



Trees Working Group Guidelines

First document of the Working Group

Principles for Non-Detriment Findings (NDF) for TREES

1. A species' listing on Appendix II indicates that, based on the available trade and scientific information and in the view of the Parties, international trade at current rates or patterns has placed it at risk of harm in its environment on a range-wide basis.
2. The non-detriment finding (NDF) required from CITES Scientific Authorities for Appendix II (and Appendix I) species verifies that traded volumes or products do not cause harm to the species or look-alike species within the range State.
3. Because species and products derived from them are the relevant units of trade, the NDF must consider biological and environmental parameters relevant to the population status of the Appendix II species. For trees, anticipated impact of current or proposed harvests on species' population status (structure & dynamics) is the central question that must be addressed during the NDF process.
4. The extent to which species population status has been described and is understood determines the scale, quality and certainty at which NDFs can be made. Comprehensive knowledge of nation-wide population structures (stocks) and dynamics (recovery capacity) would allow annual export quotas to be set at the national level in confidence that these would be non-detrimental to the species' survival. Lacking comprehensive knowledge at the national level, and considering the precautionary principle, NDF should be undertaken at the scale at which sufficient knowledge exists to verify non-detriment. In most cases at present, this scale will be the management unit within which complete or statistically inferred knowledge of population status is sufficient to assess harvest impacts on species survival.
5. Sufficient biological information for Appendix II tree species exists to propose harvest and management systems where population status is known. Management systems should represent best current practices for the type of species (product)

involved, and should be adaptive over time, incorporating new understanding of harvest impacts on species' population dynamics as revealed through practice (production) and research.

6. Risk associated with a negative outcome from the NDF process – that is, NDF allowing exports produced unsustainably – declines as the level of understanding of population status and management systems designed to mitigate negative impacts increases.

Making NDF for tree species

As explained in the draft Working Groups' guidelines, *The main objective of the workshop, as indicated in Decision 14.49, is to enhance CITES Scientific Authorities' capacities, particularly those related to the methodologies, tools, information, expertise and other resources...*

The Trees Working Group has agreed that these four elements can be addressed as follows:

- First, the Scientific Authority should consider the harvest regime and determine whether specimens are taken from a plantation or from the wild. If taken from a plantation, the NDF can be made relatively quickly since it considers that the plantation has been verified by the Management Authority and that the removal of the specimens does not affect populations in the wild (therefore this should imply a low risk of the operation).
- If specimens come from the wild, the Scientific Authority should take a more cautious approach and consider whether the harvest implies removal of the whole tree or not.
- If removal of the specimen does not result in the death of the tree (as in the case of some medicinal trees and agarwood-producing species), the guideline of maintaining the resource in the population over time and through a recovery period between harvests should be followed, with the objective of minimizing the impact of harvesting on species populations in the wild.
- If removal of the specimen results in the death of the tree, then adherence to comprehensive guidelines (encompassing information available, possible methodologies, etc.) is required. The essential elements of such guidelines are here proposed by this Working Group.
- General guidelines to help making an NDF are presented in this document and its Annexes, which include examples of species-specific guidelines for mahogany and agarwood.

Essential elements of NDF (guidelines) for tree species

ELEMENT 1: SPECIES DISTRIBUTION AREA (RANGE) AT RELEVANT SCALES

OBJECTIVE: Characterize the species' distribution at different spatial and jurisdictional scales so that production and conservation areas can be identified.

ELEMENT 2: POPULATION PARAMETERS AS INDICATORS OF SUSTAINABLE MANAGEMENT

OBJECTIVE: Characterize species population status (standing stocks & dynamics) to provide standards for evaluating harvest impacts.

ELEMENT 3: MANAGEMENT SYSTEMS & HARVEST RATES

OBJECTIVE: With sufficient knowledge of distribution and population parameters, determine whether management systems are appropriate to species populations subject to harvest AND whether harvest levels are sustainable.

ELEMENT 4: MONITORING & VERIFYING HARVESTS

OBJECTIVE: Determine whether adequate monitoring & verification systems are in place to ensure the sustainability of harvest and to reduce illegal activities & illegal trade.

ELEMENT 5: CONSERVATION & THE PRECAUTIONARY PRINCIPLE

OBJECTIVE: Determine whether safeguards are in place to ensure that representative natural populations and phenotypic & genetic diversity represented in harvested populations are conserved.

NDF guidelines for tree species

Having established the purpose of the NDF, the Trees Working Group concluded that the basic elements to be considered for making NDF for timber and non-timber tree species have been elaborated by recent working groups focused on Appendix II species (bigleaf mahogany, agarwood). These elements have been generalized and adapted to be applied to the taxa as follows:

ELEMENT 1: SPECIES DISTRIBUTION AREA (RANGE) AT RELEVANT SCALES

OBJECTIVE: Characterize the species' distribution at different spatial and jurisdictional scales so that production and conservation areas can be identified. Suggested scales & tools that may be available include:

NATIONAL (HISTORICAL, CURRENT) DISTRIBUTION

- Vegetation & forest cover maps
- Ecosystem or eco-zoning maps
- National forest inventories
- Herbarium collection data (georeferenced)
- Existing & potential conservation areas

SUB-NATIONAL (E.G. REGIONS, STATES, WATERSHEDS) DISTRIBUTION

- National databases, including management units
- Sub-national forest inventories
- Sub-national mapping from various sources

LOCAL (FOREST MANAGEMENT UNIT) DISTRIBUTION

- Statistical samples from inventories for forest management plans
- GIS representation of harvest areas
- Commercial censuses, ideally based on georeferenced data
- Local, specialist & industry knowledge

ELEMENT 2: POPULATION PARAMETERS AS INDICATORS OF SUSTAINABLE MANAGEMENT

OBJECTIVE: Characterize species population status (standing stocks & dynamics) to provide standards for evaluating harvest impacts. Suggested parameters & tools that may be available include:

POPULATION STRUCTURE: NUMBER OF INDIVIDUALS, AGE AND/OR SIZE DISTRIBUTION, DENSITY, VOLUME/QUANTITY

- Field inventories applying appropriate statistical methods
- Published studies
- Reliable proxy data (e.g. local knowledge, historical data)

POPULATION DYNAMICS: RATES OF MORTALITY, GROWTH, REPRODUCTION, REGENERATION & RECRUITMENT

- Long-term studies using appropriate methods
- Modeling approaches (e.g. matrix)
- Published studies

- Reliable proxy data (e.g. local knowledge, historical data)
- Information on other factors affecting populations (e.g. microsite preferences, pests, disturbances)

ELEMENT 3: MANAGEMENT SYSTEMS & HARVEST RATES

OBJECTIVE: With sufficient knowledge of distribution and population parameters, determine whether management systems are appropriate to species populations subject to harvest AND whether harvest levels are sustainable. Suggested aspects to review & issues to consider include:

Inventory (or description) of commercial & non-commercial trees, ideally with mapping / spatial referencing

Harvest operations

- Identification of material to be harvested, understanding that differing harvest systems can be implemented
- Equipment / tools & methods to be used (appropriate or not)
- Measures for reducing damages during harvests (direct & environmental)
- Identification & protection of reserved areas / seed trees / future crop trees

Silvicultural practices

- Pre- & post-harvest
- Examples: liana cutting, liberation thinning, seed tree selection

Restoration / alleviation measures/ reduction of harvest impacts

- Seed tree retention
- Enrichment planting, with adequate seed selection (e.g. vigor, genetic diversity)
- Cutting cycle (rotation) or fallow period
- Post-harvest measures for reducing damages (direct & environmental)

Harvest rate evaluation

- Standards: intensity (retention %), minimum diameter cutting limit
- Quantitative knowledge of population status through appropriate statistical methods
- Expected (current) production & recovery rates (future production)
- Appropriate scaling methods

ELEMENT 4: MONITORING & VERIFYING HARVESTS

OBJECTIVE: Determine whether adequate monitoring & verification systems are in place to ensure the sustainability of harvest and to reduce illegal activities & illegal trade. These may consist of or include:

Monitoring & verification systems

- Pre- & post-harvest review mechanisms to verify management practices
- Permanent plots to assess harvest impacts on populations
- Chain-of-custody from harvest to export
- Transparent practices that improve control of trade in harvested products
- Where export quotas have been set, assessment of the extent to which they indicate sustainable harvests

Optimization of timber / non timber use & processing

- Conversion / correction factors for translating raw material (e.g. standing volume, pre-processed weights) into processed product (e.g. sawnwood, extracts, etc.)

ELEMENT 5: CONSERVATION & THE PRECAUTIONARY PRINCIPLE

OBJECTIVE: Determine whether safeguards are in place to ensure that representative natural populations and phenotypic & genetic diversity represented in harvested populations and the role of the species in the ecosystem are conserved. Precautionary measures may consist of:

- Conserving different populations throughout the natural range to ensure phenotypic & genetic diversity
- Conserving the existing range of age/ size classes and distribution of the species while considering processes of natural succession and recruitment.
- Avoiding negative impacts of harvest on other species and the ecosystem
- Establishing reserve areas to protect unharvested populations
- Establishing seed banks & other mechanisms for conservation of germplasm
- Accounting for the effects of legal & illegal harvesting on species conservation status
- Giving due consideration to incentives & benefits from harvests (e.g. species / habitat conservation).