

ITTO -
CITES

PROGRAM FOR IMPLEMENTING CITES LISTINGS OF TROPICAL TREE SPECIES

Newsletter



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This Newsletter reports on activities under the second phase of the ITTO-CITES Program for Implementing CITES Listings of Tropical Tree Species. Following up on the successful first phase of the Program (2007-2011), this second phase is continuing work during 2012-2016 on the most important CITES-listed tropical tree species in trade. The Program is majority-funded through a grant from the European Union (via the European Commission), which also provides for part of the available funds to be devoted to activities relevant to both the ITTO-CITES Program and the ITTO Thematic Program on Trade and Market Transparency (TMT). The Newsletter is published on a quarterly basis, in English, French and Spanish, and is made available to all Program stakeholders and other individuals interested in the progress of the ITTO-CITES Program. This issue covers a summary of the Program activities up to August 2015.

Suggestions and contributions from Program stakeholders are essential to make future issues of this Newsletter as informative and interesting as possible. Please send any correspondence to the relevant contact(s) listed on the last page.

EDITORIAL: ITTO-CITES Program in Latin America

In addition to the objectives of Phase I of the ITTO-CITES Program, including forest inventory design, silviculture, management plans/non-detriment findings (NDFs), cost effective regulatory systems, among others, Phase II addresses issues to improve access to information on global timber markets and to enhance the quality of forest products trade statistics. The Program helps to facilitate trade in products from CITES-listed tree species from sustainably managed forests.

In Latin America, the scope of Phase II has been expanded in terms of countries and tree species coverage. Besides Bolivia, Brazil and Peru (Phase I), other countries such as Guatemala, Guyana, Honduras, Mexico, Panama and Paraguay have been considered as target countries for Program activities and/or workshops under Phase II. In addition, a university in Spain is implementing a project together with Guatemalan partners. In terms of tree species, besides *Swietenia macrophylla* (mahogany) and *Cedrela odorata* (cedar) that were covered in Phase I, additional species included in Phase II are *Dalbergia* spp (rosewood), *Bulnesia sarmientoi* (lignum vitae or palo santo) and *Aniba rosaedora* (Brazilian rosewood). The Program is focusing on tree species listed in CITES Appendix II.

The Program is implemented through activities proposed by range states that are significant exporters of products from listed tree species. Some achievements in Latin America to date

include: i) Development of national timber yield tables for mahogany standing volume and export grade sawnwood in Guatemala and Peru; ii) establishment of a biological foundation for sustainable forest management (SFM) systems for mahogany across southern Amazonia (Brazil, Bolivia, Peru) based on studies of growth, reproduction, and regeneration by natural populations in primary and logged forests; iii) Peru strengthened its capacity to make NDFs for trade in mahogany, and provided relevant information to the Plants Committee at its 17th meeting, to determine that it was not necessary to include the country in the Review of Significant Trade (RST) for this species; and, iv) Development of a computer-based user-friendly mahogany population model (growth & yield) capable of simulating response by local mahogany populations to a wide range and intensity of harvest practices.

The NDF is essential for showing that sustainable management and conservation of the species is occurring in range states. One of the project activities currently underway in Latin America "Non-detriment findings: Practical guidance for CITES-listed tree species", will provide guidance to CITES authorities on the necessary elements, methodology and information for the making of NDFs for almost 400 tree species included in CITES.

The Program activities in Latin American countries are not only benefitting governmental authorities but also private sector operators in the range states. Maintaining a sustainable trade in these species is considered essential to national economies within each country and more

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Program funding

Phase II of the Program has an approved budget of nearly \$9 million (EUR 7.5 million) and has to date been funded by the European Union (through the European Commission - EC), United States of America, Germany, Norway, the Netherlands, China and the private sector. The third installment of EUR 1.2 million under the ITTO-EC contract (that provides for two-thirds of the Phase II budget) was received from the European Commission in March 2015. The United States of America also continues to support the Program, pledging USD 200,000 during the 50th ITTC Session in November 2014 while the Netherlands pledged

USD 70,000 at the end of 2013 and an additional USD 130,000 during the 50th ITTC Session. China became a donor to the Program in 2015, with a pledge of \$100,000. The government of Germany also agreed that starting in 2015, half of the budget it was providing under ITTO's regular project cycle for PD 620/11 Rev.1 (M) (total budget \$2,046,274) "Development and Implementation of a Species Identification and Timber Tracking System in Africa with DNA Fingerprints and Stable Isotopes (Germany)" could be counted as a contribution to the ITTO-CITES Program due to the close linkages between the Program and project objectives. A total of \$1 million has therefore been added to the non-EC

contributions to the Program, leaving about \$300,000 to be sought from non-EC donors under the provisions of the ITTO-EC contract.

Due to the recent sharp drop in the US dollar – euro exchange rate, the third installment of funds under the EC contract resulted in a decrease of around \$400,000 in the amount of dollars received compared to previous installments. ITTO and CITES are working to offset this shortfall in the final year of Phase II of the Program, including through renewed efforts to encourage donors to continue providing funds to meet the co-financing provisions of the ITTO-EC contract. Requests for support under the Program continue to exceed available resources.

ITTO-CITES Program

The "ITTO-CITES Program for Implementing CITES Listings of Tropical Tree Species" aims to ensure that international trade in CITES-listed tropical tree species is consistent with their sustainable management and conservation. The specific objective of the Program is to assist CITES national authorities and the private sector to meet the requirements for managing and regulating trade in CITES-listed tree species; to provide capacity-building support, and to conduct specific studies where information is lacking so as to develop an enhanced global framework for the collection and analysis of information related to the biology and management of species and trade in tropical forest products. The main species covered to date are *Pericopsis elata* (afro-rosewood or assamela), *Prunus africana* (pygeum) and *Diospyros* spp. (ebony) of Central Africa and Madagascar; *Swietenia macrophylla* (big-leaf mahogany), *Cedrela odorata* and other *Cedrela* spp. (cedro) in Latin America; as well as *Dalbergia* spp. (rosewood) in both Africa and Latin America. Those covered in Southeast Asia are *Gonystylus* spp. (ramin) and *Aquilaria* spp./*Gyrinops* spp. (agarwood).

Editorial (cont'd from cover page)

widely to sustainable management of forests. Governments of target countries assisted by the Program have their capacity strengthened to manage and regulate trade in CITES-listed tree species. Other countries Party to CITES that trade in these species and ITTO member countries also benefit indirectly from the outcomes of this Program. The ITTO-CITES Program is therefore a unique example of a multi-stakeholder approach that involves public institutions, the private sector, academia, research institutions, NGOs and communities.

Ivan Tomaselli,
Regional Coordinator for Latin America

The main range States exporting significant volumes of these species are Cameroon, Democratic Republic of Congo, Madagascar and Republic of Congo in Africa; Indonesia and Malaysia in Asia; and Bolivia, Brazil, Guatemala, Honduras, Paraguay and Peru in Latin America. The direct beneficiaries of this Program are public authorities and private sector operators in the forest sector in the range States. The indirect beneficiaries are other Parties to CITES and members of ITTO that trade in these species, who will benefit through capacity building and awareness raising programs. Program assistance is available to countries that are significant exporters of products from CITES-listed tree species, or that have the potential to become significant exporters.

Activity progress reports

Under Phase II of the Program, ITTO has, in consultation with the CITES Secretariat, funded 10 new Activities in Africa, 12 in Asia, 10 in Latin America and two global Activities; while one Activity in both Africa and Latin America approved during Phase I of the ITTO-CITES Program was extended and continued to be implemented under Phase II of the Program. All of the 36 Activities approved or extended under Phase II are now underway or have been completed. In addition to the 36 Activities approved or extended under Phase II of the Program, eight Activities under the TMT component are currently under implementation. Five of these were approved in May 2015 and are reported on for the first time in this issue of the newsletter. Progress in the German-funded project PD 620/11 Rev.1 is also reported on as noted above. An additional 14 Activity proposals (eight in Africa, two in Asia and four in Latin America) submitted to ITTO by countries are pending approval/availability of funds.

Information about each country Activity (country, Activity document summary, executing and implementing agency, final reports, other outputs, etc.) can be found on the Program website (http://www.itto.int/cites_programme). The following section provides brief descriptions and progress reports for Activities undertaken since the inception of Phase II of the Program until August 2015 (except for completed Activities which have already been reported on in previous issues of the Newsletter). Activities pending funding will be reviewed as additional resources become available with a view to making the most effective use of available Program resources.

Africa

Cameroon

Law enforcement and management of *Pericopsis elata* in production forests in Cameroon

Implementing agency: Agence Nationale d'Appui au Développement Forestier (ANAFOR)

Status: Operational

Start date: November 2013

Planned duration: 18 months

Actual duration: 22 months

This Activity is a continuation of assistance to Cameroon to address recommendations from its first non-detriment findings (NDF) report on *Pericopsis elata* in production forests produced under Phase I of the ITTO-CITES Program. The Activity aims to implement the main recommendations outlined in the NDF report and those related to law enforcement regarding *P. elata*. It is executed by the Agence Nationale d'Appui au Développement Forestier (ANAFOR) in collaboration with the national association of timber companies. ANAFOR requested to re-schedule the completion date



Measurement of diameter of a *Pericopsis elata* tree by a student from the University of Douala, Cameroon. Photo: Tientcheu

from April to November 2015 so as to allow experts to complete their specific activities in the field, mostly on matters related to phenology and silviculture studies. A total of nine experts have been recruited to implement nine specific activities in the field. They are from research institutions, including universities, and the National Institute for Development and Agricultural Research (IRAD).

ANAFOR organized a meeting of the Scientific Committee in July 2015 with the aim to examine the different reports submitted by the experts. Four out of the nine specific activities were completed, namely, (i) training forest farmers on the silviculture of *P. elata*; (ii) production of 8,200 seedlings of *P. elata* for plantations; (iii) studies on the soils and edaphic properties of *P. elata*; and (iv) studies of pests and diseases of *P. elata*. Four other specific activities are still being implemented, including (i) testing different sampling designs to better assess the stock of *P. elata* in production forests in Cameroon; (ii) studying the physical and technological properties of *P. elata* wood; (iii) establishing permanent plots of *P. elata*; and (iv) enriching the production forests with *P. elata*. A phenological study could not be implemented due to irregular fructification of *P. elata*. It was decided that all experts should finalize their work by October 2015, one month before ANAFOR organizes a workshop in November 2015 to discuss the main outputs of the Activity. The expert in charge of wood anatomy was requested to re-submit a more realistic budget proposal to complete his analyses, while the expert in charge of phenological studies was requested to submit a second proposed work plan for the period August to December 2015.

Sustainable management of Pericopsis elata towards the implementation of the simple management plan of the Bidou II plantation in the Kienké South Forest Reserve, Cameroon

Implementing agency: ANAFOR
Status: Operational
Start date: November 2013
Planned duration: 18 months
Actual duration: 22 months

The Activity started implementation in November 2013 and is now expected to be completed by the end of 2015. The aim of the Activity is to implement the simple management plan of Bidou II plantation of *Pericopsis elata*, based in the south region of Cameroon, which was prepared during Phase I of the ITTO-CITES Program. The Activity is executed by ANAFOR in collaboration with the National Institute for Development and Agricultural Research (IRAD). As with the Activity "Law enforcement and management of *Pericopsis elata* in production forests in Cameroon", two progress reports have been submitted to ITTO, the first one in January 2014 and the second one in August 2014. A total of three experts have been recruited and are currently working in the field. The first important result obtained was the cleaning of the plantation of Bidou II in March 2015. The products obtained are currently being used by the expert in charge of studying the technological properties of *P. elata* wood, while the expert in charge of silviculture expressed some concerns regarding the low quality of the seeds used in the nurseries.

The coordination team conducted a field monitoring mission in July 2015, followed by a meeting of the Scientific Committee in charge of validating the reports from the experts. All the experts are working well, except for the expert in charge of developing the simple management plan of the Ndeng Ndeng forest plantations as he has encountered major delays in data collection. This will result in an overall delay of up to 6 months in implementing the

Activity. Nevertheless, more than 3,000 seedlings of *P. elata* have been produced in the nurseries and are ready to be distributed to farmers for planting.

Pilot implementation of a DNA traceability system for Pericopsis elata in forest concessions and sawmills in Cameroon.

Implementing agency: ANAFOR in collaboration with Double HELIX
Status: Operational
Start date: April 2014
Planned duration: 12 months
Actual duration: 17 months

The Activity commenced implementation in April 2014 and contributes to the ITTO-CITES Program output calling for development of cost-effective regulatory systems for the trade in CITES-listed tree species. The first training workshop on DNA sampling was organized in Cameroon from 2-3 June 2014, in the "Residence Julie", at Kribi, by ANAFOR in collaboration with Double HELIX. Samples of cambium were collected in east Cameroon by a student from the University of Douala and a field technician from ANAFOR. More specifically, 540 samples of cambium in three forest concessions, namely, the GVI-Ouessou Forest Management Unit; CFC-Ngola 35 FMU; and SEFAC-Libongo FMU were collected, including samples of cambium from all exploitable trees of *P. elata* with diameter at breast high of at least 90 cm that were enumerated in the 2015 annual plot of the GVI-Ouessou FMU.

There was a delay in the delivery of the collected samples to the Double HELIX laboratory, due to delays in obtaining CITES permits for export. Another delay was caused by the change in the annual logging allocation to the GVI timber company that will be used to test the tracking system. As a result, the collection of samples from the forest to export has not started. The National Technical Committee in its meeting in May 2015 had noted these delays and recommended that (i)



Collection of samples of wood of *Pericopsis elata* in the Bidou forest plantation in Cameroon by researchers from the University of Dschang. Photo: Mouliom

ANAFOR should re-organize the collection of samples in annual plots in collaboration with timber companies; (ii) ANAFOR should request the extension of the Activity for at least six months to allow the coordination team to yield some useful results; and (iii) Double HELIX should expedite the analyses of samples sent to its laboratories. These delays have resulted in an extension of the Activity which is now expected to be completed by the end of 2015.

Pilot implementation of a DNA traceability system for *Prunus africana* in *Prunus Allocation Units* in Cameroon

Implementing agency: ANAFOR in collaboration with Double HELIX
Status: Operational
Start date: June 2014
Planned duration: 18 months
Actual duration: 15 months

The Activity commenced implementation in June 2014. It seeks to demonstrate that through the use of DNA techniques *Prunus africana* bark could be traced back to specific trees from the controlled *Prunus* Allocation Units (PAUs). After the training workshop that was organized in June 2014 in Kribi, Cameroon, and as taught during the workshop, the coordination team from Cameroon has sent students and field technicians to the forest to collect samples of *Prunus*. In this regard, the students started collecting samples in August 2014 at the PAU level. The collected samples have been sent to the Double HELIX laboratory for analysis. The students were sent back to the field and have collected *Prunus* samples in the annual plot at Mount Cameroon as well as from the processing unit of AFRIMED based in Bafoussam for testing the tracking system. In fact, fresh barks collected in different production forests (PAUs) in the north-west, south-west and Adamawa were transported to Bafoussam for primary processing which consists of drying and grinding in small batches for export through the port of Douala. All field activities planned under the Activity have been achieved and samples are now being analyzed by Double HELIX. ANAFOR is planning to organize the second National Technical Committee meeting in October 2015.

***Pericopsis elata* database management in Cameroon**

Implementing agency: ANAFOR
Status: Operational (TMT Component)
Start date: August 2015
Planned duration: 10 months
Actual duration: 1 month

The Activity aims to assist ANAFOR in managing and updating the database developed for the management, logging, processing and trade in *Pericopsis elata* in Cameroon which was developed through a related Activity in 2014. Specific activities

include the training of forest officers in the management of the database, and providing assistance in field data collection, including equipment and materials. ANAFOR is planning to organize the first National Technical Committee meeting in September 2015.

Republic of Congo

Promotion of the silviculture of *Pericopsis elata* in North Congo

Implementing agency: *Centre national d'inventaire et d'aménagement des ressources forestières et fauniques* (CNIAF)
Status: Operational
Start date: November 2013
Planned duration: 18 months
Actual duration: 22 months

The Activity commenced implementation in November 2013 and is now expected to be completed in October 2015. The Activity is a continuation of the work done during Phase I of the ITTO-CITES Program in the Tala Tala Forest Management Unit in the North Congo (see NDF report for *Pericopsis elata* in Congo on Program website). It aims to address the main recommendations outlined in the NDF report on *P. elata* in north Congo. The Activity is implemented by the *Centre National d'Inventaire et d'Aménagement des Ressources Forestières et Fauniques* (CNIAF), in collaboration with the Timber Industries Association in Congo. The coordinating team organized a national workshop from 10-11 February 2015 where three experts presented their reports on (i) soil and edaphic properties of *P. elata*; (ii) diseases of *P. elata*; and (iii) the biology and ecology of *P. elata*. Work is continuing in these areas to collect scientific and field data to yield meaningful results.

From 12-19 February 2015, the Regional Coordinator for Africa (RC) monitored the work being implemented in the field and noted that some wild seedlings of *P. elata* had been planted in 5 ha of forest in the Tala Tala Forest Management Unit using the 'lining' planting method. The RC proposed that the coordination team acquire more seeds, put in place a bigger nursery, and test different silvicultural techniques. The experts have submitted their final reports on all work carried out in August 2015, which are now being reviewed by the scientific group of the Activity. The completion date of the Activity has been re-scheduled to the end of 2015.

Pilot implementation of a DNA traceability system for *Pericopsis elata* in forest concessions and sawmills in Congo

Implementing agency: CNIAF in collaboration with Double HELIX
Status: Operational
Start date: April 2013
Planned duration: 12 months
Actual duration: 29 months

The Activity commenced in April 2013 in conjunction with similar work being carried out in Cameroon. The *Centre National d'Inventaire et d'Aménagement des Ressources Forestières et Fauniques* (CNIAF) is the implementing agency. Collection of cambium samples of *P. elata* has been conducted in two forest management units in north Congo, including the Tala Tala and Dua-Ikié Forest Management Units (FMUs), as well as from all exploitable trees with diameter at breast height of at least 70 cm in the 2015 annual logging coupe of the Tala Tala FMU. Wood samples were also collected from the logs and sawn wood at the Tala Tala sawmill. These samples are being analyzed by Double HELIX and field specific activities are now completed after delays in accessing field sites and in sending samples to Double HELIX. The final report on this Activity is expected to be submitted by the end of 2015.

Settlement of a monitoring system of logging of *Pericopsis elata* in North Congo

Implementing agency: CNIAF
Status: Operational (TMT Component)
Start date: August 2015
Planned duration: 12 months
Actual duration: 1 month

The Activity aims to assist the Congo authorities in putting in place a database on the exploitation of *Pericopsis elata* in North Congo. The database will be able to track each log of *P. elata* produced in the two main production sites, Tala Tala and Dua-Ikié. ITTO disbursed the first instalment of funds in July and the coordination team is now recruiting experts to assist in achieving the planned outputs. The first National Technical Committee meeting is scheduled to be held in September 2015.

Democratic Republic of Congo

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

Implementing agency: *Institut Congolais pour la Conservation de la Nature* (ICCN)
Status: Operational
Start date: March 2011
Planned duration: 10 months
Actual duration: 54 months

The Activity started in March 2011 under Phase 1 of the ITTO-CITES Program and is now re-scheduled for completion by the end of 2015. The Activity suffered from several problems that have delayed its implementation, mainly the instability/insecurity in many *Prunus* production sites due the presence of armed rebel groups.

In November 2014, the Regional Coordinator for Africa (RC) undertook a monitoring mission to evaluate the level of implementation of

the work plan as agreed in the MoU signed between ICCN, the “Centre for the information and promotion of agricultural projects” (CIPAGRI) and the Catholic University of Grabben (CUG). In fact, following an earlier monitoring and evaluation mission that was conducted by the RC in September 2013, it was agreed that ICCN would play the role of a facilitator, while field activities would be implemented directly by CUG and CIPAGRI. The RC noted that there was weak cooperation among the partners as CIPAGRI had conducted the field inventories alone, without involving CUG. The RC proposed that the CUG authorities should convene a meeting with the other two partners to re-examine the role and responsibilities of each party. Following this intervention, the three parties involved in the *Prunus* inventories have been working well together since January 2015. As a result, ICCN has developed simple management plans for three production sites, namely, Walikalé, Lumé and Mangurejipa, allowing for a total annual sustainable production of 160 tons of dried bark of *Prunus*. This new approach adopted by ICCN is yielding good results. Inventories are being conducted in the field with the assistance of CIPAGRI and the Grabben University of Butembo under the supervision of ICCN. At the same time, the local staff of ICCN has started conducting inventories in the Kahuzi-Biega National Park (KBNP). The pilot inventories conducted in February 2015 revealed that the park hosts important stocks of *Prunus africana* in some hills. The current approved annual quota for *Prunus* from DRC is 232 tons of dried bark as compared to 72 tons for the period 2011 - 2014.

In July and August 2015, the RC undertook trips to Kinshasa to assist ICCN to finalize the simple management plans for each of the three production sites and to address issues raised by both CITES and the European Commission’s Scientific Review Group (SRG) on the sustainable harvesting of *P. africana* in the North Kivu, inventories and tracking systems. ICCN is looking for additional funds to complete the inventories in the KBNP. ICCN believes that the rational harvesting of *Prunus* bark in the KBNP will allow the park officers to build a good participative management scheme with villagers through the implementation of development projects in villages surrounding the park. ICCN is will organize a workshop in September 2015 to share the results of the Activity and discuss the way forward, especially in addressing the question on the “possibility of harvesting *P. africana* in protected areas as a tool for implementing the participative management of the resource with villagers”. ICCN is seeking additional funds from German International Cooperation (GIZ) for organizing such a workshop.



Verification of *Pericopsis elata* management inventories in the forest concession of Alibuku, Kisangani, DRC, August 2015. Photo: Lubala Essylot

Elaboration of non-detriment findings for Pericopsis elata in the Democratic Republic of Congo

Implementing agency: *Direction de la conservation de la nature*

Status: Operational

Start date: September 2013

Planned duration: 12 months

Actual duration: 24 months

The Activity commenced implementation in September 2013 and is now expected to be completed in October 2015. It aims to collect data on the status of *Pericopsis elata* in the forest concessions of the Democratic Republic of Congo (DRC). It will include data on phenology, health and stocking, as well as current harvest rates and information on sound silvicultural practices of the species. The DRC authorities succeeded in producing the NDF report for *Pericopsis elata* in May 2014 as scheduled. The Regional Coordinator for Africa (RC) conducted a monitoring and evaluation mission to DRC in November 2014 with two objectives. The first objective was to monitor the implementation of the “NDF on *Pericopsis elata* in DRC”, while the second objective was to monitor the level of implementation of the recommendations made in the NDF report on *P. elata*. The RC conducted another monitoring and evaluation mission in March 2015 with the aim to (i) assist in the evaluation of the Activity conducted by the international consultant recruited by ITTO to undertake a mid-term review of the activities implemented under Phase II of the ITTO-CITES Program; and (ii) address the problem of the control of forest inventories. The mission noted the importance of putting in place a framework to control and validate inventories conducted by timber companies and to develop a tracking system that will allow for reliable and timely tracing of the

first volume of the quota of 23,000 m³ that was harvested from the production forests covered by the NDF.

In May 2015, ITTO disbursed the second instalment and in July/August the verification of management inventories in areas of high densities of *P. elata* as identified in the concessionaire’s inventory reports was conducted by the Directorate in charge of inventories and management of the Ministry of Environment and Sustainable Development (MEDD). The validation team comprised the RC, an independent observer, and staff from the local CITES authorities. The verification report was presented to the cabinet of the Minister of Environment and Sustainable Development on 20 August 2015. The preliminary results reveal that timber companies working in *P. elata* areas in DRC have conducted or are still conducting forest inventories in accordance with the national guidelines adopted by the DRC authorities. The DRC authorities submitted an updated NDF report and quota request based on the recommendations of the verification reports to CITES and the EU SRG at the end of August 2015.

Pilot implementation of a DNA traceability system for Prunus africana in Prunus Allocation Units in Democratic Republic of Congo

Implementing agency: Minister of Environment, Nature Conservation and Tourism (MECNT) in collaboration with Double HELIX

Status: Operational

Start date: June 2014

Planned duration: 18 months

Actual duration: 15 months

The activity commenced implementation in June 2014 in parallel with the similar Activity in Cameroon. It seeks to demonstrate that through the use of DNA techniques *Prunus*

africana bark could be traced back to specific trees from controlled production sites in the North Kivu. The proposed DNA traceability system will secure controlled supply chains, detect substitution of illegally harvested bark and allow for timely corrective actions to be taken. The coordination team has sent students from the University of Grabben (Butembo) and field technicians to the forest to collect samples of *Prunus* as taught during a training workshop. Samples of cambium and bark collected by the students and technicians have already been sent to the laboratory of Double HELIX for analysis. An integral part of the traceability system involves taking DNA samples from the cambium of standing trees in *Prunus* Allocation Units (PAUs) and match them with DNA samples taken from bark post-harvest. However, Double HELIX has encountered some difficulties (mixture of bark samples much earlier in the supply chain and insecurity problems) in this approach and in March 2015 requested ITTO to change the scope of this activity. Rather than matching the bark to individual trees (DNA fingerprinting), Double HELIX proposes to match bark samples back to distinct *Prunus* populations. Whilst the activity would no longer be aiming to identify the specific tree that a piece of bark came from, Double HELIX would be able to identify and verify the PAU that the bark was obtained from. Samples collected according to the new approach had encountered delay in their analysis due to problems of communication between the German CITES authority (where the bark is being analyzed) and the DRC CITES authority regarding the CITES permits to allow the samples to be shipped. This shows the need for CITES to consider special permits and/or communications protocols for material being exported for research/scientific purposes designed to promote the sustainability of the species.

Ghana

Improving intra-African trade and market transparency in timber and timber products

Implementing agency: Ghana Timber Millers' Organization (GTMO)
Status: Operational (TMT Component)
Start date: April 2013
Planned duration: 24 months
Actual duration: 25 months

The Activity to improve market transparency for African timber products (including those arising from CITES-listed species) has been progressing well and is now nearly complete. The tariff database website (<http://atmam.org/wp-content/uploads/StatPlanet.html>) has been completed. The translation of the database into French has also been completed in so far as the web software allows (<http://atmam.org/wp-content/uploads/StatPlanetfr.html>). The

resulting online tariff database in English and French, together with an on-line magazine (African Forests and Timber) to be launched before the end of the year, will facilitate the expansion of sustainable timber markets in the region. The Activity is expected to be completed by the end of 2015.

Improving sustainable *Pericopsis elata* conservation and trade regulation in Ghana

Implementing agency: Nature and Development Foundation
Status: Operational (TMT Component)
Start date: September 2015
Planned duration: 18 months
Actual duration: 0 months

The agreement for this Activity had just been signed and the first installment of funds sent to the implementing agency at the time of preparation of the Newsletter. The Activity aims to assess remaining stands of *Pericopsis elata* in Ghana (which is currently not a significant exporter of the species) and develop a plan for conservation and sustainable trade of the species.

Regional

Development and implementation of species identification and timber tracking in Africa with DNA fingerprints and stable isotopes (PD 620/11 Rev.1 (M))

Implementing agency: Thünen Institute of Forest Genetics, Germany
Status: Operational (regular ITTO project cycle)
Start date: February 2012
Planned duration: 36 months
Actual duration: 39 months

This project has recently been included under the ITTO-CITES Program as explained in the section on Program Funding. It supports seven African countries (Cameroon, Republic of Congo, Democratic Republic of the Congo, Côte d'Ivoire, Gabon, Ghana and Kenya) to develop and implement tools to identify tree species (including CITES-listed species) and their geographic origin using DNA fingerprints and stable isotope technologies. Implementation is supported by 14 collaborative agencies in Africa, Asia and the Pacific, and Europe.

For each of the three main target species - iroko (*Milicia excelsa*, *M. regia*), sapelli (*Entandrophragma cylindricum*) and ayou (*Triplochiton scleroxylon*) - more than 1000 gene markers (single nucleotide polymorphisms - SNPs) have been developed and genetic geographic reference maps have been created to tests claims of geographic origin. A similar approach has been taken for the development of a database of stable isotopes to determine the region of origin of a particular sample.

In addition, differences in DNA sequences have been identified for another 21 important taxa (including CITES listed species) in Africa

that can be used to help identification to the species level. Blind tests are currently performed to evaluate the reliability of the various timber identification tools - DNA fingerprinting, stable isotopes, DNA sequencing and the more conventional approach of using anatomical characteristics - and the potential for combining various techniques.

To help build capacity and transfer technology, the project has also supported the establishment of three regional reference laboratories: at the Forest Research Institute of Ghana (FORIG) in Kumasi for West Africa; at the Institut de Recherche en Ecologie Tropicale, IRET in Libreville, Gabon, for Central Africa; and at the Kenya Forestry Research Institute, KEFRI in Nairobi for East Africa. Laboratory staff have been trained in the application of DNA fingerprinting and wood anatomical tree species identification techniques and also to perform simple DNA fingerprinting and stable isotope tests for determining origin. It is foreseen that in the future the regional laboratories will perform DNA testing directly on timber products, to ensure legality before export or to check claims of timber designated for domestic markets. The regional laboratories will allow neighbouring timber producing countries to access and make use of these facilities.

A final meeting involving representatives from all relevant stakeholder groups was held in Douala, Cameroon, in July 2015 and the implementing agency is now preparing the final report which is expected to be completed by the end of 2015.

Asia

China

Supporting SMEs and importers of tropical timber for better understanding of CITES and the need to comply with CITES rules in China

Implementing agency: Research Institute of Forestry Policy and Information, Chinese Academy of Forestry (RIFPI/CAF)
Status: Operational (TMT Component)
Start date: October 2015 (expected)
Planned duration: 18 months
Actual duration: 0 months

The agreement for this Activity had just been signed and the first installment of funds was about to be sent to the implementing agency at the time of preparation of the Newsletter. The Activity aims to train key importers of tropical timber and relevant government officials on how to implement CITES for listed tropical timber species, including in wood identification.

Indonesia

Development of a ramin (*Gonystylus spp.*) conservation concept for plantation forest concessions

Implementing agency: Directorate of Biodiversity Conservation and Association of Indonesian Forest Concessionaires (APHI)

Status: Operational

Start date: February 2015

Planned duration: 12 months

Actual duration: 7 months

The Activity aims to (i) formulate a ramin conservation concept for plantation forest concessions; (ii) develop a ramin conservation guideline for plantation forest concessions operation; and (iii) conduct a review of the Minister of Forestry Decree No. 127/KPTS-V/2002 on Temporary Moratorium of Logging Activities and Ramin Trade.

There has been some delay in implementing the activities due to organizational changes/restructuring caused by the merging of the Ministry of the Environment and the Ministry of Forestry to form the Ministry of Environment and Forestry. Nevertheless, two national experts have been recruited to develop the ramin conservation concept within the area of operation of plantation forest concessions. In addition, two other national experts have also been recruited to develop the guideline for the conservation of ramin in forest concession areas. In this regard, an assistant was recruited to assist the national experts to undertake their tasks. All the activities have now started.

Action has also been initiated to identify national experts to undertake a review of the Minister of Forestry Decree No. 127/KPTS-V/2002 on Temporary Moratorium



A site for the agarwood cluster in Central Bangka. Photo: Muhammad Charomaini



Morphological growth variation of ramin in the District Ogan Komering Ilir, South Sumatra. Photo: Antonius YPBC Widyatmoko

of Logging Activities and Ramin Trade and they are expected to be recruited in September 2015. There is no potential risk in the execution of the Activity as plantation forest concession holders and the government have a strong commitment to ensure that ramin conservation activities are effectively implemented on the ground and as part of the operation of plantation forest management.

Ensuring genetic diversity of ramin seed sources and ramin population from rooted cuttings

Implementing agency: Center for Forest Biotechnology and Tree Improvement Research (CFBTIR)

Status: Operational

Start date: January 2015

Planned duration: 12 months

Actual duration: 8 months

The Activity aims to contribute to the conservation and planting of ramin using wildlings and rooted cuttings in Sumatra and Kalimantan through genetic analyses and infusion of genetic materials to ramin cuttings. It has encountered some delay in implementing the activities due to the merging of the Ministry of the Environment and the Ministry of Forestry to form the Ministry of Environment and Forestry.

Nevertheless, field visits were conducted to collect leaf samples from the ramin rooted cuttings plantation in the *ex situ* Tumbangnusa conservation garden in Central Kalimantan for DNA molecular analysis in the laboratory in Yogyakarta. Measurements to study the morphological growth variation of the ramin plantation at the Tumbangnusa conservation garden were also conducted. No variation on stem morphology, branches, form and size of leaves were found.

The collection of wild genetic resources of non-*Gonystylus bancanus* species from Sumatra and Kalimantan to enable the initial establishment of *ex situ* conservation gardens of these species will be further conducted in West, Central and East Kalimantan since earlier attempts were not successful. This will also include the identification of the site for the establishment of a conservation garden for non-*Gonystylus bancanus* species.

Establishment of an integrated agarwood cluster in Bintan Island, Indonesia

Implementing agency: Center for Rehabilitation and Conservation, Forestry Research and Development Agency (FORDA)

Status: Operational

Start date: January 2015

Planned duration: 12 months

Actual duration: 8 months

The Activity aims to ensure (i) the sustainable production of agarwood from both natural and planted forests; and (ii) the sustainable production and conservation of the genetic resources, as well as to improve transparency of trade in agarwood products.

Although the Activity has encountered some delay in implementing the activities due to the merging of the Ministry of the Environment and the Ministry of Forestry to form the Ministry of Environment and Forestry, field activities had been conducted in Central Bangka where it was agreed with the Forestry District of Central Bangka Regency that the agarwood cluster would cover several aspects, such as, conservation, production, technology innovation, marketing and pests and diseases control. In addition, it was also agreed that the cluster should be located in secure areas with legal certainty for the sustainability of the agarwood cluster program. In this context, the location of the sites forming the cluster

are at the Districts of Sungai Selan, Simpang Katis and Lubuk Besar, covering a total area of 40 ha. Field surveys had also been carried out to evaluate the agarwood research plots established by the Forestry District, including inoculation tests carried out in these plots.

Action has been initiated to finalize the recruitment of a website developer and a computer technician to develop a market information system on agarwood. This will provide the necessary information on agarwood for the various parties involved in the marketing of agarwood products, ranging from traditional collectors, agarwood growers, middleman, small and medium enterprises to large exporters. This could in turn encourage them to contribute to the sustainable management of both natural and planted agarwood in Indonesia.

Malaysia

Reproductive and genetic studies towards the conservation and management of *Aquilaria malaccensis* in Peninsular Malaysia

Implementing agency: Forest Research Institute Malaysia (FRIM)

Status: Operational

Start date: June 2013

Planned duration: 24 months

Actual duration: 27 months

The Activity aims to document the flowering phenology and reproductive behavior of *Aquilaria malaccensis* in Peninsular Malaysia, develop a DNA profiling database and prepare a conservation action plan to reduce harvesting pressures on wild populations for the agarwood resin.

Most of the activities are now focused on processing and collecting data from the gathered flowers and fruits. Flowers were dried in a room at a mean temperature of 24°C for 8 hours daily for two weeks. All debris was removed prior to counting of flowers. For batches with large amounts of flowers, they were weighed to get the estimated numbers. Fruits were counted and separated into mature, split and aborted.

Population survey and sample collection of *A. malaccensis* had been completed throughout Peninsular Malaysia where 35 populations consisting of 963 samples were used for microsatellite analysis. However, after carefully checking through the microsatellite data, the total number of samples was reduced from 963 to 942 due to dubious genotypes on certain individuals. Microsatellite genotyping on the 942 samples were completed for 12 loci. In this regard, based on the 942 samples collected throughout Peninsular Malaysia and the 12 microsatellite loci, a total of 159 alleles were



Seedlings of *Aquilaria malaccensis* being inspected and counted for germination study.
Photo: Lau Kah Hoo

detected. Generally, the study revealed high levels of genetic diversity in *A. malaccensis*.

Furthermore, results from cluster analyses of the 35 populations in Peninsular Malaysia indicated that five strategically placed populations should capture the majority of total genetic diversity, and hence *in situ* conservation of these populations is likely to be sufficient to prevent the species from becoming endangered.

Eight chloroplast regions were sequenced to establish the DNA profiling database for population identification. Based on 12 microsatellite loci, the DNA profiling database for individual identification was established. On the whole, each of the 942 individuals possessed a unique multilocus genotype. Efforts are now focused in finalizing the conservation action plan to reduce harvesting pressures on wild populations for the agarwood resin. The Activity was granted a no-cost extension for another four months and is expected to be completed in October 2015.

Development of an information database for the conservation and sustainable use of *Gonystylus bancanus* (ramin) and *Aquilaria malaccensis* (karas) in Malaysia

Implementing agency: Forest Research Institute Malaysia (FRIM)

Status: Completed

Start date: June 2013

Planned duration: 22 months

Actual duration: 24 months

The Activity was granted a no-cost extension of two months until May 2015 to enable the local website developer, Hasrimy Technologies Sdn. Bhd, to finalize the development of the interactive web-based information system (MyCITES) of ramin and

karas in Malaysia for the management and conservation of these species. The system has been tested by the FRIM's ICT staff and transferred to the FRIM server.

All other activities have also been completed, namely, information on (i) ramin and karas distributions in Malaysia (ecology, phenology, habitat, etc.) where 42 locations of ramin and 87 locations of karas in their original habitats were identified and verified; (ii) research and development of ramin and karas in Malaysia where 227 and 387 publications of ramin and karas respectively have been compiled; (iii) timber trade (import and export data) and the production of ramin and karas by products type in Malaysia, including annual export quota and annual permitted production; and (iv) Malaysia's policy and management practices of ramin and karas. All the information was uploaded to the interactive MyCITES and is now fully operational.

The information stored in the MyCITES database will be useful for traders as they can now monitor the demand for their products in overseas markets, as well as in assisting them to prepare themselves to enter new markets and meet that demand, as the database also includes statistics on the production of ramin and karas by other countries. In addition, the information on management and policy applied to ramin and karas and the Malaysian International Trade in Endangered Species Act 2008 (Act 686) governing the trade in species listed in Appendices I, II, III of CITES will enable interested stakeholders to have a fuller understanding of the measures taken by Malaysia to manage and conserve these two species in Malaysia. The final report of the Activity has been submitted to ITTO and is available on the Program website.

Capacity building of Forestry Department Peninsular Malaysia's staff in identifying *Aquilaria* to species level and in the grading of agarwood

Implementing agency: Forestry Department Peninsular Malaysia (FDPM)

Status: Operational

Start date: September 2014

Planned duration: 12 months

Actual duration: 11 months

The Activity aims to (i) develop training materials, including practical field manual to enable staff of Forestry Department Peninsular Malaysia (FDPM) to undertake identification of *Aquilaria* to species level; (ii) develop a manual for the grading of agarwood to be used by the staff of FDPM; and (iii) provide training to a core team of trainers, which consists of 30 persons from FDPM, in order to provide continuous training to all the other staff of FDPM when required.

A three-day workshop was held in Kuala Lipis, Pahang, Peninsular Malaysia, from 18-20 May 2015 to deliberate on the current distribution and growing stock of *Aquilaria* species in Peninsular Malaysia, the marketing and grading of agarwood oils, and the proposed outlines for preparing a field manual on the identification of *Aquilaria* to species level, as well as a manual for the grading of agarwood.

The drafts of the two field manuals are being finalized for field testing in September 2015. It is envisaged that both the manuals will be published in November and a training workshop on the use of the manuals will be conducted in December 2015 when the Activity is expected to be completed. A syllabus on the identification of *Aquilaria* to species level and in the grading of agarwood is also currently being prepared.

The results of the Activity will enable FDPM to increase the number of competent personnel on the conservation and management of *Aquilaria* species, especially in species identification and the grading of agarwood.

Latin America

Brazil

Ecology and silviculture of mahogany (*Swietenia macrophylla* King) in the western Brazilian Amazon (Phase II)

Implementing agency: Universidade Federal Rural da Amazonia (UFRA)

Status: Operational

Start date: February 2014

Planned duration: 24 months

Actual duration: 19 months

Field activities are being carried out according to the planned schedule. In Annual Production Unit 1R, covering an area of 1,953 ha that was logged in 2011-2012, 80 mahogany trees remain which will be monitored for the growth

and yield study. The field crew revisited 35 trees during the last field trip and measured their girth and bole height. The remaining trees will be measured during the next field trip in September.

The fourth reassessment of 42 mahogany regeneration plots was conducted in July 2015. Mortality rate of mahogany seedlings increased since the first assessment prior to logging in 2010, while density decreased from 36.8 seedlings/ha to 5 seedlings/ha over the period 2010-2012, and to 1.2 seedlings/ha in the period 2012-2014, representing a mortality of 86.4% and 76% respectively. Conversely, in-growth and recruitment was 4.6 seedlings/ha (48.1%) in the first period and 23.8 seedlings/ha (95.2%) in the second period. The balance in-growth-mortality was negative in the first observation period but positive in the second.

Eighty-one new sample trees were measured for developing volume equations for the Seringal Macapá forest management unit. New measurements are planned to be carried out from August until the end of the harvesting season. It was found more efficient to take measurements in the log yards instead of at the felling areas, as in the log yard it is possible to have a loader to lift the logs, thus making it easier to take several girth measurements and bark thickness along the whole length of the log. So far, data from 206 sample trees were collected against a target of at least 300 trees. Measurements will continue to be taken to ensure enough data are available for the development of specific equations for super large individuals (trees with more than 1 metre diameter). It has been decided to develop equations for logs to increase precision when registering volumes of logs extracted. New equations will be tested after the next field trip. Two M.Sc. and two undergraduate students had the opportunity to collect data during field exercises for preparing their dissertations.



Measuring the diameter of a mahogany tree in the Brazilian Amazon. Photo: Natalino Silva

Big-leaf mahogany (*Swietenia macrophylla*) in the Brazilian Amazon: Long-term studies of population dynamics and regeneration ecology towards sustainable forest management

Implementing agency: Institute of Tropical Forestry (IFT)/J. Grogan

Status: Operational

Start date: September 2012

Planned duration: 22 months (extended to 34 months)

Actual duration: 36 months

Since the last field season undertaken from September–November 2014, project activities have focused on data management, analysis, and synthesis for publication. A list of all publications resulting from the support of the ITTO-CITES Program is available at <http://www.swietking.org/our-research.html>. All publications are also available in PDF format on request (jgrogan@swietking.org).

The Activity team used the Big-Leaf Mahogany Growth & Yield Model (see <http://www.swietking.org/model-applet.html>) to simulate population recovery and future timber yields of big-leaf mahogany together with four lesser-known species under management by forest communities and private industry in the Petén region of Guatemala since the mid-1990s. The work was carried out in collaboration with Centro Agronómico Tropical de Investigación y Enseñanza (CATIE, Turrialba, Costa Rica) and the Guatemala's Consejo Nacional de Áreas Protegidas (CONAP). The analyses indicate that the prognosis for future harvests from natural forests in Petén are quite positive, mainly due to the applied forest management regulations in Guatemala that restrict harvests to levels that can be replaced by natural growth and recruitment between cutting cycles. The results are being synthesized for submission for publication in the scientific journal *Conservation Biology*.

The Activity team is currently preparing a final report on project activities and their contributions to the overall objectives of the ITTO-CITES Program.

Using the Near Infrared Spectroscopy (NIRS) technique on a pilot scale, as a potential tool for the monitoring of mahogany trade

Implementing agency: Laboratory of Forest Products/Brazilian Forest Service (LPF/SFB)

Status: Operational

Start date: February 2014

Planned duration: 24 months

Actual duration: 19 months

The ITTO Executive Director, Mr. Emmanuel Ze Meka, visited the Forest Products Laboratory on 19 May 2015 and tested the portable NIRS device and the wood discrimination model. From 26-29 May 2015, Dr. Jez W B Braga, a project team



ITTO ED Emmanuel Ze Meka (center) identifying wood samples with the portable NIRS device in Brasília, Brazil.

Photo: Alexandre Gontijo

member, attended the international symposium on “Wood science underpinning tropical forest ecology and management” which was held at the Royal Museum for Central Africa in Tervuren, Belgium, under the XYLAREDD project of the United Nations. He delivered a speech entitled “Near-Infrared spectroscopy (NIRS) proves to be a useful tool for the discrimination of Amazon wood species”.

From 13-18 July, Alexandre Gontijo and Tereza Pastore, both researchers at the Forest Products Laboratory/Brazilian Forest Service, undertook a mission to Santa Cruz de la Sierra, Bolivia, to collect spectra of mahogany and similar wood species using two portable devices (MicroPhazier and MicroNirs). This work will complement the database that discriminates the provenance of the species in Latin America. Dr. Jez Braga from the University of Brasilia and Ms. Liz Soares, a chemistry student, were also members of the team. Most of the work was conducted at the Forest Industry Colser Ltda sawmill. The Activity has already developed models to identify mahogany from Mexico, Honduras, Brazil, Venezuela and Peru, and will now include mahogany from Bolivia. During the mission, the researchers delivered a speech to 25 people, organized by the Bolivian Institute of Forest Research and the Bolivian Forestry Chamber.

Guatemala

Inventory of population and species abundance of Dalbergia retusa and D. stevensonii in areas of natural occurrence in Guatemala

Implementing agency: Nature for Life Foundation (FNPV)

Status: Operational

Start date: April 2014

Planned duration: 24 months

Actual duration: 17 months

Inventory of the species *Dalbergia retusa*, *D. stevensonii* and other species of this genus began in Guatemala in May 2014 aiming to (i) determine the current population's status; (ii) analyze the dynamics of the species' environment and their identification; (iii) generate potential distribution models; (iv)

propose ecological indicators that allow a monitoring system to be developed; and (v) disseminate the results.

Preliminary results from the establishment of 65 plots in Guatemala indicate that *D. stevensonii* is found on flat and undulating topography with poor drainage and in sparse, low-density forests. It is mainly associated with the genera *Lonchocarpus*, *Spondias*, *Gymnanthes*, *Bursera*, *Metopium*, *Sebastiania*, *Protium*, *Jatropha*, *Guettarda*, *Aspidosperma*, *Swietenia*, etc. The species abundance is estimated at 4.52 trees/ha and 1.22 m³/ha. In general, the data show that the species has a poor distribution by diameter class above 40 cm DBH (0.16 trees/ha) and therefore, this information should be considered in the development of any plan or strategy for the sustainable management or recovery of the species.

In addition, *D. tucurensis* and *D. retusa* are found in flat to hilly terrain with drainage ranging from good to poor and in tall-dense forest to medium-sparse forest. They are associated with the species from the genera *Lochocarpus*, *Cedrela*, *Spondias*, *Bursera*, *Swietenia*, *Vochysi*, *Ceiba*, *Gliricidia*, etc. These species are present in abundance and are estimated at 2.85 trees/ha and 1.09 m³/ha for trees from 10 cm DBH. Data also show that the species have a moderately even diameter class distribution, but with total absence of regeneration. No other species of the genus was found in the evaluated forests.

In the establishment of permanent sample plots (PSP), nine sites have been identified, both in natural forests and plantations, which will define the parameters (diameter growth, level of importance, interaction with species, biological aspects, etc.) and type of forest management to be applied.

The results obtained to date show that it is necessary to protect *Dalbergia* species in Guatemala and/or establish strict guidelines

for sustainable forest management based on research to ensure the continued existence of natural specimens.

Establishment of a forensic laboratory for wood identification and description for the application of legal processes and systems of traceability of products included in CITES

Implementing agency: Nature for Life Foundation (FNPV)

Status: Operational

Start date: April 2014

Planned duration: 24 months

Actual duration: 17 months

The botanical, phenological and phytogeographical studies on *Swietenia humilis*, *S. macrophylla*, *Dalbergia retusa*, *D. calycina*, *D. tucurensis*, *D. stevensonii* and *Guaicum sanctum* have been completed in three of the four regions of their natural distribution in Guatemala, namely, the Pacific Range, Eastern Region and the Franja Transversal del Norte (FTN). As a result, it was possible to provide information needed to formulate a proposal for the inclusion of the genus *Dalbergia* (Guatemalan populations/species) in CITES Appendix II.

Field work is being carried out in Petén including the monitoring of seven sites. Strategic partnerships have also been established with national parks such as the Yaxha-Nakum National Park, with forest concessionaires such as BAREN Comercial (private sector), Árbol Verde (local community) and CustoSel (local community), to carry out the field work.

The establishment of the Forensic Laboratory is ongoing at the College of Agriculture of the National University of San Carlos de Guatemala. Currently, microscopic, macroscopic and physical studies on *S. macrophylla* and *D. calycina* timber are being conducted.

Some preliminary conclusions about the species in Guatemala are (i) *D. retusa*, *D. tucurensis*, *D. calycina* and *S. humilis*



Requesting permit from landowners to establish permanent sample plots for *Dalbergia* spp.
Photo: Ronal Martínez

populations are in decline; (ii) the survival of such species requires urgent protection measures; and (iii) at the FTN, the best preserved *D. stevensonii* and *S. macrophylla* populations are located at the Laguna Lachua National Park. Therefore, the Park's existence and protection is important for the preservation of these species, as well as many others.

Non-detriment findings - Practical guidance for CITES-listed tree species

Implementing agency: Universidad de Córdoba (Spain), CONAP and BALAM Association (Guatemala)

Status: Operational

Start date: September 2014

Planned duration: 15 months

Actual duration: 12 months

The main objective of the Activity is to "provide guidance to CITES authorities regarding the processes, methodologies and information necessary for making non-detriment findings for timber species and other species of non-timber trees so that the provisions required for the export of species listed in the CITES Appendices can be implemented in a suitable manner and that international trade is compatible with the sustainable management and conservation of the species". The expected outcome of the Activity is the production of a manual providing flexible guidance to the Parties to CITES for the preparation of non-detriment findings (NDF) in the three official languages of CITES.

The second six-month Activity progress report has been submitted to ITTO and the Activity is expected to be completed in December 2015. The outcomes achieved thus far are (i) compilation of the results of the international workshop on non-detriment findings for tree species, the IUCN guidelines, and workshops conducted by CITES Parties, as well as other available information; and (ii) analysis of the different options for preparing NDFs.

A document providing guidance on the necessary elements and methodology for preparing NDFs for trees has been prepared and sent to the experts. This document will be used as the basis for discussion at the meeting of the Working Group scheduled to be held from 16-19 September 2015 in the city of Antigua, Guatemala, where all preparations for organizing the Working Group meeting, including its agenda, have been completed.

Experts from the following countries and institutions have been invited and agreed to attend the meeting of the Working Group: Brazil, Guatemala, Peru, Mexico, Burundi, Cameroon, Malaysia, Indonesia,



***Dalbergia calycina* trees in full bloom.**
Photo: Myrna Herrera

Spain, Canada, the United States, Germany (European Union) and the CITES Secretariat. All invited participants have a high level of expertise that will make it possible to analyze and discuss different options, methodologies and special cases in order to prepare NDF guidance that will be submitted to the CITES Plants Committee for discussion.

Guyana

Enhancing the sustainable management and commercial utilization of the CITES-listed species *Cedrela odorata* (red cedar) in Guyana

Implementing agency: Guyana Forestry Commission (GFC)

Status: Operational (TMT component)

Start date: August 2014

Planned duration: 18 months

Actual duration: 13 months

The objective of the Activity is to "Enhance sustainable forest management of the forest sector of Guyana through improved market intelligence and trade of CITES-listed timber species", while its specific objective is to "Strengthen forest planning and marketing of CITES-listed, current and potential timber species from Guyana". In this context, the three main outputs of the Activity are as follows:

- (i) Output 1: Improved sustainable management of red cedar - CITES Appendix III species (*Cedrela odorata*) through enhanced forest management planning;
- (ii) Output 2: Enhance market intelligence on CITES and the timber trade, relating to the impacts on Guyana's forest sector; and
- (iii) Output 3: Increased capacity of the forest sector on trade and marketing of CITES-listed timber species.

For the period ending 31 July 2015, implementation of activities was focused on

Output 1 and Output 2, while some aspects of Output 3 have been initiated. The work on Output 1 and Output 2 were executed by an international forest resource management consultant recruited by the Activity.

In this regard, the first draft of the Resource Assessment and Forest Management Plan for the CITES-listed species *Cedrela odorata* (red cedar) in Guyana was completed. The report provides an overview of the population size and trends, geographic distribution, uses of the species, density and size classes, volume and the regeneration dynamics for determining the sustainable management level of red cedar, including the preparation of management plan (see map on following page). In addition, the report also provides, among others, an overview on the application of CITES rules regarding the export of red cedar, and elaborates the process for issuing permits.

Peru

Management of mahogany (*Swietenia macrophylla* King.) and cedar (*Cedrela spp.*) seed stands in a forest concession for the conservation of the Tahuamanu Seed Stand in the province of Tahuamanu, Madre de Dios, Peru

Implementing agency: Universidad Nacional Agraria La Molina (UNALM)

Status: Operational

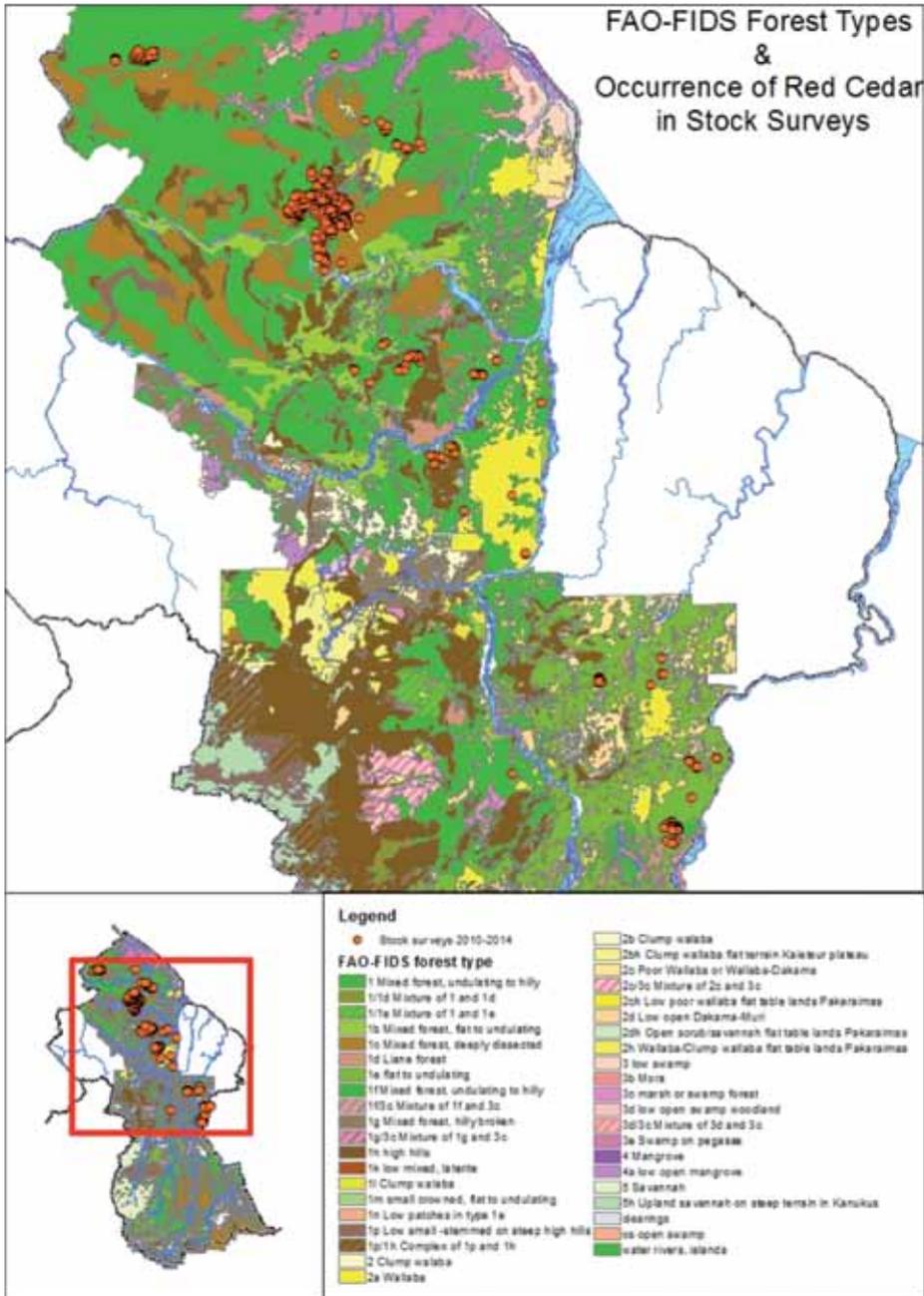
Start date: August 2014

Planned duration: 18 months

Actual duration: 13 months

This Activity aims to improve the conditions of seed stands and to ensure the sustainability of mahogany and cedar, while gaining knowledge on the phenology of these species and the best time for seed collection. The goal is to produce certified seed in the Tahuamanu seed stand in Madre de Dios, and to help achieve the conservation objectives in areas administered by the NGO Conservation International Peru.

Towards this end, an inventory of trees of mahogany and cedar of different diameter classes and intensities was conducted where a total of 129 individuals of cedar and 78 individuals of mahogany were recorded. The information gathered consists of tree size as well as qualitative variables such as vigor, form of tree crown, sanitary condition, dominance, stem straightness, infestation of lianas and vines, etc. From the inventory, 19 trees of mahogany and 23 of cedar that were grouped in different areas of the seed stand were selected where associated species have been evaluated to characterize the sites where they have grown. In addition, sample plots of natural regeneration and seed stands were established, including the



Staff climbing tree to place trap for insect pollinators in canopy. Photo: *Proyecto UNALM-CITES-ITTO*

Global

Preparation of the publication "Atlas of tropical timber species – 1st Edition: Technological characteristics and uses of 273 tropical timber species (and 17 temperate species)"

Implementing agency: CIRAD, France
Status: Operational (TMT component)

Start date: October 2013

Planned duration: 24 months

Actual duration: 23 months

The Atlas aims to make reliable and timely information available on the technological characteristics and uses of tropical timber species (including CITES-listed species) by producing, publishing and disseminating information on tropical timber species contained in the latest TROPIX software (version 7 - 2011). This new edition of the Atlas will facilitate and enhance access to information on these timber species for all operators in the timber sector, both producers (forest managers, logging companies, policy makers) and consumers (importers, traders, timber industrialists, end-users).

Production of the Atlas is progressing despite some delays, with the following achievements already accomplished:

- Documentary research and complementary literature reviewed. The number of species to be described in the Atlas was increased from 290 to 328 species (consisting of 311 tropical and 17 temperate species);
- Additional testing technology and digitization of wood samples developed;
- A new version of the TROPIX database (v. 7.5) has been developed (<http://tropix.cirad.fr/>);

100% pre-harvest inventory blocks with red cedar in Timber Sales Agreements (2010-2014) overlaid on FAO-FIDS regional forest type map. Source: GFC

placing of insect traps in the tree crown of a mahogany tree and a cedar tree for trapping possible pollinating agents. The Activity team will continue to monitor the phenology of selected trees, especially during the flowering season, while more insect traps will be placed in selected tree crowns.

Furthermore, meteorological data have been collected (temperature, rainfall, wind speed and direction, solar radiation, etc.) from the weather station located at the San Miguel camp. The collected data from March 2015 will help to understand seed dispersal behavior and the establishment of natural regeneration of cedar and mahogany species.

The Activity team will also continue to ensure the continuous monitoring of both species until December 2015, as well as applying silvicultural treatments to stimulate the establishment of regeneration and in quantifying the production volume of fruits and/or certified seeds. The results will allow the design of a suitable methodology to manage seed stands in natural forests, and in developing guidelines for the protection of seed trees earmarked for the production of certified seeds.

Examples of Atlas timber species. Photos: CIRAD



Pau roxo (*Peltogyne* spp.)



Angelim rajado (*Zygia racemose*)



Ipé (*Handroanthus* spp.)

- Photos of timber and end-uses of almost all species have been collected and digitized (all photos are included in TROPICX). It has proven more difficult than expected to obtain photos for some species being traded in small volumes or entirely new to the trade and completion of this activity has therefore been delayed;
- Writing technical descriptions for species to be added in Tropix database and Atlas has been largely finalized. As for the collection of photographs, writing technical descriptions for some new or minor species being traded is taking more time than anticipated. The share of added species in Tropix has reached over 85% of the foreseen total;
- Proofreading of technical descriptions for species to be included in the Atlas is ongoing;
- The manuscript of the Atlas for the designer/printer is being finalized.

It is expected that the electronic version of the Atlas will be available online in early 2016, with the printed version available later in the year. The Activity has received a 12 month budget-neutral extension to complete all outputs.

CITES Timber Trade Study

Implementing agency: ITTO

Status: Operational

Start date: April 2014

Planned duration: 8 months
(extended to 18 months)

Actual duration: 17 months

The study was requested by CITES Parties in Decision 15.35 to review trade in timber products from listed tree species that fall outside the listing annotations. Its outputs will be used to inform an ongoing review of listing annotations, including annotations for tree species. In July 2014,

progress in the study was described to the 65th CITES Standing Committee (SC); the SC formed an Inter-sessional Working Group on Annotations and suggested that the study focus on four species for which the listing annotation limits CITES trade controls to primary (minimally processed) wood products: *Pericopsis elata*, *Dalbergia cochinchinensis*, *Cedrela odorata* and *Swietenia macrophylla*. The trade study will assist in the annotation review by examining range country trade in processed wood products that are not subject to CITES trade controls. Although the trade study cannot (and is not intended to) provide definitive evidence of trade in listed species outside the scope of the annotation, results display the scale and complexity of wood products trade and show that many range countries export processed wood products that might include products manufactured from CITES-listed tree species. The study was completed in the third quarter of 2015 following an extension agreed to allow time to incorporate responses to a CITES notification to all Parties asking for information on their trade in products from listed tree species that might fall outside of the scope of the listing annotations. The results of the study will be presented to the 22nd meeting of the CITES Plants Committee in October 2015. Further analyses may be undertaken if the Plants Committee so decides and if resources are made available.

Establishment of a fully documented reference sample collection and identification system for all CITES-listed Dalbergia species and a feasibility study for Diospyros and look-alike species

Implementing agency: Institute of Integrative Biology (IBZ), Switzerland

Status: Operational (TMT Component)

Start date: October 2015 (expected)

Planned duration: 13 months

Actual duration: 0 months

The agreement for this Activity had just been signed and the first installment of funds was about to be sent to the implementing agency at the time of preparation of the Newsletter. The Activity aims to assist Madagascar to implement the Appendix II listings of nearly 200 *Dalbergia* and *Diospyros* species and Central American countries to implement the Appendix II listings of several *Dalbergia* species approved at CITES COP 16. The reference sample collection will be facilitated by collaborative agreements between the implementing agency and CITES authorities in Madagascar and Guatemala.

Relevant events/ initiatives

Under Interpol's Project Leaf which is supported by the Norwegian Agency for Development Cooperation (Norad), a Regional Investigative and Analytical Case Meeting on Forestry Crime in Asia was held at Interpol's Global Complex for Innovation in Singapore from 18-20 August 2015. The meeting brought together practicing officers from the forestry sector, legal units supporting the forestry sector, law enforcement, anti-corruption and forest crime investigative units, and officers from Interpol's National Central Bureaus. Law enforcement officials from nine countries in the Asia-Pacific region participated: Cambodia, Laos, Malaysia, Myanmar, Papua New Guinea, Philippines, Singapore, Thailand and Vietnam. The meeting provided a platform for sharing and exchanging forestry crime information and intelligence, as well as discussion on challenges and strategies against these crimes.

The Singapore meeting was preceded by another Regional Investigative and Analytical Case Meeting on Forestry Crime at the Interpol's Regional Bureau that was held in Nairobi, Kenya, from 27-29 July, which brought together 10 East African countries to review ongoing cases related to forestry crime and the illicit timber trade. The participating countries were Burundi, Comoros, Eritrea, Kenya, Rwanda, Seychelles, South Sudan, Sudan, Tanzania and Uganda (source: Interpol General Secretariat, Environmental Crime Programme).

A successful side event was organized by ITTO on the ITTO-CITES Program on 8 September 2015 at the XIV World Forestry Congress held in Durban, South Africa, from 7-11 September 2015 (see Program website for details).

Article from Program activities

“Herbivores limit the population size of big-leaf mahogany trees in an Amazonian forest” by Norghauer JM, Free CM, Landis RM, Grogan J, Malcolm JR, Thomas SC. published in *Oikos* (2015, doi: 10.1111/oik.02324).

Abstract

The Janzen–Connell hypothesis proposes that specialized herbivores maintain high numbers of tree species in tropical forests by restricting adult recruitment so that host populations remain at low densities. We tested this prediction for the large timber tree species, *Swietenia macrophylla*, whose seeds and seedlings are preyed upon by small mammals and the host-specific moth caterpillar, *Steniscadia poliophaea*, respectively.

At a primary forest site, experimental seed additions to gaps – canopy-disturbed areas that enhance seedling growth into saplings – over three years revealed lower survival and seedling recruitment closer to conspecific trees and in higher basal area neighborhoods, as well as reduced subsequent seedling survival and height growth. When we included these Janzen–Connell effects in a spatially explicit individual-based population model, the caterpillar’s impact was critical to limiting *Swietenia*’s adult tree density, with a >10-fold reduction estimated at 300 years.

Our research demonstrates the crucial but often ignored linkage between Janzen–Connell effects on off-spring and population-level consequences for a long-lived, potentially dominant tree species.

Upcoming events

22nd meeting of the CITES Plants Committee (PC22), Tbilisi, Georgia, 19-23 October, 2015 (ITTO-CITES Program Advisory Committee meeting to be held in parallel).

51st Session of the International Tropical Timber Council, Kuala Lumpur, Malaysia, 16-21 November 2015.

17th meeting of the Conference of the Parties to CITES (CoP17), Johannesburg, South Africa, 24 September – 5 October, 2016.

Program Monitoring

To ensure the transparency of the ITTO-CITES Program, regular monitoring of field implementation is conducted in Africa, Asia and Latin America by the respective Regional Coordinators. Mid-term and ex-post monitoring are also conducted as per the terms of the grant agreement with the EC and ITTO’s rules and procedures.

In this context, the Regional Coordinator for Africa conducted a monitoring mission to Kinshasa, Democratic Republic of Congo (DRC) from 7-12 June 2015 to (i) assist the DRC scientific authorities in addressing non-detriment findings (NDF) reports for the new production sites in the North Kivu; (ii) prepare the verification/validation of the management inventories of the nine forest concessions which obtained the 2015 quota for *Pericopsis elata*; and (iii) harmonize the field interventions scheduled by the ITTO-CITES Program with the office of the European Commission/FLEGT in Kinshasa.

He conducted a second monitoring mission to Kinshasa from 28-30 June 2015 to (i) assist in the meeting on the harmonization of the field interventions scheduled by the ITTO-CITES Program with the office of the European Commission/FLEGT in Kinshasa; (ii) finalize the Terms of Reference for the verification of the inventories on *P. elata* and its future development; and (iii) prepare an activity proposal on the verification/control of the harvesting of *Prunus africana* bark in the North Kivu.

He further conducted a third monitoring mission to Kinshasa and Kisangani from 9-20 August 2015 to (i) assist the verification/validation of the forest management inventories conducted by forest companies listed in the 2015 NDF report on *P. elata*; and (ii) assist ICCN in addressing some of the concerns raised by CITES and the European Commission (SRG) regarding *P. elata* and *P. africana*.

For the Asian region, the Regional Coordinator for Asia undertook a monitoring mission to Yogyakarta, Indonesia on 7 August 2015 to evaluate the progress of the two Activities that are currently being implemented by the Center for Forest Biotechnology and Tree

Improvement Research (CFBTIR), namely, “Ensuring Genetic Diversity of Ramin Seed Sources and Ramin Population from Rooted Cuttings”, and “Establishment of an Integrated Agarwood Cluster in Bintan Island, Indonesia”. Overall, the progress of the two Activities is progressing well as evident from the visits to the tissue culture and DNA laboratories. Nevertheless, the unsuccessful collection of wild genetic resources of non-*Gonystylus bancanus* species from Sumatra and Kalimantan, and the delay in recruiting personnel to develop a market information system on agarwood would likely result in both the Activities not being able to be completed in December 2015 as planned and would have to be extended to February or March 2016.

On 19 August 2015, he also undertook a monitoring mission to evaluate the progress of the two Activities that are currently being implemented in Peninsular Malaysia, namely, the “Reproductive and Genetic Studies Towards the Conservation and Management of *Aquilaria malaccensis* in Peninsular Malaysia” by the Forest Research Institute Malaysia (FRIM), and the “Capacity Building of Forestry Department Peninsular Malaysia’s Staff in Identifying *Aquilaria* to Species Level and in the Grading of Agarwood” by the Forestry Department Peninsular Malaysia (FDPM). The FRIM’s Activity is progressing well as planned, and will be completed at the end of September 2015. However, the FDPM’s Activity has encountered some delay in finalizing the two manuals on the identification of *Aquilaria* to species level, and for the grading of agarwood for field testing. As such, the Activity which is expected to be completed in September 2015 would have to be extended to December 2015.

The regional coordinator for Latin America was preparing to undertake a monitoring mission to Guatemala at the time this Newsletter was being prepared, in order to evaluate progress in Program activities and to participate in the workshop being convened under the Activity “Non-detriment findings - Practical guidance for CITES-listed tree species.”

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