12,568	69	57	84.1%	pending
Hirudinoidea (leeches)	1	2	1	50%	pending
Bivalvia (clams & mussels)	818	36	21	58.3%	pending
Cephalopoda (squids, octopuses, cuttlefish)	750	7	0	0%	completed
Gastropoda (snails & conches)	7,488	47	40	85.1%	pending
Anthozoa (corals & sea anemones)	851	1,822	665	36.5%	underway

Taxonomic Groups	Number of species assessed (IUCN Red List version 2023-1)	Number of species in CITES Appendices I, II and III	Number of species in CITES assessed on the IUCN Red List version 2023-1	Proportion of CITES-listed species assessed on the IUCN Red List version 2023-1	Status of IUCN Red List comprehensive assessment (completed, underway, pending)
Hydrozoa (sea ferns, fire corals & stinging medusae)	15	258	14	5.4%	pending
Coelacanthi (coelacanths)	2	2	2	100%	completed
Dipneusti (lungfishes)	6	1	1	100%	completed
Holothuroidea (sea cucumbers)	371	7	7	100%	pending
FLORA (PLANTS)[1]					
Liliopsida (flowering plants – monocots – except orchids)	9,292	661	311	50.9%	pending
Magnoliopsida (flowering plants – dicots)	54,948	3,348	2,322	69.4%	underway
Orchidaceae (flowering plants – orchids)	2,013	29,349	1,851	6.3%	pending
Pinopsida (conifers)	614	15	12	80%	completed
Cycadopsida (cycads)	347	340	330	97.1%	completed
Polypodiopsida (ferns)	703	628	22	3.5%	pending

[1] *The Secretariat notes that the taxonomy used by IUCN for flora does not align fully with the taxonomy used by CITES.*