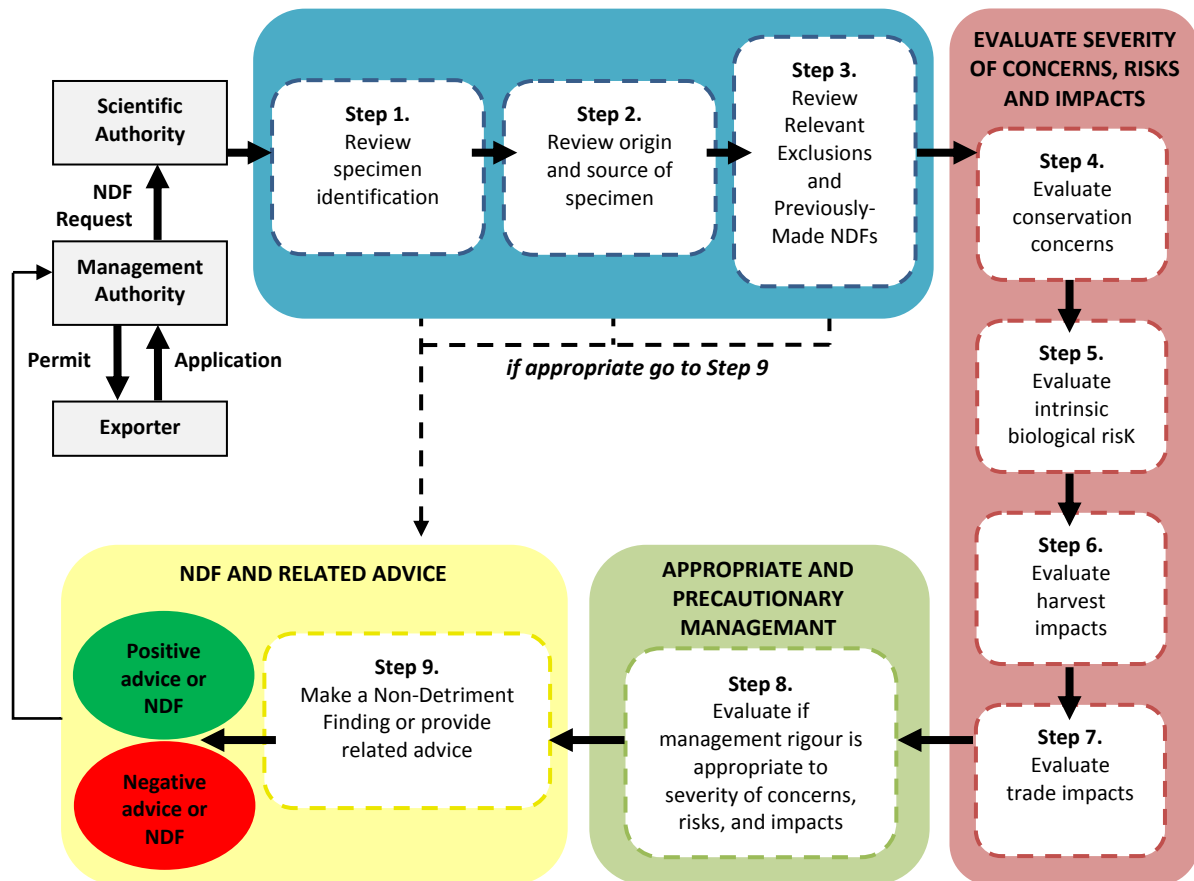


# CITES Non-detriment Findings Guidance for Perennial Plants

A nine-step process to support CITES Scientific Authorities making science-based non-detriment findings (NDFs) for species listed in CITES Appendix II

## Version 1.0





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**Version 1.0**

**D.J. Leaman  
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**TRAFFIC**  
the wildlife trade monitoring network



**Cover illustration:** Nine-step pathway for making Non-Detriment Findings for perennial plant species listed in CITES Appendix II

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This project would not have been possible without the important body of work that has come before it and upon which much of our work is based, and so we are thankful to the many authors and organisations who have dedicated so much time and effort. A special thanks to the Mexican Management Authority for driving the process of developing guidance on NDFs forward, particularly through the International Experts meeting in Cancun in 2008. We are extremely grateful to the participants of that workshop for the great strides forward they made, especially in developing taxon-specific guidance, on which much of this work is founded.

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# MAKING NDFs FOR PERENNIAL PLANTS: A NINE-STEP PROCESS

## Non-Detriment Findings in the CITES Context

Ensuring trade is within sustainable limits is at the core of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). According to the Convention, Parties shall allow trade in specimens of species included in Appendices II only if the Scientific Authority of the State of export has:

- a) Advised that “such export will not be detrimental to the survival of that species” (Article IV); and
- b) Determined that the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystems in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I (Article IV).

Collectively these requirements are referred to as ‘non-detriment findings’ (NDFs). How NDFs are made is the responsibility of the Scientific Authority of each Party. The Conference of the Parties (CoP) have decided not to adopt specific technical criteria for how NDFs are undertaken, instead the CoP adopted non-binding general guidelines on making NDFs, outlined in Resolution Conf. 16.7 on Non-detriment findings<sup>1</sup> [<http://www.cites.org/eng/res/16/16-07.php>].

## Why Is Guidance for Non-Detriment Findings Needed?

Considerable efforts have been made by some Parties, IGOs, and the Secretariat over the years to develop general and taxon-specific guidance for making NDFs; in particular significant advances have been achieved for plant taxa.

Key milestones include:

- The publication (and supporting workshops) of the IUCN Species Survival Commission’s ***Guidance for CITES Scientific Authorities: Checklist to assist in making non-detriment findings for Appendix II exports***<sup>2</sup>;
- The ***International Expert Workshop on CITES Non-Detriment Findings*** (Cancun, Mexico, 17-22 November 2008<sup>3</sup>), in particular the development of guidance at the workshop for perennial plants combining the IUCN checklist with elements derived from the International Standard for sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP, now included in the FairWild Standard version 2.0<sup>4</sup>).
- The CITES Virtual College module on making NDFs<sup>5</sup>.

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<sup>1</sup> Resolutions may be revised at each CoP (e.g. Rev CoP16), links to these on the CITES website are updated accordingly. All are up to date post CoP16.

<sup>2</sup> [http://data.iucn.org/themes/ssc/our\\_work/wildlife\\_trade/citescop13/CITES/guidance.htm#guide](http://data.iucn.org/themes/ssc/our_work/wildlife_trade/citescop13/CITES/guidance.htm#guide)

<sup>3</sup> [http://www.conabio.gob.mx/institucion/cooperacion\\_internacional/TallerNDF/taller\\_ndf.html](http://www.conabio.gob.mx/institucion/cooperacion_internacional/TallerNDF/taller_ndf.html)

<sup>4</sup> <http://www.fairwild.org/standard>

<sup>5</sup> <https://eva.unia.es/cites/>

The Guidance on CITES NDFs for Perennial Plants presented here in Version 1.0 is an output of the project “Development of Training Modules for CITES Non-Detriment Findings (NDF) for Plants”, executed by TRAFFIC International on behalf of WWF Germany, with financial support from the German Federal Agency for Nature Conservation (BfN). This project aims to improve the guidance and training tools available to assist Scientific Authorities in making NDFs for perennial plants, based on existing work and significant recent advances in approach.

Additional outputs of this project, complementary to this Guidance document, include:

- *Consolidated Worksheets and Draft Report Format (see Annex) and*
- *Concept for Training Modules for CITES Non-Detriment Findings for Perennial Plants.*

This Guidance, designed to build on previous milestones, describes a nine-step process enabling Scientific Authorities to make NDFs that are science-based, using information with data quality appropriate to the severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified for the species concerned.

Much of the content of this Guidance is based on the working group reports and case studies resulting from the “International Expert Workshop on CITES Non-Detriment Findings” hosted by the Government of Mexico, Cancun, Mexico, 17-22 November 2008. A first draft of this Guidance, and many useful contributions to its content, resulted from a small “Expert meeting on development of guidance and training for CITES non-detriment findings (NDF) for plants” hosted by TRAFFIC in Mexico City, Mexico, 1-3 February 2012. A second draft was tested in an NDF training workshop in Hanoi, Viet Nam, in October 2012, hosted by the CITES Management Authority for Viet Nam. The current version of this guidance incorporates the results of the Vietnam workshop and further comments from the participants in the Mexico City expert meeting.

Further revisions will be made to the current version of the nine-step process based on outcomes from test implementation and comments from Parties, which we see as a guide that we hope Parties will use and adapt to suit their own needs.

Although this document is intended to guide a Scientific Authority towards a decision, ultimately it will be necessary for the Scientific Authority to weigh up the risks and evidence to make its final NDF decision. This will require individual (or group) judgments; this guidance is designed draw out the information relevant to informing the process that leads to that final decision.

For more details on this Guidance, please contact:

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## Using this NDF Guidance

This Guidance suggests **nine steps** that a Scientific Authority can take to make a science-based NDF. The overall process is shown in Figure 1.

- Steps 1-3 involve the evaluation of whether a detailed, science-based NDF is needed for the species and specimens concerned.
- Steps 4-7 involve the evaluation of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts relevant to the species concerned, and their severity.
- Step 8 involves the evaluation of whether the management measures in place are sufficiently rigorous to mitigate (reduce the severity of) the concerns, risks, and impacts identified.
- Step 9 involves the making of a NDF or other advice to the Management Authority based on the outcomes of Steps 1-8.

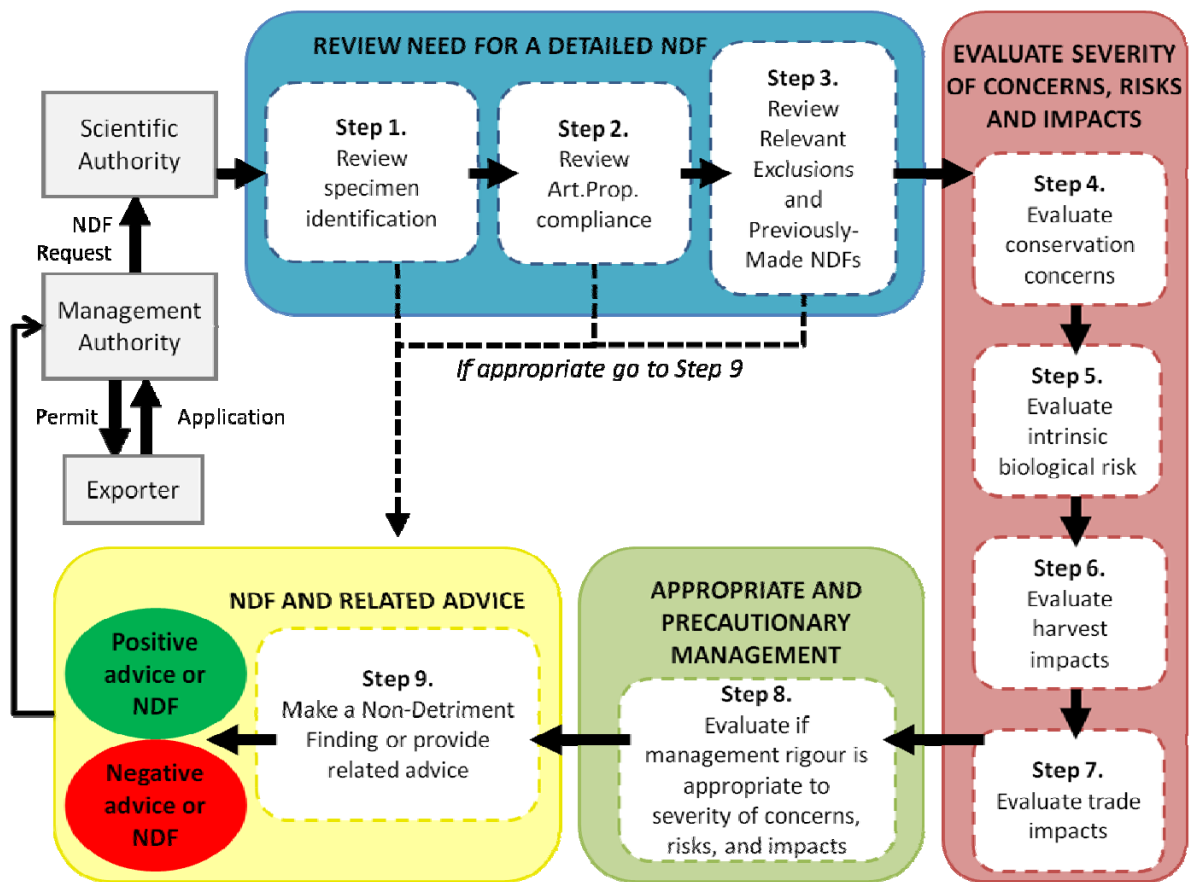
Each of the Guidance steps is comprised of the following components:

- “Rationale: Why is this Step Important?” summarizing the contribution of the guidance step to the overall NDF process
- A graphic presentation of the “Key Questions and Decision Pathway” for each step
- Guidance notes for each Key Question
- A description of the Endpoint for each step
- Useful sources and recommended information quality based on the severity of concerns, risks, and impacts identified in the previous steps
- (Steps 4-8 only) Tables of factors to consider in evaluating the severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts, and the level of rigour of management measures in place.

A set of Consolidated Worksheets is provided in the Annex to this report. These worksheets can be used to record the sources consulted, the information relevant to each of the steps, and outcome of the process. The Consolidated Worksheets may be used as a draft report format for the final NDF.

This Guidance and the associated Consolidated Worksheets can be used in various ways, including:

- Self-training for members of Scientific Authorities needing guidance on how to make NDFs and related decisions, as a complement to the NDF Module of the CITES Virtual College
- Support material for training workshops
- Structure for written NDF reports, where appropriate.



**Figure 1. Nine-Step Pathway for Making Non-Detriment Findings for Perennial Plant Species Listed in CITES Appendix II**

# STEP 1

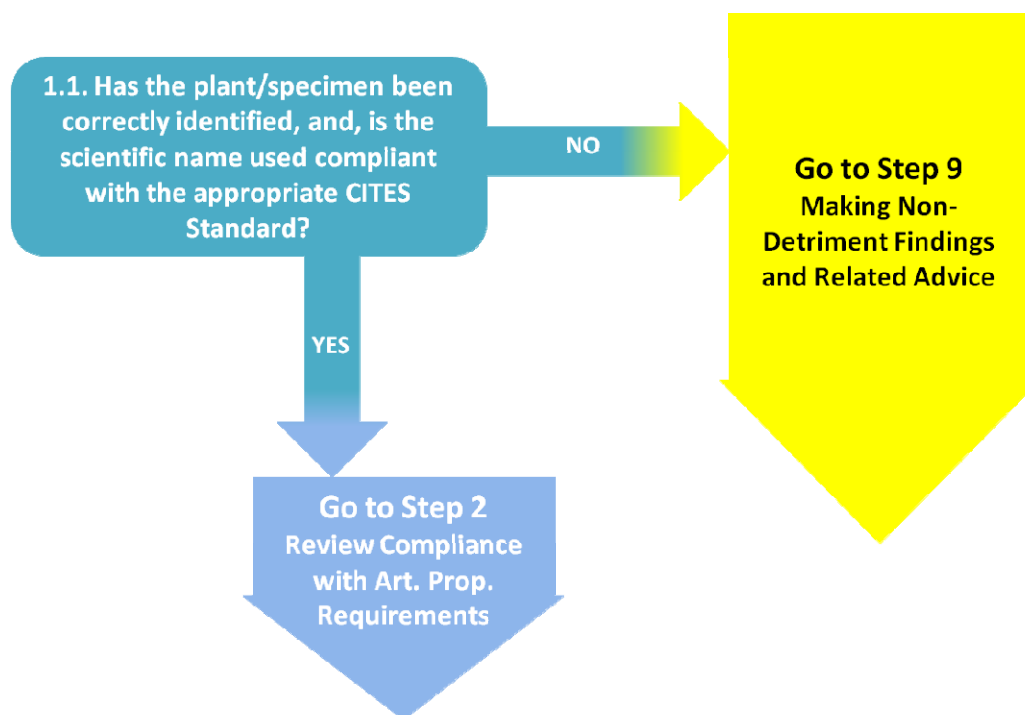
## REVIEW SPECIMEN IDENTIFICATION

### **Rationale: why is this step important?**

Correct identification of specimens and agreement on taxonomic names for species in trade are essential to CITES implementation, and the making of NDFs. Plant species can be difficult to distinguish from others that look alike, whether the specimen is a whole plant, a plant part, or a derivative. Substitution of “look-alike specimens” of CITES-listed species is a challenge for the detection of illegal trade.

The classification and naming of species is a dynamic process that can lead to uncertainty and lack of consensus about specimen and species taxonomy, and can create confusion between current and out-dated information sources. Uncertainty about the identity and taxonomic status of the specimens entering trade can undermine the ability of Scientific Authorities to gather and evaluate information relevant to the species involved when undertaking a NDF. Therefore, these concerns need to be addressed in the process of making an NDF.

## Key Questions and Decision Path for Step 1: Review Specimen Identification



## Guidance for Step 1

**Key Question 1.1.** Is the Scientific Authority confident that the plant/specimen concerned has been correctly identified, and, is the scientific name used compliant with the appropriate CITES Standard?

**Guidance notes:**

The Scientific Authorities do not normally see the specimens for which a permit is being sought, therefore a judgement on the correct identification of the species must be made on the basis of the information supplied on the permit.

Identification of the specimen(s) may be considered clear if the following conditions are met:

- a) The specimen(s) for export is/are identified on the permit application to the level of species, sub-species, or botanical variety as appropriate; AND
- b) The taxon named on the export permit application is in accordance with the nomenclature adopted by CITES (see the link to CITES Resolution 12.11 (*Rev. CoP16* <http://www.cites.org/eng/res/12/12-11R16.php>) under “Useful Sources and Examples of Recommended Information Quality”).

## Guidance for Step 1

The Scientific Authority may choose to correct a simple identification error or out-dated name where the correct name is obvious.

The Scientific Authority may refer concerns about taxonomic status of the specimen to the Nomenclature Specialist of the CITES Plants Committee (see the link to the Plants Committee Nomenclature Specialist under “Useful Sources and Examples of Recommended Information Quality”). It may be useful to check whether the specimen has been identified by an expert at this time or previously so that the specimens are highly likely to be those referred to on the permit application and if not request verification.

Without a clear taxonomic identification of the specimens involved, the Scientific Authority may be unable to confidently apply species-related information required to determine whether the proposed trade will not be detrimental to the survival of the species.

If “Yes” (conditions a and b are met OR the Scientific Authority has corrected a simple error or out-dated name): record concerns resolved and information sources used in the **Worksheet for Step 1**.

If “No” (condition a and b are not met) the Scientific Authority may call upon the Management Authority to investigate a concern about the intentional or unintentional substitution of another species for the one named in the permit application, particularly in cases where look-alike species have significant levels of illegal trade. If the MA is unable to resolve these concerns then describe any concerns about species identification in the **Worksheet for Step 1**, and go to Step 9: Decision 9.1.

**Endpoint of Step 1:** The Scientific Authority identifies any concerns about the identification of the specimens in trade. Confidence in the identification of specimens ensures that species information can be applied confidently to the rest of the NDF process to determine whether the proposed trade will not be detrimental to the survival of the species.

## Useful Sources and Examples of Recommended Information Quality

### Standard References adopted by CITES

- CITES Species Database (<http://www.cites.org/eng/resources/species.html>)
- List of standard references adopted by the Conference of the Parties / Flora [Annex 2, *Res. Conf. 12.11 (Rev. CoP16* Standard nomenclature: <http://www.cites.org/eng/res/12/12-11R16.php>]
- Nomenclature specialist of the CITES Plants Committee (<http://www.cites.org/eng/com/pc/member.php> - currently Mr Noel McGough, [n.mcgough@kew.org](mailto:n.mcgough@kew.org))

### References not adopted by CITES but which are useful guides

- World Checklist of Selected Plant Families (<http://apps.kew.org/wcsp/home.do>)
- Published national, regional, and global flora
- Identification guides and checklists reviewed by taxonomic experts
- Published papers or monographs reviewed by taxonomic experts
- Voucher specimens from the harvest site(s) specified in the application for export permit

## STEP 2

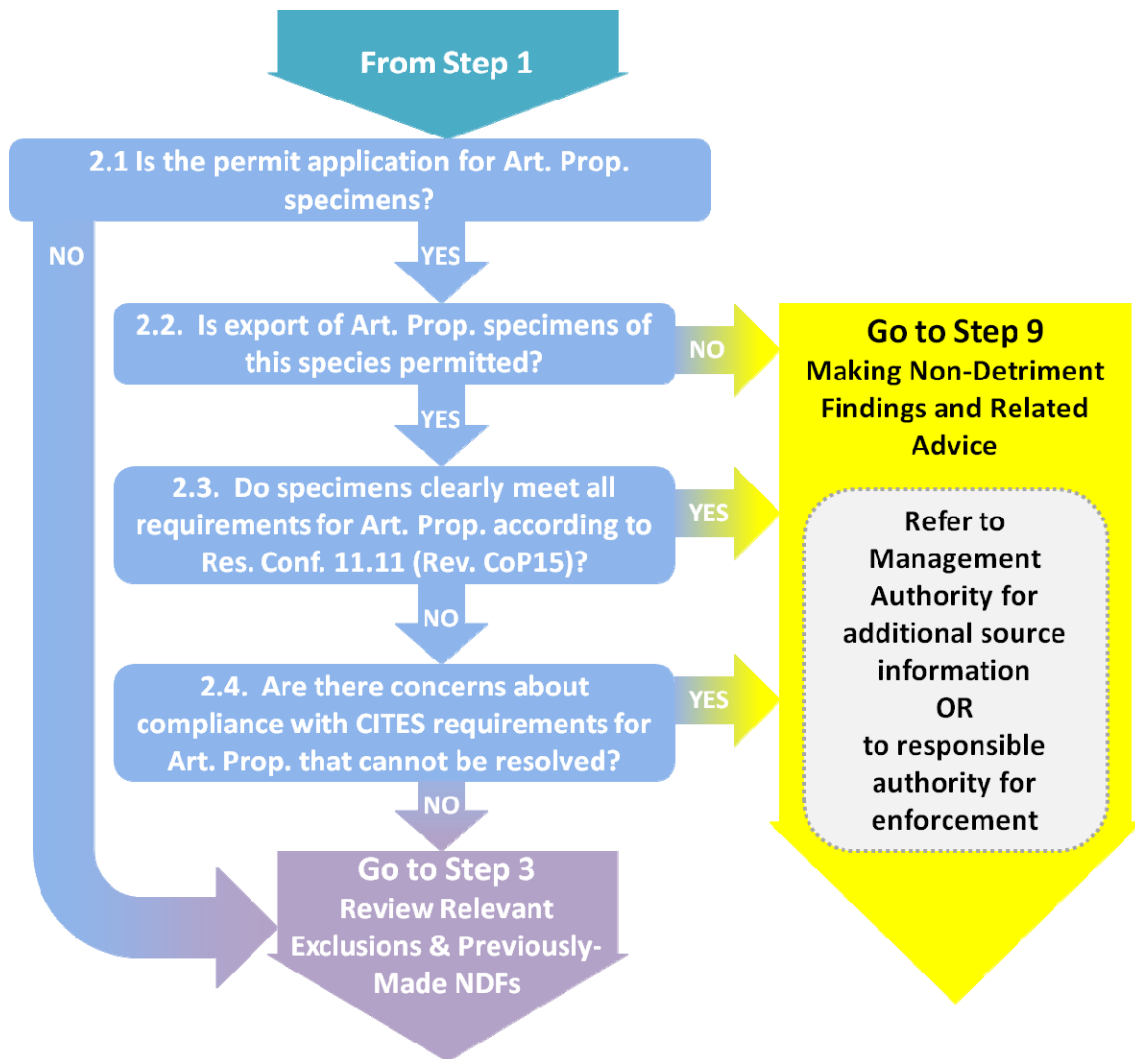
# REVIEW COMPLIANCE WITH REQUIREMENTS FOR ARTIFICIAL PROPAGATION

### Rationale: why is this step important?

International trade of specimens of plant species listed in CITES Appendix II that originate from artificial propagation sources does not require the Scientific Authority to make an NDF as for wild specimens. If an export applicant presents sufficient information for the Scientific Authority to determine that the specimens clearly meet all CITES requirements for artificially propagated as defined in *Res. Conf. 11.11 (Rev. CoP15)*, a simple positive decision may be made to permit export. However, concerns about compliance with these requirements (such as illegal trade of wild-harvested specimens declared as artificially propagated, or use of wild parental stock for nursery propagation of seedlings for export trade) need to be investigated before allowing trade.



## Key Questions and Decision Path for Step 2: Review Compliance with Artificial Propagation Requirements



## Guidance for Step 2

**Key Question 2.1.** Is the permit application for artificially propagated specimens?

**Guidance notes:**

In most cases the Scientific Authority does not see the specimens to which the permit application refers. It is therefore important that the permit application contains sufficient information to enable the Scientific Authority to answer this and the following Key Questions in Step 2.

## Guidance for Step 2

If the specimens were harvested from the wild, cultivated from wild collected material, or propagated from wild parental stock, they are treated as wild, requiring an NDF.

If “Yes”, record information sources used in the **Worksheet for Step 2** and go to Key Question 2.2.

If “No”, record reasons for treating specimens as wild-harvested, if not declared as wild harvested, and information sources used in the **Worksheet for Step 2**; then go to Step 3.

**Key Question 2.2.** Is export of the artificially propagated specimens of this species permitted by national or relevant sub-national legislation?

### Guidance notes:

National or sub-national legislation may specify exemptions or restrictions intended to support positive effects or limit detrimental impacts of artificial propagation on wild populations (e.g. collection of seeds and spores).

Advice of the Scientific Authority must comply with national or relevant sub-national legislation.

If “Yes”, record information sources used in the **Worksheet for Step 2** and go to Key Question 2.3.

If “No”, describe relevant legislation and record information sources used in the **Worksheet for Step 2** and go to Step 9: Decision 9.2.

The Scientific Authority may call upon the Management Authority for additional information or refer to the responsible authority for enforcement.

**Key Question 2.3.** Do the specimens covered by the export permit application clearly meet all requirements for artificial propagation according to *Res. Conf. 11.11 (Rev. CoP15)*?

### Guidance notes:

CITES requirements for artificial propagation are met if:

- a) The parental stock has been legally acquired and cultivated or wild-harvested in accordance with *Res. Conf. 11.11 (Rev. CoP15)*.
- b) Specimens were produced from artificial propagation in accordance with *Res. Conf. 11.11 (Rev. CoP15)*.

If an export permit application contains sufficient information for the Scientific Authority to determine that the specimens clearly meet all CITES requirements for artificial propagation according to *Res. Conf. 11.11 (Rev. CoP15)*, a simple positive decision can be made allowing a permit to be issued for export. An NDF is not required.

If “Yes”, record requirements met and information sources used in the **Worksheet for Step 2**, and go to Step 9: Decision 9.3.

If “No”, record information sources used in **Worksheet for Step 2** and go to Key Question 2.4.

**NOTE:** In some countries operations cultivating plants have introduced nursery registration schemes, which, if relevant in the country in question, may easily confirm the artificial propagation of the species. Where export permit applications for artificially propagated plants are frequently received for particular species, it may be useful for SAs and MAs to provide guidance on the necessary requirements for recognition of “artificial propagation” of those species under CITES. A register of nursery or cultivating operations meeting these requirements may also facilitate decision making.

## Guidance for Step 2

**Key Question 2.4.** Are there obvious concerns about compliance of the specimens with CITES requirements for artificial propagation that cannot be resolved by the Scientific Authority by undertaking a detailed NDF?

**Guidance notes:**

Concerns about compliance with *Res. Conf. 11.11 (Rev. CoP15)* may arise, for example:

- If there is significant uncertainty about whether the specimens are cultivated or from wild collection, or whether the parental stock was cultivated or from wild collection
- If the species is not known to be produced nationally according to CITES criteria for conditions for artificial propagation or in sufficient volume to supply the quantity of specimens covered by the export permit application

The Scientific Authority may be unable to state with confidence that the export of artificially propagated specimens complies with *Res. Conf. 11.11 (Rev. CoP15)* and will not have a detrimental impact on the wild population.

If “Yes”, record concerns and information sources used in the **Worksheet for Step 2** and go to Step 9: Decision 9.4

The Scientific Authority may call upon the Management Authority for additional information or refer to the responsible authority for enforcement.

If “No”, record information sources used in the **Worksheet for Step 2** and go to Step 3.

**Endpoint of Step 2:** Scientific Authorities make an initial decision about whether the specimens covered by the export permit application meet the Convention’s requirements for artificial propagation, enabling issue of an export permit, whether a detailed NDF is required to investigate concerns about non-compliance and detrimental effects on wild populations, or whether concerns about non-compliance require a negative NDF and referral to the Management Authority or the responsible authority for enforcement.

## Useful Sources and Examples of Recommended Information

- Export permit application information concerning source of specimens (wild / artificial propagation / unknown)
- National and sub-national legislation relevant to export of this species
- *Res. Conf. 11.11 (Rev. CoP15)*: Regulation of trade in plants (<http://www.cites.org/eng/res/11/11-11R15.php>)
- Nursery surveys and inventories
- Nursery registrations ([http://www.cites.org/common/reg/e\\_nu.html](http://www.cites.org/common/reg/e_nu.html))

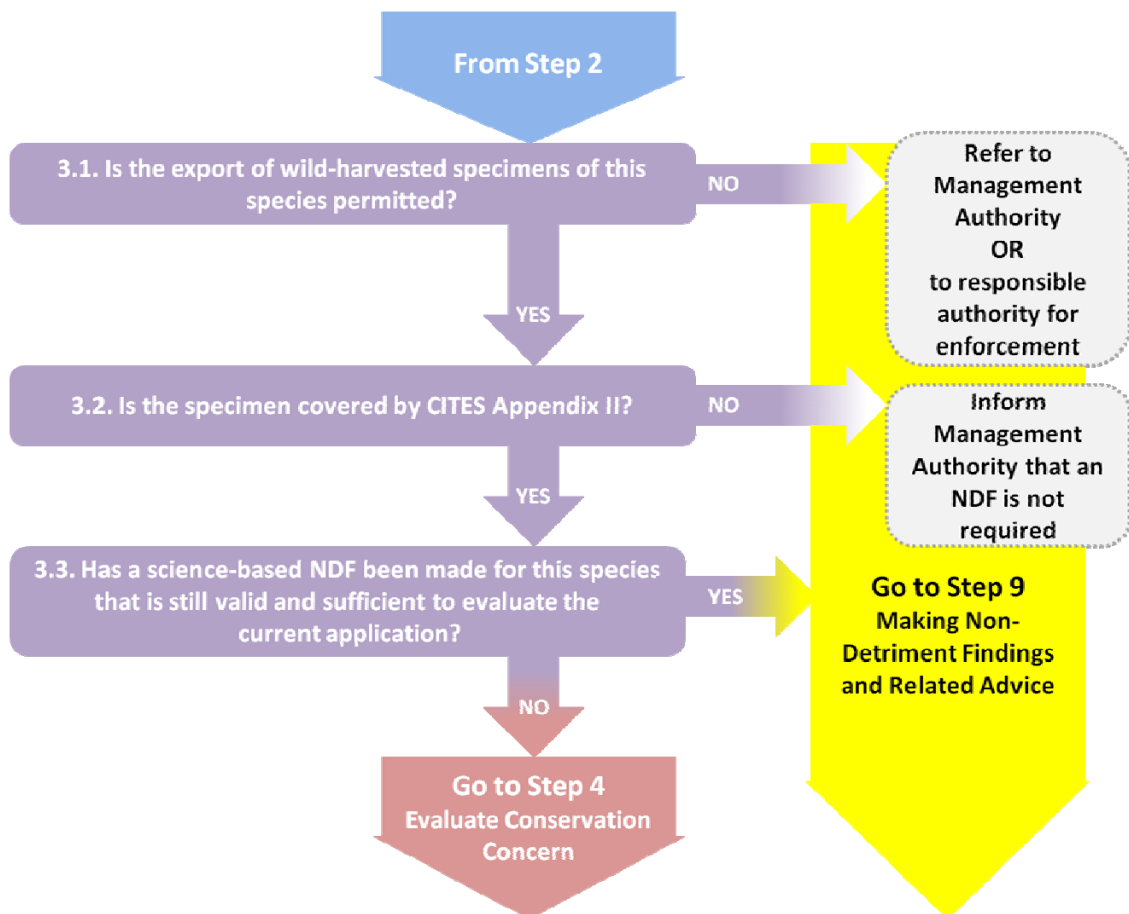
## STEP 3

# REVIEW RELEVANT EXCLUSIONS AND PREVIOUSLY-MADE NDFs

### Rationale: why is this step important?

In addition to factors relating to specimen identification, taxonomic stability, and meeting criteria for artificial propagation, several other circumstances may make undertaking a detailed NDF unnecessary for Scientific Authorities. These circumstances include: if international export is banned by national legislation; if the relevant specimens are excluded from regulation by an annotation to the species listing in the CITES Appendices; or if the export permit application is consistent with previous science-based findings.

## Key Questions and Decision Path for Step 3: Review Relevant Exclusions and Previously-Made NDFs



## Guidance for Step 3

**Key Question 3.1.** Is the export of wild-harvested specimens of this species permitted by national or relevant sub-national legislation or regulation?

**Guidance notes:**

- Advice of the Scientific Authority must comply with national or sub-national legislation.

If “Yes”, describe the legislation or regulation and its relevance in the **Worksheet for Step 3**, record information sources used, and go to Key Question 3.2.

If “No”, describe the legislation or regulation and its relevance in the **Worksheet for Step 3**, record information sources used, and go to Step 9: Decision 9.5

The Scientific Authority may refer to Management Authority for information or to the responsible authority for enforcement.

## Guidance for Step 3

**Key Question 3.2.** Is the specimen covered by CITES Appendix II?

**Guidance notes:**

- Some specimens are excluded from CITES control by the relevant numbered annotation to Appendix II.
- Specimens determined not to clearly meet all requirements for artificial propagation according to *Res. Conf. 11.11 (Rev. CoP15)* in Step 2 (Key Question 2.3) are not excluded from the NDF in that step.

If “Yes”, record information sources used in the **Worksheet for Step 3**, and go to Key Question 3.3.

If “No”, describe the reason for exclusion of the specimen from CITES Appendix II in the **Worksheet for Step 3**, record information sources used, and go to Step 9: Decision 9.6

Inform the Management Authority that an NDF and CITES export permit are not required.

**Key Question 3.3.** Has the Scientific Authority previously made a science-based NDF for this species that is still valid and is sufficient to evaluate the specimens for the current export permit application?

**Guidance notes:**

In some cases, it may be possible for a Scientific Authority to make an NDF based on a previous NDF that established a trade threshold deemed by the Scientific Authority to be non-detrimental to the species. The trade threshold might be an export quota, harvest limit, or other management system in place.

- The previous NDF considered conservation concerns, intrinsic biological risk, harvest impacts, trade impacts, and management measures in place (see Steps 4-8 of this guidance document).
- Setting a national export quota that establishes the maximum number of specimens of a species that may be exported over the course of year without having a detrimental effect on the species’ survival may meet the CITES requirement for an NDF. Information used to determine a science-based quota is relevant to the steps recommended in this guidance.
  - The current export permit application is consistent with the previous applications.
  - The proposed export of specimens is non-detrimental according to the previous finding.
  - A Party may establish export quotas unilaterally but they can also be set by the CoP (see: [www.cites.org/eng/resources/quotas/index.php](http://www.cites.org/eng/resources/quotas/index.php))
  - However, a Scientific Authority may determine a national export quota to be detrimental to species survival.

For example, the quantity of specimens to be exported may be within a pre-determined quota deemed to be non-detrimental to species survival, or the impact of export of a small number of specimens may be easily evaluated based on previous findings.

If “Yes”, describe the previously made NDF, record information sources used in the **Worksheet for Step 3**, and go to Step 9: Decision 9.7

If “No”, record absence or deficiencies of a previous NDF, information sources used, and go to **Step 4**.

## Guidance for Step 3

**Endpoint of Step 3:** Scientific Authorities may not need to undertake a detailed NDF if export of the specimens involved is banned by national or sub-national legislation, if the specimens are not covered by CITES Appendix II, or if the export permit application is consistent with previous science-based findings.

## Useful Sources and Examples of Recommended Information

National and sub-national legislation relevant to export of this species

CITES Species database (<http://www.cites.org/eng/resources/species.html>)

- Species Appendix listing
- Relevant annotations

Export permit application

- Type of material, part or product (whole plant, plant parts, derivatives)
- Quantity (Number of specimens / volume of material to be exported)
- Purpose of export

Records of trade in specimens and species included in Appendices I, II, and III (in accordance with Art. VIII.6) ([http://www.unep-wcmc-apps.org/citestrade/expert\\_accord.cfm](http://www.unep-wcmc-apps.org/citestrade/expert_accord.cfm))

Managing nationally established export quotas

- *Res. Conf. 14.7 (Rev. CoP15)* on Management of nationally established export quotas (<http://www.cites.org/eng/res/14/14-07R15.php>)
- Periodic reports of the national CITES Authority to the CITES Secretariat, including updates on national export quotas (<http://www.cites.org/eng/resources/quotas/index.shtml>)

## STEP 4

# EVALUATE CONSERVATION CONCERN

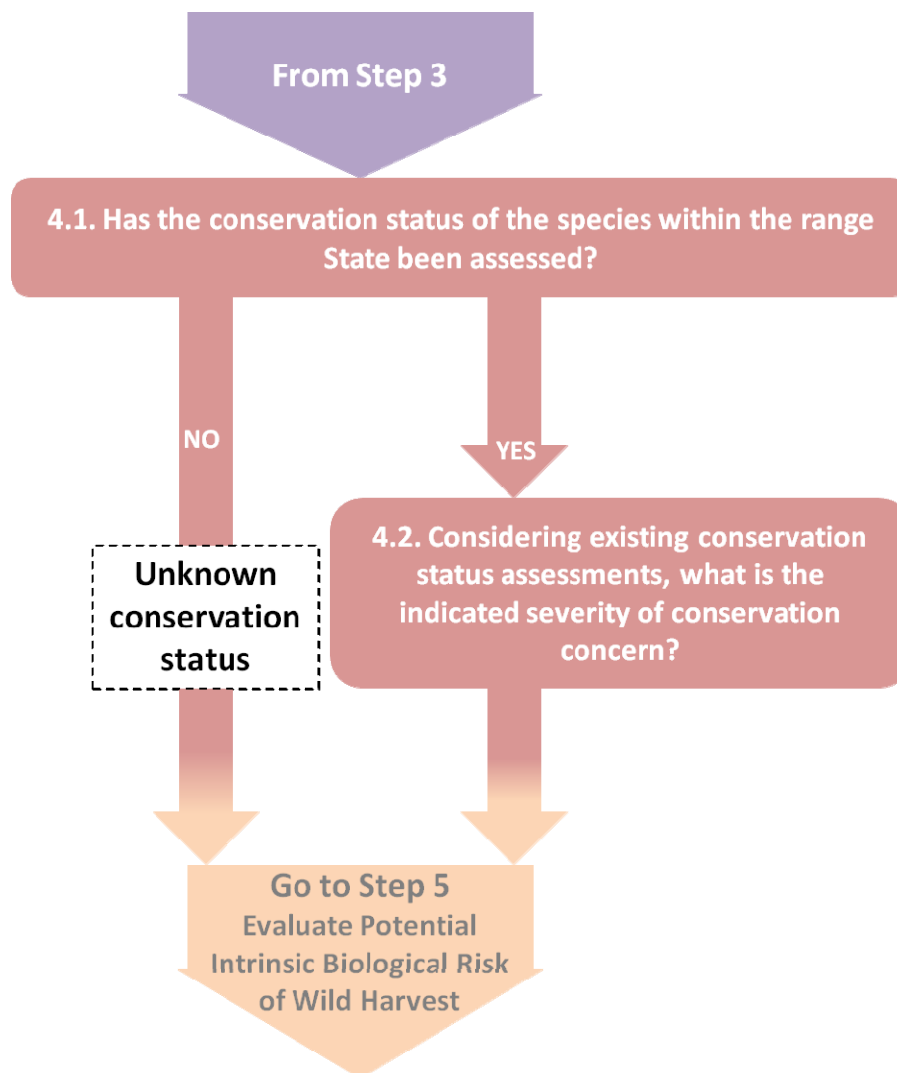
### **Rationale: why is this step important?**

This step considers existing conservation status assessments to document relevant threats and to support evaluation of the severity of conservation concern associated with the national population or sub-population(s) of the species concerned. It is not intended that the Scientific Authority will undertake conservation status assessments as part of the NDF where these are lacking, out-dated, or incomplete.

Conservation status is an assessment of the likelihood that a species (or sub-population of the species) will become extinct in the near future. Conservation status assessment systems have a variety of forms (e.g., Red Lists, Red Data Books, threatened species listings) and a range of geographic scope (sub-national, national, regional, or global). The definition of assessment criteria and categories describing extinction risk also varies among assessment systems. Existing assessments can provide information that supports the NDF by identifying general threats and severity of conservation concern (Step 4), including some of the factors that are considered in Steps 5-8 of this Guidance: intrinsic biological characteristics (Step 5), harvest impacts (Step 6), trade impacts (Step 7), and management measures in place (Step 8). A detailed, well-documented, and up-to-date conservation status assessment may therefore provide information relevant to several of the remaining steps of this Guidance.



## Key Questions and Decision Path for Step 4: Evaluate Conservation Concern



### Guidance for Step 4

**Key Question 4.1.** Has the conservation status of the species been assessed at any geographic scope that includes the population or sub-population(s) within the range State undertaking the NDF?

**Guidance notes:**

Conservation status assessment systems exist in many forms (e.g., Red Lists, Red Data Books, Threatened Species listings, Species at Risk listings). Any such system that has been used to assess the conservation status of the target species may provide information useful for Step 4 and other steps of this Guidance (see Worksheet, Step 4).

## Guidance for Step 4

Conservation status assessment systems are applied to various geographic scopes:

- Global systems consider the conservation status of a species over its entire natural geographic range (e.g. IUCN Red List Categories and Criteria). For species endemic to one country, a national assessment is also a global assessment.
- Multi-country / regional systems consider conservation status of a species for only the part of its natural geographic range that occurs within the defined region (e.g., The Red Data Book for a particular country; regional applications of the IUCN Red List Categories and Criteria)
- National systems consider conservation status of a species for only the part of its natural geographic range that occurs within the national boundaries (e.g. national Red Lists of threatened species). For species endemic to one country, a national assessment is also a global assessment.
- Sub-national systems consider the conservation status of a species for only the part of its natural geographic range that occurs within a province, state, protected area, or other defined area within national boundaries.

Existing conservation status assessments of any geographic scope that include all or parts of the national population of the species may provide information useful for Step 4 and other steps of this Guidance (see Worksheet, Step 4). Current assessments should be used wherever available; out of date or old assessments may contain useful information but they should be treated with an understanding that the information on which they were based may no longer be accurate.

If “Yes”, record existing conservation status assessments relevant to the national or sub-national populations in the **Worksheet for Step 4**, and go to Key Question 4.2

If “No”, record results in the **Worksheet for Step 4**, and go to Step 5

**Key Question 4.2.** Considering the identified threats and other criteria contributing to existing conservation status assessments relevant to the national and sub-national population(s) of the species, what is the indicated severity (“Low”, “Medium”, “High”, or “Unknown”) and scope (“None”, “Local”, “National”, “Global”, or “Unknown”) of conservation concern?

### Guidance notes:

Refer to the table of **Factors to Consider: Conservation Concerns** below to evaluate the severity and scope of conservation concern indicated by existing relevant conservation status assessments.

The Scientific Authority may find information useful for Step 4 (and steps 5-8) in this Guidance in any existing assessment. If the national population or sub-population(s) of the species have been included in more than one assessment system or geographic scope of assessment, the Scientific Authority may select one assessment to evaluate the Severity of Conservation Concern that best combines the following qualities:

- Most indicative of the threat of extinction of the national population and sub-populations of the species
- Most recent/up to date
- Most transparent and informative criteria for identifying threats and other factors on which the assessment is based

## Guidance for Step 4

A national conservation status assessment is most relevant to the national scope of NDFs, but many species included in CITES Appendix II do not have national assessments. In some jurisdictions species conservation status is evaluated only at sub-national levels (e.g. state or province), and some species may have been assessed only at the regional or global scope. (Note that for endemic species, a national assessment is also a global assessment.) Where a national assessment is lacking or out-dated, a global or regional assessment can provide useful information about threats and indicate the severity of concern. However, caution must be taken when considering the national implications of global conservation status, particularly for a widespread or globally distributed species. A national or sub-national population may be considered threatened (e.g., by localized impacts on locally small populations) while the global population may not qualify as threatened. Alternatively, the global population of a species may be considered threatened, but particular national or sub-national populations may be more secure (e.g., based on the absence of threats or the management in place).

Conservation status assessments may take many factors into account to evaluate risk of extinction. These factors may be relevant to other Steps in this Guidance. For example:

- Number of individual remaining in the population or sub-population being assessed, and recent trends in population size (Steps 5 and 6)
- Barriers to reproduction and dispersal, such as population fragmentation (Step 5)
- Known threats, such as harvest and trade impacts, loss or degradation of habitat (Steps 6 and 7)
- Existence and effectiveness of management systems in place (Step 8)

Use the **Worksheet for Step 4** to record:

- Conservation status (category) assessed and relevant criteria contributing to the assessment, and the severity of conservation concern (“Low”, “Medium”, “High”, or “Unknown”) indicated in the table of **Factors to Consider: Conservation Concerns**
- Specific threats and their scope as indicated in the table of **Factors to Consider: Conservation Concerns** (if information about scope of threats is available in the existing assessments).

This response affects the quality of information recommended for Steps 5-8, the overall management rigour required to mitigate (reduce the severity of) the conservation concerns identified (Step 8), and the degree of precaution that should be applied to making the NDF (Step 9).

To support the evaluation of appropriate rigour of existing management measures (Step 8), summary lists of threats (and their scope) associated with “Low”, “Medium”, “High”, and “Unknown” severity of conservation concern will be transferred to the **Worksheet for Step 8, Information Evaluation Matrix, Part 1**.

→ Go to Step 5

**Endpoint of Step 4:** Based on existing (and current) conservation status assessments, threats contributing to the risk of extinction of the national population or sub-population(s) are documented, and their contribution to the severity of conservation concern is evaluated by the Scientific Authority. The contribution of information from existing conservation status assessments

## Guidance for Step 4

to identification of intrinsic risks (Step 5), wild-harvest impacts (Step 6), trade impacts (Step 7), and management measures (Step 8) is documented. Identified scope of conservation concern is particularly relevant to Step 8.

## Useful Sources and Examples of Recommended Information

Sub-national and national conservation status assessment systems:

- State, provincial, and national Red Data books, nature conservation act listings
- On-line national Red Lists: (<http://www.regionalredlist.com>)
- Conservation Data Centres (for example, see [www.natureserve-canada.ca/en/cdcs.htm](http://www.natureserve-canada.ca/en/cdcs.htm))

Multi-country / regional conservation status assessment systems:

- NatureServe Explorer (United States and Canada) (<http://www.natureserve.org/explorer/>)
- Red Data Book of the Russian Federation ([http://2mn.org/eng/rdbrf\\_en.htm](http://2mn.org/eng/rdbrf_en.htm))
- North Africa Freshwater Biodiversity (regional application of IUCN Red List categories and criteria)  
([http://www.iucn.org/about/union/secretariat/offices/iucnmed/iucn\\_med\\_programme/species/species\\_assessments/freshwater\\_habitats/freshwater\\_northafrica/](http://www.iucn.org/about/union/secretariat/offices/iucnmed/iucn_med_programme/species/species_assessments/freshwater_habitats/freshwater_northafrica/))

Global conservation status assessment systems:

- IUCN Red List of Threatened Species (<http://www.iucnredlist.org>)

## Factors to Consider: Conservation Concerns

The factors and indicators defined in this table use information from existing conservation status assessments in simple rankings of severity and scope of conservation concern. These rankings use IUCN Red List categories and criteria as a benchmark against which Scientific Authorities can compare any existing assessment categories and criteria applied in national, sub-national, and other relevant conservation status assessment systems (<http://www.iucnredlist.org/technical-documents/categories-and-criteria>).

Used in combination with the **Worksheet for Step 4**, Scientific Authorities can evaluate the severity of conservation concern for the national or sub-national populations of species requiring NDFs. This record is needed for Step 8 (Evaluate Appropriate Rigour of Existing Management Measures) in preparation for **Step 9 (NDF decision and advice to the CITES Management Authority)**.

If there is more than one relevant conservation status assessment, and the results differ, see the Guidance notes for Key Question 4.2 (above).

Factor	Severity of Conservation Concern	Indicator
Severity of conservation concern	Low	The species, population, or sub-population has been assessed and is <b>not considered to be threatened</b> . The assessment or listing is based on defined criteria (e.g., IUCN Red List category Least Concern/LC or equivalent categories used in other systems). Note that the absence of conservation status assessment cannot be assumed to indicate that the species, population, or sub-population is not threatened (see indicators for “unknown” below).
	Medium	The species, population, or sub-population has been assessed and is considered to <b>nearly qualify as threatened</b> . The assessment or listing is based on defined criteria (e.g., IUCN Red List categories Near Threatened/NT, Vulnerable/VU, or equivalent categories used in other systems).
	High	The species, population, or sub-population has been assessed and <b>qualifies as threatened</b> . The assessment or listing is based on defined criteria (e.g., IUCN Red List Critically Endangered/CR, Endangered/EN, or equivalent categories used in other systems).
	Unknown	<ul style="list-style-type: none"> <li>• Conservation status has not been assessed for the species, population, or sub-population (e.g., IUCN Red List category Not Evaluated/NE, equivalent categories used in other systems, or absence of any assessment or listing; or</li> <li>• Conservation status has been assessed but the severity of conservation concern cannot be determined:               <ol style="list-style-type: none"> <li>a) There is insufficient data to evaluate against defined criteria (e.g., IUCN Red List category Data Deficient/DD or equivalent categories used in other systems); or</li> <li>b) The existing assessment / listing criteria are not defined so that Severity of Conservation Concern cannot be evaluated; or</li> <li>c) The assessment is out-dated or in doubt</li> </ol> </li> </ul>
	<p><b>Explanation of this factor:</b></p> <p>This factor considers any existing sub-national, national, regional, or global conservation status assessments that include population or sub-population(s) of the species within the country undertaking the NDF.</p>	
Scope of conservation concern	None	The species is not considered threatened and no threats have been identified
	Local	Identified threats affect only one or a few sub-populations of the species, but other sub-populations are not affected
	National	Identified threats affect the national population of the species
	Global	Identified threats affect the entire global population of the species
	Unknown	The conservation status of the species has not been assessed
	<p><b>Explanation of this factor:</b></p> <p>This factor considers the geographic extent of identified threats in relation to the distribution of the species.</p>	

## STEP 5

# EVALUATE POTENTIAL INTRINSIC BIOLOGICAL RISKS OF WILD HARVEST

### Rationale: why is this step important?

Some plant species are naturally more susceptible to detrimental effects of wild harvest and commercial trade than other species, based on intrinsic biological characteristics. In this Guidance, “intrinsic biological risk” is understood to indicate that certain biological characteristics contribute to the risk that wild harvest will be detrimental to species survival. Using the intrinsic biological characteristics, Scientific Authorities can identify the particular biological factors that contribute to higher or lower severity of risk that wild harvest will be detrimental to species survival, and assess whether the overall risk to species survival is high, medium, or low. The higher the severity of risk, the greater the requirements for information quality, management rigour, and precaution that should be sought for the NDF in Steps 6-9.

## Key Questions and Decision Path for Step 5: Evaluate Potential Intrinsic Biological Risk of Wild Harvest



### Guidance for Step 5

**Key Question 5.1.** Consider the intrinsic biological characteristics that affect the potential risk of wild harvest to species survival. Is the severity of intrinsic biological risk indicated for each of these factors “Low”, “Medium”, “High”, or “Unknown”?

**Guidance notes:**

From the many intrinsic biological characteristics that might be considered relevant to the impact of wild harvest on species survival, the following have been consistently identified in CITES discussions and documents related to making science-based NDFs (See Cancun NDF Workshop Perennial plants working group results  
[www.conabio.gob.mx/institucion/cooperacion\\_internacional/TallerNDF/wg2.html](http://www.conabio.gob.mx/institucion/cooperacion_internacional/TallerNDF/wg2.html)

## Guidance for Step 5

IUCN Checklist

[http://data.iucn.org/themes/ssc/our\\_work/wildlife\\_trade/citescop13/CITES/guidance.htm](http://data.iucn.org/themes/ssc/our_work/wildlife_trade/citescop13/CITES/guidance.htm), *Res. Conf. 16.7* <http://www.cites.org/eng/res/16/16-07.php>):

- 1) Plant part harvested and plant life form
- 2) Geographic distribution
- 3) National population size and abundance
- 4) Habitat specificity and vulnerability
- 5) Regeneration
- 6) Reproduction
- 7) Role of the species in its ecosystem

**Indicators of severity of risk** associated with each of these intrinsic biological characteristics that affect the risk of wild harvest to species survival are elaborated below in the table of **Factors to Consider: Intrinsic Risk of Wild Harvest to Species Survival**.

**Recommended information quality:** For species lacking relevant conservation status assessments in Step 4, Scientific Authorities will need to gather any available information about intrinsic biological characteristics for Step 5. For species with conservation status identified in Step 4 as “low concern”, it is likely sufficient for Scientific Authorities to use routine verification sources (see first column of table “Useful Sources and Examples of Recommended Information Quality”) to gather any additional information needed about the species’ intrinsic biological characteristics to complete Step 5. For species identified in Step 4 as “Medium”, “High” or “Unknown” conservation concern, the effort to locate available higher-quality information is recommended to fill any remaining information gaps for Step 5.

Use the **Worksheet for Step 5** to record available information corresponding to each of these factors and the severity of risk indicated.

To support the evaluation of appropriate rigour of existing management measures (Step 8), summary lists of “Low”, “Medium”, “High”, and “Unknown” intrinsic biological risk factors will be transferred to the **Worksheet for Step 8, Information Evaluation Matrix, Part 1**.

→Go to Key Question 5.2.

**Key Question 5.2.** Considering the potential severity of intrinsic biological risk indicated for the selected factors, is the indicated overall severity of risk to species survival from wild harvest “Low”, “Medium”, “High”, or “Unknown”?

### Guidance notes:

If there is a majority of factors associated with one severity level of intrinsic biological risk in the responses to Key Question 5.1, record that severity of risk in the **Worksheet for Step 5**.

If there is not a majority of factors associated with one risk severity level, the precautionary response is to record the highest risk severity level indicated by available information about the intrinsic biological risk factors (e.g. “Precautionary Medium” or “Precautionary High”).

This response affects the quality of information recommended for Steps 6-7, the overall management rigour required to mitigate (reduce the severity of) the intrinsic biological risks identified (Step 8), and the degree of precaution that should be applied to making the NDF (Step 9).

→Go to Step 6.



## Guidance for Step 5

**Endpoint of Step 5:** Ranking of intrinsic biological risk is used to guide Scientific Authorities to seek higher quality information about harvest and trade impacts related to higher risk and unknown intrinsic biological characteristics (Steps 6 and 7), to require greater management rigour for higher levels of severity of risk (Step 8), and to use greater precaution in making NDFs for those species with overall higher intrinsic biological risk (Step 9).

## Useful Sources and Examples of Recommended Information Quality

All Species / Specimens Requiring a Detailed NDF	Species with Medium, High, and Unknown Severity of Conservation Concern Identified in Step 4	Species with High and Unknown Severity of Conservation Concern Identified in Step 4
Routine verifications: <ul style="list-style-type: none"> <li>• Permit application</li> <li>• Results of detailed conservation status assessments (outputs from Step 4 recorded in Worksheet for Step 4)</li> <li>• Scientific publications and databases providing taxonomic description of species, floras, vegetation type / zone maps</li> </ul>	Existing qualitative information: <ul style="list-style-type: none"> <li>• Herbarium records</li> <li>• Vegetation surveys and inventories</li> <li>• Ecological risk assessments</li> <li>• Relevant knowledge and expertise from scientists, harvesters, local communities, other resource managers</li> <li>• Management plans</li> </ul>	Existing quantitative information: <ul style="list-style-type: none"> <li>• Comprehensive mapping of suitable habitat combined with field verification</li> <li>• Resource assessment</li> <li>• Sampled and modelled population parameters and demographic studies (e.g., abundance, population trends, regeneration rates)</li> <li>• Analyses of satellite imagery (changes in vegetation cover over time)</li> </ul>

## Factors to Consider: Intrinsic Biological Risk of Wild Harvest

The factors and indicators defined in this table use information about the intrinsic biological characteristics of the species concerned with a ranking of risk severity level: low, medium, high, and unknown. Scientific Authorities can identify specific factors of risk and evaluate the general severity of risk of wild harvest to species survival by using this table in combination with the **Worksheet for Step 5**.

For most species, information will be available for Factors 1 and 2, but not for all of the factors included in the table. Record available information and unknown factors in the **Worksheet for Step 5**: this record is needed for Step 8 (Evaluate Appropriate Rigour of Existing Management Measures) in preparation for **Step 9 (NDF decision and advice to the CITES Management Authority)**.

Intrinsic biological factors related to risk	Risk severity	Indicator
<b>1. Plant part harvested versus life form of species</b>	Low	Harvest of abundant leaves, flowers or fruits
	Medium	Exudates (sap, resin); harvest of offshoots from parent plant (e.g., cycads)
	High	Harvest of whole plants; harvest of bulbs, bark or roots; apical meristems (growing tip) of monocarpic species (plants that flower and produce seeds only once in their lifetime).
	Unknown	Information about this factor is unavailable.
	<b>Explanation of this factor:</b> <p>The resilience of the species concerned is dependent on the plant part that is harvested in relation to the ability of the individual plant and the harvested population to recover. For example, harvest of leaves from a tree species is regarded as having a low risk of killing the tree or decreasing the population over time, while harvest of roots from an herbaceous species rates as high risk because each plant harvested may be destroyed by the harvest. For the evaluation of this factor, the life form of the species (annual, biennial, perennial, geophyte, shrub, and tree) has to be taken into account.</p> <p>The impacts of harvest practices that are more destructive than necessary to obtain the material used in trade (e.g., if entire tree branches are cut to harvest leaves), are considered in <b>Step 6, Factor 1:</b> “impact of harvest on individual plants”</p>	
<b>2. Geographic distribution</b>	Low	Distribution is widespread, commonly occurring through the country (likely in several countries / more than one continent).
	Medium	Distribution is restricted to a relatively small part of the country (and likely to few countries).
	High	Distribution is locally restricted, i.e. endemic, found in only one or few localities.
	Unknown	Information about this factor is unavailable.
	<b>Explanation of this factor:</b> <p>This factor assesses the known (primarily) national / (secondarily) global range and distribution of the species. Consider whether the distribution of the species is broad and continuous, or to what degree it is restricted and fragmented.</p>	

Intrinsic biological factors related to risk	Risk severity	Indicator
<b>3. National population size and abundance</b>	Low	Sub-populations of the national population are large and spread homogeneously across the landscape
	Medium	Sub-populations of the national population mostly medium-sized, sometimes large, unevenly distributed
	High	Sub-populations of the national population are always small; scattered in low density across the landscape
	Unknown	Information about this factor is unavailable.
	<b>Explanation of this factor:</b> This factor assesses the spatial distribution across the range of the species. It assesses whether populations are large, abundant and homogeneous or small, clumped and scattered. This factor may be assessed differently in different range countries because a species that is distributed across national political boundaries may be more abundant in the centre of its natural range and less abundant at the periphery, as well as other factors affecting the species.	
<b>4. Habitat specificity and vulnerability</b>	Low	Species is highly adaptable to various habitat types; the habitat is stable (not declining in area or quality)
	Medium	Species is adapted to a few stable habitat types or is adapted to a variety of habitat types that are declining in area or quality
	High	Species is narrowly specific to one habitat type or to only a few threatened habitat types that are declining in area or quality
	Unknown	Information about this factor is unavailable.
	<b>Explanation of this factor:</b> This factor assesses habitat preference of the species concerned. It looks at the availability and abundance of habitats occupied and also at the threat to these habitats.	
<b>5. Regeneration</b>	Low	Species is fast growing, reproduces early and/or easily re-sprouting after harvest;
	Medium	Growth rate medium and partly re-sprouting after harvest
	High	Species is slow growing, late to reproduce and/or not re-sprouting.
	Unknown	Information about this factor is unavailable
	<b>Explanation of this factor:</b> This factor assesses the recovery capacity of the individual plant: i.e., the ability to regenerate the material harvested. Aspects of this are the general growth rate and especially the (re-)sprouting capability (rhizomes, creepers, clonal growth) of perennials.	

Intrinsic biological factors related to risk	Risk severity	Indicator
<b>6. Reproduction</b>	Low	Species reproduces asexually or is wind pollinated; many viable seeds with abiotic dispersal; long-lived seed bank
	Medium	Species reproduces mainly sexually and has common pollinators; seed dispersal biotic with common dispersers
	High	Species is dioecious (male and female flowers on separate plants) or monocarpic (flowers and sets seed only once); adapted to specialised pollinators and/or seed dispersers; produces few viable seeds; short-lived seed bank
	Unknown	Information about this factor is unavailable
	<p><b>Explanation of this factor:</b></p> <p>This factor evaluates the relative reproductive specialization of the species concerned, where asexual reproduction, abiotic pollination and seed dispersal (e.g., by wind or water), and abundant pollinators and seed dispersers are less specialized than sexual reproduction, biotic pollination and seed dispersal, and infrequent pollinators and seed dispersers, as well as whether species have short or long-lived seed banks for regeneration. A reduction in availability of individual plants or reproductive parts (flowers, seeds) will have a greater impact on plant species with more specialized adaptations.</p> <p>This factor very generally addresses the recovery capacity of the harvested population: i.e., the ability of the remaining plants to rebuild the population or to repopulate areas where individuals or sub-populations have been removed.</p>	
<b>7. Role of the species in its ecosystem</b>	Low	No known dependent species or key functions
	Medium	Not relevant: see explanation below
	High	Keystone species, nurse plant, major food source for other species
	Unknown	Information about this factor is not available.
	<p><b>Explanation of this factor:</b></p> <p>This factor considers the role of the species in the ecosystem and whether ecosystem processes are interrupted or changed by the harvest of the species. Is the species a keystone or guild species, do other species depend on it for survival (e.g., food source)?</p> <p>Note: Information about this factor is not commonly available, but may be included in some detailed conservation status assessments. A “medium” indicator is not meaningful for this factor. A species either does, or does not, have a known key ecosystem function as defined.</p>	

## STEP 6

# EVALUATE IMPACTS OF WILD HARVEST

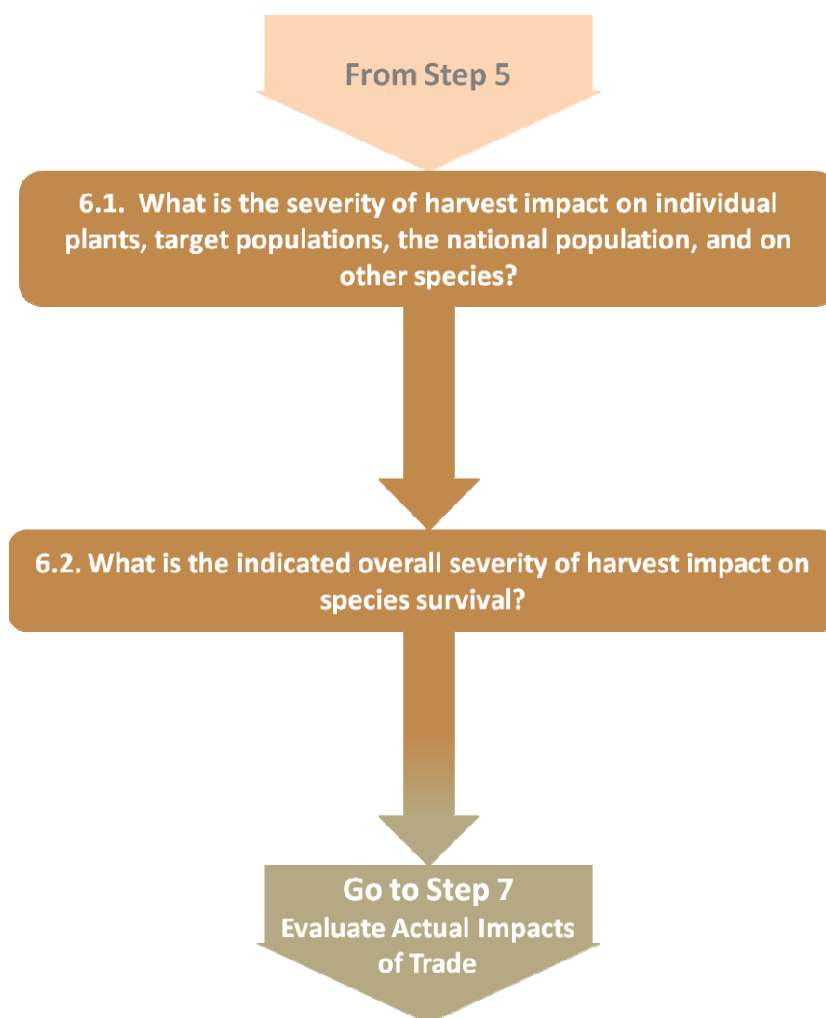
### Rationale: why is this step important?

The impacts of wild harvest can be detrimental to the individual plants, to the harvested populations, and to the national population of the species concerned overall, as well as to the species' ecosystem and other species on which it depends. Scientific Authorities can identify and evaluate these impacts by considering the best currently available information about the harvest practice used and harvest intensity (e.g., proportion affected of the individual plant, harvested populations, and the national population overall). Although population decline may be caused by impacts unrelated to wild harvest (which may have been identified in existing conservation status assessments in **Step 4**), population trends can also be a useful indicator of detrimental impact of wild harvest.

In some cases, existing management measures may mitigate (reduce the severity of) harvest impacts. Therefore, this Step considers actual impact rather than potential impact. Management measures are considered in Step 8.

The greater the severity of wild harvest impact on the species concerned, the greater are the requirements of information quality, management rigor, and precaution that Scientific Authorities should apply to the NDF.

## Key Questions and Decision Path for Step 6: Evaluate Impacts of Wild Harvest



### Guidance for Step 6

**Key Question 6.1.** Considering the impacts of wild harvest on species survival, is the severity of harvest impact on individual plants, target populations, the national population, and on other species “Low”, “Medium”, “High”, or “Unknown”?

**Guidance notes:**

Factors that affect the impact of wild harvest on species survival are elaborated below in the table **Factors to Consider: Impacts of Wild Harvest**.

**Recommended information quality:** For species identified in Step 4 as “Medium”, “High” or “Unknown” conservation concern, or identified in Step 5 as “Medium”, “High”, or “Unknown” risk, the effort to locate available higher-quality information is recommended to fill any remaining information gaps for Step 6. For species lacking relevant conservation status

## Guidance for Step 6

assessments in Step 4, Scientific Authorities will need to gather any available information on harvest impacts for Step 6. For species with conservation status identified in Step 4 as “low concern” and “intrinsic biological risk” identified as “Low” in Step 5, it is likely sufficient for Scientific Authorities to use routine verification sources to gather any additional information needed about actual harvest impacts to complete Step 6.

Use the **Worksheet for Step 6** to record available information corresponding to each of the harvest impact factors and the severity of impact indicated (see table of Factors to Consider: Impacts of Wild Harvest, below).

In some cases, existing management measures may mitigate (reduce the severity of) harvest impacts. This information should be noted under the relevant impact factor. This information will be considered in Step 8.

To support the evaluation of appropriate rigour of existing management measures (Step 8), summary lists of “Low”, “Medium”, “High”, and “Unknown” harvest impact factors will be transferred to the **Worksheet for Step 8, Information Evaluation Matrix, Part 1**.

→Go to Key Question 6.2.

**Key Question 6.2.** Considering the severity of harvest impact indicated for the selected factors, is the indicated overall severity of harvest impact on species survival “Low”, “Medium”, “High”, or “Unknown”?

### Guidance notes:

If there is a majority of factors associated with one level of harvest impact severity in the responses to Key Question 6.1, record that severity of impact in Worksheet and Draft Report (Step 6).

If there is not a majority of factors associated with one impact severity level, the precautionary response is to record the highest impact severity level indicated by available information harvest impact factors (e.g. “Precautionary Medium” or “Precautionary High”).

This response affects the quality of information recommended for Steps 7 and 8, the overall management rigour required to mitigate (reduce the severity of) the harvest impacts identified (Step 8), and the degree of precaution that should be applied to making the NDF (Step 9).

→ Go to Step 7.

**Endpoint of Step 6:** Based on the best available information of recommended quality, Scientific Authorities determine the severity of impact of wild harvest on individual plants, on the harvested populations, the national population, and on other species. An overall ranking of harvest impact is used to guide Scientific Authorities to expect greater management rigour for higher levels of severity of harvest impact (Step 8), and to use greater precaution in making NDFs for those species with overall higher or unknown severity of harvest impact (Step 9)

## Useful Sources and Examples of Recommended Information Quality

All Species / Specimens Requiring a Detailed NDF	Species with Medium, High and Unknown Severity of Conservation Concern or Risk Identified in Steps 4-5	Species with High and Unknown Severity of Conservation Concern or Risk Identified in Steps 4-5:
<p>Routine verifications:</p> <ul style="list-style-type: none"> <li>Permit application (number or volume of specimens included in relation to other permits for the same species in the current year)</li> <li>Conservation status assessments (Step 4) – population trends and harvest impacts</li> <li>Scientific publications / reports describing harvesting practices, population trends</li> </ul>	<p>Existing qualitative information:</p> <ul style="list-style-type: none"> <li>Harvest method (e.g., written or verbal instructions for harvesters, Good Practice guidelines, Standard Operating Procedures)</li> <li>Management plans</li> <li>Vegetation surveys and inventories (e.g. surveys conducted at harvest locations and at sites protected from harvest)</li> <li>Expert, harvester, local community, resource manager reports of actual harvest practices used</li> <li>Qualitative indices (e.g., harvesters' perceptions of change in resource availability and quality)</li> </ul>	<p>Existing quantitative information:</p> <ul style="list-style-type: none"> <li>Records of harvest yields (e.g., volume/area/year) and frequencies</li> <li>Commercial census</li> <li>Quantitative indices (e.g., roots per pound harvested as an indicator of population size and age-class distribution)</li> <li>Monitoring data, sampled and modelled population parameters (e.g., changes in abundance, distribution, age or size-class structure, regeneration)</li> </ul>

## Factors to Consider: Impacts of Wild Harvest

The factors and indicators defined in this table use information about the harvest practices, and population trends in a simple ranking of impact severity: low, medium, high, and unknown. Scientific Authorities can identify and evaluate detrimental impacts of wild harvest on the individuals, target populations, and species concerned by using this table of factors in combination with the **Worksheet for Step 6**.

For most species, information will be available for Factor 1 but may be more difficult to locate for Factors 2-4. Record available information and unknown factors in the **Worksheet for Step 6**: this record is needed for Step 8 (Evaluate Appropriate Rigour of Existing Management Measures) in preparation for **Step 9 (NDF decision and advice to the CITES Management Authority)**.

Factor	Harvest impact severity	Indicator
1. Impact of harvest on individual plants	Low	<ul style="list-style-type: none"> <li>Non-lethal harvest (plant part harvested and practice used*)</li> <li>Small proportion of the yield (e.g. leaves, seeds, fruit) per plant is harvested and is unlikely to reduce reproductive success</li> <li>Harvest frequency is low relative to the rate of regeneration of the part harvested (e.g., once per season)</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>Harvest (plant part harvested and practice used*) sometimes lethal</li> </ul>



Factor	Harvest impact severity	Indicator
		<ul style="list-style-type: none"> <li>• Small proportion of yield of sap, resin, bark, roots per plant is harvested OR large proportion of yield of leaves, seeds, fruit per plant is harvested, and is likely to reduce reproductive success</li> <li>• Harvest frequency is low relative to the rate of regeneration of the part harvested (e.g., once per season)</li> </ul>
	High	<ul style="list-style-type: none"> <li>• Harvest (plant part harvested and practice used*) is lethal</li> <li>• Large proportion (whole plants, bulbs, bark, roots, apical meristems of monocarpic species) per plant is harvested</li> <li>• Harvest frequency is high relative to the rate of regeneration of the part harvested (e.g., numerous times per season)</li> </ul>
	Unknown	<ul style="list-style-type: none"> <li>• Information about this factor is unavailable</li> </ul>
	<p><b>Explanation:</b></p> <p>This factor considers the characteristics of wild harvest that affect the survival and reproductive capacity of individual plants.</p> <p>*Note that the part of a plant harvested is not always just the part used: e.g., it is possible that the common harvest practice may be lethal for individual plants whereas the targeted plant parts could be harvested in a non-lethal manner (e.g., cutting down a tree to harvest the fruit or leaves).</p>	
2. Impact of harvest on target populations	Low	<ul style="list-style-type: none"> <li>• Harvest spread over a broad range of age/size-classes</li> <li>• Small proportion of individual plants in the population is affected by harvest (quantity harvested is small in comparison with quantity available for harvest)</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>• Moderately selective harvest of age/size class</li> <li>• Moderate proportion of individual plants in the population is affected by harvest (quantity harvested is moderate in comparison with quantity available for harvest)</li> </ul>
	High	<ul style="list-style-type: none"> <li>• Highly selective harvest of one age/size- class (except if age-class selected is no longer reproducing)</li> <li>• Large proportion of individual plants in the population is harvested (quantity harvested is large in comparison with quantity available for harvest)</li> </ul>
	Unknown	<ul style="list-style-type: none"> <li>• Information about this factor is unavailable</li> </ul>
	<p><b>Explanation:</b></p> <p>This factor considers the characteristics of wild harvest that affect the long-term viability of breeding populations, such as recruitment (the addition of individuals to a breeding population through reproduction and/or dispersal from other populations). For example, if the target population is very small, collecting most of the seeds may have a large impact on population viability and species survival. The actual off-take should be considered, which may include a large proportion of wasted material that is not accounted for in documentation of material in trade.</p>	

Factor	Harvest impact severity	Indicator
3. Impact of harvest on national population of targeted species	Low	<ul style="list-style-type: none"> <li>• A small proportion of national population affected by wild harvest</li> <li>• Harvest infrequent with respect to the rate of replacement of harvested individuals</li> <li>• Population numbers and distribution stable or increasing</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>• Harvest occurs regularly but low-to-moderate proportion of the national population affected</li> <li>• Population numbers and distribution stable</li> </ul>
	High	<ul style="list-style-type: none"> <li>• High proportion of national population accessible and targeted for harvest</li> <li>• Long term, continuous harvest</li> <li>• Population numbers and distribution declining due to harvest</li> </ul>
	Unknown	<ul style="list-style-type: none"> <li>• Information about this factor is unavailable</li> </ul>
	<p><b>Explanation:</b></p> <p>This factor considers the characteristics of wild harvest that affect scope of harvest impact, and the long-term viability of (primarily) the national population of the species concerned.</p> <p>Note: information about population trend (increasing, stable, or decreasing) may be available from existing conservation status assessments (Step 4).</p>	
4. Harvest impact on other species	Low	<ul style="list-style-type: none"> <li>• Target species easy to identify, unlikely to be confused with other species</li> <li>• Harvest practices have a minimal (or even positive) effect on non-target species and the environment (e.g., animals that eat fruit, seeds; removal of an alien/invasive species)</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>• Target species occasionally confused with other species</li> <li>• Harvest practices occasionally disruptive to non-target species or environment</li> <li>• Harvest has a moderate effect on resources available for other species</li> </ul>
	High	<ul style="list-style-type: none"> <li>• Target species is easily confused with other species; indiscriminate harvest of the target species in place of another look-alike species, or of another look-alike species in place of the target species</li> <li>• Harvest practices have a substantially negative effect on non-target species or the environment</li> </ul>
	Unknown	<ul style="list-style-type: none"> <li>• Information about this factor is unavailable</li> </ul>
	<p><b>Explanation:</b></p> <p>Article IV paragraph 3 of the Convention text states that “the export of specimens of any such species should be limited in order to maintain that species throughout its range and at a level consistent with its role in the ecosystems in which it occurs”.</p> <p>This factor considers the characteristics of wild harvest that may impact other species either accidentally (as in the case of harvest of look-alike species) or species that depend on the species concerned (e.g., for food or micro-habitat, as in the case of some epiphytes). Harvest damage to the target species’ ecosystem or to other species on which it depends can reduce the viability of the target population.</p>	

# STEP 7

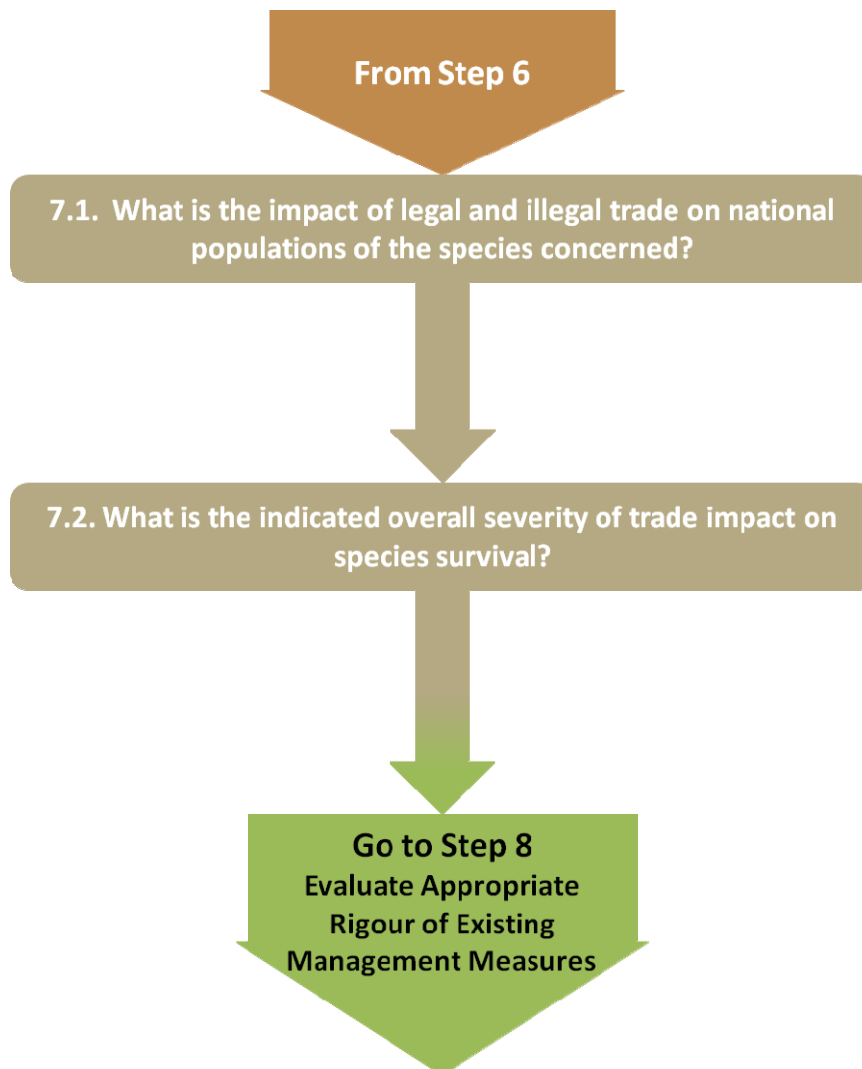
## EVALUATE IMPACTS OF TRADE

### **Rationale: why is this step important?**

The impacts of trade can be detrimental to survival of the species concerned. Trade is the potential threat most relevant to CITES. Scientific Authorities can identify and evaluate these impacts by considering the available information about the scale and trend of legal and illegal trade. Although the impact of all harvest is considered (in step 6) whether for domestic or international trade, it is useful to consider the impact of international trade in relation to that of any domestic trade (including any illegal trade). The greater the severity of trade impact on the species concerned, the greater are the requirements of information quality, management rigor, and precaution that Scientific Authorities should apply to making an NDF.

In some cases, existing management measures may mitigate (reduce the severity of) trade impacts. Therefore, this Step considers actual impact rather than potential impact. Management measures are considered in Step 8.

## Key Questions and Decision Path for Step 7: Evaluate Impacts of Trade



### Guidance for Step 7

**Key Question 7.1.** Considering the impacts of trade on species survival, is the severity of legal and illegal trade impact on national populations of the species concerned “Low”, “Medium”, “High”, or “Unknown”?

**Guidance notes:**

Factors that affect the impact of trade on species survival are elaborated below in the table **Factors to Consider: Impacts of Trade.**

**Recommended information quality:** For species identified in Step 4 as “Medium”, “High” or “Unknown” conservation concern, and/or identified in Step 5 as “Medium”, “High”, or

## Guidance for Step 7

“Unknown” risk, and/or identified in Step 6 as “Medium”, “High”, or “Unknown” harvest impact, the effort to locate available higher-quality information is recommended to fill any remaining information gaps for Step 7. For species lacking relevant conservation status assessments in Step 4, Scientific Authorities will need to gather any available information about trade impacts for Step 7. For species with conservation status identified in Step 4 as “Low concern”, “intrinsic biological risk” identified as “Low” in Step 5, and harvest impact identified as “Low” in Step 6, it is likely sufficient for Scientific Authorities to use routine verification sources to gather any additional information needed about actual trade impacts to complete Step 7.

Use the **Worksheet for Step 7** to record available information corresponding to each of these factors and the severity of impact indicated.

In some cases, existing management measures may mitigate (reduce the severity of) trade impacts. This information should be noted under the relevant impact factor. This information will be considered in Step 8.

To support the evaluation of appropriate rigour of existing management measures (Step 8), summary lists of “Low”, “Medium”, “High”, and “Unknown” trade impact factors will be transferred to the **Worksheet for Step 8, Information Evaluation Matrix, Part 1**.

→Go to Key Question 7.2.

**Key Question 7.2.** Considering the severity of trade impact indicated for the selected factors, is the indicated overall severity of trade impact on species survival “Low”, “Medium”, “High”, or “Unknown”?

### Guidance notes:

If there is a majority of factors associated with one trade impact severity level in the responses to Key Question 7.1, record that level of impact severity in Worksheet and Draft Report (Step 7).

If there is not a majority of factors associated with one impact severity level, the precautionary response is to record the highest impact severity level indicated by available information harvest impact factors (e.g. “Precautionary Medium” or “Precautionary High”).

This response affects the quality of information recommended for Step 8, the overall management rigour required to mitigate (reduce the severity of) the trade impacts identified (Step 8), and the degree of precaution that should be applied to making the NDF (Step 9).

→ Go to Step 8.

**Endpoint of Step 7:** Based on the best available information quality, Scientific Authorities determine the severity of impact of legal and illegal trade on the species concerned. An overall ranking of trade impact is used to guide Scientific Authorities to expect greater management rigour for higher severity of trade impact (Step 8), and to use greater precaution in making NDFs for those species with overall higher or unknown severity of trade impact (Step 9)

## Useful Sources and Examples of Recommended Information Quality

All Species / Specimens Requiring a Detailed NDF	Species with Medium, High, and Unknown Severity of Conservation Concern, Risk, or Impact Identified in Steps 4-6	Species with High and Unknown Severity of Conservation Concern, Risk, or Impact Identified in Steps 4-6
<p>Routine verifications:</p> <ul style="list-style-type: none"> <li>Export permit application (proposed volume or number of specimens)</li> <li>Export trade history</li> <li>National trade data: records of current and past years' trade levels from the CITES trade database (<a href="http://www.cites.org/eng/resources/trade.shtml">http://www.cites.org/eng/resources/trade.shtml</a>)</li> <li>Internet searches for both common and scientific names can give an indication of demand.</li> </ul>	<p>Existing qualitative information:</p> <ul style="list-style-type: none"> <li>Additional information from the CITES trade database (<a href="http://www.cites.org/eng/resources/trade.shtml">http://www.cites.org/eng/resources/trade.shtml</a>) also see guide to using the trade database <a href="http://www.unep-wcmc-apps.org/citestrade/docs/CITESTradeDatabaseGuide_v7.pdf">http://www.unep-wcmc-apps.org/citestrade/docs/CITESTradeDatabaseGuide_v7.pdf</a> <ul style="list-style-type: none"> <li>Market reports</li> <li>Enforcement reports (including seizure data)</li> <li>Reports of exports and imports from other Parties</li> </ul> </li> <li>Field and market surveys</li> <li>Information from traders, harvesters, wildlife managers</li> </ul>	<p>Existing quantitative information:</p> <ul style="list-style-type: none"> <li>Quantitative information on numbers of specimens exported (CITES trade database)</li> <li>Trends in volume of national exports</li> <li>Trends in volume of domestic trade (if available) <ul style="list-style-type: none"> <li>USF&amp;WS LEMIS and EU-Twix databases (for illegal trade)</li> </ul> </li> </ul>

## Factors to Consider: Impacts of Trade

The factors and indicators defined in this table use information about the characteristics of trade in the species concerned, and trends in legal and illegal trade to rank trade impact severity: Low, Medium, High, and Unknown. Scientific Authorities can identify and evaluate detrimental impacts of trade to the species concerned by using this table of factors in combination with the **Worksheet for Step 7**

For most species, information will be available for Factor 1 but may be more difficult to locate for Factor 2. Record available information and unknown factors in the **Worksheet for Step 7**: this record is needed for Step 8 (Evaluate Appropriate Rigour of Existing Management Measures) in preparation for **Step 9 (NDF decision and advice to the CITES Management Authority)**.

Factor	Trade impact severity	Indicator
1. Magnitude and trend of legal trade	Low	<ul style="list-style-type: none"> <li>Number or volume of specimens in trade is small in relation to abundance of the species (information from Steps 4 and 5)</li> <li>Trade volume / market demand decreasing over time</li> <li>No shortage of material in trade observed</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>Number or volume of specimens in trade neither small nor large in relation to abundance of the species (Steps 4 and 5)</li> </ul>

Factor	Trade impact severity	Indicator
		<ul style="list-style-type: none"> <li>Trade volume / market demand stable or slowly increasing over time</li> </ul>
	High	<ul style="list-style-type: none"> <li>Multiple uses in commercial trade (i.e. the species supplies several products to different types of markets)</li> <li>Trade volume / market demand high in relation to information about abundance of species and part used (Steps 4 and 5)</li> <li>Trade volume / market demand increasing quickly, or decreasing in response to limited resource availability</li> <li>Shortages of material in trade</li> </ul>
	Unknown	<ul style="list-style-type: none"> <li>Information about this factor is unavailable</li> </ul>
	<p><b>Explanation:</b></p> <p>This factor considers the characteristics of trade magnitude in relation to harvest and trade volume trend (decreasing, stable, or increasing).</p> <p>Trade might be increasing or decreasing which could indicate changes in supply or demand. Price changes might indicate that a decreasing trade volume is due to declining resource, driving up the price.</p>	
<b>2. Magnitude of illegal trade</b>	Low	<ul style="list-style-type: none"> <li>Good documentation of domestic and international trade</li> <li>Trade chain transparent</li> <li>Little concern about substitution for a look-alike species</li> <li>Estimated harvest and estimated volume in legal domestic and reported export trade are approximately equal</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>Poor documentation of trade (domestic and international)</li> <li>Trade chain difficult to follow</li> <li>Some concern about substitution for a look-alike species</li> <li>Some concerns about whether estimated harvest and volume in legal domestic and reported export trade are approximately equal</li> </ul>
	High	<ul style="list-style-type: none"> <li>Documented illegal trade</li> <li>Little documentation of legal domestic and international trade</li> <li>Trade chain not transparent</li> <li>Great concern about substitution for a look-alike species</li> <li>Quantities legally exported are significantly smaller than quantities reported by importing countries</li> </ul>
	Unknown	<ul style="list-style-type: none"> <li>Information about this factor is unavailable</li> </ul>
	<p><b>Explanation:</b></p> <p>This factor considers whether the magnitude and trend in legal trade is significant in proportion to the abundance of the species, whether known illegal trade exists, whether illegal trade is significant in proportion to the overall volume of trade, and whether the substitution for a look-alike species in trade has a significant influence on the species of concern's survival.</p>	

## STEP 8

# EVALUATE APPROPRIATE RIGOUR OF EXISTING MANAGEMENT MEASURES

### Rationale: why is this step important?

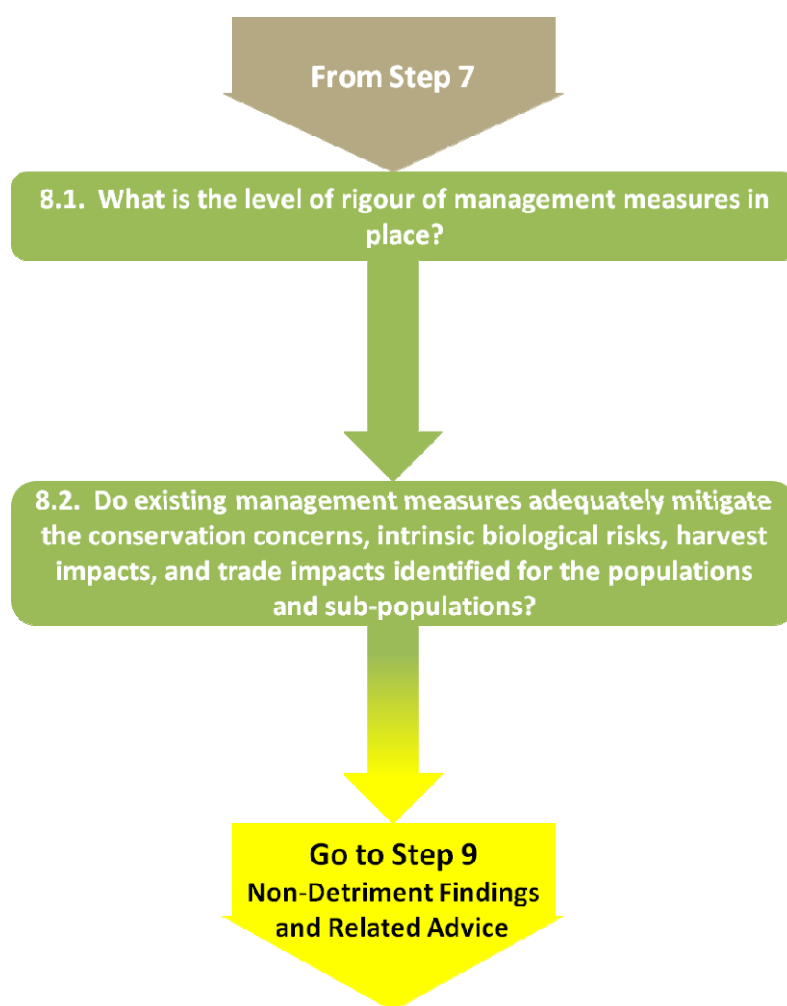
For most wild-harvested perennial plant species included in CITES Appendix II, non-detrimental trade requires the effective implementation of management measures. The level of management rigour needs to be appropriate to mitigate (reduce the severity of) the specific conservation concerns, intrinsic risks, harvest impacts, and trade impacts identified for the species concerned and populations. In many cases the management required may be simple and informal if the resource is well known to the national experts and there is little risk to the survival of the species.

Steps 4-7 of this Guidance have supported Scientific Authorities to rank the species concerned as “Low”, “Medium”, or “High” for conservation concern, intrinsic biological risk, harvest impact, and trade impact, and to identify the particular factors that contribute to the severity of concern, risk, and impact. Step 8 supports use of available information to evaluate whether the management measures in place have the appropriate level of rigour and are effectively implemented to mitigate (reduce the severity of) the identified conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts.

In some cases, existing management measures may mitigate (reduce the severity of) conservation concerns, harvest impacts, and trade impacts; therefore, it is not possible to consider conservation concern, harvest impact, and trade impact as independent factors in a non-detriment finding process (for example, if existing management measures are appropriate, conservation concerns, harvest impacts, and trade impacts will not be “High”). Management measures in place may have already been identified in Steps 4-7 of this Guidance. Scientific Authorities will need to consider these mitigating effects in evaluating the appropriate rigour of existing management measures in relation to concerns, risks, and impacts in Step 8.



## Key Questions and Decision Path for Step 8: Evaluate Appropriate Rigour of Existing Management Measures



### Guidance for Step 8

**Key Question 8.1.** Considering the characteristics of management measures in place related to conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts, is their level of rigour “Minimal”, “Moderate”, or “Intense”?

**Guidance Notes:**

Response to this Key Question has two parts:

**Part 1:** Using the **Information Evaluation Matrix for Step 8, Part 1** in the **Worksheet for Step 8**, transfer summary information about conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified in Steps 4-7. It is not necessary to duplicate detailed

## Guidance for Step 8

information, but helpful to highlight the relevant information from the previous steps in this **Guidance** and its location in the worksheets for Steps 4-7.

**Part 2:** Referring to the **Factor Table for Step 8** in the **Guidance** document (below), and using the **Information Evaluation Matrix for Step 8, Part 2** in the **Worksheet for Step 8**, record summary information about the existing management measures relevant to the severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified in Steps 4-7.

Record the information sources used in the **Worksheet for Step 8**, Key Question 8.1.

**Level of Management Rigour:** Characteristics that indicate the rigour of management measures related to severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts, are elaborated below in the table **Factors to Consider: Management Measures**.

**Recommended information quality:** For species identified in Steps 4-7 as “Low” severity of conservation concern, intrinsic biological risk, harvest impact, and trade impact, this **Guidance** considers it sufficient for Scientific Authorities to use routine verification sources to gather any additional information needed about management measures in place to complete Step 8. For species identified in Steps 4-7 as “Medium”, “High”, or “Unknown” severity of conservation concern, intrinsic biological risk, harvest impact, or trade impact, the **Guidance** considers the effort to consult available higher-quality information recommended to complete Step 8.

Sources consulted for Steps 4-7 may contain information about management measures. Sources should be noted in the **Worksheet for Step 8, Key Question 8.1**, and the relevant information about management measures in place should be summarized in the **Worksheet for Step 8, Information Evaluation Matrix for Step 8, Part 2**.

It may be necessary to refer back to the completed worksheets for Steps 4-7 and the Worksheet for Step 8 to complete responses to Key Question 8.1.

→Go to Key Question 8.2

**Key Question 8.2.** Do existing management measures adequately mitigate (reduce the severity of) the conservation concerns, intrinsic biological risks, harvest impacts and trade impacts identified for the populations and sub-populations of the species concerned affected by the proposed trade?

### Guidance notes:

Use the **Worksheet for Step 8, Information Evaluation Matrix for Step 8, Part 3** to evaluate whether management measures in place are appropriately rigorous to reduce the severity of concern, risk, and impact, based on the following conditions for appropriate management rigour:

- a) Management measures in place address the type and geographic scope of identified concerns, risks, and impacts.
- b) Management measures in place have at minimum the appropriate level of rigour required to reduce the severity of identified concerns, risks, and impacts.
- c) There is evidence that the existing management measures are effectively implemented to mitigate (reduce the severity of) the identified concerns, risks and impacts.
- d) Management measures in place are sufficiently precautionary to address unknown concerns, risks, and impacts.

## Guidance for Step 8

This Guidance treats “unknown” concern, risk, impact as equal to a “high” level of severity, requiring intense management rigour.

Taking the **Guidance** into consideration, make an overall judgement of whether rigour of management measures in place are appropriate to the severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified,

Identify and record gaps between management measures required and in place.

→ Go to Step 9: Decision 9.8

**Example:** A species may be slow growing and produce few viable seeds (therefore identified as “high severity of intrinsic risk” for those factors in Step 5. If wild collection targets fruits of mature plants, this would be non-lethal, but potentially have a high impact on the targeted populations by selectively targeting a limited resource important for population replacement. The management measures in place would need to consider the minimum number or proportion of fruits that can be harvested without reducing the viability of the harvested population(s), and have a system in place to monitor the intensity and longer-term impacts of harvest.

**Endpoint of Step 8:** Based on available information, Scientific Authorities identify the level of rigour of management measures in place for the target species and populations, and evaluate whether these are appropriate and effective to mitigate (reduce the severity of) the conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified in Steps 4-7.

## Useful Sources and Examples of Recommended Information Quality

All Species / Specimens Requiring a Detailed NDF	Species with Medium, High, and Unknown Severity of Concern, Risk, or Impact Identified in Steps 4-7	Species with High and Unknown Severity of Concern, Risk, or Impact Identified in Steps 4-7
<p><b>Routine verifications:</b></p> <ul style="list-style-type: none"> <li>• Export permit application</li> <li>• Conservation status assessments specifying existing management</li> <li>• Information on existing quotas (and the basis for setting them), monitoring of harvest and trade levels and impacts, enforcement</li> <li>• National legislation (conservation, harvest, trade of species concerned)</li> </ul>	<p><b>Existing qualitative information:</b></p> <ul style="list-style-type: none"> <li>• Approved local / national / state / provincial management plan(s)</li> <li>• Interviews with harvesters, traders, resource managers, enforcement officers, and other stakeholders along the supply chain</li> <li>• Harvester instructions, including harvest practices, impact mitigation measures, volume and quality controls</li> </ul>	<p><b>Existing quantitative information:</b></p> <ul style="list-style-type: none"> <li>• GIS layers of harvesting areas and land tenure</li> <li>• Quantitative monitoring in protected and harvest areas</li> <li>• Quantitative monitoring of domestic and export trade</li> <li>• Quantitative off-take thresholds (e.g., estimates of maximum sustainable yield, minimum viable - population)</li> </ul>

## Factors to Consider: Existing Management Measures

The factors and indicators defined in this table rank management procedures relevant for conservation concerns, intrinsic biological risk factors, harvest impacts, and trade impacts according to rigour (complexity, accuracy, precision). These should be considered as examples of the types of management measures appropriate for “Low”, “Medium” and “High” levels of conservation concern, intrinsic biological risk, harvest impact, and trade impact. It is not expected or necessary that management measures in place will have all of the characteristics outlined in this table. Scientific Authorities can evaluate the existing management procedures for the target species and populations as “Uncertain”, “Minimal”, “Moderate” or “Intense” using this table in combination with **Worksheet for Step 8 Part 3**, and then evaluate whether the existing management measures are appropriate in **Worksheet for Step 8, Part 4**.

Level of existing management rigour	Management of conservation concerns (Step 4)	Management of intrinsic biological risks (Step 5)	Management of wild harvest impacts (Step 6)	Management of trade impacts (Step 7)
<b>Uncertain</b>	<ul style="list-style-type: none"> <li>No information available about management system or control measures relating to conservation concerns for the target species or populations</li> </ul>	<ul style="list-style-type: none"> <li>No information available about management system or control measures relating to intrinsic biological risks for the target species or populations</li> </ul>	<ul style="list-style-type: none"> <li>No information available about management system or control measures relating to harvest impacts on the target species or populations</li> </ul>	<ul style="list-style-type: none"> <li>No information available about management system or control measures relating to trade impacts (domestic or international) on the target species or specimens</li> </ul>
<b>Minimal</b>	<ul style="list-style-type: none"> <li>Proportion of the species' natural range or population that is in a protected area none or small (&lt;5%)</li> <li>No or few <i>ex situ</i> collections (seeds, whole plants, other germplasm)</li> </ul>	<ul style="list-style-type: none"> <li>Informal (usually verbal) harvest guidelines and controls describing accepted practices</li> <li>Good practices defined as general guidelines (“rules of thumb”)</li> <li>Multiple conflicting uses with cumulative harvests (e.g., several groups of harvesters competing for the same plant parts in the</li> </ul>	<ul style="list-style-type: none"> <li>Informal (usually verbal) harvest guidelines and controls describing accepted practices</li> <li>Good practices defined as general guidelines (“rules of thumb”)</li> <li>Multiple conflicting uses with cumulative harvests (e.g., several groups of harvesters competing for the same plant parts in the same target population)</li> </ul>	<ul style="list-style-type: none"> <li>Qualitative monitoring of trend of regulated and unregulated trade (increasing, stable, or decreasing)</li> </ul>

Level of existing management rigour	Management of conservation concerns (Step 4)	Management of intrinsic biological risks (Step 5)	Management of wild harvest impacts (Step 6)	Management of trade impacts (Step 7)
<b>Moderate</b>	<ul style="list-style-type: none"> <li>National conservation status assessment exists</li> <li>Proportion of species natural range or population that is in a protected area 5-15%</li> <li>Monitoring and qualitative documentation of harvest in protected areas</li> <li>Documented <i>ex situ</i> collections of seed, other germplasm or whole plants for conservation purposes</li> </ul>	<ul style="list-style-type: none"> <li>same target population)</li> <li>Local control over access to and use of harvest area uncertain or weak (open access)</li> <li>Local management with clearly defined harvest controls (see examples under Step 6 column at right)</li> <li>Monitoring of harvest controls</li> </ul>	<ul style="list-style-type: none"> <li>Local control over access to and use of harvest area uncertain or weak (open access)</li> <li>Local management with clearly defined harvest controls, e.g. <ul style="list-style-type: none"> <li>Maximum / minimum age or size classes restrictions</li> <li>Harvest seasons</li> <li>Maximum harvest quantity (often expressed as a proportion of available plant parts / individuals)</li> <li>Harvest frequency</li> <li>Number of harvesters (per season)</li> <li>Type and methods of use of harvest equipment</li> </ul> </li> <li>Monitoring of harvest controls</li> </ul>	<ul style="list-style-type: none"> <li>Some points in chain of custody known and monitored</li> <li>Qualitative indicators of changes in supply and demand (both domestic and international)</li> <li>Qualitative indicators of scale and trend of trade (domestic and international)</li> <li>Qualitative indicators of regulated and unregulated trade</li> <li>Precautionary (limited data) export quotas</li> </ul>
<b>Intense</b>	<ul style="list-style-type: none"> <li>National and global conservation status assessment regularly reviewed and updated</li> <li>National and local management plans mitigate (reduce the severity of)</li> </ul>	<ul style="list-style-type: none"> <li>National and local management plans mitigate (reduce the severity of) the intrinsic biological risks</li> <li>Harvest guidelines and controls established based on estimated quantities of</li> </ul>	<ul style="list-style-type: none"> <li>Harvest guidelines and controls established based on estimated quantities of regulated (managed) versus unregulated (unmanaged including illegal) harvest</li> <li>Approved and coordinated</li> </ul>	<ul style="list-style-type: none"> <li>Export quota system based on biologically derived local and national data [a process equivalent to making NDFs]; annually reviewed; may specify</li> </ul>

Level of existing management rigour	Management of conservation concerns (Step 4)	Management of intrinsic biological risks (Step 5)	Management of wild harvest impacts (Step 6)	Management of trade impacts (Step 7)
	<p>conservation concerns</p> <ul style="list-style-type: none"> <li>• Aim of the management plan is conservation benefit</li> <li>• Proportion of species natural range or population that is in a protected area &gt; 15%</li> <li>• Quantitative monitoring of harvest in protected areas</li> <li>• Harvest practices specify restoration measures (e.g., planting seed when whole plant is removed)</li> <li>• <i>Ex situ</i> collections which, <i>inter alia</i>, take genetic diversity into account</li> <li>• Individuals protected <i>in situ</i> to provide seed stock for restoration purposes</li> <li>• Restoration, alleviation or re-introduction plans exist / are being implemented</li> <li>• Incentives for species and habitat conservation provided by wild-harvesting (e.g., controlled and managed wild harvest reduces illegal harvest and trade, or harvesters</li> </ul>	<p>regulated (managed) versus unregulated (unmanaged including illegal) harvest</p> <ul style="list-style-type: none"> <li>• Access to the harvest area defined, monitored and enforced by a recognized authority (e.g.: a local community, private landowner, government agency responsible for managing and regulating the harvest).</li> </ul>	<p>national and local (site specific) harvest management plans with clear monitoring requirements, e.g.:</p> <ul style="list-style-type: none"> <li>○ Maintaining harvest records</li> <li>○ Documenting harvest practice</li> <li>○ Resource inventory and yield data</li> <li>○ Regeneration data</li> </ul> <ul style="list-style-type: none"> <li>• Management approach is adaptive, e.g.: <ul style="list-style-type: none"> <li>○ Regular review of harvest records</li> <li>○ Regular harvest impact monitoring</li> <li>○ Regular adjustment of harvest instructions</li> </ul> </li> <li>• Harvest restrictions (including quotas) based on research and monitoring results, e.g.: <ul style="list-style-type: none"> <li>○ Estimated minimum viable population</li> <li>○ Maximum sustainable harvest quantity</li> <li>○ Proportion of mature, reproducing individuals to be retained</li> </ul> </li> </ul>	<p>product types</p> <ul style="list-style-type: none"> <li>• Chain of custody well documented</li> <li>• Quantitative indicators of changes in supply and demand (both domestic and international)</li> <li>• Quantitative indicators of scale and trend of trade (domestic and international)</li> <li>• Quantitative indicators / estimates of regulated / unregulated trade</li> </ul>

Level of existing management rigour	Management of conservation concerns (Step 4)	Management of intrinsic biological risks (Step 5)	Management of wild harvest impacts (Step 6)	Management of trade impacts (Step 7)
	<p>contribute to enforcement of controlled access to the collection area</p> <ul style="list-style-type: none"> <li>Restoration, alleviation, or reintroduction plans or measures exist / are being implemented (e.g., planting seed when whole plant is removed)</li> </ul>		<ul style="list-style-type: none"> <li>Periods of allowed harvest determined using reliable and practical indicators (e.g., seasonality, precipitation cycles, flowering and fruiting times) and based on information about the reproductive cycles of target species.</li> <li>Demographic assessments (e.g. size or age-class distributions) use reliable and practical data (e.g., plant diameter / DBH, height, fruiting and flowering, local harvesters' knowledge).</li> <li>Access to the harvest area defined, monitored and enforced by a recognized authority (e.g.: a local community, private landowner, government agency responsible for managing and regulating the harvest).</li> </ul>	

## STEP 9

# NON-DETRIMENT FINDING AND RELATED ADVICE

### Rationale: why is this step important?

Steps 1-8 of this Guidance have been structured to guide Scientific Authorities through a series of Key Questions and Decision Paths to make “a science-based assessment that verifies whether a proposed export is detrimental to the survival of that species”.<sup>6</sup>

These steps and the related guidance support various outcomes, depending on:

- (Step 1) whether there are concerns about specimen identification
- (Step 2) whether the specimen(s) clearly meet all requirements for artificial propagation according to *Res. Conf. 11.11 (Rev. CoP15)*
- (Step 3) whether the specimens can be excluded from a detailed NDF by legislation banning export, CITES listing annotations, or compliance with a previously made, science-based NDF
- (Step 8) whether existing management measures adequately mitigate (reduce the severity of) conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified in Steps 4-7.

This Guidance additionally supports Scientific Authorities to gather, evaluate, and document relevant information for which the data quality is “proportionate to the vulnerability of the species concerned”.<sup>7</sup>

The task remaining for the Scientific Authority is to make a positive or negative NDF or related decision, and to advise the Management Authority whether to allow the proposed export of specimens based on the outcome of the previous steps of this Guidance.

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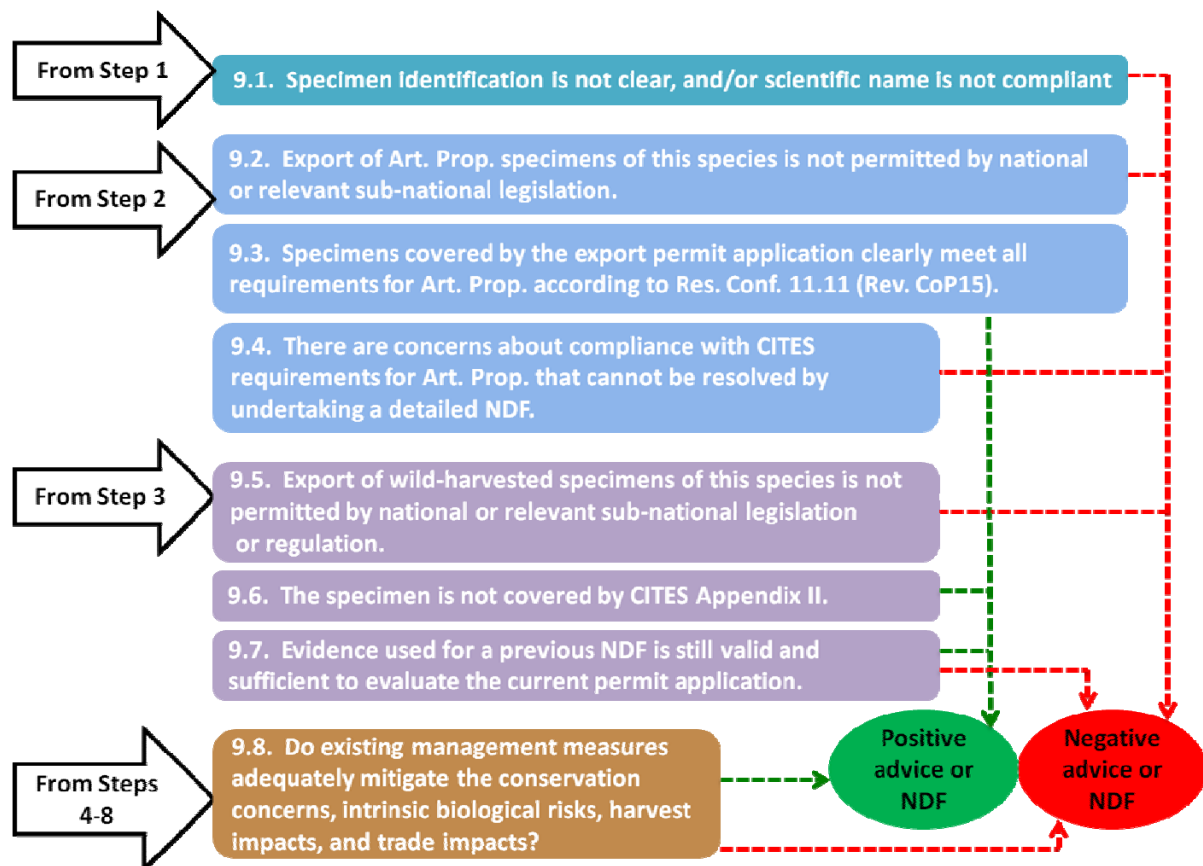
<sup>6</sup> Resolution Conf. 16.7, Non-detriment findings [<http://www.cites.org/eng/res/16/16-07.php>]

<sup>7</sup> Ibid.



## Decisions for Step 9

### Non-Detriment Findings and Related Decisions



## Guidance for Step 9

### Decision 9.1

The outcome of Step 1, Key Question 1.1: The Scientific Authority is not confident that the plant/specimen concerned has been correctly identified, and that the scientific name used is compliant with the appropriate CITES Standard.

#### Guidance notes:

Without a clear taxonomic identification (i.e. the naming of the species is in accordance with the adopted CITES references) of the specimens involved, the Scientific Authority may be unable to confidently apply species-related information required to determine whether the proposed trade will not be detrimental to the survival of the species.

**Information sources:** Worksheet for Step 1, Responses and outcomes for Key Question 1.1; Guidance for Key Question 1.1.

## Guidance for Step 9

The Scientific Authority's advice supported by this Guidance is → **Negative NDF**

Concerns over the species' identity were identified by the Scientific Authority and were not easily corrected or resolved by consultation with the Nomenclature specialist of the Plants Committee or the Management Authority. Record the justification for this finding in the **Worksheet for Step 9, Outcome 9.1**.

If the Scientific Authority decides to make a positive NDF, the basis for the finding should be documented.

### Decision 9.2

The outcome of Step 2, Key Question 2.2 is: Export of artificially propagated specimens of this species is not permitted by national or relevant sub-national legislation

#### Guidance notes:

Advice of the Scientific Authority must comply with national or relevant sub-national legislation.

**Information sources:** Worksheet for Step 2, Responses and outcomes for Key Question 2.2; Guidance for Key Question 2.2.

The Scientific Authority's advice to the Management Authority, supported by this Guidance, is → **Negative decision: Advise the MA that NDF cannot be made.**

The Scientific Authority may refer to the Management Authority to investigate or to the responsible authority for enforcement.

Record the basis for the decision in the **Worksheet for Step 9, Outcome 9.2** or refer to the response in the Worksheet for Step 2, Key Question 2.2.

If the Scientific Authority advises a positive decision (approval of the export permit), the basis for this advice should be documented.

### Decision 9.3

The outcome of Step 2, Key Question 2.3 is: Specimens covered by the export permit application clearly meet all requirements for artificial propagation according to *Res. Conf. 11.11 (Rev. CoP15)*

#### Guidance notes:

A NDF is not required. Inform Management Authority that an CITES NDF and export permit are not required.

**Information sources:** Worksheet for Step 2, Responses and outcomes for Key Question 2.3; Guidance for Key Question 2.3.

The Scientific Authority's advice to the Management Authority, supported by this Guidance, is → **Approve export permit**

Record decision in the **Worksheet for Step 9, Outcome 9.3**.

### Decision 9.4

The outcome of Step 2, Key Question 2.4 is: There are concerns about compliance of the specimens with CITES requirements for artificial propagation that cannot be resolved by Scientific Authority by undertaking a detailed NDF

## Guidance for Step 9

### Guidance notes:

The Scientific Authority may be unable to state with confidence that the export of artificially propagated specimens complies with *Res. Conf. 11.11 (Rev. CoP15)* and will not have a detrimental impact on the wild population.

**Information sources:** Worksheet for Step 2, Responses and outcomes for Key Question 2.4; Guidance for Key Question 2.4.

The Scientific Authority's decision supported by this Guidance is → **Negative NDF**

The Scientific Authority may refer to the Management Authority to investigate or to the responsible authority for enforcement.

Record decision in the **Worksheet for Step 9, Outcome 9.4.**

If the Scientific Authority decides to make a positive NDF, the basis for the decision should be documented.

### Decision 9.5

The outcome of Step 3, Key Question 3.1 is: Export of wild-harvested specimens of this species is not permitted by national or relevant sub-national legislation or regulation

### Guidance notes:

Advice of the Scientific Authority must comply with national or relevant sub-regional legislation.

**Information sources:** Worksheet for Step 3, Responses and outcomes for Key Question 3.1; Guidance for Key Question 3.1.

The Scientific Authority's advice to the Management Authority, supported by this Guidance, is → **Deny export permit**

The Scientific Authority may refer to the Management Authority to investigate or to the responsible authority for enforcement.

Record decision in the **Worksheet for Step 9, Outcome 9.5.**

### Decision 9.6

The outcome of Step 3, Key Question 3.2 is: The specimen is not covered by CITES Appendix II

### Guidance notes:

A NDF is not required.

**Information sources:** Worksheet for Step 3, Responses and outcomes for Key Question 3.2; Guidance for Key Question 3.2.

The Scientific Authority's advice to the Management Authority, supported by this Guidance, is → **CITES Export permit is not required**

Record decision in the **Worksheet for Step 9, Outcome 9.6.**

### Decision 9.7

The outcome of Step 3, Key Question 3.3 is: Science used for a previous NDF is still valid and sufficient to evaluate the current export permit application

## Guidance for Step 9

### Guidance notes:

If there is a standing NDF or a national quota that has been established based on an NDF, a new NDF may not be required.

**Information sources:** Worksheet for Step 3, Responses and outcomes for Key Question 3.3; Guidance for Key Question 3.3.

The Scientific Authority's advice to the Management Authority, supported by this Guidance, is  
→ **Positive NDF if the proposed export is within the limits defined by the previous NDF**

→ **Negative NDF if the proposed export is not within the limits defined by the previous NDF**

Record decision in the **Worksheet for Step 9, Outcome 9.7.**

### Decision 9.8

Step 8, Key Question 8.2 is: Do existing management measures adequately mitigate (reduce the severity of) conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified for the populations and sub-populations of the target species affected by the proposed trade?

### Guidance notes:

For species requiring a detailed NDF, the Key Questions and Decision Paths in Steps 4-7 have supported evaluation of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts and their severity, using information with a data quality recommended for the severity of concerns, risks, and impacts. Key Questions and the Decision Path for Step 8 have supported identification of management measures in place that are relevant to the identified concerns, risks, and impacts, and evaluation of whether existing management measures are sufficiently rigorous and effective to mitigate (reduce the severity of) the concerns, risks, and impacts identified.

**Information sources:** Worksheet for Step 8, Responses and outcomes for Key Question 8.2; Guidance for Key Question 8.2.

The Scientific Authority's decision supported by this Guidance is

→ **Positive NDF if the evaluation of available information indicates "Yes", management measures in place are sufficiently rigorous and effective, or "Yes" with advice on key management gaps identified in the Worksheet for Step 8, Key Question 8.2, to be defined in the NDF.**

→ **Negative NDF if the evaluation of available information indicates "No or Uncertain", management measures in place are not sufficiently rigorous and effective**

Record decision in the **Worksheet for Step 9, Outcome 9.8.**

**Endpoint of Step 9:** Scientific Authorities make science-based positive or negative NDFs, or other relevant decisions concerning the proposed export of specimens, guided by the outcome of Steps 1-8 of this Guidance. NDFs are justified by evaluating whether the existing management procedures are appropriate and effective to mitigate (reduce the severity of) the identified conservation concerns, intrinsic biological risks, wild harvest impacts, and trade impacts. If there is insufficient information to enable the Scientific Authority to determine with confidence that the proposed trade will not be detrimental to the survival of the population or species, the precautionary approach supports a negative NDF.

## Guidance for Step 9

Quality of information gathered and evaluated (and the associated time and effort of the Scientific Authority) to support the NDF and related advice is appropriate to the severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified.

In accordance with *Res. Conf. 10.3*, paragraph j. Scientific Authorities may define any permit adjustments, qualification, precautions, or information gaps that should be communicated to the CITES Management Authority.

## **Annex**

### **Consolidated Worksheets and Draft Report Format**

A download of this Annex in MS Word format is available at [http://www.bfn.de/0302\\_wa.html](http://www.bfn.de/0302_wa.html).

## HOW TO USE THESE WORKSHEETS

The Worksheets for Steps 1-9 are intended to assist Scientific Authorities to document the basis for a non-detriment finding and the information sources used. Each Worksheet is designed to provide a record of responses to the Key Questions for each of the nine Steps outlined in the companion document *CITES Non-Detriment Findings: Guidance for Perennial Plants*. In the absence of a preferred NDF report format, Scientific Authorities may find the consolidated worksheets helpful as a draft report format for the NDF and related advice to the CITES Management Authority.

## **NDF INFORMATION PAGE**

<b>Species name:</b> (Genus and species, sub-species, or botanical variety as appropriate)
<b>Trade name(s) or synonyms found on permit application:</b>
<b>Permit application reference number:</b>
<b>Completion date of NDF:</b>
<b>Contact / Author(s) of NDF:</b>





## WORKSHEET FOR STEP 1. REVIEW SPECIMEN IDENTIFICATION

Key questions for Step 1	Responses and outcomes	Information sources used [Record number or citation from Information Sources Consulted]
<p>1.1 Is the Scientific Authority confident that the plant/specimen concerned has been correctly identified, and, is the scientific name used compliant with the appropriate CITES Standard?</p>	<p>Refer to Guidance for Step 1</p> <p><input type="checkbox"/> Yes</p> <ul style="list-style-type: none"> <li>• Conditions a and b are met OR the Scientific Authority has corrected a simple error or out-dated name and taxonomic concerns have been resolved</li> <li>• Describe concerns or error(s) resolved below → Go to Step 2</li> </ul> <p><input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>• Conditions a and b are not met</li> <li>• Concerns cannot be resolved by the Scientific Authority or referral to the Nomenclature Specialist of the CITES Plants Committee</li> </ul> <p>Concerns remain over the species or clear identification of specimens → Go to Step 9: Decision 9.1</p> <p><b>Concerns about clear identification</b> (including concerns to be referred to the Management Authority or to the responsible authority for enforcement):</p>	

**Endpoint of Step 1:** Scientific Authorities identify concerns about taxonomic clarity and stability that may support a negative NDF if species-based information cannot be confidently applied to determine whether the proposed trade will not be detrimental to the survival of the species.

## WORKSHEET FOR STEP 2. REVIEW COMPLIANCE WITH ART. PROP. REQUIREMENTS

Key questions for Step 2	Responses and outcomes	Information sources used [Record number or citation from Information Sources Consulted]
2.1 Is the permit application for artificially propagated specimens?	<p>Refer to Guidance for Step 2</p> <p><input type="checkbox"/> Yes → Go to Key Question 2.2</p> <p><input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>Describe reasons for treating specimens as wild-harvested, if not declared as wild-harvested → Go to Step 3</li> </ul>	<ul style="list-style-type: none"> <li>Export permit application</li> </ul>
2.2 Is the export of artificially propagated specimens of this species permitted by national or relevant sub-national legislation?	<p>Refer to Guidance for Step 2</p> <p><input type="checkbox"/> Yes → Go to Key Question 2.3</p> <p><input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>Describe relevant legislation below → Go to Step 9: Decision 9.2</li> </ul> <p><b>Relevant legislation</b> (including concerns referred to the Nomenclature Specialist of the CITES Plants Committee):</p>	
2.3 Is specimens covered by the export permit application clearly meet all requirements for artificial propagation according to Res. Conf. 11.11 (Rev. CoP15)?	<p>Refer to Guidance for Step 2</p> <p><input type="checkbox"/> Yes</p> <ul style="list-style-type: none"> <li>Requirements a and b are met</li> <li>Describe requirements met below → Go to Step 9: Decision 9.3</li> </ul> <p><input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>Describe unmet requirements in this column → Go to Key Question 2.4</li> </ul>	

Key questions for Step 2	Responses and outcomes	Information sources used [Record number or citation from Information Sources Consulted]
	<p><b>Requirements met for artificial propagation:</b></p> <p><b>Unmet requirements for artificial propagation:</b></p>	
<p>2.4 Are there concerns about compliance of the specimens with CITES requirements for artificial propagation that cannot be resolved by Scientific Authority by undertaking a detailed NDF?</p>	<p><i>Refer to Guidance for Step 2</i></p> <p><input type="checkbox"/> Yes</p> <ul style="list-style-type: none"> <li>• <i>Describe concerns below</i></li> </ul> <p>→ <i>Go to Step 9: Decision 9.4</i></p> <p><input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>• <i>Describe concerns to be addressed in a detailed NDF below</i></li> </ul> <p>→ <i>Go to Step 3</i></p> <p><b>Concerns about compliance of specimens with CITES requirements for artificial propagation</b> (if not already included above for Key Question 2.3, and including concerns to be referred to the Management Authority or to the responsible authority for enforcement):</p>	

**Endpoint of Step 2:** Scientific Authorities make an initial decision about whether the specimens covered by the export permit application meet the Convention's requirements for artificial propagation, enabling issue of an export permit, whether a detailed NDF is required to investigate concerns about non-compliance and detrimental effects on wild populations, or whether concerns about non-compliance require a negative NDF and referral to the Management Authority or the responsible authority for enforcement.

## WORKSHEET FOR STEP 3. REVIEW RELEVANT EXCLUSIONS AND PREVIOUSLY-MADE NDFS

Key questions for Step 3	Responses and outcomes	Information sources used <i>[Record number or citation from Information Sources Consulted]</i>
<p>3.1. Is the export of wild-harvested specimens of this species permitted by national or relevant sub-national legislation or regulation?</p>	<p>Refer to Guidance for Step 3</p> <p><input type="checkbox"/> Yes</p> <ul style="list-style-type: none"> <li>Describe legislation or regulation and its relevance below → Go to Key Question 3.2</li> </ul> <p><input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>Describe relevant legislation or regulation below → Go to Step 9: Decision 9.5</li> </ul> <p><b>Relevant national or relevant sub-national legislation or regulation</b> (including concerns to be referred to the Management Authority or to the responsible authority for enforcement):</p>	
<p>3.2. Is the specimen covered by CITES Appendix II?</p>	<p>Refer to Guidance for Step 3</p> <p><input type="checkbox"/> Yes → Go Key Question 3.3</p> <p><input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>Describe the reason for exclusion of the specimen from CITES Appendix II (e.g. the relevant ## annotation) in this column → Go to Step 9: Decision 9.6</li> </ul> <p><b>Reason for exclusion of the specimen from CITES Appendix II</b> (and information for the Management Authority that an NDF and CITES export permit are not required)</p>	

Key questions for Step 3	Responses and outcomes	Information sources used [Record number or citation from Information Sources Consulted]
<p>3.3. Has the Scientific Authority previously made a science-based NDF for this species that is still valid and sufficient to evaluate the current export permit application?</p>	<p>Refer to Guidance for Step 3</p> <p><input type="checkbox"/> Yes</p> <ul style="list-style-type: none"> <li>Describe previously-made NDFs below</li> </ul> <p>→ Go to Step 9: Decision 9.7</p> <p><input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>Record any reasons that evidence used for a previous NDF is not valid and sufficient to evaluate the current permit application below</li> </ul> <p>→ Go to Step 4</p> <p><b>Previously-made NDF:</b></p>	

**Endpoint of Step 3:** Scientific Authorities may not need to undertake a detailed NDF if export of the specimens involved is banned by national or sub-national legislation, if the specimens are not covered by CITES Appendix II or if the export permit application is consistent with previous science-based findings.

## WORKSHEET FOR STEP 4. EVALUATE CONSERVATION CONCERN

Key questions for Step 4	Responses and outcomes	Severity of Conservation Concern	Information sources used <i>[Record number or citation from Information Sources Consulted]</i>
4.1. Has the conservation status of the species been assessed at any geographic scope that includes the national or sub-national population(s) within the range State undertaking the NDF?	<p>Refer to <i>Guidance for Step 4</i></p> <p><input type="checkbox"/> No</p> <p><i>Although not directly relevant to the NDF, it may be useful to note below any existing conservation status assessments that exclude the national or sub-national populations.</i></p> <p>→ Go to Step 5</p> <p><input type="checkbox"/> Yes</p> <ul style="list-style-type: none"> <li>List any relevant national or sub-national, regional, or global conservation status assessments below.</li> </ul> <p>→ Go to Key Question 4.2</p> <p><b>Existing conservation status assessments:</b></p>		
4.2. Considering the identified threats and other criteria contributing to existing conservation status assessments relevant to the national and sub-national population(s) of the species, what is the indicated severity and scope of conservation concern?	<p>Refer to the <b>Factor Table for Step 4</b> in the <i>Guidance document</i></p> <p>Severity of conservation concern:</p> <p>If “Low”, “Medium”, or “High”:</p> <ul style="list-style-type: none"> <li>Record conservation status (category) assessed and relevant criteria contributing to the assessment:</li> </ul> <p>If “Unknown” is selected for an existing assessment:</p> <ul style="list-style-type: none"> <li>Record the reason(s) for this selection:</li> </ul>	<p><input type="checkbox"/> Low</p> <p><input type="checkbox"/> Medium</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Unknown</p>	

Key questions for Step 4	Responses and outcomes	Severity of Conservation Concern	Information sources used [Record number or citation from Information Sources Consulted]
	<p><i>Identified Threats and Scope of conservation concern</i></p> <ul style="list-style-type: none"> <li>Record identified threats, and indicate the scope if information is available in existing conservation status assessments.</li> <li>Record harvest threats identified in the Worksheet for Step 6: 6.1</li> <li>Record trade threats identified in the Worksheet for Step 7: 7.1</li> <li>Record information about management measures in place in the Worksheet for Step 8: 8.1</li> </ul> <p>[Threat/scope]:</p>	<p>None <input type="checkbox"/></p> <p>Local <input type="checkbox"/></p> <p>National <input type="checkbox"/></p> <p>Global <input type="checkbox"/></p> <p>Unknown <input type="checkbox"/></p>	
	<ul style="list-style-type: none"> <li>To support the evaluation of appropriate rigour of existing management measures (Step 8): In the <b>Worksheet for Step 8, Information Evaluation Matrix, Part 1</b>, list or summarize the threats (and their scope) identified related to “Low”, “Medium”, “High”, and “Unknown” severity of conservation concern</li> </ul> <p>→ Go to Step 5</p>		

**Endpoint of Step 4:** Based on existing conservation status assessments, threats contributing to the risk of extinction of the national population or sub-population(s) are documented, and their contribution to the severity of conservation concern is evaluated. The contribution of information from existing conservation status assessments to identification of intrinsic risks (Step 5), wild-harvest impacts (Step 6), trade impacts (Step 7), and management measures (Step 8) is documented. Identified scope of conservation concern is particularly relevant to Step 8.



## WORKSHEET FOR STEP 5. EVALUATE POTENTIAL INTRINSIC BIOLOGICAL RISKS OF WILD HARVEST

Key questions for Step 5	Responses and outcomes		Information sources used <i>[Record number or citation from Information Sources Consulted]</i>
	Selected Intrinsic Biological Characteristics	Risk severity	
<p>5.1. Considering intrinsic biological characteristics that affect the potential risk of wild harvest to species survival, is the severity of intrinsic biological risk indicated for each of these factors “Low”, “Medium”, “High”, or “Unknown”?</p>	<ul style="list-style-type: none"> <li>• Refer to the indicators of risk severity for each characteristic included in the <b>Factor Table for Step 5</b> in the <b>Guidance</b> document</li> <li>• Record the relevant information available and the risk severity indicated for each factor below</li> <li>• To support the evaluation of appropriate rigour of existing management measures (Step 8): In the <b>Worksheet for Step 8, Information Evaluation Matrix, Part 1</b>, list or summarize the factors identified as “Low”, “Medium”, “High”, and “Unknown” intrinsic biological risk → Go to Key Question 5.2</li> </ul>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Low  <input type="checkbox"/> Medium  <input type="checkbox"/> High  <input type="checkbox"/> Unknown                 </div> <div style="width: 45%;"> <input type="checkbox"/> Low  <input type="checkbox"/> Medium  <input type="checkbox"/> High  <input type="checkbox"/> Unknown                 </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Low  <input type="checkbox"/> Medium  <input type="checkbox"/> High  <input type="checkbox"/> Unknown                 </div> <div style="width: 45%;"> <input type="checkbox"/> Low  <input type="checkbox"/> Medium  <input type="checkbox"/> High  <input type="checkbox"/> Unknown                 </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Low  <input type="checkbox"/> Medium  <input type="checkbox"/> High  <input type="checkbox"/> Unknown                 </div> <div style="width: 45%;"> <input type="checkbox"/> Low  <input type="checkbox"/> Medium  <input type="checkbox"/> High  <input type="checkbox"/> Unknown                 </div> </div>	
	<p>Plant part harvested and life form of species:</p>		
	<p>Geographic distribution:</p>		
	<p>National population size and abundance:</p>		
	<p>Habitat specificity and vulnerability:</p>		

Key questions for Step 5	Responses and outcomes		Information sources used [Record number or citation from Information Sources Consulted]
	Selected Intrinsic Biological Characteristics	Risk severity	
	Regeneration:	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Unknown	
	Reproduction:	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Unknown	
	Role of the species in its ecosystem	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Unknown	
5.2. Considering the potential severity of intrinsic biological risk indicated for the selected factors, is the overall severity of risk to species survival from wild harvest "Low", "Medium", "High", or "Unknown"?	<ul style="list-style-type: none"> <li>Record the overall level of severity of intrinsic biological risk indicated by the majority of factors in Key Question 5.1. If there is not a majority of factors associated with one risk severity level, the precautionary response is to record the highest risk severity level indicated by available information about the intrinsic biological risk factors (e.g. "Precautionary Medium" or "Precautionary High").</li> <li>This response affects the quality of information recommended for Steps 6-8, the overall management rigour required to mitigate (reduce the severity of) the intrinsic biological risks identified (Step 8), and the degree of precaution that should be applied to making the NDF (Step 9).</li> </ul> <p>→ Go to Step 6</p>	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Unknown <input type="checkbox"/> Precautionary <input type="checkbox"/> Medium <input type="checkbox"/> Precautionary <input type="checkbox"/> High	

**Endpoint of Step 5:** Ranking of intrinsic biological risk is used to guide Scientific Authorities to seek higher quality information about harvest and trade impacts related to higher risk and unknown intrinsic biological characteristics (Steps 6 and 7), to require greater management rigour for higher severity of risk (Step 8), and to use greater precaution in making NDFs for those species with overall higher intrinsic biological risk (Step 9).

## WORKSHEET FOR STEP 6. EVALUATE ACTUAL IMPACTS OF WILD HARVEST

Key questions for Step 6	Responses and outcomes		Information sources used [Record number or citation from Information Sources Consulted]
	Selected Wild Harvest Impact Factors	Harvest Impact severity	
6.1. Considering the actual impacts of wild harvest on species survival, is the severity of harvest impact on individual plants, target populations, the national population, and on other species “Low”, “Medium”, “High”, or “Unknown”?	<ul style="list-style-type: none"> <li>Refer to the indicators of harvest impact for each factor included in the <b>Factor Table for Step 6</b> in the <b>Guidance</b> document</li> <li>Record the relevant information available and the impact severity indicated for each factor below.</li> <li>Where management measures in place are known to mitigate (reduce the severity of) harvest impacts, note these under the relevant impact factor.</li> <li>To support the evaluation of appropriate rigour of existing management measures (Step 8): In the <b>Worksheet for Step 8, Information Evaluation Matrix, Part 1</b>, list or summarize the factors identified as “Low”, “Medium”, “High”, and “Unknown” harvest impact severity.</li> <li>In the <b>Worksheet for Step 8, Information Evaluation Matrix, Part 2</b>, list or summarize any information recorded below concerning management measures in place.</li> </ul> <p>→ Go to Key Question 6.2</p>		
	Impact of harvest on individual plants	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Unknown	
	[Note any management measures that are known to be reducing or entirely mitigating impacts]		
	Impact of harvest on target populations	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Unknown	
	[Note any management measures that are known to be reducing or entirely mitigating impacts]		

Key questions for Step 6	Responses and outcomes		Information sources used [Record number or citation from Information Sources Consulted]
	Selected Wild Harvest Impact Factors	Harvest Impact severity	
	<p>Impact of harvest on national population of targeted species</p> <p>[Note any management measures that are known to be reducing or entirely mitigating impacts]</p>	<p><input type="checkbox"/> Low</p> <p><input type="checkbox"/> Medium</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Unknown</p>	
	<p>Impact on other species (harvest specificity)</p> <p>[Note any management measures that are known to be reducing or entirely mitigating impacts]</p>	<p><input type="checkbox"/> Low</p> <p><input type="checkbox"/> Medium</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Unknown</p>	
<p>6.2. Considering the actual severity of harvest impact indicated for the selected factors, is the indicated overall severity of harvest impact on species survival “Low”, “Medium”, “High”, or “Unknown”?</p>	<ul style="list-style-type: none"> <li>Record the overall severity of harvest impact indicated by the majority of factors in Key Question 6.1. If there is not a majority of factors associated with one harvest impact severity level, the precautionary response is to record the highest impact severity level indicated by the available information (e.g. “Precautionary Medium” or “Precautionary High”).</li> <li>This response affects the quality of information recommended for Steps 7 and 8, the overall management rigour required to mitigate (reduce the severity of) the harvest impacts identified (Step 8), and the degree of precaution that should be applied to making the NDF (Step 9).</li> </ul> <p>→ Go to Step 7</p>	<p><input type="checkbox"/> Low</p> <p><input type="checkbox"/> Medium</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> Precautionary</p> <p><input type="checkbox"/> Medium</p> <p><input type="checkbox"/> Precautionary</p> <p><input type="checkbox"/> High</p>	

**Endpoint of Step 6:** Based on the best available information of recommended quality, Scientific Authorities determine the severity of impact of wild harvest on individual plants, on the harvested populations, the national population, and on other species. An overall ranking of harvest impact is used to guide Scientific Authorities to expect greater management rigour for higher severity of harvest impact (Step 8), and to use greater precaution in making NDFs for those species with overall higher or unknown severity of harvest impact (Step 9)

## WORKSHEET FOR STEP 7. EVALUATE ACTUAL IMPACTS OF TRADE

Key questions for Step 7	Responses and outcomes		Information sources used [Record number or citation from Information Sources Consulted]
	Selected Trade Impact Factors	Trade Impact severity	
<p>7.1. Considering the actual impacts of trade on species survival, is the severity of legal and illegal trade impact on national populations of the species concerned “Low”, “Medium”, “High”, or “Unknown”?</p>	<ul style="list-style-type: none"> <li>• Refer to the indicators of trade impact for each factor included in the <b>Factor Table for Step 7</b> in the <b>Guidance</b> document</li> <li>• Record the relevant information available and the impact severity indicated for each factor below</li> <li>• Where management measures in place are known to mitigate (reduce the severity of) trade impacts, note these under the relevant impact factor.</li> <li>• To support the evaluation of appropriate rigour of existing management measures (Step 8): In the <b>Worksheet for Step 8, Information Evaluation Matrix, Part 1</b>, list or summarize the factors identified as “Low”, “Medium”, “High”, and “Unknown” trade impact severity.</li> <li>• In the <b>Worksheet for Step 8, Information Evaluation Matrix, Part 2</b>, list or summarize any information recorded below concerning management measures in place. →Go to Key Question 7.2</li> </ul> <p>Magnitude and trend of legal trade</p> <p>[Note any management measures that are known to be reducing or entirely mitigating impacts]</p>	<p>Low <input type="checkbox"/></p> <p>Medium <input type="checkbox"/></p> <p>High <input type="checkbox"/></p> <p>Unknown <input type="checkbox"/></p>	

Key questions for Step 7	Responses and outcomes		Information sources used [Record number or citation from Information Sources Consulted]
	Selected Trade Impact Factors	Trade Impact severity	
	<p>Magnitude of illegal trade</p> <p>[Note any management measures that are known to be reducing or entirely mitigating impacts]</p>	<p><input type="checkbox"/> Low</p> <p><input type="checkbox"/> Medium</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Unknown</p>	
<p>7.2. Considering the actual severity of trade impact indicated for the selected factors, is the indicated overall severity of trade impact on species survival “Low”, “Medium”, “High”, or “Unknown”?</p>	<ul style="list-style-type: none"> <li>Record the overall severity of trade impact indicated by the majority level of impact severity assigned in Key Question 7.1. If there is not a majority of indicators associated with one impact severity level, the precautionary response is to record the highest impact severity indicated by available information (e.g. “Precautionary Medium” or “Precautionary High”).</li> <li>This response affects the quality of information recommended for Step 8, the overall management rigour required to mitigate (reduce the severity of) the trade impacts identified (Step 8), and the degree of precaution that should be applied to making the NDF (Step 9).</li> </ul> <p>→ Go to Step 8</p>	<p><input type="checkbox"/> Low</p> <p><input type="checkbox"/> Medium</p> <p><input type="checkbox"/> High</p> <p><input type="checkbox"/> Unknown</p> <p><input type="checkbox"/> Precautionary</p> <p><input type="checkbox"/> Medium</p> <p><input type="checkbox"/> Precautionary</p> <p><input type="checkbox"/> High</p>	

**Endpoint of Step 7:** Ranking of trade impact is used to guide Scientific Authorities to require greater management rigour for higher severity of impacts (Step 8), and to use greater precaution in making NDFs for those species with overall higher or unknown severity of trade impact (Step 9).



## WORKSHEET FOR STEP 8. EVALUATE APPROPRIATE RIGOUR OF EXISTING MANAGEMENT MEASURES

Key Questions for Step 8	Responses and outcomes	Information sources used <i>[Record number or citation from Information Sources Consulted]</i>
<p>8.1. Considering the characteristics of management measures in place related to conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts, is the level of rigour “Minimal”, “Moderate”, or “Intense”?</p>	<p><input type="checkbox"/> No information sources for management measures were found.</p> <p><input type="checkbox"/> Information sources for management measures are listed in the column to the right.</p> <p>Using the <b>information evaluation matrix for Step 8</b> (see below):</p> <p><b>Part 1:</b> Transfer summary information about conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified in Steps 4-7. It is not necessary to duplicate detailed information, but helpful to highlight the relevant information from the previous steps in this <b>Guidance</b> and its location in the worksheets for Steps 4-7.</p> <p><b>Part 2:</b> Referring to the <b>Factor Table for Step 8</b> in the <b>Guidance</b> document, record summary information about the existing management measures relevant to the severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified in Steps 4-7.</p> <p>→Go to Key Question 8.2</p>	
<p>8.2. Do existing management measures adequately mitigate (reduce the severity of) the conservation concerns, intrinsic biological risks, harvest impacts and trade impacts identified for the populations and sub-populations of the species concerned affected by the</p>	<p>Using the <b>information evaluation matrix for Step 8</b> (see below):</p> <p><b>Part 3:</b> Taking into account the conditions for appropriate management rigour defined in the Guidance Notes for Key Question 8.3, compare the conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified in <b>Part 1 of the Information Evaluation Matrix for Step 8</b> with the associated rigour of management measures in place identified in <b>Part 2 of the Information Evaluation Matrix for Step 8</b>.</p> <p>Indicate whether management measures in place are appropriately rigorous to reduce the severity of concern, risk, and impact, based on the conditions defined for</p>	

Key Questions for Step 8	Responses and outcomes	Information sources used <i>[Record number or citation from Information Sources Consulted]</i>
proposed trade?	<p><i>appropriate management rigour in the <b>Guidance</b> for Step 8:</i></p> <ul style="list-style-type: none"> <li><i>a) Management measures in place address the type and geographic scope of identified concerns, risks, and impacts.</i></li> <li><i>b) Management measures in place have at minimum the appropriate level of rigour required to reduce the severity of identified concerns, risks, and impacts.</i></li> <li><i>c) There is evidence that the existing management measures are effectively implemented to mitigate (reduce the severity of) the identified concerns, risks and impacts.</i></li> <li><i>d) Management measures in place are sufficiently precautionary to address unknown concerns, risks, and impacts.</i></li> </ul> <p><i>Identify and record gaps between management measures required and in place.</i></p> <p><i>Make an overall judgement taking the <b>Guidance</b> into consideration.</i></p> <p><i>→ Go to Step 9.8</i></p>	

**Endpoint of Step 8:** Based on available information, Scientific Authorities identify the level of rigour of management measures in place for the target species and populations, and evaluate whether these are appropriate and effective to mitigate (reduce the severity of) the severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified in Steps 4-7.

Previous Steps in Guidance	Information Evaluation Matrix for Step 8, Key Question 8.1		
Conservation concern (Worksheet for Step 4)	Part 1. Severity of Conservation Concern, Intrinsic Risk, Harvest and Trade Impact		
	Low	Medium	High
<p><i>(From Key Question 4.2)</i></p> <p><input type="checkbox"/> <i>Not threatened; there are no known threats</i></p> <p><input type="checkbox"/> <i>Not threatened; threats</i></p>	<p><i>(From Key Question 4.2, list or summarize conservation factors identified as “medium” concern and the scope of</i></p>	<p><i>(From Key Question 4.2, list or summarize conservation factors identified as “high” concern and the scope of</i></p>	<p><b>Unknown</b></p> <p><input type="checkbox"/> <i>No assessments exist (From Key Question 4.1)</i></p> <p><input type="checkbox"/> <i>Existing assessments do not include the relevant</i></p>

Information Evaluation Matrix for Step 8, Key Question 8.1				
Part 1. Severity of Conservation Concern, Intrinsic Risk, Harvest and Trade Impact				
Previous Steps in Guidance	Low	Medium	High	Unknown
		are known but appropriate management is in place [List or summarize any known threats that qualify as "low" and the scope of identified threats]	identified threats]	identified threats]
<b>Intrinsic biological risk (Worksheet for Step 5)</b>	[From Key Question 5.1, list or summarize intrinsic biological factors identified as "Low" risk]	[From Key Question 5.1, list or summarize intrinsic biological factors identified as "Medium" risk]	[From Key Question 5.1, list or summarize intrinsic biological factors identified as "High" risk]	[From Key Question 5.1, list or summarize intrinsic biological factors identified as "Unknown" risk]
<b>Harvest impact (Worksheet for Step 6)</b>	[From Key Question 6.1, list or summarize harvest factors identified as "Low" harvest impact]	[From Key Question 6.1, list or summarize harvest factors identified as "Medium" harvest impact]	[From Key Question 6.1, list or summarize harvest factors identified as "High" harvest impact]	[From Key Question 6.1, list or summarize harvest factors identified as "Unknown" harvest impact]
<b>Trade impact (Worksheet for Step 7)</b>	[From Key Question 7.1, list or summarize trade factors identified as "low" trade impact]	[From Key Question 7.1, list or summarize trade factors identified as "medium" trade impact]	[From Key Question 7.1, list or summarize trade factors identified as "high" trade impact]	[From Key Question 7.1, list or summarize trade factors identified as "unknown" trade impact]

Information Evaluation Matrix for Step 8, Key Question 8.1 Part 2. Management Measures in Place			
Management Measures	Minimal or Uncertain	Moderate	Intense
Type and rigour of management measures in place (Step 8)	[From sources indicated in response to Key Question 8.1, list or summarize management measures identified that correspond to “minimal” or “uncertain” rigour indicated in Factor Table for Step 8 in the Guidance document]	[From sources indicated in response to Key Question 8.1, list or summarize management measures identified that correspond to “moderate” rigour indicated in Factor Table for Step 8 in the Guidance document]	[From sources indicated in response to Key Question 8.1, list or summarize management measures identified that correspond to “intense” rigour indicated in Factor Table for Step 8 in the Guidance document]

Information Evaluation Matrix for Step 8 Part 3. Evaluation of Appropriate Management Rigour to Mitigate (reduce the severity of) Identified Concerns, Risks, and Impacts			
Response to Key Question 8.2	Low Minimal or Uncertain	Medium Moderate	High or Unknown Intense
Management measures are appropriate	<input type="checkbox"/> Not relevant (no “Low” severity concerns, risks, or impacts were identified)  a) Management measures in place address the type and geographic scope of identified concerns, risks, and impacts <input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain	<input type="checkbox"/> Not relevant (no “Medium” severity concerns, risks, or impacts were identified)  a) Management measures in place address the type and geographic scope of identified concerns, risks, and impacts <input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain	<input type="checkbox"/> Not relevant (no “High” severity concerns, risks, or impacts were identified)  a) Management measures in place address the type and geographic scope of identified concerns, risks, and impacts <input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain  b) Management measures in place have at minimum the appropriate level of rigour required to reduce the severity of identified concerns, risks, and impacts

Response to Key Question 8.2	Information Evaluation Matrix for Step 8		
	Part 3. Evaluation of Appropriate Management Rigour to Mitigate (reduce the severity of) Identified Concerns, Risks, and Impacts	High or Unknown Intense	Medium Moderate
	<p><b>Minimal or Uncertain</b></p> <p>b) Management measures in place have at minimum the appropriate level of rigour required to reduce the severity of identified concerns, risks, and impacts</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain</p> <p>c) There is evidence that the existing management measures are effectively implemented to mitigate (reduce the severity of) the identified concerns, risks and impacts</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain</p> <p><i>Record management gaps and other comments:</i></p>	<p><b>Medium Moderate</b></p> <p>b) Management measures in place have at minimum the appropriate level of rigour required to reduce the severity of identified concerns, risks, and impacts</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain</p> <p>c) There is evidence that the existing management measures are effectively implemented to mitigate (reduce the severity of) the identified concerns, risks and impacts</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain</p> <p><i>Record management gaps and other comments:</i></p>	<p><b>High or Unknown Intense</b></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain</p> <p>c) There is evidence that the existing management measures are effectively implemented to mitigate (reduce the severity of) the identified concerns, risks and impacts</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain</p> <p>d) Management measures in place are sufficiently precautionary to address unknown concerns, risks, and impacts</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No or Uncertain</p> <p><i>Record management gaps and other comments:</i></p>

## WORKSHEET FOR STEP 9: NON-DETRIMENT FINDING AND RELATED ADVICE

Possible Outcomes of the NDF process based on this Guidance are listed in in this worksheet. **Each export permit application should have just one of the following outcomes.** The Worksheet, together with more detailed information in the relevant Worksheets for previous steps, may be useful as a summary report of the NDF results and related advice to the CITES Management Authority.

Outcome of NDF Process	NDF Results and Related Advice
<p>9.1. The outcome of Step 1, Key Question 1.1 is: <i>Identification of the specimen(s) is not clear, and concerns about taxonomic identification are not easily resolved by the Scientific Authority or referral to the Management Authority the Nomenclature Specialist of the CITES Plants Committee</i></p>	<p><input type="checkbox"/> Negative NDF (supported by this Guidance)  <input type="checkbox"/> Positive NDF  <input type="checkbox"/> Other: e.g., Negative NDF pending referral to the Management Authority</p> <p><b>Justification for the advice of Scientific Authority:</b>  <i>[Summary, or refer to Worksheet 1, Key Question 1.1]</i></p> <p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p>
<p>9.2. The outcome of Step 2, Key Question 2.2 is: <i>Export of artificially propagated specimens of this species is not permitted by national or relevant sub-national legislation</i></p>	<p><input type="checkbox"/> Negative decision (deny export permit) (supported by this Guidance)  <input type="checkbox"/> Positive decision (approve export permit)  <input type="checkbox"/> Other: e.g., Negative decision pending referral to the Management Authority to investigate or to the responsible authority for enforcement</p> <p><b>Justification for advice of Scientific Authority:</b>  <i>[Summary, or refer to Worksheet 2, Key Question 2.2]</i></p>

Outcome of NDF Process	NDF Results and Related Advice
<p>9.3. The outcome of Step 2, Key Question 2.3 is: <i>Specimens covered by the export permit application clearly meet all requirements for artificial propagation according to Res. Conf. 11.11 (Rev. CoP15)</i></p>	<p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p> <p><input type="checkbox"/> Negative decision (deny export permit)</p> <p><input type="checkbox"/> Positive decision (approve export permit) <b>(supported by this Guidance)</b></p> <p><input type="checkbox"/> Other:</p> <p><b>Justification for advice of Scientific Authority:</b>  <i>[Summary, or refer to Worksheet 2, Key Question 2.3]</i></p> <p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p>
<p>9.4. The outcome of Step 2, Key Question 2.2 is: <i>There are concerns about compliance of the specimens with CITES requirements for artificial propagation that cannot be resolved by Scientific Authority by undertaking a detailed NDF</i></p>	<p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p> <p><input type="checkbox"/> Negative NDF <b>(supported by this Guidance)</b></p> <p><input type="checkbox"/> Positive NDF</p> <p><input type="checkbox"/> Other: e.g., Negative NDF pending referral to the Management Authority to investigate or to the responsible authority for enforcement</p> <p><b>Justification for advice of Scientific Authority:</b>  <i>[Summary, or refer to Worksheet 2, Key Question 2.4]</i></p> <p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p>



Outcome of NDF Process	NDF Results and Related Advice
<p>9.5. The outcome of Step 3, Key Question 3.1 is: <i>Export of wild-harvested specimens of this species is not permitted by national or relevant sub-national legislation or regulation</i></p>	<p><input type="checkbox"/> Negative decision (deny export permit) (supported by this Guidance)</p> <p><input type="checkbox"/> Positive decision (approve export permit)</p> <p><input type="checkbox"/> Other: e.g., Negative decision pending referral to the Management Authority to investigate or to the responsible authority for enforcement</p> <p><b>Justification for advice of Scientific Authority:</b> [Summary, or refer to Worksheet 3, Key Question 3.1]</p> <p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p>
<p>9.6. The outcome of Step 3, Key Question 3.2 is: <i>The specimen is not covered by CITES Appendix II</i></p>	<p><input type="checkbox"/> CITES Export permit not required (supported by this Guidance)</p> <p><input type="checkbox"/> Other:</p> <p><b>Justification for advice of Scientific Authority:</b> [Summary, or refer to Worksheet 3, Key Question 3.2]</p> <p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p>
<p>9.7. The outcome of Step 3, Key Question 3.4 is: <i>Evidence used for a previous NDF is still valid and sufficient to evaluate the current export permit application</i></p>	<p><input type="checkbox"/> Positive NDF, proposed export is within the limits defined by the previous NDF</p> <p><input type="checkbox"/> Negative NDF, proposed export is not within the limits defined by the previous NDF</p> <p><input type="checkbox"/> Other:</p> <p><b>Justification for advice of Scientific Authority:</b> [Summary, or refer to Worksheet 3, Key Question 3.4]</p>



Outcome of NDF Process	NDF Results and Related Advice
<p>9.8. Step 8, Key Question 8.2 is:  <i>Do existing management measures adequately mitigate (reduce the severity of) conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified for the populations and sub-populations of the species concerned affected by the proposed trade?</i></p>	<p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p> <p> <input type="checkbox"/> <b>Positive NDF if the evidence indicates “Yes” or “Yes, with specific conditions”</b>  <input type="checkbox"/> <b>Negative NDF if the evidence indicates “No or Uncertain”</b>  <input type="checkbox"/> Other: e.g., Negative NDF pending additional information required to evaluate conservation concerns, intrinsic biological risks, harvest impacts, trade impacts, or management rigour </p> <p><b>Justification for advice of Scientific Authority:</b>  <i>[Summary, or refer to Worksheet 8, Key Question 8.2]</i></p> <p><b>Specific management procedures, precautions, other actions that need to be undertaken to ensure the survival of the species:</b></p>

**Endpoint of Step 9:** Scientific Authorities make science-based positive or negative NDFs, or other relevant decisions concerning the proposed export of specimens, guided by the outcome of Steps 1-8 of this Guidance. NDFs are justified by evaluating whether the existing management procedures are appropriate and effective to mitigate (reduce the severity of) the identified conservation concerns, intrinsic biological risks, wild harvest impacts, and trade impacts. If there is insufficient information to enable the Scientific Authority to determine with confidence that the proposed trade will not be detrimental to the survival of the population or species, the precautionary approach supports a negative NDF.

Quality of information gathered and evaluated (and the associated time and effort of the Scientific Authority) to support the NDF and related advice is appropriate to the severity of conservation concerns, intrinsic biological risks, harvest impacts, and trade impacts identified.

In accordance with *Res. Conf. 10.3*, Scientific Authorities may define any permit adjustments, qualification, precautions, or information gaps that should be communicated to the CITES Management Authority.