

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



Joint sessions of the 27th meeting of the Animals Committee and  
21st meeting of the Plants Committee  
Veracruz (Mexico), 2-3 May 2014

Interpretation and implementation of the Convention

Compliance and enforcement

EVALUATION OF THE REVIEW OF SIGNIFICANT TRADE

1. This document has been prepared by the co-chairs of the CITES Advisory Working Group for the Evaluation of the Review of Significant Trade<sup>1</sup>.
2. At the 12th meeting of the Conference of the Parties (Santiago, 2002) the Animals and Plants Committees sought and received a mandate to develop terms of reference for an evaluation of the Review of Significant Trade. These terms of reference were proposed and adopted at the 13th meeting of the Conference of the Parties (Bangkok, 2004) and can be found in Annex 1 to the Decisions of the Conference of the Parties in effect after its 16th meeting (CoP16, Bangkok, 2013). For ease of reference, they are reproduced in Annex 1 to the present document.
3. The terms of reference give the responsibility for overseeing the evaluation to the Animals and Plants Committees, with the help of an advisory working group comprising Committee members, Parties, the Secretariat and invited experts. The Secretariat is responsible for administering the evaluation and for reporting regularly on progress to the Committees. Whilst the evaluation was to commence after CoP14 (The Hague, 2007), there is no fixed time by which it must be concluded.
4. The members of the Advisory Working Group are currently as follows:
  - a) Animals Committee: Ms Carolina Caceres
  - b) Plants Committee: Mr Noel McGoughThe above are co-chairs for the group.
- c) Parties:

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<sup>1</sup> *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat or the United Nations Environment Programme concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

## Africa

Cameroon (Mr Narcisse Lambert Mbarga)  
Ghana (Mr William Oduro)  
Madagascar (Mr Aro Vonjy Ramarosandratana)  
United Republic of Tanzania (Mr Dennis Ikanda)

## Asia

China (Mr Jiang Zhigang)  
Indonesia (Dr. Ubaidillah Rosichon)  
Islamic Republic of Iran (Mr Asghar Mobaraki)

## Central and South America and the Caribbean

Guyana (Ms Alona Sankar)  
Jamaica (Ms Jane Cohen)  
Peru (Ms. Karina Cuadros Ramirez)

## Europe

Norway (Ms. Sunniva Aagaard)  
Switzerland (Mr Mathias Lörtscher)  
United Kingdom of Great Britain and Northern Ireland (Ms Alison Littlewood)

## North America

United States of America (Ms Rosemarie Gnam)

## Oceania

Fiji (Mr Aisake Batibasaga)

### d) Invited experts:

IUCN (Ms Thomasina Oldfield)  
TRAFFIC (Mr Sabri Zain)  
UNEP-WCMC (Ms. Alison Rosser)  
European Commission (Mr Gael de Rotalier)  
Canadian Scientific Authority Working Group (Ms Gina Schalk)

5. At their 26th and 20th meetings respectively (Dublin, March 2012) the Animals and Plants Committees agreed on a roadmap towards the conclusion of the Evaluation of the Review of Significant Trade as follows:

### Roadmap

Today (March 2012) – June 2012	<i>Opportunity for Parties and interested organizations to provide their feedback to the advisory working group co-chairs</i>
June 2012	Meeting of the Advisory Working Group, Vilm, Germany
July 2012	Oral report on progress to the Standing Committee
June – October 2012	Develop report for CoP16, reporting on current progress, initial conclusions and next steps
April 2013 – July 2014	Advisory Working Group works intersessionally to follow-up on direction confirmed by the Animals and Plants Committees.
April 2014	Report of the Advisory Working Group to be considered by AC27/PC21.
July 2014	Submit draft recommendations to Animals Committee and Plants Committee (may include changes to resolution as identified)

2014 Standing Committee Meeting	Report on progress to Standing Committee
2014 – 2015	Intersessional work to further elaborate draft recommendations following direction provided by AC/PC/SC
2014 – 2015	<i>Opportunity for Parties and interested organizations to provide their feedback to the advisory working group co-chairs</i>
2015 Meetings of the Animals & Plants Committees	Final draft report and recommendations to be agreed by the Animals and Plants Committee
2015 Standing Committee Meeting	Final draft report and recommendations presented to the Standing Committee
2015 – 2016	Final report and recommendations completed based on AC/PC/SC direction and recommendations submitted to CoP 17
2016	CoP 17

7. With generous support from the German CITES authorities, the Advisory Working Group met 24-28 June 2012 at the International Academy for Nature Conservation on the Isle of Vilm, Germany. The co-Chairs take this opportunity to warmly thank the German CITES authorities for funding the meeting. The report from the Vilm meeting is found in Annex 2.
8. The co-Chairs of the Advisory Working group draw the attention of the Animals and Plants Committee to the recommendations arising from the Vilm meeting, found in Annex 2 starting on page 7 of the present document. To tackle these extensive recommendations, the Advisory Working Group recommended activities that should begin first (see Vilm Recommendation 3 of Annex 2). The Advisory Working Group has initiated some preliminary work on elements c) and e) of Vilm Recommendation 3 intersessionally.

#### Recommendations

9. The Committees are invited to examine the outcomes of the Vilm meeting of the Advisory Working Group, taking careful note of the proposed changes to the existing Review of Significant Trade process and provide their views on these proposed changes.
10. The co-Chairs of the Advisory Working Group note the ambitious nature of the Vilm Recommendations. We propose a stepwise approach towards addressing these Recommendations. As a first step, we propose the Advisory Working Group begin preparing the items proposed in Vilm Recommendation 3. Subsequently, we propose the Advisory Working Group would work intersessionally to prepare a first draft of the modifications to Resolution Conf. 12.8 (Rev. CoP13) on *Review of Significant Trade in Specimens of Appendix-II species* required to put the Vilm recommendations into effect. The draft modifications to Resolution Conf. 12.8 (Rev. CoP13) and supporting documents would be submitted to the 28th Meeting of the Animals Committee and the 22nd Meeting of the Plants Committee for their review and approval. The Committees are invited to support this proposed path forward.
11. The Committees are invited to request the Chairs of the Plants and Animals Committee submit the Vilm recommendations, as well as the outcomes of the discussions at the 27th Meeting of the Plants Committee and 21st Meeting of the Plants Committee as part of the progress report to the 65th Meeting of the Standing Committee.

## TERMS OF REFERENCE FOR AN EVALUATION OF THE REVIEW OF SIGNIFICANT TRADE

### Objectives

1. The objectives of the evaluation of the Review of Significant Trade are to:
  - a) evaluate the contribution of the Review of Significant Trade to the implementation of Article IV, paragraphs 2 (a), 3 and 6 (a);
  - b) assess the impact over time of the actions taken in the context of the Review of Significant Trade on the trade and conservation status of species selected for review and subject to recommendations, taking into consideration the possible effects of these measures on other CITES-listed species;
  - c) formulate recommendations in view of the results and findings of the evaluation and the impact assessment; and
  - d) prepare a document on the evaluation of the Review of Significant Trade and the resulting conclusions and recommendations for consideration at the first appropriate meeting of the Conference of the Parties.

### Process

2. The evaluation will commence immediately after the 14th meeting of the Conference of the Parties, contingent on the availability of sufficient funds to ensure its completion.
3. The Animals and Plants Committees will oversee the evaluation, which will be administered by the Secretariat. Consultants may be engaged to assist it in this regard.
4. A working group composed of members of the Animals and Plants Committees, Parties, the Secretariat and invited experts will be responsible for advising on the evaluation process, reviewing the findings of associated research and developing recommendations for wider consideration by the Parties.
5. The Secretariat will regularly report on the progress of the evaluation at meetings of the Animals and Plants Committees.
6. A final report, which may include proposed amendments to existing Resolutions or Decisions, or other recommendations, and which will incorporate the comments of the Animals and Plants Committees and of range States addressed in the report, will be submitted by the Chairmen of the Animals and Plants Committees for consideration at a future meeting of the Conference of the Parties. The Chairman of the Animals or Plants Committee may submit an interim report to the Standing Committee when appropriate and considered useful.

### Content of the evaluation

7. The evaluation of the Review of Significant Trade should include the following activities:
  - a) assess:
    - i) the process used to select species for review (including the reliance on numerical data), and the species selected as a result;
    - ii) the process and means used to compile and review information concerning the implementation of Article IV, paragraphs 2 (a), 3 and 6 (a), for the selected species (including communications with the range States), and the subsequent use of this

information by the Animals and Plants Committees for the categorization of species and the issuance of recommendations;

- iii) the types and frequency of recommendations made;
  - iv) the nature and rate of responses to recommendations, and problems identified;
  - v) the use of the recommendations by range States as guidance for managing target species and other CITES-listed species with similar characteristics;
  - vi) the nature and scale of the support provided to range States for implementing the recommendations, including field projects, financial aid and assistance in building local capacities;
  - vii) the ongoing process to monitor and review the implementation of recommendations, having regard to differing points of view as to where this responsibility should lie; and
  - viii) the impacts of the process on other aspects of CITES implementation, including how problems identified in the course of the review but not directly related to the implementation of Article IV, paragraphs 2 (a), 3 and 6 (a), were addressed;
- b) conduct case studies of a representative range of species and countries subject to recommendations to assess subsequent short- and long-term changes, and whether these could be attributed to the process, in:
- i) conservation status of the target taxa in the range States;
  - ii) trade volumes and patterns of the target taxa, considering trade involving the range States subject to recommendations, other range States and non-range States;
  - iii) production or management strategies for the target taxa;
  - iv) market developments of conservation relevance (such as shifts in supply or demand);
  - v) costs and benefits associated with the management of and trade in the target taxa (such as the effects of trade suspensions and export quotas, shift in trade to non-CITES species or increased illegal trade);
  - vi) protection status of the target taxa within range States, and regulatory measures outside range States;
  - vii) trade patterns, conservation status and management for other CITES-listed species that might be suitable 'substitutes' for the target taxa; and
  - viii) changes in conservation policies in range States; and
- c) analyse the information to assess the effectiveness, costs and benefits<sup>2</sup> of the Review of Significant Trade as implemented so far, by reference to the cost of the process and the time it takes, and identify means to improve the contribution it makes to the objectives of the Convention by reducing the threats to wild species.

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<sup>2</sup> The phrase 'effectiveness, costs and benefits' is intended to address issues such as whether or not the funds spent on the process give value for money comparable to that for other CITES activities, and whether the time-scale envisaged in the process is too long for species that are in rapid decline.

Evaluation of the Review of Significant Trade

Meeting of the Advisory Working Group for the Evaluation of the Review of Significant Trade,  
24-28 June 2012, Isle of Vilm, Germany

THE VILM RECOMMENDATIONS ON THE EVALUATION  
OF THE REVIEW OF SIGNIFICANT TRADE

1. This document has been prepared by the Co-Chairs of the Advisory Working Group and the Secretariat.
2. The Advisory Working Group (AWG) met over the period 24th to 28th June 2012 at the International Academy for Nature Conservation, Isle of Vilm, Germany. The Advisory Working Group extends its sincere gratitude to Germany for graciously offering to host the meeting.
3. The AWG began its work reviewing progress to date against the agreed terms of reference and *modus operandi* for the Evaluation (see Annexes 1 and 2 of document AC26/PC20 Doc. 7). The AWG also heard a presentation by TRAFFIC on the case studies it undertook as per the terms of reference (see Annex 5 of document AC26/PC20 Doc. 7).
4. The AWG began its deliberations by identifying a number of key areas for attention within the existing Review of Significant Trade process. This included identification of areas for improvement in the process, focussing on issues related to the selection of species, correspondence and communications, categorization of species/countries, recommendations and implementation of recommendations and non-article IV issues. It also included identification of other issues that influence the effectiveness of the Review of Significant Trade (RST).
5. The Advisory Working Group identified that, to be effective, the Review of Significant Trade should be proportional, transparent, timely and simple. It should help build the capacity of the Scientific Authorities to carry out their non-detriment findings.
6. Regarding transparency, the Advisory Working Group noted that in the past it has been extremely difficult to track certain information. This includes what species and range States have been or are in the review process, why they were selected, what category they have been placed in, what stage they are at in the process and what recommendations have been made. In addition, there is no apparent record of why a species has or has not been included in the RST and why it has been eliminated. The Advisory Working Group identified the need for a better, more transparent, rationale to support sound and accountable decision-making. The Review of Significant Trade should be documented and justified. National CITES Scientific Authorities should be informed and involved early in the Review of Significant Trade process and should have a role at all stages.
7. Improved selection criteria, more precision in the initial notification to range States of the species selected and in the accompanying requests for comments regarding possible problems in implementing Article IV would increase efficiency. A move to a standardisation in recommendations and the identification of clear measureable targets that would identify when a recommendation has been met would also help achieve this goal. Similarly, the continuing development, population and maintenance of the Review of Significant Trade Management System database would help facilitate tracking and transparency and provide an audit trail for the process.
8. Regarding timeliness, the Advisory Working Group noted that the process is intrinsically linked to meetings of the Scientific Committees. There was general consensus that the process is currently too slow, – with range States being retained in the process, perhaps unnecessarily, for too long. Currently the process is dictated by the number of times the Committees meet which has been reduced to two times between meetings of the Conference of the Parties. Not only does this slow

the whole process, but it can also delay identification of those species or range States of priority concern as well as the formation of recommendations for remedial action to ensure trade is conducted sustainably. This time-scale is particularly long for species in rapid decline. The Advisory Working Group made recommendations to streamline the process by having the Review of Significant Trade process, from selection to the formulation of recommendations, occur in one intersessional period between meetings of the Conference of the Parties.

9. Range State members of the working group repeatedly stressed the need for Parties to empower and embed Scientific Authorities in their decision making processes. An appropriate revision of Resolution Conf. 10.3 Designation and Role of the Scientific Authorities would encourage Parties to enhance the national profile of their scientific advisors and reaffirm their importance in CITES processes. The AWG agreed that the single most important action by a Party in CITES was the making of an effective, proportional and science based non-detriment finding and core to this was the presence of an effective, empowered and resourced Scientific Authority.

## RECOMMENDATIONS

1. In order to fulfil a number of the recommendations outlined in this report the AWG recognised that elements of Resolution Conf. 12.8 (rev. CoP13) Review of Significant Trade in specimens of Appendix-II species should be revised. The AWG recommends the Res. Conf. 12.8 be amended to incorporate the following changes to the existing process:
  - a) The process should be modified so that species can be selected and final recommendations made within one intersessional period between two meetings of the Conference of the Parties in line with the proposed process outlined in Figure 1, the current process is found in Figure 2.
  - b) The Review of Significant Trade would benefit from stricter selection criteria that are more rigorous and transparent to highlight those species/range States combinations where the best available information suggests a concern. The Advisory Working Group recommends using the selection process and criteria outlined in Annex A as a starting point, noting further refinement would be required in areas such as the appropriate setting of the proposed thresholds.
  - c) The selection process, as outlined in Annex A, should include a second sift to facilitate the identification of:
    - i) The status of a country in the RST, in particular flagging countries that have previously set a voluntary zero or limited quotas or countries whose trade is under suspension;
    - ii) Those countries with no recent trade in the species concerned and remove from consideration;
    - iii) Trade in species recently listed in the Appendices and can therefore be removed from consideration;
    - iv) Conservation status, particularly national status where available;
    - v) Trade that would normally occur under an exemption (for example, Parties reporting on trade in plant parts and derivatives which are in fact subject to an exemption) and remove from consideration;
    - vi) Species subject to other MEA/regional processes.
  - d) Recognising that urgent action may sometimes be required and without prejudice to the inherent precautionary nature of the process the Scientific Committees should select fewer species to allow faster completion of the review for the species requiring action. A consultant should be retained immediately after initial selection by the Committees to initiate in-depth information gathering, in order to further reduce the total time involved in the process.
  - e) In parallel, the letters from the Secretariat to range States seeking information on Article IV implementation should clearly specify, in plain language, the type of response required and the

information the Committees are seeking and, inter alia, should be sent to the range State Scientific Authority. These letters should have an explicit explanation on why the species was selected and include specific questions on what data are required, including, for example, a short user-friendly questionnaire. Points that should be included in the letter include:

- i) A specific request to involve the Scientific Authority in formulating a response;
  - ii) That the response will be made public unless the Party concerned requests otherwise;
  - iii) Specific questions regarding relevant aspects of the implementation of Article IV.
- f) The Secretariat, through a consultant, should ensure range States are fully informed and consulted in the process of compiling the report to the Scientific Committees. These consultations should be fully reflected in the consultant's report.
- g) The consultant's report to the Scientific Committees should provide preliminary categorisation as "least concern" or "urgent concern/action required". They should also indicate when it is unclear whether or not the provisions of Article IV are being implemented, i.e. where they have been unable to assign a provisional category. Additionally, the consultant's report should propose a draft suite of applicable recommendations. The working group felt the use of "possible concern" was unnecessary in that, ultimately, the process should result in recommendations being made or the species being removed from the process. In cases where the consultant cannot readily determine if there is a concern, they could use a category to indicate uncertainty. However, for those identified as uncertain by the consultant, the Committees would need to determine if they had a concern that merited a recommendation or if the species should be eliminated.
- h) The Scientific Committees should then be required to review the range State responses and the consultant's report and confirm or categorise the species/range State combinations. In doing so, the Scientific Committees should review those species/range State combinations where the consultant was unable to assign a category. The Scientific Committees should assign these into either "least concern" (for elimination from the process) or "urgent concern/action required" (for which recommendations would be made).
- i) There is a need to standardise the recommendations by creating a "menu" of standard recommendations which can then be crafted to the individual case based on the consultant's research and the ongoing communications with range States. This ongoing communication is vital in order to develop recommendations that are proportionate, tailored to the specific issue and the capacity of the range State. As noted above, the AWG recognized that recommendations should be feasible, measurable, time-bound and proportional to the issues identified. This approach, including a menu of recommendations and ongoing communication, is essential to improve the effectiveness of the RST, engaging range States in the design of the process and ensuring that it builds long term capacity in the Parties concerned to implement Article IV across the board. It is hoped that it will also reassure Parties that to be included in the RST is a positive action aiming to build capacity in-country to implement Article IV with the assistance and guidance of the scientific committees.
- j) The decision as to whether recommendations have been implemented should remain with the Secretariat, in consultation with the AC/PC Chairs and, in addition, the AC/PC Chairs of the Significant Trade Working Group and be reported (as in paragraph q of Resolution Conf. 12.8 (Rev. CoP13) to the Standing Committee.
- k) Each review case needs to have a definitive end point which is clear to all the parties concerned. It is important that the decisions made by the Standing Committee, for those range States that have not fulfilled the recommendations, are reasonably time-bound and have a clear measurable consequence in order to easily identify an end to the process.
- l) For those rare cases where the recommendations remain partially fulfilled for an extended period of time (e.g. long term trade under what was planned to be a temporary precautionary



quota), there should be a mechanism in place to receive feedback from the Scientific Committees on appropriate actions to take in order to ensure the process has closure.

- m) The Standing Committee should continue to review suspensions that have been in place for more than two years. However, the Secretariat should consult those countries under suspension, including that input in their report to the Standing Committee. Furthermore, the decisions on retention or elimination should be based on the original Review of Significant Trade recommendations made by the AC/PC. The Secretariat, Chairs of the AC/PC and Chairs of the RST WG should be involved in the review.
2. The AWG recommended that the Scientific Committees should undertake a regular review on whether the process is working in an effective manner or if some adjustments are needed to enhance the process. This may be progressed through inclusion of relevant action in the Strategic Plan. The Scientific Committees may wish to look back at a sample of the species they selected to see if the desired result was achieved. In doing so, feedback should be obtained from Parties (including their Scientific Authorities) who have been through the process. This review might include a questionnaire to solicit feedback as part of the biennial report. This review process will require further consideration by the Advisory Working Group.
  3. Further to the recommendations above, the Advisory Working Group recommends the Animals and Plants Committee should (where possible intersessionally):
    - a) in consultation with UNEP-WCMC, test the selection criteria proposed in Annex A;
    - b) for species selected after CoP-16, request the Secretariat to amend the initial consultation letter to range States to include the request to involve Scientific Authorities and to note that responses will be made public unless the Party requests that this does not happen;
    - c) develop a short questionnaire to include in the range States consultation letters to guide and standardize the information being requested;
    - d) review and, if necessary, revise definitions of the “least concern” and “urgent concern/action needed” categories, and;
    - e) develop the standard “menu” of recommendations.
  4. With respect to non-article IV and other issues, the Advisory Working Group identified a number of issues under the broad categories of Capacity Building, Illegal Trade, Regional Cooperation and Country Based Reviews. The AWG recommends the Animals and Plants Committee give further consideration to the issues identified below and their impact on the Review of Significant Trade:
    - a) Capacity Building including:
      - i) Promotion of co-operation with the academic community to facilitate research on species subject to the RST through, for example, graduate research programmes, including field surveys, population monitoring techniques and applied research on appropriate NDF's;
      - ii) Promotion of co-operation between Scientific Authorities;
      - iii) Identification of options for small development grants for urgent RST actions;
      - iv) Sharing of information beyond countries;
      - v) Identification of funding needs for activities within the range States – ensure that CITES projects are prioritised on donor lists.
    - b) Illegal Trade including:
      - i) Recognising that illegal trade is a pressure on harvest and undermines the ability of a Party to make an effective NDF;

- ii) Clarification of the process by which problems identified in the RST can be addressed by the Standing Committee or through relevant CITES processes;
    - iii) Clarification of the process by which problems identified in the RST can be communicated to regional enforcement networks.
  - c) Regional Cooperation including:
    - i) Identification of the need for regional cooperation within the text of the revised Resolution;
    - ii) Identification and flagging regional of issues highlighted by the RST (including in the consultants reports);
    - iii) Encouragement, support and facilitation of regional workshops to address RST issues;
    - iv) Encouragement of the establishment of regional “networks” that can be used for information sharing.
  - d) Country-Based Reviews including:
    - i) Consideration of the need for the development of selection criteria;
    - ii) Consideration of a mechanism for a wider needs/gap analysis and development of country action plans to encourage a holistic approach to implementation of the Convention.
- 5. Based on the issues identified in Recommendation 4 the AWG recommends the following actions should be carried out to deliver overall improvement of Article IV:
  - a) Revise Resolution Conf. 10.3 Designation and Role of the Scientific Authorities in order to encourage Parties to enhance the national profile of their scientific advisors and reaffirm their importance in CITES processes;
  - b) Consider of the appropriateness and need for a national legislation project type approach which would categorise national implementation of Article IV. This categorisation could then be used to prioritise assistance to the Parties concerned;
  - c) Build capacity for Parties to improve the quality of data in their annual reports. It is critical that this data is as good as possible as it provides the basis for the RST;
  - d) Provide a simple mechanism to allow feedback from Parties which have been involved in the RST

Figure 1. Proposed new process

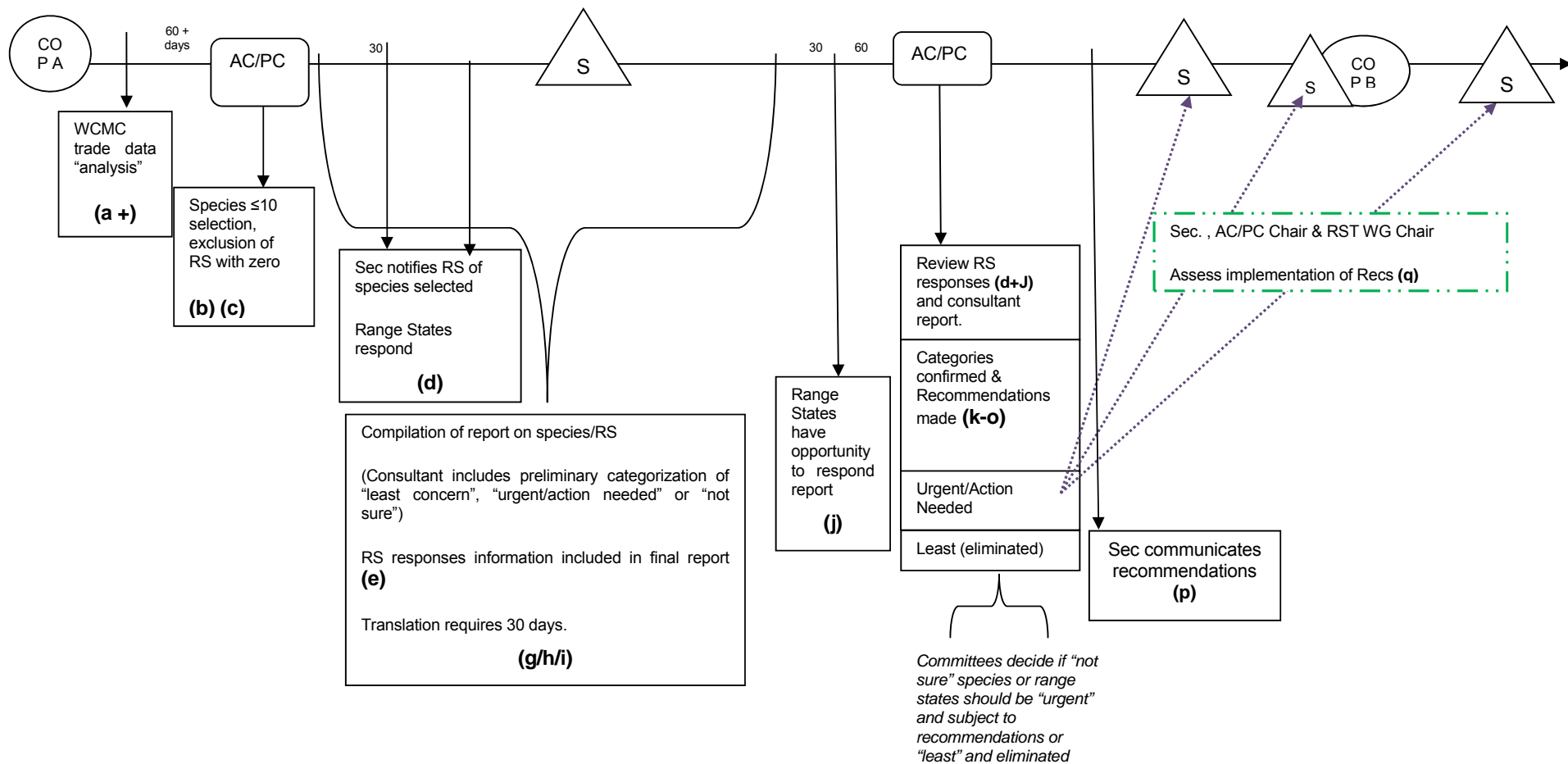
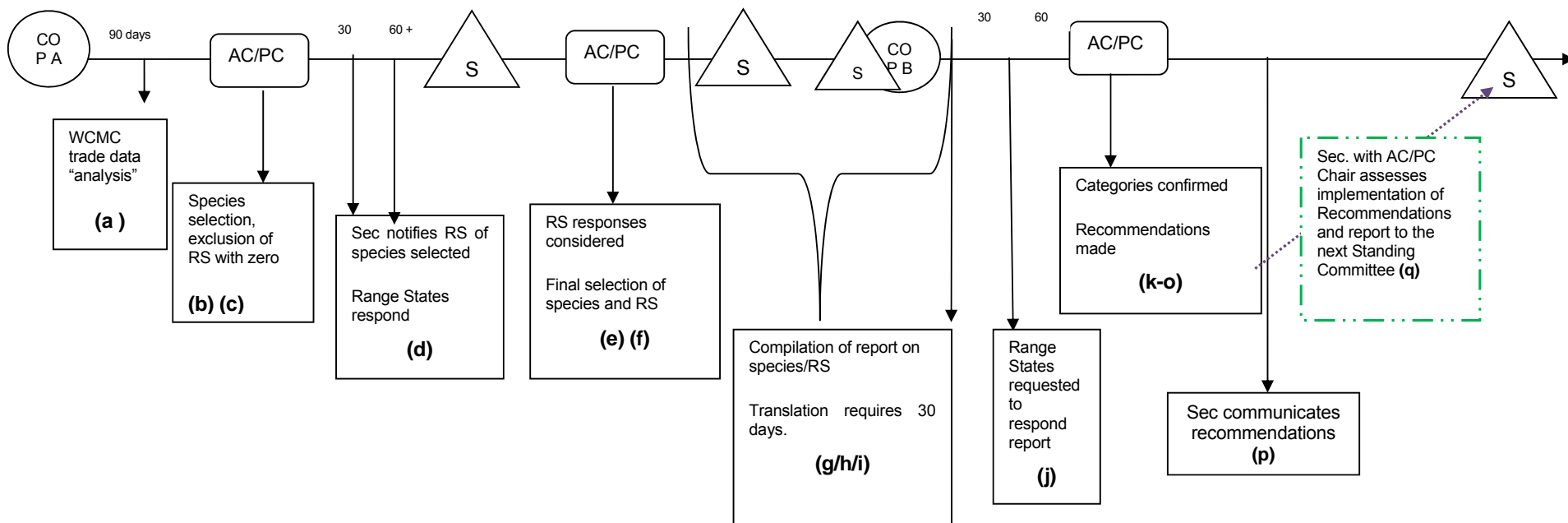


Figure 2. Current process



### Criteria for Initial Selection of Species for consideration in the Review of Significant Trade

1. In accordance with paragraph a) of that Resolution Conf. 12.8 under Regarding conduct of the Review of Significant Trade, UNEP-WCMC is requested to produce a summary from the CITES Trade Database of annual report statistics showing the recorded net level of exports for Appendix-II species over the five most recent years.
2. Paragraph b) of the same section directs the Plants and Animals Committee, on the basis of recorded trade levels and information available to it, the Secretariat, Parties or other relevant experts, to select species of priority concern for review (whether or not such species have been the subject of a previous review).
3. UNEP-WCMC has developed an extended analysis of trade for identifying candidate species for review as indicated below:

#### Extended Analysis

4. An extended analysis of gross exports in Appendix-II species covers trade data over the most recent ten-year period for which near-complete data is available. This output only contains direct trade reported as wild-collected ('W'), ranches ('R'), unknown ('U') or without a source reported for animals and wild-collected ('W'), unknown ('U') or without a source reported for plants. Specimens traded at levels averaging less than one over the most recent five-year (or 10 year?) period were excluded. Trade at the genus level is included. However, trade reported at higher taxonomic levels (e.g. at the family, order or class level) has been excluded.
5. Only the data concerning direct exports is used in the analysis.
6. Data for the most recent year is included in a separate analysis described under "Preliminary analysis of most recent year data".
7. The resulting dataset is filtered to include only the following terms of trade (i.e. types of specimens in trade):
  - a) For animals: baleen, bodies, bones, carapaces, carvings, eggs, egg (live), fins, gall and gall bladders, horns and horn pieces, ivory pieces, ivory carvings, live, meat, musk (including derivatives for *Moschus moschiferus*), plates, raw corals, scales, shells, skin pieces, skins, skeletons, skulls, teeth, trophies, and tusks;
  - b) For plants: bark, carvings, chips, cultures, derivatives, dried plants, extract, flowers, flower pots, fruit, furniture, leaves, live, logs, plywood, powder, roots, sawn wood, seeds, stems, timber, timber carvings, timber pieces, veneer, and wax.
8. Conversion factors were applied to allow analysis of the different units in which trade was originally reported. For example, Parties often report corals in either kilograms or number of pieces; but the preferred unit of measurement for live corals is number of pieces and the preferred unit of measure for raw corals ('COR') is kilograms (see Notification to the Parties 2011/019). Therefore, prior to the creation of the gross export tables, live coral reported in kilograms was converted to pieces and raw corals reported in pieces were converted to kilograms using conversion factors published in Green and Shirley (1999):

Term	Converted to	Conversion factor
live corals (kg)	live corals (pieces)	206.1 ± 13.1g
raw corals (pieces)	raw corals (kg)	580g ± 121g

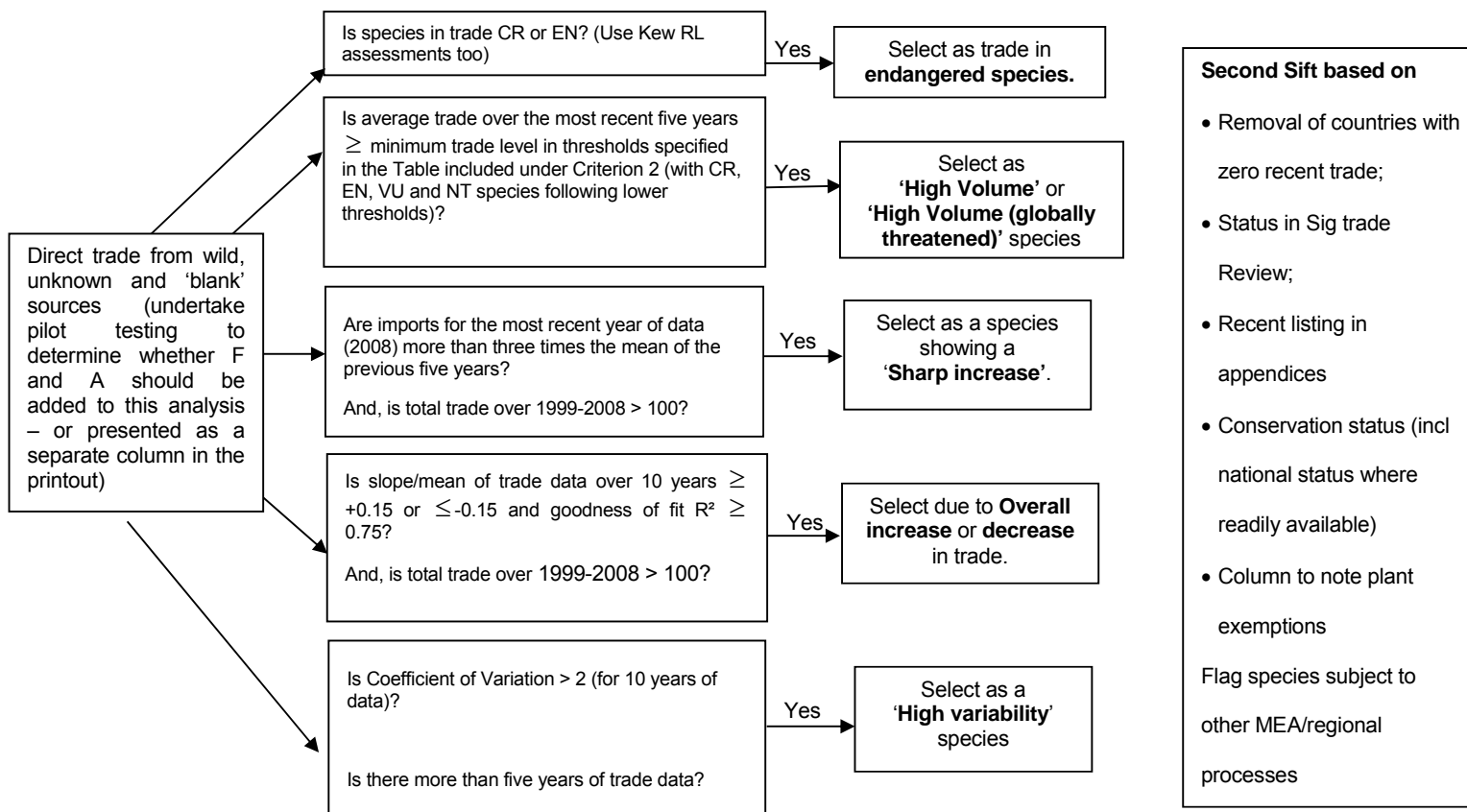
9. Timber reported in kilograms was converted to cubic meters where a conversion factor for the species was available from the CITES Identification Manual – see below: (NB conversion factors for oils and derivatives need to be developed)

Species	Mean specific weight
<i>Gonystylus</i> spp.	0.66 g/cm <sup>3</sup>
<i>Guaiacum sanctum</i>	1.23 g/cm <sup>3</sup>
<i>Guaiacum officinale</i>	1.23 g/cm <sup>3</sup>
<i>Pericopsis elata</i>	0.725 g/cm <sup>3</sup>
<i>Prunus africana</i>	0.74 g/cm <sup>3</sup>
<i>Swietenia humilis</i>	0.61 g/cm <sup>3</sup>
<i>Swietenia macrophylla</i>	0.60 g/cm <sup>3</sup>
<i>Swietenia mahagoni</i>	0.75 g/cm <sup>3</sup>

### **Species selection**

10. The resulting dataset is filtered using a set of five criteria to extract the species showing the following noteworthy patterns of trade as depicted in Figure 1:
- Endangered species – CR or EN;
  - Globally threatened and near-threatened species traded at relatively high volumes over the ten year period were also selected;
  - Sharp increase in trade in recent year in comparison to the average over preceding five-year period;
  - Overall increase or decrease in trade over a ten-year period;
  - High variability in trade over a ten-year period.
11. Further details on these criteria are summarized in Figure 1, followed by a detailed description of each criterion.

**Figure 1: Flow chart for the selection of candidate species for consideration in the Review of Significant Trade**



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Data output to include:

Taxon; trade terms; data for 5 years; Annual mean wild; annual mean ranged; Annual mean F/A; RL status; Justification; Sig Trade, Recent Listing

## Additional information on thresholds

### Criterion 1: Global threat status

12. Species threatened with extinction are assumed to be potentially more adversely affected by high trade volumes, species in trade that have been classified as Critically Endangered and Endangered in the 2010 IUCN Red List of Threatened Species are automatically selected for inclusion.
13. It should be noted that not all species have been assessed in the 2010 IUCN Red List of Threatened Species e.g. many reptiles, invertebrates, fish and plants. Therefore, the higher trade thresholds will apply to these species by default as it cannot be easily determined whether or not these species are threatened.

### Criterion 2: High volume trade

14. Species will qualify for inclusion on the basis of 'high volume trade' or 'high volume (globally threatened)' if the average level of gross direct exports during the recent 5 year period exceeded pre-determined thresholds (see below).
15. **For animals**, the average minimum number of specimens from wild, ranched and unknown sources reported as directly exported per year over the most recent five years that are needed to qualify for selection on the basis of high trade volume.

Types of animals	High volume	High volume (*globally threatened)
Mammals	500	50
Birds	500	50
Reptiles	2500	50
Amphibians	2500	50
Fish	2500 (number/kg)	50 (number/kg)
Invertebrates (non-corals)	2500	250
Corals	2500 (number/kg)	1000 (number/kg)

\*Applies to species that are classified as Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Near Threatened (NT) according to the *2010 IUCN Red List of Threatened Species*.

16. For species not considered globally threatened, individual terms traded at levels less than 100 over the ten year period are excluded from the table even if they contributed to the selection on the basis of high volume
17. **For plants**, the average minimum number of specimens from wild, ranched and unknown sources reported as directly exported per year over the most recent five year period that are needed to qualify for selection on the basis of high trade volume.

Types of plants	High volume	High volume (*globally threatened)
Non-tree	5000	250
Trees	500m <sup>3</sup>	250m <sup>3</sup>



\*Applies to species that are classified as Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Near Threatened (NT) according to the 2010 IUCN Red List of Threatened Species.

Criterion 3: Sharp increase in trade volume in most recent year

18. Species meet this criterion if the volume of direct exports during the most recent year was more than three times the average trade volume of the preceding five years (see graphic below). Species that, despite a sharp increase in trade in the recent year, but are still only traded in very low volumes (i.e. totalling less than 100 over the entire period), are not considered to meet this criterion.

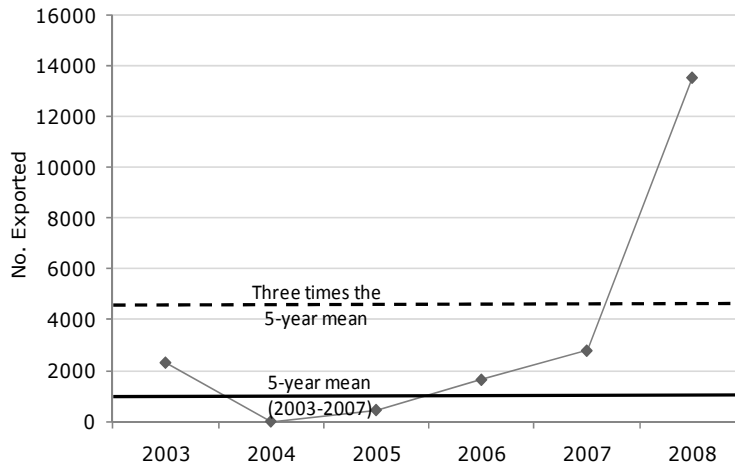


Illustration of the application of the 'sharp increase' criterion (direct gross exports).

Criterion 4: Overall increase or decrease in trade levels over 10 year period

19. This criterion is included to take into account more general trends over a ten-year period ('overall increase' and 'overall decrease'). General trends in trade for each taxon are identified by calculating the slopes of a best-fit linear function to the trade data, a large slope (positive or negative) indicating a notable change in trade levels over time (see graphic below).

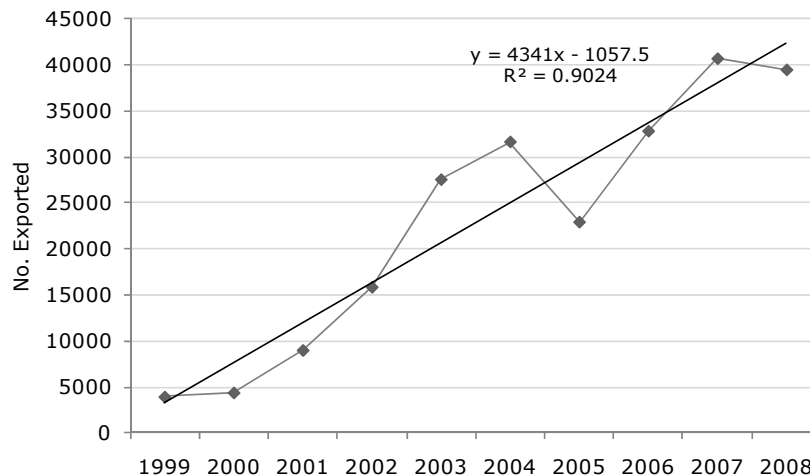


Illustration of the application of the 'overall increase' criterion (direct gross exports).

20. For the purpose of comparison between taxa, the value of the slope is divided by the mean level of trade (for the ten-year period in question) for each taxon. Following examination of the slope/mean values for all species, a cut-off threshold of  $\pm 0.15$  is chosen. That is to say, values below  $+0.15$  and above  $-0.15$  are considered small slopes, while higher values than  $+0.15$  and lower than  $-0.15$  are considered large slopes. The goodness of fit of the trend-line is also considered with only species with  $R^2$  values of greater than

0.75 retained in the final selection for overall increase or decrease ( $R^2$  is a commonly-used criterion for goodness of fit with  $R^2=1.00$  being best fit).

21. Species that, despite an overall increase or decrease in trade over this period, are still only traded in very low volumes (i.e. totalling less than 100 over the entire period), are not selected on the basis of this criterion. The date of CITES listing is also taken into consideration for this criterion.

Criterion 5: Highly variable trade levels over 10 years

22. Trade levels in some species can be highly variable, with relatively high volumes being traded in some years and little or no trade reported in other years. A number of measures of spread exist but the most appropriate when comparing across groups with different means is considered to be the coefficient of variation (CV). The CV is calculated as the standard deviation divided by the mean. This coefficient can therefore be used to make comparisons among taxa, as division of the standard deviation by the mean removes the effect of differences in scale of the trade volumes to which different taxa are subject.
23. Following examination of the coefficients of variation shown by all species within the period of analysis, a cut-off value of +2 is used to select candidate taxa. Thus, taxa whose levels of trade showed a coefficient of variation higher than +2 (i.e. highly variable trade levels) are considered as potential candidates for selection.
24. As with the previous criterion, species that are traded in low numbers (totalling less than 100 units during the 10 year period) are not selected for further consideration. In addition, species that had five or less data-points are excluded as zero-trade volumes are confounded with no-data due to lack of reporting, therefore many species would be selected as showing artificially high variability.

**Preliminary analysis of most recent year's data**

25. A preliminary analysis is conducted to detect high volume and sharp increases in trade in the final year of available trade data. The sharp increase criterion applied is the same as described above, with adjustments made for the year (e.g. taxa met the criterion if gross export levels in final year were over three times the average level of trade for the preceding five year period, with only terms traded at levels greater than 50 over the period most recent five year period included).

**Species that meet at least one/ two of the criteria can be listed.**

**Additional information to be provided:**

- a) Species previously selected for review as part of the Review of Significant Trade following CoPs 12, 13, 14 and 15;
- b) Species that were newly listed on the CITES Appendices (within the period analysed).