BIG-LEAF MAHOGANY (*SWIETENIA MACROPHYLLA*) IN PERU, BOLIVIA AND BRAZIL

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The debate over bigleaf mahogany's commercial and conservation status across its neotropical range has dominated CITES deliberations over timber species since the early 1990s. A proposal to uplist mahogany from Appendix III to Appendix II was finally adopted at CoP12 (Santiago); the listing went into effect on 15 November 2003.

Mahogany's natural range stretches from Mexico at 23° N of the equator down the Central American Atlantic coastal strip into South America, continuing in a broad southeasterly arc from Venezuela through the Colombian, Ecuadorian, Peruvian, Bolivian, and Brazilian Amazon regions to points as far south as 18° S. Its historic range covers an estimated 238 million hectares in Peru, Bolivia, and Brazil. Mahogany is generally associated with seasonally dry tropical forests. It is an emergent tree growing to great height (45 m) and diameter (2.5 m), occurring at low landscape-scale densities, with large wind-dispersed seeds, light-demanding seedlings and saplings, and relatively fast diameter and height growth rates under ideal (high light, rich soil) conditions.

Several international meetings and workshops have been held since mahogany's inclusion in CITES Appendix II, with emphasis on implementation and recommendations regarding NDF. Technical recommendations for NDF were first proposed at the 2nd Mahogany Working Group held in Belém, Brazil in 2003, and elaborated further at the International Expert Workshop on NDF held in Cancún, Mexico in 2007. Guidelines for NDF from these and other working meetings are available at the CITES webpage (www.cites.org).

In **Peru**, national export quotas for mahogany have been set since 2005, but this process has been considered weak due to poor verification of timber stocks from inventories and to the overestimation of sawn timber yield per tree. Data from the on-going project 'UNALM-ITTO PD 251/03' is being used to develop NDF procedures for mahogany based on parameters such as population size within commercial concessions and forest areas of native communities, population size-class distributions and estimated production volumes, and the rate of defective or hollow trees. Based

on preliminary data from permanent production areas, the Peruvian Scientific Authority considers mahogany's population status in some regions to be too low for commercial exploitation and recommends limits or bans on harvests coupled with restoration programs. The main issues for providing NDF continue to be related to the lack of information on mahogany distribution, stocks, ecology and regeneration. As well, authorities lack the capacity and resources to monitor and control harvests and commercialization, and transparency, communications and information systems need to be improved.

Bolivia has not yet defined NDF procedures for mahogany because information upon which these should be based remains lacking. However, recent research results from the Long-term Silvicultural Research Project established in La Chonta provide information useful for NDF. Results from simulation models constructed to assess different harvesting scenarios indicate that mahogany could be sustainably harvested if the minimum diameter cutting limit is at least 70 cm diameter, if cutting cycles are longer than 25 years, if harvest intensity is reduced to 50% of commercial-sized trees, and if silvicultural treatments such as liana cutting and liberation from competing trees are applied to create and maintain optimal growing conditions throughout the cutting cycle. Although significant advances have been made towards developing a sustainable model for mahogany harvests and therefore towards NDF, the question of how mahogany regeneration can be promoted requires further examination.

In **Brazil**, management guidelines for mahogany are broadly consistent with current understanding of best practices for the species, and controls on new management plans are stringent. In the absence of clear NDF procedures for timber species, Brazil has relied on recommendations from a series of Mahogany Working Group meetings within IBAMA and the Ministry of the Environment (MMA). Outputs from these meetings were incorporated into Instrução Normativa N°. 07 (2003) which regulates mahogany harvests. Industrial timber producers wishing to harvest mahogany must submit management plans to IBAMA. If proposed activities are broadly compatible with forest regulations, IBAMA solicits further review – including on-site verification – from a Technical-Scientific Committee composed of foresters and ecologists with specialized knowledge of mahogany. The final licensing decision rests with IBAMA. Since 2003 only one management plan including mahogany has been approved for harvest in Brazil. The Brazilian government additionally directly or indirectly supports on-going applied research on mahogany ecology, genetics, and management through projects in Acre, Amazonas, and Pará. While research results have contributed to public policy on management and conservation of mahogany, the main challenge will be to update guidelines as more information regarding sustainable management comes available.