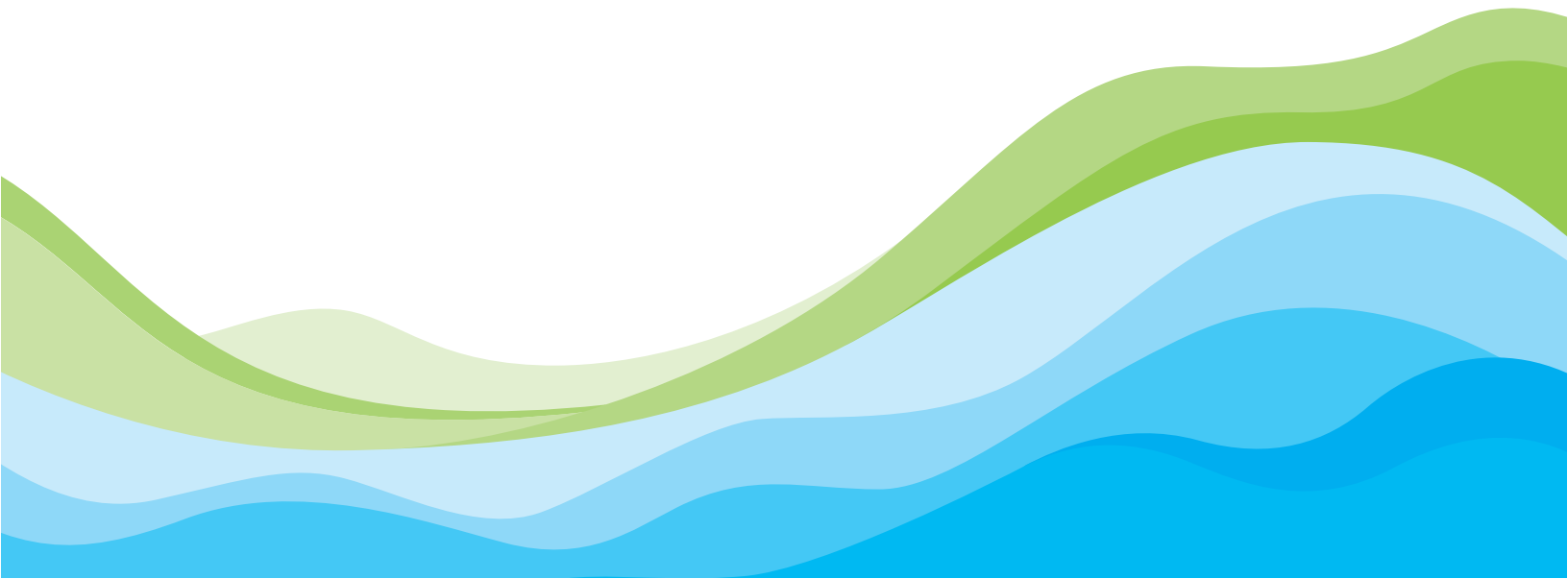




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# Guidance for Completing CITES Non-Detriment Findings for Timber Produced via Assisted Production in Mexico

January 2024





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## List of Abbreviations and Acronyms

CEC	Commission for Environmental Cooperation
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
Conabio	<i>Comisión Nacional para el Conocimiento y Uso de la Biodiversidad</i> (National Commission for the Knowledge and Use of Biodiversity; Mexico)
Conafor	<i>Comisión Nacional Forestal</i> (National Forestry Commission of Mexico; Mexico)
CoP	Meeting of the Conference of Parties [to CITES]
DGVS	<i>Dirección General de Vida Silvestre</i> (General Directorate for Wildlife; Mexico)
Ecosur	<i>El Colegio de la Frontera Sur</i> (South Border College; Mexico)
LGDFS	<i>Ley General de Desarrollo Forestal Sustentable</i> (General Law of Sustainable Forest Development; Mexico)
LGEEPA	<i>Ley General del Equilibrio Ecológico y la Protección al Ambiente</i> (General Law of Ecological Equilibrium and Environmental Protection)
LGVS	<i>Ley General de Vida Silvestre</i> (General Wildlife Law; Mexico)
NDF	Non-Detriment Finding
NOM-059	<i>NORMA Oficial Mexicana NOM-059-SEMARNAT-2010</i> (Mexican Official Standard NOM-059-SEMARNAT-2010)
PIMVS	<i>Predios e Instalaciones que Manejan Vida Silvestre en forma confinada, fuera de su hábitat natural</i> (Premises and Facilities that Manage Wildlife in confinement, outside of its natural habitat; Mexico)
RLGDFS	<i>Reglamento de la Ley General de Desarrollo Forestal Sustentable</i> (Regulation of the General Law of Sustainable Forest Development; Mexico)
RLGVS	<i>Reglamento de la Ley General de Vida Silvestre</i> (Regulations of the General Wildlife Law; Mexico)
Semarnat	<i>Secretaría de Medio Ambiente y Recursos Naturales</i> (Secretariat of Environment and Natural Resources; Mexico)
UMA	<i>Unidad de Manejo para la Conservación de la Vida Silvestre</i> (Management Units for the Conservation of Wildlife; Mexico)
UNAM	<i>Universidad Nacional Autónoma de México</i> (National Autonomous University of Mexico)
UNEP	United Nations Environment Programme
WCMC	World Conservation Monitoring Centre

## **Abstract**

The purpose of this guide is to advise CITES Scientific Authority in Mexico on completing non-detriment findings (NDFs) for exports of wood from species of CITES-listed trees grown via “assisted production” and therefore qualifying to be assigned source code “Y” on CITES permits and certificates. The focus was specifically on exports of wood from CITES-listed tree species managed and harvested in Mexico, some of them imported by United States and Canada, all of which are listed on Appendix II of the Convention.

Information was compiled via literature review, personal communication with selected experts, and via discussion at the Workshop on Implementing CITES Source Code Y in Oaxaca, Mexico, in July 2023.

The text of the document describes the management schemes used in Mexican timber and their relevance to the designation of CITES source codes.

Guidance on CITES source code “Y” implementation and conducting non-detriment findings for exports of tree species were developed based on whether wood was produced from the following three categories:

- Trees artificially propagated under controlled conditions.
- Trees produced under natural conditions.
- Trees harvested from small-scale production on non-forestry Lands.

The information needed and the general methods for deriving an NDF for tree species under assisted production are detailed and highlight the differences from an NDF for wild specimens and other cases.

# Introduction

The eighteenth meeting of the Conference of the CITES Parties (CoP18) was held in Geneva, Switzerland, in August 2019. During the meeting, the Parties adopted a new CITES source code for use on permits and certificates. The new source code, “Y”, pertains to plants grown via “assisted production” and applies to trade in plants which fall somewhere between those that were artificially propagated (source code “A”) and those harvested from the wild (source code “W”) (CITES 2000).

In 2021, the Commission for Environmental Cooperation (CEC) launched the project “Strengthening the Implementation and Effective Enforcement of CITES for Timber in North America.” This project encompassed five parallel activities, including the development of guidance on CITES source code “Y” implementation and conducting non-detriment findings for tree species. This document serves as the final product of this activity.

It is worth noting that the development of this **Guidance** was led and supervised by the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (Conabio) (Mexico’s National Commission for the Knowledge and Use of Biodiversity) under the sponsorships of CEC. The offices of Division of Management Authority (DMA) and the Division of Scientific Authority (DSA) from the governments of the United States and Canada supported the development of this Guide but were not directly involved in its development and nor endorse the results.

The purpose is to advise the CITES Scientific Authority in Mexico on completing non-detriment findings (NDFs) for exports of wood from species of CITES-listed trees cultivated via “assisted production” and that therefore qualify to be assigned source code “Y” on CITES permits and certificates. The focus is specifically on exports of wood from CITES-listed tree species managed, harvested, and exported from Mexico, all of which are listed in Appendix II of the Convention, some of which are imported by Canada and the United States, like Big leaf mahogany *Swietenia macrophylla*.

Data sources for this document include trade data analyses, literature and website reviews, and consultations with experts and authorities. Forestry and timber trade experts were consulted between January and July 2023. Additionally, a CEC workshop on implementing CITES source code Y took place in Oaxaca, Mexico, from 25–26 July 2023. This workshop brought together 14 participants, including experts from the CITES Secretariat, the National Commission for the Knowledge and Use of Biodiversity (*Comisión Nacional para el Conocimiento y Uso de la Biodiversidad*—Conabio); the National Forestry Commission (*Comisión Nacional Forestal*—Conafor); the National Autonomous University of Mexico (*Universidad Nacional Autónoma de México*—UNAM), Secretariat of Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*—Semarnat), and South Border College (*El Colegio de la Frontera Sur*—Ecosur).

The Oaxaca workshop focused on forestry management and trade dynamics of CITES-listed tree species in Mexico to provide guidance on source code “Y” implementation. Participants also collaborated in developing a framework for completing non-detriment findings (NDFs) for timber species designated with CITES source code “Y” (assisted production). This framework, combined with insights from various forestry experts, played a pivotal role in crafting this document.



This document is divided into three parts. This introduction concludes Part 1. Part 2 provides relevant background information on CITES non-detriment findings, Mexican legislation, forest management, and designation of CITES source codes. Part 3 offers NDF guidance for wood designated as source code “Y” sorted by forest management group. Annex A lists the CITES-listed timber species found in and exported by Mexico and imported by Canada and the United States.

# Background

## CITES Non-Detriment Findings

Article IV of the Convention specifies that an export permit for an Appendix II species is only to be granted once a Scientific Authority for the exporting State has advised that this action will “not be detrimental to the survival of that species” (CITES 1973). This is commonly referenced as a “non-detriment finding” or NDF.<sup>1</sup>

Resolution of the Conference of the Parties 10.3 outlines the role of a Scientific Authority and provides the following guidance for completing non-detriment findings for Appendix II taxa (CITES 1997):

- The findings and advice of a Scientific Authority should be formulated from the scientific review of the trade information for the species concerned and appropriate biological and ecological factors, such as population status, distribution, population trend and harvest.
- The Scientific Authority should monitor the status of native Appendix II species and export data and, if required, recommend suitable remedial measures to limit the export of species to maintain each species’ population throughout its range at a level consistent with its role in the ecosystem and well above the levels at which it could become eligible for inclusion in Appendix I.
- The Scientific Authority should review all applications submitted, utilizing the exemptions and special trade provisions of Article VII and advise its Management Authority as to whether the facility concerned meets the criteria for producing specimens considered to be bred in captivity or artificially propagated.

Guidance on completing non-detriment findings is provided in Resolution Conf. 16.7 (Rev. CoP17), which reprises some points made in Resolution Conf. 10.3 and adds the following (CITES 2013):

- A non-detriment finding for an Appendix-I or -II species is the result of a science-based assessment that verifies whether a proposed export is detrimental to the survival of that species or not, for which the sustainability of the overall harvest will usually be a necessary consideration.
- Scientific Authorities should consider whether the species would be maintained throughout its range at a level consistent with its role in the ecosystems in which it occurs.
- in making a non-detriment finding, Scientific Authorities should consider the volume of legal and illegal trade (known, inferred, projected, estimated) relative to the vulnerability of the species (intrinsic and extrinsic factors that increase the risk of extinction of the species).
- The data requirements for completing a non-detriment finding for a species should be proportionate to the vulnerability of the species.
- The making of an effective non-detriment finding relies upon a correct identification of the species concerned and verification that specimens of this species are in fact to be exported.<sup>2</sup>

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<sup>1</sup> In Mexico, the term is the DENP, the *Dictamen de Extracción no Perjudicial*.

<sup>2</sup> Accurate identification of specimens is a critical consideration, especially when the specimens in question are only parts or derivatives of whole animals or plants and where products from different species may be very similar (e.g., tropical hardwoods).

The methodology for completing a non-detriment finding for specimens confirmed to not originate in the wild may be less rigorous than for a specimen of wild origin.

- The methodology used (for a NDF) should be flexible enough to allow for consideration of the specific and individual characteristics of different taxa.

The implementation of adaptive management, including monitoring, is an important consideration in making of a non-detriment finding; Resolution Conf. 16.7 (Rev. CoP17) also lists the following factors which may be included, but are not exclusive to, in completion of a non-detriment finding (CITES 2013):

- Species' biology and life-history characteristics
- Species' range (historical and current)
- Population structure, status and trends (in the harvested area, nationally and internationally)
- Threats
- Historical and current species-specific levels and patterns of harvest and mortality (e.g. age, sex) from all sources combined
- Management measures currently in place and proposed, including adaptive management strategies and consideration of levels of compliance
- Population monitoring
- Conservation status

## Relevant Provisions for Making Non-Detriment Findings

Various provisions affect the preparation of NDFs (non-detriment Findings) in Mexico. Further information about these provisions can be found in the Annex B of this Guide. A brief description of the most relevant regulations is provided below.

The General Law of Ecological Equilibrium and Environmental Protection (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*—LGEEPA) establishes the national environmental policy for the preservation and restoration of ecological balance and protection of the environment. The law establishes a general framework for addressing a wide range of environmental matters, including forestry (DOF 1988).

The General Wildlife Law (*Ley General de Vida Silvestre*—LGVS) implements CITES in Mexico and dictates that importing, exporting, and re-exporting specimens of species listed in the Appendices of CITES must comply with the requirements of the Convention. A key component of the LGVS is the establishment of Management Units for the Conservation of Wildlife (*Unidades de Manejo para la Conservación de la Vida Silvestre*—UMAs).<sup>3</sup> UMAs are properties and facilities operating under a management plan approved by the General Directorate for Wildlife (*Dirección General de Vida Silvestre*—DGVS) for the sustainable use of native species (DOF 2021). Their overarching objective is to conserve wild species and their natural habitat (DOF 2021).

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<sup>3</sup> Originally described as the *Unidades de Manejo y Aprovechamiento* (UMAs). The text was eventually changed to *Unidades de Manejo para la Conservación de la Vida Silvestre*, but the original acronym has continued to be used.

The key elements of a Management Plan include specific objectives and indicators, biological information of the managed species, sampling methods, management measures for habitat, populations and specimens and harvesting methods, among others.

The regulations of the General Wildlife Law establishes that annual reports from UMA must provide an assessment of the effects of the harvesting over populations and habitat, including achievements regarding objectives/indicators, the results of harvesting activities, among others.

Any harvesting request to UMA must include population studies, sampling, inventories and other information from the monitoring report, as well as evidence that the harvest levels/rates are less than the natural renovation capacity of wild populations and that no negative effects will be inflicted on the populations.

A Forest Management Program outlines the strategies and guidelines for the responsible and sustainable use of forest resources within a specific area. The goals of a Forest Management Program are to ensure the conservation of forest ecosystems, maintain biodiversity, and promote the long-term viability of forest resources while also allowing for the extraction of forest products. The key elements of a Forest Management Program include a forest inventory; sampling size estimations, abundance and population information, monitoring methods and analysis, estimation of harvest rates, management, harvesting and reforestation strategies; measures to conserve biodiversity, protect habitats and mitigate negative environmental impacts; and a plan to monitor the implementation of the management activities and assess their impacts.

## Forest Management in Mexico

Timber is produced in Mexico through eight different management or administrative schemes which reflect the purpose of the production and the risk status (NOM-059-SEMARNAT-2010) of the tree species being utilized (see Annex B for detailed information on the Mexican legislation and regulations behind them). These schemes can be categorized into three groups based on the forestry management techniques characteristic of those schemes (Table 1).

Group One: this group consists of trees artificially propagated under controlled conditions. This includes trees produced on commercial plantations, intensive UMAs and PIMVS. These schemes are based on artificial propagation methods and characterized by plantations of dense, evenly-planted and same-aged trees. Typically, these plantations are established on former agricultural land where all existing vegetation, except for pre-existing trees, is removed before the trees are planted in rows. The trees are maintained until they reach a size suitable for harvest. Such plantations may consist of single- or multi-species plantings (CEC 2023). The primary distinction between the schemes is that intensive UMAs and PIMVS (Premises and Facilities that Manage Wildlife in confinement, outside of its natural habitat) utilize species listed on NOM-059, whereas commercial plantations do not. Intensive UMAs must also incorporate a conservation component into their management plans. Commercial Plantations and PIMVS are established exclusively for commercial purposes (DOF 2010, 2021).

Group Two: this group comprises trees produced under natural conditions and includes trees produced on extensive UMAs and Forestry Properties. UMAs and Forestry Properties use both natural and artificial

propagation methods and are characterized by natural spacing, low-density planting, and unevenly aged management. Trees grow as in a natural forest. However, they may also incorporate assisted regeneration and maintenance of seed trees, with more mature trees typically being selectively harvested. If trees are regenerated naturally they may be considered “wild” (CEC 2023). The primary difference between the schemes is extensive UMAs utilize species listed on NOM-059, while trees produced in Forestry Properties must be species not listed on NOM-059. Furthermore, extensive UMAs are explicitly required to incorporate conservation into their management plans (DOF 2010, 2021). This group also includes trees harvested via authorized Land-Use Change in Forested Areas (DOF 2015). As previously noted, these trees may include both species listed in NOM-059 and/or not listed in NOM-059 (Escamilla, in litt.). Furthermore, the trees from authorized Land-Use Change in Forested Areas may have been growing in forested areas not originally intended for harvest and were, therefore, unmanaged (and wild).

Group Three: this group includes trees harvested from small-scale production on non-forestry lands. This involves small numbers of trees (generally fewer than 15) taken from land not specifically designated for forestry purposes, via permits for Subsistence-Use or Harvesting on Land Other than Forest Land. Tree production is secondary to other land-uses such as agriculture or livestock production. These trees may or may not have originally been planted for eventual harvest (CEC 2023). Harvesting of these trees is permitted on a one-time basis. The distinguishing factor between the schemes is whether or not the species in question is listed on NOM-059. Subsistence-Use permits are issued for species listed on NOM-059, while permits for Harvesting on Land Other than Forest Land are issued for species not listed on NOM-059 (DOF 2010, 2015, 2021).

**Table 1. Management Schemes for Mexican Timber Production**

Schemes	Techniques
<p><b>Commercial Plantations</b> (species <i>not</i> on NOM-059) <b>PIMVS</b> (species on NOM-059) <b>Intensive UMAs</b> (species on NOM-059)</p>	<ul style="list-style-type: none"> <li>• <i>Monoculture planting</i>: planting a single tree species in a plantation to optimize growth and yield; <u>or</u> <i>Polyculture planting</i>: diversifying the tree species in a plantation to enhance biodiversity, reduce pests and diseases, and improve overall forest resilience</li> <li>• <i>Even spacing</i>: planting trees at regular intervals in rows and columns</li> <li>• <i>High-density planting</i>: planting trees at higher densities than their natural spacing to maximize timber production within a limited area</li> <li>• <i>Even-aged management</i>: creating stands with trees of similar age and size to simplify harvesting</li> <li>• <i>Selective pruning</i>: removing specific branches chosen to encourage development of high-quality timber</li> <li>• <i>Clear-cutting</i>: the complete removal of all trees within a designated area during harvest</li> <li>• <i>Thinning</i>: selectively removing certain trees to create more space and resources for the remaining trees to grow and develop</li> <li>• Intensive UMAs also use <i>Eco-production forestry</i>: integrating ecological and production goals in forest management to optimize ecological functions <i>and</i> timber production</li> </ul>
<p><b>Extensive UMAs</b> (species on NOM-059) <b>Forestry Properties</b> (species <i>not</i> on NOM-059)</p>	<ul style="list-style-type: none"> <li>• <i>Multiple species’ cultivation</i>: provided only native species are utilized.</li> <li>• <i>Natural spacing and low-density planting</i>: planting trees with spacing and density that emulates a natural forest structure</li> </ul>

<p><b>Land-Use Change in Forested Areas</b> (species both on and <i>not</i> on NOM-059)</p>	<ul style="list-style-type: none"> <li>• <i>Uneven-aged management</i>: trees of various ages in the same forest stand, ensuring a continuous supply of timber a diverse forest structure</li> <li>• <i>Assisted regeneration</i>: planting or assisting the establishment of desired tree species after harvesting to ensure adequate regeneration</li> <li>• <i>Seed tree system</i>: retention of a number of mature, healthy trees during harvest to produce seed for natural regeneration</li> <li>• <i>Selection system</i>: individual or small groups of trees are selectively harvested in rotation, maintaining an uneven-aged forest structure</li> <li>• <i>Single-tree selection</i>: harvesting individual trees across the forest based on individual tree characteristics, such as health, size, and timber quality.</li> <li>• <i>Thinning</i></li> <li>• Extensive UMAs also use <i>Eco-production Forestry</i></li> </ul>
<p><b>Subsistence-Use</b> (species on NOM-059)  <b>Harvesting on Land Other than Forest Land</b> (species <i>not</i> on NOM-059)</p>	<ul style="list-style-type: none"> <li>• <i>Silvopastoral systems</i>: integrating tree planting with livestock grazing to improve overall land productivity and sustainability</li> <li>• <i>Agroforestry</i>: combining forestry with agricultural practices, such as planting trees alongside crops or livestock, to enhance overall productivity and sustainability</li> <li>• <i>Woodlot management</i>: managing small, privately-owned forested areas (woodlots) for timber production</li> <li>• <i>Urban forestry management</i>: managing trees and green spaces within urban areas to enhance urban biodiversity, air quality, and overall livability</li> <li>• <i>Integrated livestock management</i>: integrating livestock grazing within the plantation to manage undergrowth and improve nutrient cycling</li> </ul>

## Designation of CITES Source Codes

### *Artificial Propagation (source code “A”)*

Resolution Conf. 11.11 (Rev. CoP18) defines “artificially propagated” plants as those grown under controlled conditions, from seeds, cuttings, divisions, tissues, spores, or other propagules either exempt from the provisions of CITES or derived from cultivated parental stock. “Controlled conditions” refer to “a non-natural environment intensively manipulated for plant production”. This manipulation may include potting or bedding operations, protection from weather, tillage, fertilization, pest control, irrigation, etc. Furthermore, plants grown from cuttings or divisions are only considered artificially propagated if no part was collected from the wild. Similarly, grafted plants are deemed to be artificially propagated only if both the rootstock and grafted portion were sourced from artificially propagated specimens.

In addition, Resolution Conf. 10.13 (Rev. CoP18) states timber and other parts of trees grown in monospecific plantations should be considered as being artificially propagated in accordance with the definition provided in Resolution Conf. 11.11 (Rev. CoP18). It is worth noting that this text does not explicitly state multi-species plantations cannot be considered as being artificially propagated. However, it appears to be commonly held among the Parties that trees from plantations with more than one species should not be considered artificially propagated (CITES 2021; Hitziger, pers. comm.). At the time of writing, debates about mixed-plantations were ongoing within CITES (López, in. litt.).

### *Wild (source code “W”)*

The CITES Parties have not established a definition for “wild” specimens of trees. Prior to the creation of source code Y there was no need. Source code “A” was defined and if a specimen did not meet the

definition it was considered wild (Hitziger, pers. comm.). Now, however, in order to be designated as source code “Y,” a specimen must not meet both the definition of artificially propagated and of wild. The lack of a definition for “wild” was discussed during the July 2023 Oaxaca Workshop on Implementing CITES Source Code Y. The workshop participants decided that planted trees would fit the definitions of artificially propagated or assisted production and would not be considered wild. However, trees grown from naturally dispersed seeds would not always meet the definition of wild. “Natural” does not necessarily imply “wild.”<sup>4</sup> Human-disturbed locations, such as farmland or roadsides, would not seem to fit the intended definition of “wild.” Human-disturbed areas would constitute outdoor habitat created by a degree of human intervention and would better fit the definition of “assisted production” as being “derived from plants grown in an environment with some level of human intervention.” For the purposes of the workshop, therefore, the participants established the following working definition for specimens taken from the wild: *trees growing from naturally dispersed seeds in natural, intact ecosystems*. This definition has been adopted for this report.

#### *Assisted Production (source code “Y”)*

Resolution Conf. 11.11 (Rev. CoP18) defines assisted production as the propagation of plants that do not meet the definition of artificially propagated but are not considered to be wild because they are grown with some degree of human intervention. The material used for propagation may be derived from different sources, including species not listed in the Appendices of CITES, they were artificially propagated, and they were grown with some human intervention or were collected sustainably from wild populations.

#### *Source code designation*

There is considerable overlap between the definitions provided in CITES Resolution Conf.11.11 (Rev. CoP18) for artificial propagation vs assisted production. An important distinction between the two is that artificially propagated plants must be grown under “controlled conditions.” As noted, “controlled conditions” is defined as “a non-natural environment intensively manipulated by human intervention for the purpose of plant production.” Unfortunately, the term “intensively manipulated” is not defined. The definitions of “artificially propagated” and “assisted production” are subjective, and the list of activities associated with artificial propagation are not prescriptive.

The management techniques used to produce trees on Commercial Plantations, intensive UMAs, and PIMVS meet the definition of artificial propagation (Source Code “A”) provided in Resolution Conf. 11.11 (Rev. CoP18). Resolution Conf. 10.13 (Rev. CoP18) states the timber and other parts of trees grown in monospecific plantations should be considered as being artificially propagated in accordance with the definition provided in Resolution Conf. 11.11 (Rev. CoP18). It is worth noting that this text does not state that multi-species plantations cannot be considered as artificially propagated. However, it seems to be commonly held among the Parties that trees from plantations with more than one species should not be considered artificially propagated (CITES 2021b; Hitziger, pers. comm.). At the time of writing, debates about mixed-plantations were ongoing within CITES (López, in. litt.). Nonetheless, the participants at the

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<sup>4</sup> One would generally conclude that outdoor habitat would be considered “natural,” but not necessarily “wild.” For example, a well-tended flower garden would be natural, but not a wild environment.

Oaxaca workshop decided to accept the definition of “artificially propagated” as applying only to monoculture plantations.

If that definition is accepted, then the CITES source code attributed to wood from trees grown in Commercial Plantations, intensive UMAs and PIMVS will depend on whether the trees were cultivated as monocultures or polycultures. Wood from monocultures would be designated with source code “A” while wood from polycultures would be designated with source code “Y” (Table 5).

The participants also defined specimens taken from the wild as applying to trees growing from naturally dispersed seeds in natural, intact ecosystems, while trees planted in natural settings would have received “assisted production.” This definition has been adopted for this report.

The differentiation of wood from trees produced under natural conditions as source code “W” or “Y” based on whether or not they were planted or naturally regenerated is an arbitrary, but valid and appropriate approach. However, planted and naturally seeded trees are typically grown and managed together. When the trees are eventually harvested, any records of which trees are which will likely be unavailable. Furthermore, the logs and wood products derived from these trees would also be mixed during milling and sorting. Following the precautionary principle, if it cannot be determined whether wood from trees produced under natural conditions came from naturally regenerated or planted trees, then the source should be designated as wild (“W”).

Under these circumstances, exports of wood from extensive UMAs, Forestry Properties or via Land-Use Change in Forested Areas assigned source code “Y” will be rare.

A less arbitrary issue is the source of the propagules used in cultivating trees. As noted, to be considered artificially propagated, trees must have been grown from propagules (seeds) exempt from the provisions of CITES or derived from cultivated parental stock. At the time of this writing, the seeds and pollen of all timber species listed on CITES Appendix II and exported from Mexico are explicitly exempt from the provisions of CITES (see Annex A). The source of the seeds used for cultivating these species is, therefore, not a consideration when determining CITES source codes.

The key considerations when determining the source of wood from CITES-listed species of trees may be summarized as follows:

- Whether trees artificially propagated under controlled conditions were managed as a monoculture or as a polyculture, both scenarios can be identified in the following schemes: Commercial Plantations, Intensive UMA and PIMVS (Table 2).
- Whether trees harvested from forested areas were “artificially planted” or “naturally regenerated” (Table 3).<sup>5</sup> If “unknown,” the trees should be considered wild. These scenarios can be found in the schemes: extensive UMA, forest properties, and Land Use Change in Forest Areas.

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<sup>5</sup> Naturally regenerated refers to the propagation of a tree from natural seeding, sprouting, or suckering.



- Trees with one-time harvest permits that can be issued for “Subsistence-Use” or “Harvesting on Land Other than Forest Land” would be considered as produced via assisted production (Table 4).

**Table 2. CITES Source Codes for Trees Artificially Propagated Under Controlled Conditions in Mexico**

Mexican management Schemes	Description of different scenarios	Source code
<b>Commercial Plantations</b> (species <i>not</i> on NOM-059)	Trees grown as a <i>monoculture</i> (single species) under controlled conditions in a non-natural environment that is intensively manipulated	A
	Trees grown as a <i>polyculture</i> (two or more species) under controlled conditions in a non-natural environment that is intensively manipulated	Y
<b>PIMVS</b> (species on NOM-059)	Trees grown as a <i>monoculture</i> (single species) under controlled conditions in a non-natural environment that is intensively manipulated	A
	Trees grown as a <i>polyculture</i> (two or more species) under controlled conditions in a non-natural environment that is intensively manipulated	Y
<b>Intensive UMAs</b> (species on NOM-059)	Trees grown as a <i>monoculture</i> (single species) under controlled conditions in a non-natural environment that is intensively manipulated	A
	Trees grown as a <i>polyculture</i> (two or more species) under controlled conditions in a non-natural environment that is intensively manipulated	Y

Legend: artificially propagated (A); produced via assisted production (Y); wild (W).

**Table 3. CITES Source Codes for Trees Produced Under Natural Conditions in Mexico**

<b>Extensive UMAs</b> (species on NOM-059)	Naturally regenerated trees harvested from wild ecosystems or where the source (wild or planted) is unknown	W
	Trees artificially planted (by humans) and harvested from wild ecosystems	Y
<b>Forestry Properties</b> (species <i>not</i> on NOM-059)	Trees naturally regenerated and harvested from wild ecosystems	W
	Trees artificially planted (by humans) and harvested from wild ecosystems	Y
<b>Land-Use Change in Forested Areas</b> (species listed and <i>not</i> listed on NOM-059)	Trees naturally regenerated and harvested from wild ecosystems	W
	Trees artificially planted (by humans) and harvested from wild ecosystems	Y

Legend: artificially propagated (A); produced via assisted production (Y); wild (W).

**Table 4. CITES Source Codes for Trees Harvested from Small-Scale Production on Non-Forestry Designated Lands in Mexico**

<b>Subsistence-Use</b> (species on NOM-059)	Small volumes of trees growing in non-wild areas on lands not designated for commercial forestry and subject to a one-time harvest	Y
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<b>Harvesting on Land Other than Forest Land</b> (species <i>not</i> on NOM-059)	Small volumes of trees growing in non-wild areas on lands not designated for commercial forestry and subjected to a one-time harvest	Y
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Legend: artificially propagated (A); produced via assisted production (Y); wild (W).

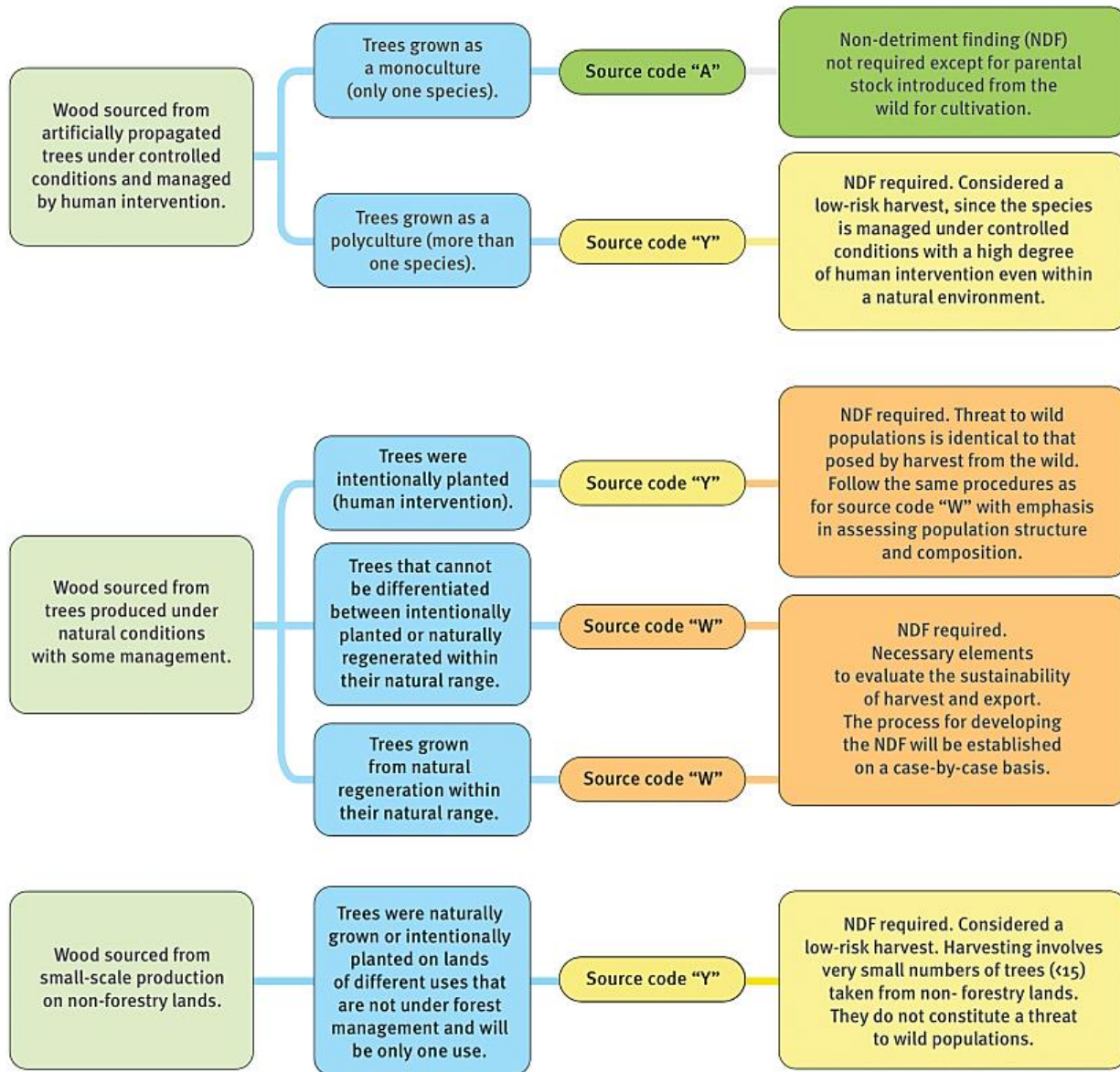
# Guidance

## Summary

The decision-making process for designating CITES source codes and providing guidance on the type of NDFs for wood produced in Mexico is illustrated in Figure 1. Detailed discussions for each management group can be found below in the relevant sections of this document, listed under the following headings:

- Trees artificially propagated under controlled conditions.
- Trees produced under natural conditions.
- Trees harvested from small-scale production on non-forestry lands.

Figure 1. Designation of CITES Source Codes W, Y and A and Non-detriment Findings requirement.



  Wood source     
   Form of growth and development     
   NDF not required  
  NDF required, Low-risk harvest     
   NDF complete required

## Trees Artificially Propagated under Controlled Conditions

### Administration schemes

This group encompasses trees produced on Commercial Plantations, intensive UMAs, and PIMVS. These schemes employ artificial propagation methods to cultivate tree species for commercial harvest.<sup>6</sup> Intensive UMAs and PIMVS utilize species listed on NOM-059, whereas Commercial Plantations do not. Intensive UMAs must incorporate a conservation component into their management plans, whereas Commercial Plantations and PIMVS are established exclusively for commercial purposes.

### Management

These schemes are characterized by plots of densely planted, evenly-spaced, and same-aged trees. Typically, these plantations are created from previously agricultural land. Essentially, the trees are produced as an agricultural crop. All existing vegetation, except for pre-existing trees, is removed before planting the trees in rows. Pre-existing trees on the land must be left in place and may not be felled to plant new trees. The trees are then maintained until they reach a suitable size for harvest. These plots may consist of single- or multi-species plantings. Characteristic management practices include the following:

- **Uniform spacing:** Trees are planted at regular intervals in rows and columns.
- **High-density planting:** Trees are planted in higher densities than would be their natural spacing in order to maximize wood production within a limited area.
- **Uniform age management:** Stands consist of trees of similar age and size to simplify harvesting.
- **Selective pruning:** Specific branches are removed from trees to promote the development of high-quality wood.
- **Thinning of trees:** Slower-growing or defective trees are removed to provide more space for the remaining trees to grow.
- **Clear-cutting:** All trees within a designated area are completely removed during harvesting.
- **Biodiversity conservation criteria:** These are practices for conserving biodiversity (intensive UMAs).

### Species

Of the six species of North American timber-producing trees listed on the Appendices of CITES and exported from Mexico, four are known to be produced on plots administered under these schemes (Table 5). *Cedrela odorata* and *S. macrophylla* are widely grown and commercially valuable species. Both grow relatively quickly (especially *C. odorata*) and produce wood that is in high demand. Wood from *D. granadillo* and *D. retusa* is in high demand and is very valuable. However, these species are very slow growing, taking 80 to 100 years to mature. No *D. granadillo* or *D. retusa* were planted prior to 2005, and none of these plantation trees may be expected to reach a harvestable size for many years. *Dalbergia retusa* is not native to Mexico and will only be found in artificial situations.

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<sup>6</sup> The different management schemes referenced are discussed in the *Background* of this report.

**Table 5. Source Codes for CITES-listed Tree Species Grown Under Controlled Conditions in Mexico**

Administration	Management	<i>C. odorata</i>	<i>D. granadillo</i>	<i>D. retusa</i>	<i>S. macrophylla</i>
Commercial Plantations	Monoculture	-	-	-	A
	Polyculture	-	-	Y	Y
PIMVS	Monoculture	A	-	-	-
	Polyculture	Y	[Y]	-	-
Intensive UMAs	Monoculture	A	-	-	-
	Polyculture	Y	[Y]	-	-

Legend: Artificially propagated (A); produced via assisted production (Y). At least one plantation has been planted with *D. granadillo*, but it is not readily apparent whether those trees are being managed as an UMA or PIMVS. Hence the source codes for these species are presented in square brackets.

### NDF guidance for trees artificially propagated under controlled conditions

Trade in artificially propagated plants requires the completion of an NDF for the acquisition of the original founder stock harvested from the wild except for any wild material introduced to ensure the genetic viability of the parental stock. An NDF is not technically required for exports of the artificially propagated offspring per Article VII(5) of the Convention (CITES 1973, 2021). As noted, the founder stock (seeds) for trees produced in Commercial Plantations, intensive UMAs and PIMVS are exempt from CITES. Hence, CITES export permits, allowing wood to be exported from monoculture Commercial Plantations or intensive UMAs and PIMVS, may be issued without an NDF and a simple positive evaluation may be made that will allow the trade to proceed.

For wood from Commercial Plantations, intensive UMAs and PIMVS, the difference between monocultures or polycultures is insignificant when it comes to conservation. Both monocultures and polycultures are managed similarly in Mexico and the designation of source codes “A” for one and “Y” for the other has no real significance. Trade in wood from either source will not have a detrimental impact on the survival of wild populations. For exports of wood designated with source code “Y” from polyculture Commercial Plantations, intensive UMAs, and PIMVS, a simple NDF may be issued.

## Trees Produced under Natural Conditions

### Administration schemes

This group includes trees produced on extensive UMAs, Forestry Properties, or via authorized Land-Use Change in Forested Areas. These schemes use both natural and artificial propagation methods and are characterized by natural spacing, low-density planting, and uneven-aged management.<sup>7</sup> Trees are produced as a natural forest. Extensive UMAs utilize species listed on NOM-059, whereas Forestry Properties do not, and extensive UMAs must incorporate a conservation component into their management plans. Hypothetically, any forested land could be appropriated by the government via authorized Land-Use Change in Forested Areas. Trees harvested via Land-Use Change in Forested Areas may have been growing in areas not originally intended for harvest and were, therefore, unmanaged (and wild). Land-Use Change in Forested Areas may involve species both listed and not listed on NOM-059.

<sup>7</sup> The different management schemes referenced here are discussed in the *Background* of this report.

## Management

These schemes are characterized by plots of naturally forested areas in which trees may have been planted or naturally regenerated. Frequently, natural and planted trees are mixed. Characteristic management practices include the following:

- **Multiple species’ cultivation:** Under the condition that only native species are utilized
- **Assisted regeneration and reforestation efforts:** Planting or aiding the establishment of desired tree species after harvesting to ensure proper regeneration and a healthy forest ecosystem
- **Uneven age management:** Trees of various ages in the same forest stand, ensuring a continuous wood supply and maintaining a diverse forest structure
- **Seed tree system:** Retaining several mature, healthy trees to produce seeds for natural regeneration, and harvesting the remaining trees
- **Individual and group selection system:** Selectively harvesting individual trees or small groups of trees throughout the rotation, in order to maintain an uneven-aged forest structure
- **Thinning of trees:** Selectively removing certain trees, creating more space and resources to enable the remaining trees to grow and develop
- **Biodiversity conservation criteria:** practices for conserving biodiversity (extensive UMAs)

## Species

Five of the six species of the North American CITES-listed timber-producing trees exported from Mexico could be produced on plots administered as extensive UMAs and under Forestry Properties, or harvested via Land-Use Change in Forested Areas (Table 6). The sole exception is *Dalbergia retusa*, which is not native to Mexico. Wild specimens of *D. retusa* would therefore not be growing in these areas, and non-native species may not be planted in forested areas. As noted, *C. odorata* and *S. macrophylla* are widely grown and commercially valuable species, and both planted, and naturally regenerated trees may be found in the same plots. It is unclear whether *D. congestiflora* or *D. granadillo* have been planted in any extensive UMAs. If they have been, the available information suggests their planting would have occurred after 2004. Any planted *Dalbergia* would not reach a harvestable size for many years. However, naturally regenerated (wild) *D. congestiflora* and *D. granadillo* are sometimes harvested from extensive UMAs.

**Table 6. Source Codes for CITES-listed Tree Species Grown Under Natural Conditions in Mexico**

Schemes	Management	<i>C. odorata</i>	<i>D. congestiflora</i>	<i>D. granadillo</i>	<i>G. sanctum</i>	<i>S. macrophylla</i>
Extensive UMAs	Naturally regenerated	W	W	W	W	-
	Planted	Y	[Y]	[Y]	-	-
Forestry Properties	Naturally regenerated	-	-	-	-	W
	Planted	-	-	-	-	Y
Land-Use Change in Forested Areas	Naturally regenerated	W	W	W	W	W

	Planted	Y	[Y]	[Y]	-	Y
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Legend: artificially propagated (A); produced via assisted production (Y); wild (W). If source codes are in square brackets this indicates it is unclear whether the designation applies to the situation. For example, it is not certain whether *D. congestiflora* or *D. granadillo* have been planted in any extensive UMAs. If so, the wood from those trees would be designated with source code Y. If it is not known whether wood came from naturally regenerated or planted trees, or if wood from naturally regenerated and planted trees may be mixed, then the source should be designated as wild (W).

## NDF guidance for trees produced under natural conditions

Most exports of wood from trees produced under natural conditions will be designated as source code “W” and a full NDF will be required.

Even if the trees grown under natural conditions were planted, the intent [in their planting] was to create a natural (e.g., wild) forest. Thus, the impact of their harvest on the survival of the species and on ecosystem services would be virtually identical to the impact of harvesting wild trees. For the purposes of the development of NDFs in Mexico this involves the review and analysis of information from said programs/plans at the species level and under an adaptive management approach with respect to:

- Sampling design
- Abundance and population estimates
- Calculation sequences and use of algorithms/conversion factors
- Re-estimation of calculations/comparison with reference data
- Field data structure and data behavior
- Generation of maps for: establishment of management area, visualization of sample sites, habitat/vegetation/topography characteristics
- Population analysis and implications (ecological, abundance/density/volume, productivity, regeneration/population increase, etc.)
- Compliance with technical aspects of national laws and standards
- Analysis and re-estimation of the harvest rate, the contrast with the state of the population and, if necessary, the proposal of a new sustainable harvest rate
- As the NDFs<sup>8</sup> are specific to each species, it is necessary to carry out pre-harvest evaluations and assessments and establish management that adjusts to the biological needs of each species and social context.

The only significant difference between an NDF for source code “Y” vs source code “W” is the need to consider whether the composition and structure of the harvested forest matched the original composition of the original primary forest. The original forest structure may not be available, but newer Management Plans, Forest Management Programs and annual reports list both the current composition and the composition of the previous harvest cycles (CEC 2023; Venegas, pers. comm.). Valid information indicating the structure of the harvested forest deviated significantly from that of the previous cycle and or the natural (wild) composition may impact the results of the NDF.

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<sup>8</sup> As noted earlier, in Mexico, the term is the DENP, the *Dictamen de Extracción no Perjudicial*.



The composition and structure of the harvested forest may be reviewed in the information provided in the Management Plan, the Forest Management Program, and in annual reports. In order to compare the previous and current composition of species, stand densities and forest structures to evaluate whether silvicultural management practices have favorably impacted species or groups of species, the Scientific Authority could incorporate the following in composing its NDF (Navarro, Noguez, & Venegas, in litt.):

- Consult periodic reports on volumes of wood removed and actions to promote natural regeneration and reforestation.
- Identify reforested areas, the species employed in the reforestation, the surface area, the number of trees, and their survival rates.
- Analyze the spatial organization of trees through the forest inventory, considering the variation, dimension, and location of individual specimens.
- Examine the distribution of trees by height categories (vertical structure) and basal area (horizontal structure), using available forest inventory data.
- Assess the proportion of CITES-listed species compared to other species present and identify plant associations after harvesting (taxonomic composition).
- Calculate the Importance Value Index to determine ecological importance in different species  $IVI (%) = 1/3 (\text{relative BA} + \text{relative density} + \text{relative frequency})$ .<sup>9</sup> If applicable, compare the parameters obtained with those of previous cutting cycles.

In cases where the information is limited, the Scientific Authority should collaborate with the relevant Semarnat office to compile the required information (Venegas, in litt.). The following resources may be consulted to assist with the completion of NDFs for wood sourced from trees produced under natural conditions:

- CITES webpage on Non-Detriment Findings (periodically updated): <https://cites.org/eng/prog/ndf/index.php>
- Conabio (2021). *Manual de procedimientos para emitir consideraciones técnicas por especie para la formulación de Dictámenes de Extracción No Perjudicial (NDF): Caoba (Swietenia macrophylla)*. Mexico City. 21 pp.
- Conabio (2021). *Manual de procedimientos para emitir consideraciones técnicas por especie para la formulación de Dictámenes de Extracción No Perjudicial (NDF): Guayacán (Guaiacum sanctum)*. Mexico City. 19 pp.
- Conabio (2021). *Manual de procedimientos para emitir consideraciones técnicas por especie para la formulación de Dictámenes de Extracción No Perjudicial (NDF): Palo de rosa (Dalbergia spp.)*. Mexico City. 20 pp.
- Conabio (2019). *Guía informativa para el manejo y aprovechamiento sustentable de caoba en el marco de las disposiciones de la CITES*. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad. Ciudad de México
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<sup>9</sup> Relative BA is the relative basal area of the particular species of interest at breast height divided by the total basal area of all individuals in the plot. See the bulleted sources above, or, for example:

<[https://www.davidzeleny.net/wiki/doku.php/vegsurvey:materials:how\\_to\\_calculate\\_ivi](https://www.davidzeleny.net/wiki/doku.php/vegsurvey:materials:how_to_calculate_ivi)>

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## Trees Harvested from Small-scale Production on Non-Forestry Designated Lands

### Administration schemes

This group consists of trees harvested via permits for Subsistence-Use or Harvesting on Land Other than Forest Land. Subsistence-Use permits are issued for harvesting species listed on NOM-059, whereas permits for Harvesting on Land Other than Forest Land apply to the take of species *not listed* on NOM-059. In these situations, tree production for forestry is secondary to other land-uses, such as agriculture or livestock production, and the harvested trees may not have been originally planted for eventual harvest.<sup>10</sup> These permits allow for the one-time harvest of small numbers of trees (generally fewer than 15).

### Management

These schemes are characterized by a one-time harvest of small numbers of trees from plots of land not designated for forestry. Characteristic management includes the following:

- **Silvopastoral Systems:** Integrating tree planting with livestock grazing to enhance overall land productivity and promote sustainability
- **Agroforestry:** Combining forestry with agricultural practices, such as planting trees alongside crops or livestock, to improve overall productivity and sustainability
- **Small Woodlot Management:** Managing small forested areas (woodlots)
- **Urban Forestry Management:** The administration of trees and green spaces in urban environments to enhance urban biodiversity, air quality, and overall habitability
- **Integrated Management:** Combining livestock grazing within the plantation to control weeds and improve the ecosystem's nutrient cycle.

### Species

These schemes apply to the harvest and export of *C. odorata* and *S. macrophylla* from Mexico. *Dalbergia* and *Guaiacum* grow too slowly for practical management on the relevant lands and circumstances. At the time of writing, *C. odorata* was listed on NOM-059 and, therefore, a one-time harvest of the species could be conducted via a Subsistence-Use permit. *Swietenia macrophylla* was not listed on NON-059 and its harvest could be permitted under the terms of Harvesting on Land Other than Forest Land. In both cases, the wood produced via these schemes would be designated as source code “Y.”

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<sup>10</sup> The different management schemes referenced are discussed in the *Background* of this report.

## NDF guidance for trees harvested from small-scale production on non-forestry lands

Harvesting trees via permits for Subsistence-Use or Harvesting on Land Other than Forest Land involves the take of very small numbers of trees from non-forested (human disturbed) lands on a one-time only basis. A detrimental impact on the survival of wild populations will be insignificant. For exports of wood taken via Subsistence-Use or Harvesting on Land Other than Forest Land and designated with source code "Y," a simple positive NDF may be issued.

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## Personal Communications

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- María Angelica Navarro Martínez, *Investigadora titular, Colegio de la Frontera Sur*. Discussions during the July 2023 Workshop on Implementing CITES Source Code Y; email correspondence comments in October 2023.
- Martin Otto Hitziger, Associate Scientific Support Officer, CITES Secretariat, email correspondence in July 2023; discussions during the July 2023 Workshop on Implementing CITES Source Code Y.
- Paola Mosig Reidi, Co-lead of Data, Research and Enforcement Support, TRAFFIC. Personal communication via Zoom, 31 January 2023.
- Sergio Madrid, *Director en Consejo Civil Mexicano para la Silvicultura Sostenible, Mexico*. Personal communication via phone, 25 March 2023.

## Annex A: CITES Appendix II–Timber-Producing Tree Species Found in Mexico

The relevant annotations are listed below the table. Species reported in the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) CITES Trade Database to have been exported in the years 2015–2019 are shown in **bold** text.

Family	Species	Annotation	
Fabaceae	<i>Dalbergia brownei</i>	#15	
	<i>D. calderonii</i>		
	<i>D. calycina</i>		
	<b><i>D. congestiflora</i></b>		
	<i>D. cubilquitzensis</i>		
	<i>D. cuscatlanica</i>		
	<i>D. ecastaphyllum</i>		
	<i>D. glabra</i>		
	<i>D. glomerata</i>		
	<b><i>D. granadillo</i></b>		
	<i>D. longepedunculata</i>		
	<i>D. luteola</i>		
	<i>D. melanocardium</i>		
	<i>D. mexicana</i>		
	<i>D. modesta</i>		
	<i>D. monetaria</i>		
	<i>D. palo-escrito</i>		
	<i>D. paucifoliolata</i>		
	<b><i>D. retusa</i></b> <sup>†</sup>		
<i>D. rhachiflexa</i>			
<i>D. ruddiae</i>			
<i>D. stevensonii</i>			
<i>D. tilarana</i>			
<i>D. tucurensis</i>			
Meliaceae	<i>Cedrela angustifolia</i>	#6	
	<i>C. discolor</i>		
	<i>C. dugesii</i>		
	<i>C. oaxacensis</i>		
	<b><i>C. odorata</i></b>		
	<i>C. salvadorensis</i>		
	<i>C. tonduzii</i>		
	<i>Swietenia humilis</i>		#4
	<b><i>S. macrophylla</i></b>		#6
Zygophyllaceae	<i>Guaiacum angustifolium</i>	#2	
	<i>G. coulteri</i>		
	<b><i>G. sanctum</i></b>		
	<i>G. unijugum</i>		

<sup>†</sup> UNEP-WCMC notes *Dalbergia retusa* was introduced to Mexico. In 2020, Mexico notified the CITES Plants Committee that *D. retusa* was not native to the country and wood previously exported as *D. retusa* had actually been *D. granadillo* (CITES 2020b). Sources: (CITES 2023) (UNEP 2022a, 2022b, 2022c, 2023a, 2023b).

## Annex B. Mexican Legislation and Regulations

### General Law of Ecological Equilibrium and Environmental Protection

The General Law of Ecological Equilibrium and Environmental Protection (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*—LGEEPA) establishes the national environmental policy for the preservation and restoration of ecological balance and protection of the environment. The law establishes a general framework for addressing a wide range of environmental matters, including forestry (DOF, 1988).

### General Wildlife Law

The General Wildlife Law (*Ley General de Vida Silvestre*—LGVS) implements CITES in Mexico and dictates that importing, exporting, and re-exporting specimens of species listed in the Appendices of CITES must comply with the requirements of the Convention. The LGVS establishes national policy for wildlife protection and programs for the sustainable exploitation of wildlife. Furthermore, the LGVS also defines the following risk categories for Mexican at-risk species and populations (DOF 2021):

- Endangered (P): species whose survival is threatened by drastic declines in population, distribution and/or habitat loss or disruption.
- Threatened (A): species which may be in danger of extinction in the short or medium term if the threats to their survival are not reduced.
- Subject to special protection (Pr): potentially threatened species for which special efforts are required to secure and promote their conservation.

Species assessed as being at-risk and their category of risk (under the Risk Assessment Method) are listed in NOM-059-SEMARNAT-2010 (NOM-059) (see [Official Mexican Standards](#) below).

A key component of the LGVS is the establishment of Management Units for the Conservation of Wildlife (*Unidades de Manejo para la Conservación de la Vida Silvestre*—UMAs).<sup>11</sup> UMAs are properties and facilities operating under a management plan approved by the General Directorate for Wildlife (*Dirección General de Vida Silvestre*—DGVS) for the sustainable use of native species (DOF 2021). UMAs may be established under any land tenure regime. Their overarching objective is to conserve wild species and their natural habitat (DOF 2021).

The key elements of a Management Plan include: specific objectives and indicators, biological information of the managed species, sampling methods, management measures for habitat, populations and specimens and harvesting methods, among others.

The regulations of the General Wildlife Law establishes that annual reports from UMA must provide an assessment of the effects of the harvesting over populations and habitat, including achievements regarding objectives/indicators, the results of harvesting activities, among others.

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<sup>11</sup> Originally described as the *Unidades de Manejo y Aprovechamiento* (UMAs). The text was eventually changed to *Unidades de Manejo para la Conservación de la Vida Silvestre*, but the original acronym has continued to be used.

Any harvesting request in UMA must include population studies, sampling, inventories and other information from the monitoring report, as well as evidence that the harvest levels/rates are less than the natural renovation capacity of wild populations and that no negative effects will be inflicted on the populations.

The LGVS also establishes the option for Premises and Facilities that Manage Wildlife in confinement, outside their natural habitat (*Predios e Instalaciones que Manejan Vida Silvestre en forma confinada, fuera de su hábitat natural*—PIMVS). These are properties or facilities reproducing wildlife under artificial conditions for commercial purposes. Unlike UMAs, they do not necessarily include the establishment of designated units or areas or have the purpose of conserving wild species or populations and habitat.

Individuals may also obtain Subsistence Use permits (*Autorización de aprovechamiento para fines de subsistencia*) which allow for the one-time harvest of small numbers of tree species listed on NOM-059 from private lands (Venegas and Escamilla, pers. comm). This would include trees not grown expressly for commercial harvest such as those growing in backyards on grazing lands or alongside agricultural land. See also the [General Law on the Development of Sustainable Forestry](#) below for information on other permits for utilizing wood from tree species not listed on NOM-059.

## Regulations of the General Wildlife Law

The LGVS is enabled and implemented via the Regulations of the General Wildlife Law (*Reglamento de la Ley General de Vida Silvestre*—RLGVS). The import, export, and re-export of specimens of CITES-listed species are subject to the provisions of CITES, as per Article 56 of the RLGVS.

The RLGVS also establishes two types of UMA: extensive UMAs and intensive UMAs (RLGVS 2006):

- An extensive UMA (*Unidad de Manejo para la Conservación de la Vida Silvestre Extensiva*) manages the conservation and sustainable exploitation of wildlife in their natural habitats. The goal is to ensure the activities conducted within the UMA do not significantly affect the ecological dynamics or endanger the long-term survival of the species concerned.
- An intensive UMA (*Unidad de Manejo para la Conservación de la Vida Silvestre Intensiva*) focuses on breeding or propagating wildlife species in a controlled environment. The goals are to increase the population of the species concerned and facilitate their commercial production. This may be accomplished to support conservation breeding programs, research, or for commercial purposes, such as farming or the pet trade. The difference between an intensive UMA and a PIMVS is that an UMA management plan must incorporate actions aimed at the conservation of wild of species or populations and habitat; however, a PIMVS management plan does not require that component (Garcia 2018).

## General Law on Sustainable Forestry Development

The General Law on Sustainable Forestry Development (*Ley General de Desarrollo Forestal Sustentable*—LGDFS) regulates article 27 of the Mexican Constitution to promote the integral and sustainable management of forest territories (DOF 2015). The objective of this law is to conserve and restore natural heritage and contribute to the social, economic, and environmental development of the country through integral management of forest resources. This is to be accomplished by (DOF 2015):

- Promoting forestry, management, and sustainable use of forest resources.



- Promoting the use of environmental goods and services while protecting and increasing forest ecosystem biodiversity.
- Promoting actions in the forestry sector to comply with international treaties to which the Mexican State is a Party.

The LGDFS requires applications to use timber forest resources in a Forestry Property (*Predio Forestal*) to be accompanied by an approved Forest Management Program (*Programa de Manejo Forestal*).<sup>12</sup> This requirement, per the LGEEPA, applies to the tropical forests larger than 20 hectares, protected natural areas, and exploitation of forest species that do not regenerate easily (DOF 2015). Timber resources grown on commercial forestry plantations (*Plantaciones Forestales*) are also regulated by the LGDFS.

A Forest Management Program outlines the strategies and guidelines for the responsible and sustainable use of forest resources within a specific area. The goals of a Forest Management Program are to ensure the conservation of forest ecosystems, maintain biodiversity, and promote the long-term viability of forest resources while allowing for the extraction of forest products. The key elements of a Forest Management Program include a forest inventory; sampling size estimations; abundance and population information; monitoring methods and analysis; estimation of harvest rates; management; harvesting and reforestation strategies; measures to conserve biodiversity, protect habitats and mitigate negative environmental impacts; and a plan to monitor the implementation of the management activities and assess their impacts. In addition, permits for “Harvesting on Land Other than Forest Land” (*Aprovechamiento en terrenos diversos a los forestales*) may be acquired (Venegas and Escamilla, pers. comm.). This allows for the one-time harvest of small volumes of tree species not listed on NOM-059 that are grown on non-forestry lands such as in backyards, on grazing lands, or alongside agricultural land.

Permits may also be issued to utilize wood from authorized “Land-Use Change in Forested Areas” (*Cambio de Uso de Suelo en Terrenos Forestales*). This involves harvesting trees and completely removing the original vegetation from areas designated for new communication routes, development projects, or similar projects (Escamilla, pers. comm.). Land-Use Change in Forested Areas may be applied to any species—whether listed in NOM-059 or not so listed—but applies only to forested lands. If the land was originally used for agriculture, livestock, or other purposes, the trees would be harvested via permits for Subsistence-Use (for species listed on NOM-059) or “Harvesting on Land Other than Forest Land” (*Aprovechamiento en terrenos diversos a los forestales*) (for species not listed on NOM-059) (Escamilla, in litt.). See also [General Wildlife Law](#).

The LGDFS is enabled via the Regulation of the General Law of Sustainable Forest Development (*Reglamento de la Ley General de Desarrollo Forestal Sustentable—RLGDFS*). This regulation establishes the general content of management programs for the use of timber forest resources (DOF 2020), as described above.

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<sup>12</sup> A “*Predio Forestal*” is a forestry property or forest land. It is an area of land that is primarily used for the cultivation, conservation, and sustainable management of forests and their resources. These properties may be privately owned, owned by communities, or managed by governmental agencies.

## Official Mexican Standards

### NOM-059-SEMARNAT-2010 (NOM-059)

The NOM-059 is linked to the LGVS. It defines the concept of species at risk and establishes the criteria for reviewing the conservation status of native Mexican species of animals and plants. The NOM-059 categorizes the species at risk (DOF 2010). The harvest of plant species listed on NOM-059 is permitted only via the UMA and PIMVS frameworks.

**Annotations:** The following text is been quoted verbatim from the CITES Appendices of August 2022 (CITES 2023).

#2 All parts and derivatives except:

- a) seeds and pollen; and
- b) finished products packaged and ready for retail trade.

#4 All parts and derivatives, except:

- a) seeds (including seedpods of *Orchidaceae*), spores and pollen (including pollinia). The exemption does not apply to seeds from *Cactaceae* spp. exported from Mexico, and to seeds from *Beccariophoenix madagascariensis* and *Dypsis decaryi* exported from Madagascar;
- b) seedling or tissue cultures obtained in vitro, in solid or liquid media, transported in sterile containers;
- c) cut flowers of artificially propagated plants;
- d) fruits, and parts and derivatives thereof, of naturalized or artificially propagated plants of the genus *Vanilla* (*Orchidaceae*) and of the family *Cactaceae*;
- e) stems, flowers, and parts and derivatives thereof, of naturalized or artificially propagated plants of the genera *Opuntia* subgenus *Opuntia* and *Selenicereus*;
- f) finished products of *Aloe ferox* and *Euphorbia antisyphilitica* packaged and ready for retail trade.

#5 Logs, sawn wood and veneer sheets.

#6 Logs, sawn wood, veneer sheets and plywood.

#15 All parts and derivatives, except:

- a) Leaves, flowers, pollen, fruits, and seeds;
- b) Finished products to a maximum weight of wood of the listed species of up to 10 kg per shipment;
- c) Finished musical instruments, finished musical instrument parts and finished musical instrument accessories;
- d) Parts and derivatives of *Dalbergia cochinchinensis*, which are covered by Annotation #4; and
- e) Parts and derivatives of *Dalbergia* spp. originating and exported from Mexico, which are covered by Annotation #6.