

ITTO-CITES PROGRAM FOR IMPLEMENTING CITES LISTINGS OF TROPICAL TIMBER SPECIES

NEWSLETTER



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This is the ninth issue of the **ITTO – CITES Program for Implementing CITES Listings of Tropical Timber Species newsletter**. It is published on a quarterly basis, in English, Spanish and French, and is mainly made available to our African, Asian and Latin American colleagues, sponsors and other individuals interested in the progress of the ITTO-CITES Program. This issue covers a summary of program activities during the period January – March 2011.

This is the final issue of this newsletter for the first phase of the ITTO – CITES programme which has been operational for over three years. Readers can continue checking the ITTO website to learn about programme progress and outputs.

EDITORIAL

It gives us great pleasure to write the editorial for what will be the final issue of this newsletter during the current phase of the ITTO-CITES program. The newsletter has chronicled the implementation of our groundbreaking joint program since its inception more than three years ago. ITTO and CITES have had a productive partnership that is a model for international collaboration for many years. As detailed in these pages over the past three years, this program has served to both solidify this important partnership and to build capacity in range States to implement CITES regulations for listed tree species in the tropics.

With increasing international attention on forests during the current International Year of the Forest and next year's Rio+20 summit, it is important that the international community can show the world that progress is being made on bringing tropical forests under sustainable management and thereby helping to conserve their precious biological and genetic diversity. The ITTO-CITES program is one concrete example of what our two important international organizations have achieved in this regard, with the generous support of the donor community (most notably the EU) and the full commitment and involvement of range States.

ITTO and CITES have been gratified by the overwhelming interest in this program shown by target countries and the continuing commitment of donors to support it. Our staff are currently working with donors and range States (including through the program Advisory Committee) to develop a proposal for funding that should allow ITTO and CITES to extend the kind of assistance offered during the first phase of the program to a wider range of countries and threatened tree species. Both the ITTO Council (which recently adopted a Decision calling for establishment of a multi-donor trust fund to facilitate on-going funding for the program) and the CITES Conference of the Parties (which recently adopted a resolution welcoming and endorsing the further strengthening of ITTO-CITES collaboration) have repeatedly endorsed and encouraged our joint work, which we have every intention of continuing. We therefore look forward to publishing a follow-up editorial in the successor to this newsletter once the second phase of this important program begins implementation.

Emmanuel ZeMeka, Executive Director, ITTO
John Scanlon, Secretary General, CITES

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ITTO-CITES PROGRAM IN A NUTSHELL

The "ITTO – CITES Program for Implementing CITES Listings of Tropical Timber Species" aims to ensure that international trade in CITES-listed tropical timber species is consistent with their sustainable management and conservation. The specific objective of the program is to assist national authorities to meet scientific, administrative and legal requirements for managing and regulating trade in *Pericopsis elata* (afrorosia) of Central Africa, *Swietenia macrophylla* (bigleaf mahogany) in Latin America, and *Gonystylus spp.* (ramin) in SE Asia and, in particular, to develop guidance to ensure that utilization is not detrimental to the survival of these CITES-listed tropical timber species.

The main range States exporting significant volumes of these species are Cameroon, Republic of Congo and Democratic Republic of Congo in Africa; Indonesia and Malaysia in Asia; and Bolivia, Brazil and Peru in Latin America.

The direct beneficiaries of this Program are public authorities and private sector operators in the timber sector in the range States. The indirect beneficiaries are other Parties to CITES that trade in these species, who will benefit through capacity building and awareness raising.

FUNDING

The program has received funding from the European Commission, United States of America, Japan, Norway, New Zealand, Switzerland, Germany, the private sector and through ITTO's Bali Partnership Fund.

The European Commission provided a grant worth 2.4 million euros for program implementation, with over USD 1,200,000 provided from the other donors in aggregate to date. ITTO will encourage donors to continue providing funds as requests for support under the program exceed available resources. A recent development has been the provision of funds (over USD 300,000) from several pharmaceutical companies to improve management and produce an NDF report for *Prunus africana* in Cameroon and DRC. Norway also recently provided funding to the program to assist Madagascar with assessing timber species of conservation concern. The USA provided an additional USD 200,000 to the program during the 46th ITTC Session in December 2010. ITTO and CITES have prepared a follow-up grant proposal which has been submitted to the European Commission to seek significant new funding for the program to continue operating beyond 2011.

AGREEMENTS BETWEEN ITTO AND INSTITUTIONS OF RANGE STATES

50 country activity proposals in Africa (7), Asia (23) and Latin America (20) have been submitted to ITTO for consideration under the Program. Of these, 13 activities in Asia, 6 in Africa and 6 in Latin America have received funding from ITTO since 2008. Most activities are now completed except for one on-going in each of Indonesia, Malaysia, Peru, Brazil, DRC and Cameroon. All of these are now in the process of wrapping up activities and preparing final reports.

SIGNED MOUs

Brazil

FUNPEA (Foundation for Supporting Research, Extension and Teaching in Agrarian Sciences) – 2 activities

IFT (Tropical Forest Institute)/J. Grogan – 1 Activity plus extension

Bolivia

Vice Ministry of Environment, Biodiversity and Climate Change – 1 activity

Peru

UNALM (Universidad Nacional Agraria La Molina) – 2 activities

Cameroon

ANAFOR (Agence Nationale d'Appui au Développement des Forêts) – 3 activities

Democratic Republic of Congo

Direction des Ressources Fauniques et Chasse /CITES RDC – 2 activities

Republic of Congo

MINFE (Ministère de l'Economie Forestière) – 1 activity

ICCN (Institut Congolais pour la Conservation de la Nature)/CITES RDC - 1 activity

Indonesia

Government of Indonesia and the Forestry Research and Development Agency (**FORDA**) - 5 Activities (2 Activities by the Centre for Forest and Nature Conservation Research and Development (**CFNCRD**); 1 Activity by the Remote Sensing Laboratory, Faculty of Forestry, Bogor Agricultural University; 1 Activity by the Research Centre for Biology, Indonesian Institute of Sciences; and, with the Directorate General Forest Protection and Nature Conservation - 1 Activity by the Directorate of Biodiversity Conservation.

Malaysia

Ministry of Natural Resources and Environment Malaysia (**NRE**) and the Malaysian Forestry Research and Development Board - 8 Activities (2 Activities implemented by the Forest Department Sarawak and Sarawak Forestry Corporation; 3 Activities by the Forestry Department Peninsular Malaysia; 2

Information about each country activity (country, title, abstract, executing agency) can be found on the ITTO website <www.itto.int>. The following section provides brief descriptions and progress reports during the period January-March 2011 for all activities that are currently underway and completed. Activities pending funding will be reviewed in the second quarter of 2011 with a view to making the most effective use of new program resources when they materialize.

ACTIVITIES IN DETAIL

Africa

Cameroon

"Management of *Pericopsis elata* in forest concessions" (ANAFOR)

This activity was proposed to collect data on the state of *Pericopsis elata* in the forest concessions in Cameroon, including data on phenology, processing, status and stocking, and to promote the silviculture of the species. The key outputs are: i) The distribution area of *Pericopsis elata* is 5 339 023 ha, larger than 4 855 738 ha outlined in the literature; ii) Minimum Exploitable Diameters (MED) proposed: 80 cm, 90 cm, or 100 cm; the best diameter is 90 cm, considering the precautionary principle; iii) if adopted by the Cameroon government, MED 90 cm will produce an exploitable volume of 1 791 646 m³ and an annual possibility of 59 722 m³ of assamela in production forests; iv) the assamela processing rate of logs to sawnwood is 0.4242 instead of 0.33 as often used by the Cameroon CITES Management Authority. This processing rate leads to an export quota of 14 400 m³ at MED 100 cm instead of 15 200 m³ and 25 334.07 m³ at MED 90 cm; v) in December 2009, ANAFOR, the CITES Scientific Authority drafted the first Non-detriment findings (NDF) report on assamela; vi) on 15th June 2010, the Minister of Forestry and Wildlife signed a decision N° 0511/D/MINFOR/SG/DF/BSJ, reducing the minimum exploitable diameter (MED) of *P. elata* from 100 cm to 90 cm. With this decision, the annual quota of assamela in Cameroon will be 25 334.07 m³; vii) a total of 15 490 seedlings were sown in 9 nurseries in 11 forest management units (FMU) belonging to 5 forest companies; and, viii) timber companies have enriched their forests with assamela seedlings. The problem now is to develop standards for planting those seedlings in manner to ensure their survival. Cameroon Government has submitted a new proposal to ITTO to tackle that problem.

"Management of *Pericopsis elata* in forest plantations" (ANAFOR)

This activity addresses the management of *Pericopsis elata*'s plantations in Cameroon to determine the important tools for enhancing silviculture of this plant species in the country. The key outputs are: i) The results of studies were compiled in a training book on the silviculture of *P. elata*. This book was used in the field training from 3 - 4 March 2010, at Ngola; ii) simple management plan of the Bidou forest plantation is available; iii) a two days training workshop was organised in Bidou in August 2010. A total of 35 villagers and local forest officers were trained on the silviculture of assamela, including the nursery stock production. During the workshop a total of 700 seedlings of assamela were distributed to the surrounding villagers; iv) The Bidou plantation was cleaned in August 2010, including cutting (removing) about 30% of assamela trees as recommended in the simple management plan. Cameroon Government is still looking to additional funds to fully meet the guidelines of the simple management plan of the Bidou forest plantation.

"Non-detriment findings for *Prunus africana* (Hook. f.) Kalman in Cameroon" (ANAFOR)

This activity will produce a Non-detriment findings report for *Prunus africana* in Cameroon. The outputs are: (i) A well-established information base on production, processing, transport and trade on *P. africana* products; (ii) Delimitation of Prunus Allocation Units (PAUs) and estimated abundance/density of Prunus as well as scientifically calculated sustainable harvest quota; (iii) simple management plans elaborated and implemented for each

PAU; (iv) silvicultural operations promoted; (v) CITES authorities' capacity-building enforced and control system enhanced; (vi) research on relevant topics related to the sustainable management of *P. africana* in Cameroon; (vii) a Non-detriment findings report finalized for *P. africana*; and (viii) dissemination of project results through publications.

The Non-detriment findings report on *Prunus africana* was made available for the Northwest region of Cameroon in October 2010, containing data on distribution area, density and quota per community forest. The 2010 quota of Prunus dried bark in the northwest was estimated at 180 tons. Cameroon MA has requested the quota of 150 tons of dried bark of wild Prunus for the Northwest region for the year 2010. This quota is supposed to increase in 2011 with the inclusion of the domestic Prunus. The Minister of Forestry and Wildlife has signed the letter that notifies the beginning of harvesting *Prunus africana* barks in the Northwest region.

The Non-detriment findings report on *Prunus africana* is available for the Southwest region since 25 March 2011, containing data on distribution area, density and quota (quantity of dried barks to be harvested) per forest. Two categories of quota are defined for the southwest region: the quota for Prunus found outside the Mount Cameroon National Park, and the quota for Prunus found inside the Mount Cameroon Park. Prunus quotas will be defined for the last region of Adamaoua by April 2011.

Democratic Republic of Congo

"Training of different stakeholders in the verification of the CITES permits compliance and the use of 'CITESWOOD ID' tool in the Democratic Republic of Congo" (OCC/OFIDA)

This activity refers to the national training workshop held in Kinshasa, Gombe in June 2009 on the use of CITES tools. The goal was to contribute to the control of international trade in *Pericopsis elata* through the training of field inspectors. A total of 40 participants attended this workshop.

The second training workshop on CITES tools was organized in DRC from 22 - 24 December 2010 in Matadi. The goal of the second training workshop was to train participants on the use of "CITESWOOD ID" tool, in response to the recommendation made by ITTO's monitor in December 2009. This activity has been concluded and the report is now available on the program website .

"Dissemination of the CITES convention and its implementation texts within the distribution area of *Pericopsis elata* (Afromosia/Assamela) in the Democratic Republic of Congo" (DRFC)

This activity aimed to disseminate the CITES and its implementation tools. The key outputs are: DRC authorities organized three workshops as planned: 1) First on 3 - 5 February 2010, in Kinshasa Gombé; 2) The second on 11 - 12 August 2010, in Kisangani; and 3) the third on 17 - 18 August 2010, in Matadi; the participants were from the Congolese control office (OCC), the Congolese Customs Office (OFIDA), forest officers, transporters and trade/timber companies.

Recommendations were made to better implement the CITES in DRC, including: i) the contents of the CITES; ii) Memorandum of Understanding (MOU) between the Ministry of Environment, Nature Conservation and Tourism, the OCC and OFIDA; iii) the effective implementation of CITES in DRC (Ministerial Order n° 056/CAB/MIN/AFF-ECNPF/01/00 of 28 March 2000). Compared to the wildlife sector, DRC has not made progress for conserving flora species. Participants of the workshops suggested to develop an updated list of threatened plant species in DRC.

Major constraints for the CITES regulations implementation in DRC are establishing/enforcing quotas, inclusion of species in the CITES Appendix, difficulty in operating at the border due to the insecurity, difficulty in the control and monitoring due to the lack of logistics, and the lack of statistics based on data provided in the permits.

Participants to the workshop formulated the following recommendations: (1) enforce the MOU between the environment administration and the OCC and OFIDA by transforming the text (Ministerial Order n° 056/CAB/MIN/AFF-ECNPF/01/00) to an inter-ministerial Order, which is MOU between three administrations: trade, finances, and environment; (2) enforce the conservation of *Diospyros crassiflora* and *Millettia laurentii* by including these two species in the appendix 4 of the Ministerial Order n° 056/CAB/MIN/AFF-ECNPF/01/00 of 28 March 2000); (3) ensure security of inspectors posted at different checkpoints (ports, airports); (4) use dry seal to better safeguard the certificate of origin; (5) update the Ministerial Order fixing the forest taxes; (6) develop database on logging, processing, transportation and trade statistics; (7) provide adequate materials and logistics for control, data collection and analysis; (8) mobilize funds for identifying flora species which can be included in appendixes 4 and 5 of the Ministerial Order n° 056/CAB/MIN/AFF-ECNPF/01/00.

"Non-detriment findings for *Prunus africana* (Hook.f.) Kalman in North and South Kivu, Democratic Republic of Congo" (ICCN)

This activity seeks to assist the DRC's CITES Scientific Authority (SA) to provide a Non-detriment findings report for *Prunus africana* in the North and South provinces of Kivu and to draft a report for the CITES Secretariat addressing all recommendations directed to DRC by the Plants Committee in the context of the Review of Significant Trade (STR). This will lead to a request for CITES to consider lifting the current suspension on exports of *Prunus africana* from DRC based on the scientific data generated with the implementation of this project. The two provinces of Kivu are target areas since it is established that they host the most important reserve of *P. africana* in DRC. The expected outputs are (i) A well-established information base on production, processing, transport and trade on *P. africana* products, (ii) Delimitation of *Prunus* forests, and estimated abundance/density of *Prunus* as well as scientifically calculated sustainable harvest quota, (iii) for each *Prunus* forest, a simple management plans elaborated and implemented, (iv) silvicultural operations promoted, (v) capacities building for CITES authorities (management and scientific) enforced and control system enhanced, (vi) well-developed research focus for relevant topics related to the sustainable management of *P. africana* in DRC, (vii) the ban on DRC's *Prunus* is lifted and a Non-detriment findings report finalized with *P. africana's* quota defined for the two Kivus, (viii) results from project activity disseminated through various publications

Republic of Congo

"Assessment of Afrormosia in a production forest to ensure its sustainable management in Congo-Brazzaville" (MINFE)

This activity aims to ensure that the exportation of products from afrormosia by the Industrial and Forestry Society of Congo (SIFCO) is not detrimental to the conservation of that plant species in the Tala-Tala forest management unit (FMU), 621 000 ha, based in the northern Congo. Key outputs are: i) Report on the state of-exploitation, processing, trade, and control on *Pericopsis elata*; ii) Report analysing the gaps between the CITES and the national policy; iii) Report on biological and ecological research on *P. elata*; iv) inventory and the simple management plan on *P. elata*.

The main findings include: i) 80% of 75 000 ha of the Tala Tala FMU has been exploited by the former timber company (SOCALIB) and the

current company (SIFCO); ii) afrormosia is not threatened in the Tala Tala forest, the average density being 0.22 stems/ha; iii) afrormosia with diameter over 60 cm Minimum Exploitable Diameter (MED) were cut by the two companies; iv) forest loggers did not safeguard mother trees to ensure the regeneration of afrormosia; v) forest canopy gaps stimulated regeneration of afrormosia in the Tala Tala FMU; vi) the influence of light tends to be more effective on young stems of afrormosia than on adult trees; vii) MED 60 cm cannot allow regeneration of afrormosia in the Average Annual Volume (AAV) 2009 – 2010 attributed to SIFCO; viii) SIFCO should plant afrormosia in the study block as a useful tool for regeneration in this forest; ix) the authorities of the SIFCO signed a service note increasing MED of *P. elata* from 60 to 70 cm, as recommended by the ITTO - CITES program.

The national workshop for the validation of studies was held on March 26, 2011 in Brazzaville. A total of 21 participants from the forest administration, the ministry of scientific research and higher education, the research institutions, and national NGOs attended that workshop. The NDF report was validated and the Congo's CITES management authority will send it soon to the CITES Secretariat.



National workshop for the validation of the non detriment findings report on *Pericopsis elata* (Afrormosia) in Congo, Brazzaville, 26 March 2011. Photo by: Banzouzi Jean Claude

Asia

Malaysia

All the 5 Activities in Malaysia that were approved by ITTO in October 2008 have been successfully completed in October 2010 where many technical and completion reports have been published. They are as follows:

"Non-detriment findings report on *Gonystylus bancanus* – a quantitative assessment of *G. bancanus* in two selected permanent forests of Sarawak" (FDS/SFC)

The objective of the Activity to collect data on the status and stocking of *G. bancanus* in the production forests of Sarawak, namely, the Kayangeran Forest Reserve in Lawas and the Saribas Lupar Protected Forest in Sri Aman, had been achieved where 2 reports were produced. They are (i) Non-detriment Findings Report on *Gonystylus bancanus* - A Quantitative Assessment of *G. bancanus* in two selected Permanent Forests of Sarawak; and (ii) Completion Report - Non-detriment Findings Report on *Gonystylus bancanus* - A Quantitative Assessment of *G. bancanus* in two selected Permanent Forests of Sarawak.

"Quantification of dry and wet inland *Gonystylus* spp. (ramin), *Aquilaria* spp. (agarwood) and *Intsia* spp. (merbau) in Peninsular Malaysia" (FDPM)

The 2 objectives of the Activity to: (i) collect information on the distribution, status and stocking of dry and wet inland *Gonystylus* spp., *Aquilaria* spp. and *Intsia* spp.; and (ii) establish 10 permanent sample plots to monitor the growth, mortality and recruitment of *Gonystylus* spp. have been achieved where 2 reports were produced. They are: (i) a technical report on the Quantification of Dry and Wet Inland *Gonystylus* spp. (Ramin), *Aquilaria* spp. (Agarwood) and *Intsia* spp. (Merbau) in Peninsular Malaysia; and (ii) Completion Report - The Quantification of Dry and Wet Inland *Gonystylus* spp. (Ramin), *Aquilaria* spp. (Agarwood) and *Intsia* spp. (Merbau) in Peninsular Malaysia.

"Generation of spatial distribution maps of *Gonystylus bancanus* (ramin) using hyperspectral technology and determination of sustainable level of harvest of ramin in production forests of Peninsular Malaysia" (FRIM)

The 2 objectives of the Activity to: (i) generate spatial distribution maps through the use of hyperspectral technology and non-spatial information of ramin; and (ii) determine the sustainable level of harvest for ramin in production forests of Peninsular Malaysia had been achieved. A total of 11 technical papers and reports were published, namely, (i) Generation of Spatial Distribution Maps of *Gonystylus bancanus* (Ramin) using Hyperspectral Technology; (ii) Population Dynamics and Optimum Harvest of *Gonystylus bancanus* in Production Forests of Peninsular Malaysia; (iii) Ecological Characteristics of a *Gonystylus bancanus*-rich Area in Pekan Forest Reserve, Pahang, Malaysia; (iv) Ecological and Management Status of Ramin (*Gonystylus* spp.) in Malaysia; (v) Generation of Spatial Distribution Maps of *Gonystylus bancanus* (Ramin) using Hyperspectral Technology and Determination of Sustainable Level of harvest of Ramin in Production Forests; (vi) Development of Local Volume Table (LVT) for Peat Swamp in Pekan Forest Reserve, Pahang with special reference to *Gonystylus bancanus* (*Ramin melawis*); (vii) Phenological Behaviours of *Gonystylus bancanus* (Miq.) Kurz in Pekan Forest Reserve, Pahang, Peninsular Malaysia; (viii) *Gonystylus bancanus* – Jewel of Peat Swamp Forest; (ix) Optimum Harvesting Regime of Peat Swamp Forest in Peninsular Malaysia; (x) High Resolution Airborne Hyperspectral Data for Mapping of Ramin (*Gonystylus bancanus*) Distribution in Peat Swamp Forest; and (xi) Completion Report - Generation of Spatial Distribution Maps of *Gonystylus bancanus* (Ramin) using Hyperspectral Technology and Determination of Sustainable Level of Harvest of Ramin in Production Forests of Peninsular Malaysia. In addition, 3 reports on the training involving: (i) the use of GER 1500 Spectroradiometer and demonstration of High Precision GPS; (ii) processing of hyperspectral and Lidar data for mapping of forest tree in particular the *Gonystylus bancanus*; and (iii) the use of GPS for tree mapping in the forest were also produced.

"The development of *Gonystylus* spp. (ramin) timber monitoring system using radio frequency identification (RFID) in Peninsular Malaysia" (FDPM)

The 2 objectives of the Activity to: (i) develop a customized cost-effective *Gonystylus* spp. timber monitoring system using radio frequency identification (RFID); and (ii) develop an automated detection and notification mechanism for tracing non-compliances using customized cost-effective handheld data logger in Peninsular Malaysia had been achieved. A total of 2 reports and a manual were produced: (i) a technical report on the Development of *Gonystylus* spp. (Ramin) Timber Monitoring System Using Radio Frequency Identification (RFID) in Peninsular Malaysia; (ii) User Manual for Handheld Application; and (iii) Completion Report - The Development of *Gonystylus* spp. (Ramin) Timber Monitoring System Using Radio Frequency Identification (RFID) in Peninsular Malaysia.

"Developing DNA database for *Gonystylus bancanus* in Sarawak" (FDS/ SFC/ FRIM)

The 2 objectives of the Activity to: (i) study the genetic variation and differentiation of *G. bancanus* population in Sarawak; and (ii) develop a DNA database for *G. bancanus* to enhance efforts in tracing and tracking of *G. bancanus* timber have been achieved. A total of 2 publications were produced: (i) the Development of DNA Database for *Gonystylus bancanus* in Sarawak; and (ii) Completion Report - Development of DNA Database for *Gonystylus bancanus* in Sarawak.

Of the 3 Malaysian Activities approved in June 2010, two of the Activities involving holding workshops had been completed in December 2010 while the other Activity involving a study on the recovery of ramin sawn timber and plywood in Peninsular Malaysia would be completed in April 2011. In brief they are as follows:

Three Additional Project Activities Started in Malaysia During 2010

"Sawn Timber and Plywood Recovery Study of Ramin (*Gonystylus bancanus*) in Peninsular Malaysia" (FDPM/ MNRE)

The 2 objectives of the Activity to: (i) determine the recovery rate of ramin logs for the manufacture of sawn timber and plywood; and (iii) develop a technique for quantifying wood waste from sawmilling and in plywood production are currently being implemented by the Faculty of Forestry, University Putra Malaysia that was appointed to implement the Activity. Data from a number of sawmills producing ramin timber have since been collected, while historical data on plywood production using ramin logs have also been examined. All the data have been analyzed and a total of 2 reports will be produced: (i) Sawn Timber and Plywood Recovery Study of Ramin (*Gonystylus bancanus*) in Peninsular Malaysia; and (ii) Completion Report - Sawn Timber and Plywood Recovery Study of Ramin (*Gonystylus bancanus*) in Peninsular Malaysia

"National Workshop on Enforcement Compliance for Trade in Ramin (*Gonystylus* species)" (MTIB/MPIC)

The 4 objectives of the national Workshop to: (i) understand the CITES Convention and its trade enforcement mechanism and implementation related to ramin; (ii) develop common understanding and practices related to trade control for ramin and related timber/plant species listed under CITES; (iii) establish effective communication channel and networking within the enforcement agencies in Malaysia directly or indirectly involved in ramin trade; and (iv) establish a mechanism to coordinate effective implementation of CITES regulation in Malaysia has been achieved through a 3-day national Workshop that was successfully held in Kuala Lumpur, Malaysia from 8-10 December 2010 where a total of 42 participants attended. Two reports are currently being finalized for publication by May 2011: (i) a Proceeding of the national Workshop; and (ii) a Completion Report on the Activity.

"Regional Workshop on the Sharing of Findings from the Activities Implemented in Indonesia and Malaysia under the ITTO-CITES Project on Ensuring International Trade in CITES-listed Timber species is Consistent with their Sustainable Management and Conservation" (FRIM/MNRE)

The 3 objectives of the regional Workshop to: (i) share, learn and discuss the findings of each Activity implemented in Indonesia and Malaysia under the ITTO-CITES Project; (ii) identify and adapt relevant findings from the Indonesian Activities by Malaysia and vice versa; and (iii) identify potential projects and activities to further ensure that the international trade in ramin is consistent with their

sustainable management and conservation has been achieved through a 4-day regional Workshop that was successfully held in Kuantan, Pahang, Malaysia from 1-4 December 2010. A total of 61 participants attended which included 11 officers from Indonesia who were involved in implementing the 5 Activities in Indonesia. Two reports are currently being finalized for publication by May 2011: (i) a Proceeding of the regional Workshop; and (ii) a Completion Report on the Activity.

Indonesia

All the 4 Indonesian Activities approved in November 2008 have been successfully completed in August 2010 with the publication of all the technical and completion reports. They are as follows:

"Improving inventory design to estimate growing stock of ramin (*Gonystylus bancanus*) in Indonesia" (SEAMEO/BIOTROP)

The 3 objectives of the Activity to: (i) develop an inventory design using satellite technology for estimating the standing stock of ramin, as well as the other species found growing in the peat swamp forests in Sumatra and Kalimantan; (ii) prepare guidelines for ramin inventory and Non-detriment Findings (NDF) assessment on ramin; and (iii) conduct a short training workshop on the inventory method and NDF assessment on ramin has been achieved.

A total of 11 reports were published: (i) Proceeding Technical Workshop: Review of the existing Methods and Design for Ramin Inventory in Peat Swamp Forest; (ii) Selection Methods, Provision of Satellite Images and Interpretation; (iii) Ground Check of Selected Sites; (iv) Re-evaluation of Method; (v) Relative Efficiency of Double Sampling in Peat Swamp Forest; (vi) Manual of Ramin Inventory in Peat Swamp Forest; (vii) Inventory Technique of Ramin in Peat Swamp Forest; (viii) Panduan Penilaian Non-Detrimental Finding untuk Ramin (*Gonystylus spp.*); (ix) Guideline for Non-Detrimental Finding Assessment on Ramin (*Gonystylus spp.*); (x) An Executive Summary: Improving Inventory Design to Estimate Growing Stock of Ramin (*Gonystylus bancanus*) in Indonesia; and (xi) Completion Report - Improving Inventory Design to Estimate Growing Stock of Ramin (*Gonystylus bancanus*) in Indonesia.

"Assessing silvicultural system on ramin: review on the current practice and re-vitalization of existing permanent sample plots" (CFNCRD)

The 5 objectives of the Activity to: (i) review and evaluate the silvicultural system and its practice; (ii) re-vitalize the existing permanent sample plots of ramin and the other species found growing in peat swamp forests so as to obtain a better understanding on the population dynamics, growth and yield of ramin; (iii) develop guidelines for monitoring fruiting-flowering and ramin seed handling; (iv) prepare a manual on vegetative propagation techniques; and (v) conduct a short training workshop on the manual for monitoring fruiting-flowering and ramin seed handling, as well as on vegetative propagation techniques has been achieved.

A total of 9 reports were published: (i) The Evaluation of the Silvicultural System in Peat Swamp Forest Area in Indonesia; (ii) Revised draft Silvicultural System in Peat Swamp Forest Area; (iii) Review and Evaluation of Permanent Sample Plot of Peat Swamp Forest; (iv) Design and Establishment of Ecological Observation Plot and Population Dynamic of Ramin and other species in Peat Swamp Forest in Sumatra and Kalimantan, Book 1: Main Report; (v) Design and Establishment of Ecological Observation Plot and Population Dynamic of Ramin and other species in Peat Swamp Forest in Sumatra and Kalimantan, Book II: Data base Phase I; (vi) Technical Guideline for Monitoring Flowering and Fruiting of Ramin [*Gonystylus bancanus*]; (vii) Technical Guideline for Vegetative Propagation of Ramin [*Gonystylus bancanus*]; (viii) An Executive Summary: Assessing

Silvicultural System on Ramin - Review on the Current Practice and Re-vitalization of existing Permanent Sample Plots (Silviculture, Study Plots, Seed Production and Propagation of Ramin); and (ix) Completion Report - Assessing Silvicultural System on Ramin: Review on the Current Practice and Re-vitalization of existing Permanent Sample Plots.

"Exploratory assessment on the population distribution and potential uses of non-*Gonystylus bancanus* species in Indonesia" (CFNCRD/FORDA)

The 5 objectives of the Activity to: (i) explore the current status of *Gonystylus* species (non-*G. bancanus*) in Indonesia through literature review and field survey; (ii) conduct further analyses of the genetic relationship between species and in vitro propagation of *Gonystylus* species; (iii) develop a guidebook for species identification; (iv) conduct a training workshop on species identification for field staff; and (v) undertake initial establishment of ramin gene pools at Kedaton, Ogan Komering Lir in South Sumatra and the Sebangau National Park and Tumbang Nusa Research Station, both located in Central Kalimantan has been achieved.

A total of 7 reports were published: (i) Literature review on *Gonystylus spp.* other than *Gonystylus bancanus*: Botany, Ecology and Potency; (ii) Evaluation on Species Diversity, Population, Habitat, and Regeneration Status of Selected *Gonystylus* Species [Non - *Gonystylus bancanus*]; (iii) Genetic relationship between species of *Gonystylus spp.*; (iv) Embryogenic Callus Induction Effort from Ramin Shoot; (v) Guidebook for Field Identification of Ramin species [*Gonystylus spp.*] in Indonesia; (vi) An Executive Summary: Exploratory Assessment on the Population Distribution and Potential Uses of Non-*Gonystylus bancanus* species in Indonesia (*Gonystylus spp.* [Ramin] - Population Status, Genetics and Gene Conservation); and (vii) Completion Report - Exploratory Assessment on the Population Distribution and Potential Uses of Non-*Gonystylus bancanus* species in Indonesia.

"National Workshop: Identification of Information Gaps Towards the SFM of Ramin and Thematic Programs to be Included in the 2009 and 2010 Work Program of the ITTO-CITES Project on Ensuring International Trade in CITES-listed Timber Species is Consistent with their Sustainable Management and Conservation"

The 2 objectives of the 2-day national Workshop to: (i) identify information gaps on resource base, production and trade of *G. bancanus*, including administrative and legal provisions, and other enabling conditions for achieving sustainable management of ramin; and (ii) the thematic programs to be included in the 2009 and 2010 Work Programs of Indonesia have been achieved.

Arising from the national Workshop held in Bogor, Indonesia on 21-22 January 2009 where 34 participants attended, a total of 3 reports were published. They are: (i) Prosiding Lokakarya Nasional: Identifikasi Gap Informasi Menuju Pengelolaan Hutan Ramin secara Lestari, Bogor, Indonesia, 21-22 January 2009; (ii) Information Gaps toward the Sustainable Management and Conservation of Ramin; and (iii) Completion Report - National Workshop: Identification of Information Gaps Towards the SFM of Ramin and Thematic Programs to be Included in the 2009 and 2010 Work Program of the ITTO-CITES Project on Ensuring International Trade in CITES-listed Timber Species is Consistent with their Sustainable Management and Conservation.

In addition, Indonesia also hosted the "Asian Workshop of the ITTO-CITES Project on Ensuring International Trade in CITES-listed Timber Species is Consistent with their Sustainable Management and Conservation: *Gonystylus spp.* (Ramin)" in Bogor, Indonesia on 1-2 July 2009 where a total of 35 participants attended. In this regard, 2 publications from the Workshop were produced: (i) Report: Asian Workshop of the ITTO-CITES Project on Ensuring International Trade in CITES-listed Timber Species is Consistent with their Sustainable Management and Conservation: *Gonystylus spp.* (Ramin), Bogor,

Indonesia, 1-2 July 2009; and (ii) Completion Report - Asian Workshop of the ITTO-CITES Project on Ensuring International Trade in CITES-listed Timber Species is Consistent with their Sustainable Management and Conservation: *Gonystylus spp.* (Ramin).

Additional Project Activity Started in Indonesia During 2010

The only Indonesian Activity that was approved in April 2010 - Review on Ramin Harvest and Trade: CITES Compliance, Tri-National Task Force on Trade in Ramin, Trade Control and Monitoring would be completed in April 2011. The 3 objectives of the Activity are to: (i) contribute to improved management on ramin through the formulation of a roadmap towards their sustainable management and conservation, and the implementation of CITES provisions and regulation; (ii) review the effectiveness of regional fora and mechanism in combatting illegal logging, including the work of the Tri-National Task Force on Trade in Ramin; and (iii) improve trade data collection, monitoring and trade control has been achieved.

Currently, a total of 4 technical reports covering: (i) a roadmap for sustainable management and conservation of ramin; (ii) a review on the work of the Tri-national Task Force on Trade in Ramin; (iii) a study on the strengthening of CITES trade compliance system through the dissemination of CITES rules and regulation on the listing of ramin and other plant species; and (iv) a review on trade data collection, monitoring and trade control are being finalized for publication. In this regard, a training workshop on CITES trade compliance system and a verification workshop on trade data collection, monitoring and trade control were held in late December 2010 and their respective proceedings are currently being prepared; while a Regional Workshop on the Work of the Tri-National Task Force on Trade in Ramin was held in Jakarta, Indonesia on 11 January 2011.

Latin America

Brazil

"Management of *Hypsipyla grandella* in *Swietenia macrophylla* King plantations in Pará and São Paulo States, Brazil" (UFRA/FUNPEA)

This project aimed to select a management system to control *Hypsipyla grandella* insect drill to stimulate mahogany reforestation in the states of Para and Sao Paulo in Brazil. Almost all planned activities are completed, except for activity 3.1 (Experiment in hidropony) which will end in May 2011.

The relevant results were: 1) mahogany drill control systems for the state of Para: i) mahogany plantation intercropped with *Toona ciliata* + Colacid solution; ii) mahogany intercropped with *Toona ciliata* + fertilization with Calcium and Boron + application of Colacid solution, which presented control efficiencies of 94.02% and 100%, respectively; 2) mahogany insect drill control system for the state São Paulo: i) mahogany plantation intercropped with *Toona ciliata* + Colacid solution showed efficiency of 92.36% of control; 3) Colacid spray formulation was used in the experiments of Aurora do Pará and São José do Rio Preto due to practical application, which presented efficiency similar to Colacid solution in drops; 4) construction of a lifting platform type that facilitated the silvicultural practices (pruning and application of treatments) of mahogany with 3-8m in height.

These results were presented at the XXIII Brazilian Congress of Entomology held in Natal (RN) 26 October to 30 September 2010 and at the III Taller Latino Americano del Program ITTO-CITES on 15-17 February 2011, in Brasilia. In addition, a field training for 50 people was carried out at Tramontina plantation farm on March 2, 2011, in Aurora do Pará

The results are very encouraging for the development of mahogany reforestation in the Amazon and southeastern Brazil. In this regard, the coordinators of the project suggest that the ITTO-CITES Program continue encouraging and supporting this research in Brazil in order to give continuity to this promising results, and also to take advantage of mahogany plantations at experimental level already established in the field.

"Bigleaf mahogany (*Swietenia macrophylla*) in the Brazilian Amazon: long-term studies of population dynamics and regeneration ecology towards sustainable forest management" (IFT/J. Grogan)

The objective of this applied research program is to establish a biological foundation for sustainable forest management systems for bigleaf mahogany across southern Amazonia based on long-term studies of growth, reproduction, and regeneration by natural populations in primary and logged forests. Detailed understanding of age- and size-related mortality, growth, and reproductive rates is essential for evaluating current management guidelines and adapting management practices to changing environmental and socio-economic contexts across this vast region. By annually recensusing protected natural populations and outplanted seeds and seedlings in experimental logging gaps and clearings, we can answer questions about regeneration requirements, cutting cycles, and population



Application of Colacid spray for mahogany (5m high) drill insect control, in Aurora do Pará, Brazil.
Photo by: Orlando Ohashi

dynamics under various management scenarios with increasing accuracy and precision. Under study since 1995 in southeast Pará and since 2001 in Acre, Brazil, this proposal's mahogany populations are the longest- and most intensively studied populations in Amazonia.

The 2010 field season included recensus of mahogany populations in a total area of 2750 hectares. At the Project's principal field site, Marajoara, more than 350 adult mahogany trees were recensused for survivorship, diameter growth, fruit production, and crown phenology. Several thousand naturally occurring and experimentally outplanted seedlings were also recensused for survivorship and growth. At a

second field site, Corral Redondo, 70 adult mahogany trees were recensused.

Nine journal articles and five book chapters were published or placed in press during the 12-month reporting period. Four additional journal articles remain in review or will be submitted in the coming months. A technical document intended for dissemination to forest managers in the Brazilian forest products industry will also be completed in the coming months. Finally, a growth and yield model for mahogany was developed using a freely available computer application called NetLogo 4.1. The model projects population recovery and timber production from simulated harvests of pre-selected and user-provided mahogany populations. Simulations are based on current legal management practices in Brazil and on demographic parameters derived from field studies at Marajoara. Harvest parameters can be adjusted to view population and production outcomes under alternative management scenarios. The growth and yield model is freely available as an internet download from <http://www.swietking.org/>.

In collaboration with other Projects supported by ITTO-CITES in Brazil, Bolivia, and Peru, we are optimistic that this Project's primary objective, to establish a biological foundation for sustainable natural forest management systems for mahogany, is nearing achievement. The biological facts of a long-lived timber species' life cycle, which spans many decades or even centuries, require long-term studies at secure field sites supported by patient and visionary funders in order to reveal the full range of silvicultural options available to forest managers. With continued support from ITTO-CITES, we believe this goal is attainable in the coming decade.

"Ecology and silviculture of mahogany (*Swietenia macrophylla* King) in the western Brazilian Amazon" (UFRA/FUNPEA)

The project was established at the Novo Macapa Forest Management Unit, located in the border of the Amazonas and Acre states, on the left margin of the Purus River. It is being carried out by an institutional partnership involving the Federal Rural University of the Amazon (UFRA), International Tropical Timber Organization (ITTO), Foundation for Supporting Research Extension and Teaching in Agrarian Sciences (FUNPEA) and the private company Batisflor Forestry Ltda. It started in March 2009.

The study aims at establishing silvicultural practices to enable mahogany harvesting in natural forests and to promote improvements to the current Brazilian Forest Legislation, which standardizes the preparation of forest management plans aiming the conservation of the species.

The present project can be divided in two phases: i) Phase I - the activities developed before logging, according to the management plan (pre-harvesting activities); and ii) Phase II - the activities to be developed after logging (post-harvesting activities). All activities of the Phase I were carried out, but the activities of the Phase II have not been done yet because the logging is delayed due to governmental bureaucracy and it is expected to happen in the next dry season (May to October, 2011). Partial results of the project were presented at the workshop held in Brasilia from 15 to 17 February 2011 (III Latin-American Workshop of the ITTO-CITES Program).

Bolivia

"Population density and forest harvesting impact on natural regeneration and diameter growth of mahogany (*Swietenia macrophylla*)" (MEBCC)

The Ministry of Environment and Water together with the CITES Management and Scientific Authorities of Bolivia, through IBIF, is

implementing the project whose main objective is to evaluate the current status of mahogany populations in Bolivia.

The project team has completed the fieldwork phase, with 1205 plots (20 x 100 m) established and database on mahogany in Bolivia. The results confirm that mahogany is distributed predominantly in seasonal forests in the departments of Pando, Beni, Santa Cruz and northern La Paz.

The density of the species is very low (average 0.43 trees / ha) and



Tree identified with an aluminum tag in permanent sample plots, at Novo Macapa Forest Management Unit, Acre, Brazil. Photo by: Paulo Contente

has decreased over time, similar to regeneration, which occurs only if there are seed trees. The study found individuals of different diameter, mostly below 70 cm, in all forests, except in the Amazonian region. Diameter growth estimated based on data from experimental plots in La Chonta was on average 1.01 cm/year. The comprehensive data analysis resulting from the experiments will allow to develop a strategy for monitoring and proper forest management of the species in Bolivia, which will be done by June 2011.

The results of the project implementation in Bolivia have improved knowledge on mahogany but it is necessary to study mahogany populations in protected areas, the resilience of the species against disturbances such as forest fires, the influence of climate change on the species, and to monitor the species in its natural distribution range. Finally, it is necessary to restore the species in degraded and deforested areas, and prepare non- non-detriment findings to determine the levels that allow the subsistence of the species, so that the country (Bolivia) considers very important the continuation of the ITTO -CITES Program.

Peru

"Evaluation of commercial stocks and strategy for the sustainable management of mahogany/cedar in Peru" (UNALM)

Following donor consultations at the 43rd ITTC session, additional funding of \$209,500 was provided from program funds to extend work carried out under PD 251/03 Rev.3 (F) on mahogany to *Cedrela spp.* in Peru. The Project PD 251/03 (cedar component) ended its activities in March 2009. The final report included the methodology and results obtained by the Project. The main findings are: i) the dendrological identification of tree samples of different species and the analysis of soil and organic material to provide description of cedar habitat and its accompanying species; ii) the analysis of form and volume determined the form factor for cedar at the national level, which is 0.6822, and the volume tables for this tree species; iii) A map of the probability of occurrence of *Cedrela spp* was generated and a map of current

density of cedar populations in the Peruvian Amazon. The population of cedar has been estimated between 1 million and 1,154,000 individuals in the country; 62.12% of the population is below the minimum cutting diameter (DMC) and 37.88% are commercial trees; iv) the most important factor in the destruction of cedar habitats is the land use change to other uses such as agriculture and/or livestock; v) the populations of cedar have been depleted due to road building, combined with changes to the hydrographic network and the technological changes introduced in forestry operations. However there are forest areas with *Cedrela spp* in recovery, especially in places where habitats were once destroyed. The results of the project will help the Peruvian government making non-detriment findings for cedar. The final report of this Project was presented to the ITTC at its 45th session in November 2009.

"Design, validation and adjustment of the methodology for monitoring and periodic evaluation of the plots for characterization of mahogany and cedar populations in Peru" (UNALM)

This activity began in July 2009 under the coordination of the Universidad Nacional Agraria La Molina (UNALM), and all activities ended in May 2010. The main objective was the design, validation and adjustment of the methodology for monitoring and periodic evaluation of the plots for characterization of mahogany and cedar populations in Peru; specific objectives were: i) to understand the dynamics of mahogany and cedar population recovery and the influence of related species; and, ii) to identify silvicultural parameters of cedar and mahogany to allow detailed monitoring to support making non-detrimental findings of these timber species. The key outputs are: i) Report on the analysis of various field reports and information processing to establish a baseline with updated information, proposing a methodology for monitoring cedar and mahogany population; ii) Field manual for the continuous evaluation of mahogany and cedar populations; Draft manual for supporting field verifications; iii) proposal on participatory silvicultural practices and adjusted for cedar populations recovery; and iv) report on the silvicultural criteria used in monitoring cedar and mahogany populations' recovery, adjusting the size of populations. Major changes based on the results obtained by the project are: i) the export quota for the year 2010-2011 has been proposed; the proposal to determine the quota for 2011-2012 was based on silvicultural practices; ii) the draft bill of new Forestry and Wildlife Law include silvicultural plans for some timber species in danger based on the results of the project; iii) the Ministry of Environment (MINAM) has accepted the proposal on silvicultural practices; iv) MINAM will establish a new method of setting future quotas according to forest management units, considering the possibility of concession areas; v) MINAM will establish the necessary recommendations, considering the sustainability and precautionary principle, as previously accepted by INRENA and the General Directorate of Forestry and Wildlife of MINAG; and, vi) the proposed regeneration of timber species needs yet a few steps to be fully adopted by forest users. The database on cedar and mahogany populations continues to be updated and maintained by professors of the Faculty of Forest Sciences of UNALM.

Other ITTO-CITES Program Studies

"Market Study of Cedrela odorata in Bolivia, Brazil and Peru"

The project aims at studying the market for *Cedrela odorata* focused on countries with high levels of export, that is, Bolivia, Brazil and Peru. The results were: data collection on cedar production in national and international markets; information obtained from timber industries and

export ports; production from deforestation, forest management plans and plantations; evaluation of national and international trade in Cedar.



Mahogany sawnwood at a sawmill in Peru
Photo by: Leoncio Calderon

The key change was to analyze mahogany production and export, which by its inclusion in CITES Appendix II has distorted the cedar market.

The United States and Mexico are the main market destinations for cedar and mahogany of the 3 countries. Between 2001-2008, the unmet demand for mahogany was covered in 68% by cedar in Bolivia, Brazil and Peru, increasing the price from US\$580 to US\$1.000/m³ of sawnwood between 2003-2007. Compliance with the CITES regulations is not uniform in these 3 countries and it influences the cedar market. Peru requested its inclusion in Appendix III in 2001, the government established annual export quota for mahogany export since 2004; consequently, CITES export permits require inspections at timber industries and export ports. Bolivia and Brazil have recently applied for listing cedar in CITES Appendix III, and there is no mahogany export quotas. In Brazil, export permits require an inspection at export ports, but in Bolivia that is not required.

As a result of the study, the recommendations are as follows: i) If a country requests the listing of a species (of regional distribution) in Appendix III, the cooperation of the Parties should result in the issuance of export certificates for the species; ii) in parallel to the inclusion in Appendix III, studies on population, ecology and impact on domestic and international trade should be carried out; and, iii) to promote projects at watershed levels with ITTO for better compliance with the CITES regulations.

"Support Compliance of CITES Convention in Guatemala and Peru: In-country Technical Assistance for the Development of the National Timber Yield Tables for Mahogany (Swietenia macrophylla) Standing Volume & Export Grade Sawnwood"

The major objective is to provide technical assistance to the National Council of Protected Areas - CONAP and the National Forest Institute INAB (Guatemala), to General Directorate of Forestry and Wildlife Fauna - DGFFS and Office to Monitor Forest Concessions - OSINFOR (Peru) in the participatory preparation of their national timber yield tables for mahogany, based on conversion factors statistically reliable from standing volume to export quality sawnwood.

The operational strategy is participatory and maximalist. Participatory because it works with all stakeholders and maximalist because they

used trees that would be used by forest concessionaires within the current POA, to obtain information, so that there is no need to log other trees exclusively to develop the table.

The tables will be used by the concessionaires to estimate their production volumes and negotiate ex ante the volumes obtained after timber processing. State institutions will have a tool to improve their controls and develop a better implementation of CITES Convention.

The government will develop a process of socialization and training on the use of table and it will be submitted for the approval of the Peruvian mahogany national group. The product of this project in Guatemala is the national timber yield table for Guatemala for mahogany (*Swietenia macrophylla*), according to the National Hardwood Lumber Association (NHLA). It shows that on average, the volume of sawnwood obtained from a tree is 42% of the standing log

volume, this increases to 43% if branches are included. Through this table, the volume of sawn timber that will be obtained from trees available for harvesting can be determined. In the case of Peru, the process of timber yield table development is in its finalization stage.

The participation and consensus of most of actors carrying out mahogany harvesting (*Swietenia macrophylla*) legally was the key to its commitment in implementing the project, both in terms of technical and financial support.

The participatory and maximalist strategy that allowed reaching agreement by consensus was essential in the project implementation to drastically reduce the costs. The continuation of the project is very important to Guatemala and Peru, because it would allow to expand research on timber species in CITES listings and to put in practice the progress made to date.

RECENT EVENTS

Workshop in DRC

DRC hosted the 2nd CITES training workshop on 22-24 December 2010 in Kinshasa, Gombé. The objective of the workshop was to train participants on the use of CITESWOOD ID tool.

LA Regional Workshop in Brazil

The Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) hosted the 3rd Latin America regional workshop of the ITTO-CITES Program on ensuring international trade in CITES-listed timber species is consistent with their Sustainable Management and Conservation, on February 15-17, 2011, in Brasília, Brazil. The objective of the workshop was to share results and experiences from the Activities implemented under the ITTO-CITES Program in the range States in Latin America, Bolivia, Brazil and Peru. A total of 55 participants attended the workshop.

UPCOMING EVENTS

Workshop in Belém, Brazil

A seminar on forest legislation, forest plantation, mahogany forest management, and control of *Hypsipyla grandella* in the Brazilian Amazon is planned to be held in Belém with a field-day in the Project study area on 25-26 May, 2011. The objective is to evaluate the impacts of current legislation and the New Forest Code on investments in reforestation and commercialization of native and exotic species, with emphasis on mahogany, and dissemination of Partial Results of Research Projects regarding mahogany (*Swietenia macrophylla* King), funded by the ITTO-CITES Program in the Brazilian Amazon.

CITES Plants Committee Meeting

The Nineteenth Meeting of the CITES Plants Committee will take place from 18-21 April 2011, in Geneva, Switzerland. Amongst relevant topics on timber issues, progress report of the Working Group on the Bigleaf Mahogany and Other Neotropical Timber Species [Decisions 15.91, 15.92 and 14.146 (Rev. CoP15)] and progress report on the joint CITES-ITTO Program will be discussed.



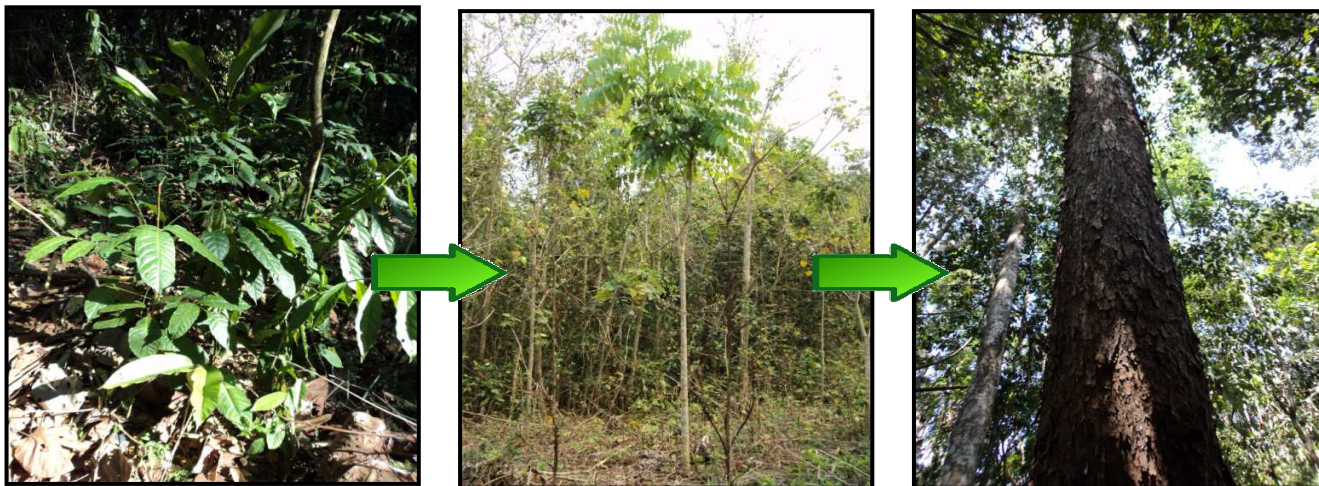
Ivan Tomaselli (left), Américo Tunes, President of IBAMA, Steve Johnson (right), opening ceremony at the 3rd Latin American Workshop, on 15-17 February, 2011, Brasília, Brazil.
Photo by: Sofia Hirakuri



City of Belém, state of Pará, Brazil.

PROGRAM MONITORING

In order to increase the transparency of the ITTO-CITES Program, external monitoring has been regularly conducted, including independent European Commission monitoring carried out in mid-2008 and 2009, and an ITTO-funded External Monitoring Review/ Evaluation of the Program in late 2009-early 2010. In addition, regular monitoring of field implementation is conducted in Africa, Asia and Latin America by respective regional coordinators.



Mahogany sapling (left), mahogany young tree (center) and mahogany tree (right) at Novo Macapá Forest Management Unit, Acre, Brazil
Photo by: Sofia Hirakuri

ARTICLE

The use of Near Infrared Spectroscopy (NIRS) to identify the wood of *Swietenia macrophylla* (mahogany) and similar species.*

By Tereza C. M. Pastore and Jez W. B. Braga

Swietenia macrophylla (mahogany) is one of the most valuable wood species in international trade and the word "mahogany" is synonymous with high quality wood since 200 years ago. Because there is no renewal of stocks in the same proportion of resource exploitation, mahogany was considered threatened by international trade and it was included on Appendix II of the CITES in 2003. Consequently, wood species with some similar features and appearance of mahogany are traded under inappropriate name of mahogany. Also, mahogany wood sometimes is traded under different names. To investigate the feasibility of the use of near infrared spectroscopy for wood discrimination, the mahogany (*Swietenia macrophylla* King.), andiroba (*Carapa guianensis* Aubl.), cedar (*Cedrela odorata* L.), and curupixá (*Micropholis melinoniana* Pierre) woods were examined. Four discrimination models based on partial least squares-discriminant analysis were developed based on a calibration set composed of 88 samples and a test set with 44 samples. Each model corresponds to the discrimination of a wood species from the others. Optimization of the model was performed by

the OPUS® software followed by statistical analysis software (Matlab®). The observed root mean square errors of predictions were 0.14, 0.09, 0.12, and 0.06 for discriminations of mahogany, cedar, andiroba, and curupixá, respectively. The identification of the species obtained based on the difference in the predicted values for each species was at least 0.38. The separations of the species obtained based on the difference in the predicted values was at least 0.38. This makes it possible to perform safe discriminations with a very low probability of misclassifying a sample. Therefore, this instrumental and statistic method can be considered effective as a tool for identifying these four wood species.

* The full article has been published in *Holzforshung*, Vol. 85, pp. 73-80, 2011 under the title "Near infrared spectroscopy (NIRS) as a potential tool for monitoring trade of similar woods: Discrimination of true mahogany, cedar, andiroba, and curupixá", by Tereza Cristina Monteiro Pastore et al.

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