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**REPORT ON COMPLETED PROJECTS AND PRE-PROJECTS
IN THE FIELD OF REFORESTATION AND FOREST MANAGEMENT**

**REPORT ON COMPLETED PROJECTS* AND PRE-PROJECTS IN THE FIELD OF
REFORESTATION AND FOREST MANAGEMENT**

• **COMPLETED PROJECTS**

**(1) PD 21/98 Rev.2 (F) Forest Management, Community Involvement and Sustainable Use of
Si-Kop Forest Area (Coastal Province, Cameroon) - Phase II**

Budget and Funding Sources:

Total Budget:		US\$	1,289,007
ITTO Budget:		US\$	647,517
Government of Japan:	US\$	647,517	
Government of Cameroon:		US\$	641,490

Implementing Agency: Agence Nationale d'Appui au Développement Forestier (ANAFOR, former ONADEF)

Session of Approval: ITTC XXIV, May 1998, Libreville, Gabon

Starting Date and Duration: June 2000 / 48 months

Approved Revised Date of Project Completion: First project extension granted until July 2011 (NOLF.09-0197)
Second project extension granted until July 2012 (NOLF.11-0197)
Third project extension granted until January 2013 (NOLF.12-0197)
Fourth project extension granted until May 2014 (NOLF.14-0045)
Fifth project extension granted until August 2015 (NOLF.15-0077)

I. Introduction

The project was approved by the Council at its Twenty-fourth Session in May 1998. Full financing was pledged by the Government of Japan during the Twenty-seventh Session in November 1999. The Agreement regulating the implementation of the project was signed on 20 March 2000 in Yaoundé, during an official visit of the Executive Director to Cameroon. The first disbursement of funds was made on 20 June 2000. The project had been under suspension enforced since November 2003, as it was decided by the 33rd Session of the Committee on Reforestation and Forest Management. In relation to the progress made by the Executing Agency to meet the suspension-related requirements, the ITTO Secretariat lifted the suspension on 7 October 2008 in order to allow an independent mid-term evaluation to be conducted. The lifting of the suspension was endorsed by the Forty-second Session of the Committee on Reforestation and Forest Management in November 2008.

Five project extensions were granted until August 2015, without additional ITTO funds, by the ITTO Secretariat, based on official requests including proper justification with appropriate detailed work plan and budget. However, as an acceptable version of the project completion report was received in December 2015, the project operation period had lasted 185 months instead of 48 initially designed by the implementing agency (SODEFOR). The project final financial audit report was submitted in December 2015 by the Executing Agency, allowing this project to be documented for the completion and closure procedures.

II. Project Objective

The overall objective of the project was to sustainably manage the communal and community forests of the Si-Kop Forest area with the participation of local communities. It specifically intended to increase the income of the local communities through agroforestry and improved agriculture and also to develop eco-tourism as a new source of income.

III. Project Achievements and Outputs

It could be important to recall that the implementation of most project activities had been disturbed and delayed due to the suspension of the project implementation from November 2003 to October 2008. The

*Including financial audit

project implementation strategy had been based on an integrated approach for the implementation of activities dealing with forestry, agriculture and eco-tourism in the Si-Kop Forest. However, eco-tourism related activities were deleted as recommended by the mid-term evaluation carried out in February 2009 because of the lack of cooperation of the ministry of tourism of Cameroon.

The main project achievements and outputs, in relation to the project implementation strategy, can be summarized as follows:

- The process for the gazetting of the Si-Kop Forest was finalized and formalized by the Decree No.2013/7570/PM signed by the Prime Minister of Cameroon on 12 August 2013, for a total surface area of 20,395 hectares of production forest;
- The management plan of the Si-Kop Forest was approved by the ministry of forestry and fauna of Cameroon in July 2015 after carrying out the forest inventory and the demarcation of its boundaries with the participation of local communities;
- The project support for the commencement of activities by local communities included the following main achievements: construction of two warehouses, purchasing of a mobile saw, construction of two wells as source of potable water local communities;
- The creation of three following community forests: MAHOHI (2,836 ha), NEMKOK ((930,3 ha) and WAK (1,590.3 ha). These community forests had become operational as their simplified management plans had been approved by the ministry of forestry and fauna of Cameroon;
- The leaders and selected people from the MAHOHI, NEMKOK and WAK communities were trained on improved techniques of agroforestry to be implemented in the three abovementioned community forests.

IV. Outcomes and Impacts

The main project outcomes and impacts, in relation to the expected outputs and associated activities, can be summarized as follows:

- The project had contributed to formalize the gazetting of the Si-Kop Forest through the decree signed by the Prime Minister of Cameroon in August 2013. It contributed also to the preparation of the management plan of the Si-Kop Forest which was approved in July 2015;
- The reinforcement of capacity local communities living around the Si-Kop Forest had been achieved by organizing them in cooperatives and associations called "*groupements d'intérêts communautaires*" (GIC) as structures facilitating the management of three abovementioned community forests, which could contribute to the improvement of their livelihood;
- The living standard of local communities involved in the project implementation had been improved with the establishment of two wells for potable water;
- ANAFOR (ex ONADEF), as the national institution in charge of the implementation of national reforestation policies in Cameroon, had contributed to put in place nurseries for the production of seedlings for the needs of agroforestry activities in the target project areas.

V. Lessons Learnt and sustainability

As the continuation of the first phase, some achievements in relation to the eco-tourism activities could not be met due to the lack of cooperation of the ministry of tourism of Cameroon. The mid-term evaluation was a good opportunity to readjust the expected outputs of this project taking into account the field reality of the target project areas. Special arrangements made with local communities, through the establishment of cooperatives and associations called "*groupements d'intérêts communautaires*" (GIC), contributed to the smooth implementation of the project, as the responsibilities and rights of each party were clearly defined in relation to the project's objective and expected outputs.

The sustainability of main project outcomes could be ensured through the institutional arrangement between ANAFOR and GIC. ANAFOR, as the national institution in charge of the implementation of the reforestation and forest management policies in Cameroon, will continue the collaboration with GIC (involved in the project implementation) through technical supports which could contribute to sustaining key project's achievements and outcomes, after the project completion.

VI. Concluding Remarks

As the ITTO Secretariat received the Project Completion Report, as well a satisfactory Final Financial Audit Report, the Committee may wish to declare the Project PD 21/98 Rev.2 (F) as completed. Soft copies of abovementioned reports can be made available, upon request, by the Secretariat. However, the project

Executing Agency should refund XAF73,756,000 (approximately USD158,000), if no further audited report is to be submitted, before the financial file closure procedures could be initiated after the acceptance of the project as completed by the Committee.

(2) PD 20/99 Rev.2 (F) Establishment and Management of Production-Protection Community Forests in Lower and Middle Atrato, Department of Choco, Colombia

Budget and Funding Sources:

Total Budget:		US\$	2,884,062
ITTO Budget:		US\$	559,493
Government of Japan:	US\$	484,493	
Government of U.S.A.:	US\$	75,000	
Government of Colombia		US\$	2,039,284
CODECHOCO:		US\$	285,285

Implementing Agency: Corporación de Desarrollo Sostenible del Chocó (CODECHOCÓ)

Session of Approval: ITTC Session XXVII, November 1999, Yokohama, Japan

Starting Date and Duration: March 2001 / 36 months
June 2009 (restart after 5 years suspension)

Approved Revised Date of Project Completion: December 2010 (CRFXLII)

I. Introduction

The Council approved the project at its Twenty-seventh Session in November 1999 and fully financed it at its Twenty-eighth Session in Lima, Peru. The Agreement regulating the implementation of the project was signed on March 5, 2001. The first disbursement of funds was made on March 16, 2001.

In January 2004 the project was suspended due to irregularities by the former executing agency, SINERGIA. After the government of Colombia addressed these irregularities and selected a new Executing Agency, CODECHOCO, the suspension was lifted in September 2008. An ancillary agreement, regulating the implementation of the project with the new Executing Agency, CODECHOCO, was duly signed in March 2009. The third installment of funds was transferred in June 2009, after the submission, by the Executing Agency, of an updated Yearly Plan of Operations and a notification that implementation is about to begin, and the approval of the aforementioned by the Secretariat.

Notwithstanding, the implementation of this project appeared to continue progressing at a slow pace, and the Executing Agency CODECHOCO continued to be haphazard in submitting its progress reports and other documents, and did not request another of the three disbursements still pending, totaling US\$ 240,000, after the 3rd disbursement made in June 2009, nor did it submit a satisfactory annual financial audit report for year 2010. While the project was slated to have been completed in December 2010, the Committee further observed that prior to its 47th Session the Executing Agency had submitted a progress report, an YPO to December 2013 and a request for an extension in time until December 2013 in order to satisfactorily complete the project. However, these documents were incomplete, lacked proper justification for the extension in time and did not include the 2010 financial audited report. The ITTO Regional Officer, nevertheless, further reported in 2015 that it appeared that some unspecified work in the field continued to be carried out with funds provided by the National Environmental Compensation Fund, and that efforts were currently being undertaken by the EA to produce all pending documents.

In view of the project's apparent difficulty in the attainment of the project's objectives and outputs, the Secretariat considered an onsite in-depth evaluation to be carried out to assess the situation of the project and report the outcomes at the 50th CRF Session in November 2016. In this light, the last Project Steering Committee Meeting was held in April, 2016 at CODECHOCO's headquarters in Quibdo, Choco. At this

meeting, the Steering Committee reviewed the project's recently submitted 14th Progress Report and noted that most of the project's activities had in fact been attained, and in some cases had even exceeded the goals e.g. a total of 1,900,000 seedlings were produced, 500,000 more than originally planned, and 2,648 ha of plantations were established and managed, 648 ha more than originally planned. In addition, it was noted that 1,635 farmers were trained in basic silvicultural concepts, although many workshops remained pending due to the withdrawal of Maderas del Darien S.A. from the project after it was suspended in 2004, due its mismanagement by former EA SINERGIA, which absconded with a certain amount of ITTO funds.

It also came to light that, as a result of the conditions to lift the suspension of the project, in which Colombia had to reimburse the funds absconded by the former EA (approx. US\$ 40,000), the Colombian Environmental Compensation Fund (CECF) had provided the project via CODECHOCO an amount of US\$570,980 between 2005 and 2008 while the project was suspended, and another US\$1,468,304 in counterpart funds upon the restart of the project in 2009 until 2014. It can therefore be inferred that it was in the best interest of the EA to keep the project operational as long as it could to continue receiving approximately US\$ 200,000/year as counterpart funds from the CECF, and one of the major reasons why it never requested any additional funds from ITTO since 2009.

Overall, the Project Steering Committee observed that while the project had had a string of major issues/problems since its inception in 2001, it also noted that it had achieved the majority of its outputs, albeit with counterpart funds rather than with ITTO funds, and that it had also set the groundwork for the continuation of the project's activities, namely the establishment of additional industrial plantations and the processing of the plantations products by communities in the Choco Region, via the implementation of two follow-up projects, one by Maderas del Darien S.A. financed by USAID, and another US\$ 5 Million project currently being implemented by the Choco Technological University in collaboration with CODECHOCO and other institutions. In this light, the Steering Committee decided to request the Executing Agency to submit a project completion report and final audited report to the Secretariat, discontinue ITTO's involvement in the implementation of the project's additional activities, and relinquish the three pending ITTO disbursements for a total of US\$240,000.

The Executing Agency, as per the recommendations emanating from the Project Steering Committee's meeting, recently submitted to ITTO a proper Completion Report, a Final Financial Audit Report, an Official Notification relinquishing the ITTO last disbursement of US\$ 240,000 and offering to reimburse ITTO the unspent amount of ITTO funds it had in the project account.

II. Project Objective

This project sought to establish and manage 2,000 hectares of protection/production plantations on lands granted by the Colombian government to the Afro-Colombian communities in the Domingodo-Truando region. Reforestation has been identified as one of the activities that will facilitate the sustainable development of the area given the high forestry potential of these lands. The local communities will work in a participatory manner with Maderas del Darien S.A., a local forest industry with extensive experience in the proposed forestry practices, so as to ensure the equitable distribution of benefits generated by the project.

III. Project Achievements and Outputs

The overall project was reported as completed in June 2016. In accordance with the completion report, the majority of the planned activities were carried out during the project's lifespan and its achievements can be summarized as follows:

- A total of 2,885,850 of five commercial tree species were acquired or produced in community nurseries on community council lands in Domingodó and Truandó, 500,000 more than originally planned (130%). The species are: Gmelina arbórea, Tabebuia rosea, Tectona grandis, Cedrela odorata and Bombacopsis quinata;
- 2,648 ha of timber plantations were established and managed on community council lands in Domingodó and Truandó, 648 ha more than originally planned (130%); and
- 1,635 farmers were trained in basic silvicultural concepts, although half the planned workshops remained pending due to the withdrawal of Maderas del Darien S.A. from the project (50%).

IV. Outcomes and Impacts

The project's overall objective was achieved: 1,635 rural producers in the Choco Region were engaged in the establishment and maintenance of 2,648 hectares of timber plantations. Despite the difficulties encountered during the project, a major advance in the establishment of quality timber plantations can be highlighted. The project's beneficiaries participated actively throughout its execution and continue to tend their plantations to date.

V. Lessons Learnt and sustainability

In spite of the extensive experience of CODECHOCO in the management of the natural forests of the region, the establishment of commercial timber plantations was a relatively new theme to the institution and therefore was a learning experience for it.

With regards to the sustainability of the project after its completion, there was a positive surprise: The project also set the groundwork for the sustainability of the project's activities, namely the establishment of additional industrial plantations and the processing of the plantations products by communities in the Choco Region, via the implementation of two follow-up projects, one by Maderas del Darien S.A. financed by USAID, and another US\$ 5 Million project currently being implemented by the Choco Technological University in collaboration with CODECHOCO and other institutions.

VI. Concluding Remarks

Overall, the project has contributed towards the establishment and management of production-protection community forests in Lower and Middle Atrato, Department of Choco, Colombia.

As the ITTO Secretariat has received a proper Completion Report, a Final Financial Audit Report, an Official Notification relinquishing the last three ITTO disbursements amounting to US\$ 240,000, and its intention to reimburse ITTO the unspent amount of ITTO funds it had in the project account, this project can be reported as completed. Copies of the Completion Report are available either upon written request from the Secretariat or can be downloaded in digital format via the online project search engine on ITTO's website at: <http://www.itto.int>

(3) PD 351/05 Rev.1 (F) **Criteria and Indicators for the Evaluation of Tropical Forest Management Sustainability in Mexico (South-eastern Coastal Plains: Gulf of Mexico and Yucatan Peninsula)**

Budget and Funding Sources:

Total Budget:		US\$	696,225
ITTO Budget:		US\$	514,653
Government of Japan:	US\$	474,653	
Government of U.S.A.:	US\$	10,000	
Government of Finland:	US\$	30,000	
INIFAP:		US\$	181,572

Implementing Agency: National Institute for Forestry, Agricultural and Animal Research (INIFAP)

Session of Approval: ITTC Session XXXVIII, June 2005, Brazzaville, Rep. of Congo

Starting Date and Duration: July 2006 / 24 months

Approved Revised Date of Project Completion: First extension until March 2011 (CRF XLIII)
Second extension until September 2012 (CRF XLIII)
Third extension until September 2013 (CRF XLVI)
Fourth extension until December 2014 (NOL No. F.14-0051)

I. Introduction

The Council approved the project during its Thirty-eighth Session in June 2005 and full financing for its implementation was pledged during the Thirty-ninth Session in November 2005. The Agreement regulating the implementation of the project was duly signed in April 2006. Upon the submission of the Detailed Work Plan, the first installment of funds was transferred in July 2006. The fourth and last disbursement was released in April 2014 shortly after submission of their 15th progress report, several technical reports and an appropriate explanation as regards the sustainability of the implemented actions after project completion and its expected impacts. The project's completion report, several technical documents and several articles for the TFU, and the final audited report were submitted to the Secretariat in early 2016, together with several technical documents and other related project outputs. The eighth and final meeting of the Steering Committee was held in March 2016 in Chetumal, Quintana Roo, Mexico, at which the aforementioned final reports and products were reviewed. A discussion on the project's impact and its sustainability after completion also ensued.

II. Project Objective

This project sought to strengthen, encourage and evaluate sustainable tropical forest management in Mexico, with a view to achieving the ITTO's Objective 2000 and the Mexican Government's Forest Development Plan so that international trade may be based on raw materials originating from forests managed and certified according to criteria and indicators that strengthen the sustainability of this resource. Overall, the project aimed to develop management programmes for the sustainable conservation and utilization of tropical forests in the southeast of Mexico. More specifically, it envisioned transferring knowledge to the Ejido communities that own tropical forest resources in these regions in order to develop and implement specific local C&I to evaluate and monitor the progress towards sustainable forest management.

III. Project Achievements and Outputs

The Project's field activities were completed in March 2015 and the overall project was reported as completed in June 2016. In accordance with the project document, all the planned activities were carried out during the project's lifespan and its achievements can be summarized by major outputs and products envisaged by the project, as follows:

1. Forest management evaluation processes tailored to Mexico's tropical forest conditions

This output has been 100% successfully achieved.

- Seven diagnostics on humid and sub-humid forest and environmental resources have been completed and published for eleven areas in the following seven federal states: Veracruz, Oaxaca, Tabasco, Chiapas, Campeche, Yucatan and Quintana Roo, covering a total area of 15 million hectares of forests in the South-eastern Coastal Plain of Mexico;
- Two multidisciplinary and inter-institutional teams, one for the Gulf Region and another for the Yucatan Peninsula Region were formed and trained in C&I; and
- Over 60 state-wide workshops and region-wide workshops were organized by the aforementioned teams to systematically develop appropriate C&I for the Gulf of Mexico and Yucatan Peninsula regions, with the participation of ejido members, authorities, technical experts, academics and NGO members.

2. Validated local C&I with a holistic view of ecological, economic and social systems required to evaluate tropical forest management

100% of the activities required to achieve this output have been implemented, as follows:

- The multidisciplinary and inter-institutional teams from the two regions reviewed the ITTO C&I and those generated in other counties, using analytical methods, discussion and consensus, and developed a "master list" of C&I for Mexico's tropical forests;
- A C&I Master List was developed for the tropical forests of Mexico, and is composed of 10 principles, 25 criteria, 40 indicators and 69 verifiers;

- Based on the aforementioned C&I Master List, a specific set of C&I was developed with the participation of landowners, foresters and researchers, for each of the Yucatan Peninsula and Gulf of Mexico regions, based on the different ecological and social aspects they present; and
- 9 Models for the Evaluation of Sustainability were designed for Mexico's tropical forests using the results and conclusions obtained during the development of C&I, one for each of the following ejidos located within one of the five federal states (Oaxaca, Chiapas, Campeche, Yucatan and Quintana Roo): Santa Catarina Ixtepeji, Francisco Romo Serrano, Monte Sinai II, Silvituc, New Becal Alvaro Obregon, November 20, St. Augustine, Mahogany, covering a total area of 150,000 hectares under forest management.

3. Agents of change (*ejido* residents, technical experts and management personnel) trained in the use of C&I to monitor tropical forest sustainability

All activities required to achieve this output have been completed, as follows:

- Various training programmes in the use and application of C&I were conducted through courses and forums, aimed at owners of forest areas and their technical advisers in the five federal states. More than 1000 people were trained in the use and application of C&I;
- Various dissemination and training materials were produced on the use application of C&I, targeting *ejido* members, technical experts and academics. These included brochures, leaflets, articles, reports, *ejido*-specific C&I folders, etc.; and
- A base document was developed to assist the incorporation on C&I into the Mexican legislation regulating tropical forest management in Mexico.

IV. Outcomes and Impacts

The project's overall objective and all major outputs were successfully achieved. Some additional non-programmed products were also obtained which further strengthened the C&I process in Mexico.

It was possible to identify, build, and socialize sustainability C&I with the participation of the stakeholders involved in the use and management of rainforests. The methodology was consistent with the reality of the ejidos and communities that participated in the C&I process, and included social aspects of governance and local culture crucial for the sustainability of forest management.

The developed C&I were applied in 8 ejidos and communities, and assessed the sustainable forest management over a total area of 150,337 hectares. It further managed to transfer the concept and use of C&I to 1,333 ejidatarios.

The ejidos gained new knowledge and information about the current management of their forests. All forest management activities were systematized and compiled into a single working tool, denominated "Carpeta Especifica de C&I", which now serves as the baseline document for the management of their forests.

The project had a positive impact on the operational capacity of the communities and foresters in forest management activities, as a result of sharing their management experiences and creating synergies and technical support links between them.

Moreover, the Project has produced a total of 21 documents, among scientific papers, technical reports, studies, training materials and others, the main ones being the following:

1. Criteria and Indicators for the Sustainable Management of Tropical Forests in Mexico.
2. The Social Perception of Forests: Cultural Practices for Access and Management of Forests in Two Communities of the Yucatan Peninsula (Ethnography of ejidos November 20 and St. Augustine).
3. Linkage Experiences emanating from the Sustainable Forest Management Criteria and Indicators Project.

Most of the aforementioned documents have been or will be uploaded onto the ITTO website for further dissemination to all our member countries and other interested parties. The project has also provided several articles for ITTO's Tropical Forest Update journal.

V. Lessons Learnt and sustainability

The main lessons learned from the implementation of this project can be summarized as follows:

An important part of promoting the project in order for the main beneficiaries to fully participate in it was to grant the highest recognition from the onset of the project to the decision-making authorities of the ejidos and communities. i.e.: the General Assembly and the ejido commissaries.

The consolidation of a team within the Ejidos is linked to the active participation and commitment of its professional forester, who is the direct communication link with the ejido / community authorities.

Each Ejido / Community required differing amounts of time in order to enter the C&I process, to understand and appropriate the theme and feel comfortable with the methodology.

Each Ejido / Community had different levels of organization and this was reflected in the time it required to join the C&I workshops.

Projects like this should be linked to the forestry authorities of the country, so it can have the expected impact on society and the use of information generated is optimized. CONAFOR should activate its official monitoring through the State Forest Councils it presides. Another measure to consider is to include the Ministry of Environment and Natural Resources (SEMARNAT); as it is this body which is responsible for reviewing and approving the forest management plans submitted by the ejidos / communities.

The sustainability of the project after completion hinges on the continued dissemination of the acquired knowledge to all stakeholders and beneficiaries. INIFAP is to continue tracking and monitoring the application of C&I in the ejidos / communities, while the competent authorities (CONAFOR, SEMARNAT, CONABIO, PROFEPA, among others) provide legal support to the C&I process and incorporate these into the current forest management programs, in order to extend the application of the tool throughout the tropical forests of Southeast Mexico.

VI. Concluding Remarks

Overall, the project made a significant contribution towards the sustainable management of the tropical forests in southeastern Mexico, while at the same time it has improved the quality of life of the region's forest-dependent communities.

As the ITTO Secretariat has received the Project Completion Report, several technical reports and the Final Financial Audit, this project can be reported as completed. Copies of the Completion Report and other technical documents are available either upon written request from the Secretariat or can be downloaded in digital format via the online project search engine on ITTO's website at: <http://www.itto.int>

(4) **PD 424/06 Rev.2 (F) Conservation and Utilization of Medicinal Plants in Ghanaian Forests Fringe Communities (Ghana)**

Budget and Funding Sources:

Total Budget:		US\$	537,093.40
ITTO Budget:		US\$	429,138.00
Government of Japan:	US\$	399,138.00	
Government of USA:	US\$	20,000.00	
Government of Korea:	US\$	10,000.00	
Government of Ghana:		US\$	107,955.40

Implementing Agency: Forestry Research Institute of Ghana (FORIG)

Session of Approval: ITTC Session XLII, May 2007, Port Moresby, PNG

Starting Date and Duration: October 2008 / 48 months

Approved Revised Date of
Project Completion:

First extension: October 2013 (NOLF.13-0022)
Second extension: October 2014 (NOLF.14-0037)

I. Introduction

The project was approved by the Council at its Forty-second Session in Port Moresby, Papua New Guinea, in May 2007, and fully financed at the ITTO High Level Meeting in Accra, Ghana, in June 2008. The Agreement regulating the implementation of the project was signed on 1 October 2008. The first disbursement of ITTO funds was made on 28 October 2008. Two project extensions were granted until October 2014, without additional ITTO funds, by the ITTO Secretariat, based on an official request including proper justification with appropriate detailed work plan and budget. However, as an acceptable version of the project completion report was received in April 2016, the project operation period had lasted 90 months instead of 48 initially designed by the implementing agency (FORIG). As the Executing Agency had also submitted the final financial audit report, this project could be documented for the completion and closure procedures.

II. Project Objective

The project contributed to develop conservation and sustainable utilization strategies for medicinal plant species within forest fringe communities of different ecological zones in Ghana. It specifically intended to document the distribution, utilization (endangered, common) and practice conservation methods for the sustainable supply of medicinal plants from three different ecological zones in Ghana.

III. Project Achievements and Outputs

The project strategy, which contributed to achieve its specific objective, was based on the division of Ghana into the following six project target areas: Sudan savanna, Guinea savanna, Forest savanna transition, Semi-deciduous rain forest, High rain forest and Coastal savanna. Within each project target area, one district was identified. In each district, five communities were selected and the selection was based on the closeness to natural habitats of medicinal plants and the presence of traditional medical practitioners or herbalists and fetish priests and collectors, in consultation with the District Traditional Medical Practitioners Association. Three communities in each of the identified districts were selected for Rapid Diagnostic Appraisal (RDA). The fringe community members assisted scientists to conduct ethno-botanic surveys on important medicinal plant species and collect specimen samples for herbarium storage. The medicinal plants were authenticated and the voucher specimens of medicinal trees were lodged at the herbarium of Forestry Research Institute of Ghana (FORIG), in Kumasi, Ghana.

The main project outcomes and impacts, in relation to the expected outputs and associated activities, can be summarized as follows:

- A socio-economic survey was conducted to identify and document the market trends (demand and supply) and prescribe techniques for the sustainable utilization of medicinal plant species in Ghana to protect them from over-exploitation. A total of 147 herbalists were interviewed. Data and related information were collected from the herbalists or traditional herbal practitioners using structured questionnaires. Indigenous knowledge on over 300 medicinal plant species has been gathered comprising plant names, part used and major uses as well as their levels of availability across different ecological zones of Ghana;
- Selected members of local communities were trained on domestication (ex-situ conservation) of wild medicinal plant species, especially threatened species, in home gardens. Usually, medicinal plants had been collected from the wild without replacement or without ensuring their continuous natural regeneration. That's why it was important to introduce and promote appropriate domestication methods of medicinal plants;
- Training of local herbalists and collectors in general nursery and silviculture-based field management was undertaken for reforestation, in order to promote the in-situ conservation of medicinal plants in their natural habitats;
- The traditional methods of harvesting the medicinal plant species were monitored by FORIG scientists and herbalists of the fringe communities in the target project areas. In addition, training workshops were organized on the sustainable harvesting techniques, as most medicinal plant collectors rather acknowledged the harm traditional bark harvesting technique posed on tree species due to excessive debarking. Capacity building on sustainable harvesting techniques had led to the awareness of local communities on the consequences of unsustainable harvesting techniques on medicinal plants availability;

- Herbarium samples of 21 medicinal tree species were collected and preserved, for research and educational purposes. Those medicinal tree species specimens were collected from forest reserves and off-reserves forest lands in Ghana.

IV. Outcomes and Impacts

The main project outcomes and impacts, in relation to the expected outputs and associated activities, can be summarized as follows:

- It was demonstrated by the project that many people, especially the poor communities in rural and urban areas, still rely on medicinal plants to sustain their health problems due to their lack of access to the modern health system;
- As plant medicines remain vital for many people in Ghana, the project contributed to introduce and promote the appropriate techniques for the ex-situ conservation (domestication in home gardens) and in-situ conservation (in natural habitats) of medicinal plants by local communities;
- Given the important role of traditional medicine, based on the utilization of medicinal plants in Ghana, the project's studies and reports add voice to the mounting calls to formally integrate traditional medicine into the orthodox health system in order to ensure safe primary healthcare in Ghana, under specific regulations and rules to be formalized by all relevant parties. The aim would be to gradually shift the traditional medicine from informal to a formal status, for the benefit of users in Ghana;
- Population increase and its associated pressure on lands for anthropic activities resulted in competing land uses by local communities. That's why the project promoted the use of agroforestry systems, for communities where this problem was predominant, by combining the medicinal trees with crops in their farms established at their backyards;
- Over 100 participants from various communities were trained in nursery establishment (for the production of seedlings of medicinal plants selected for each community's interests and priorities) and also in silviculture-based field management (for ex-situ and in-situ conservation of medicinal trees).

V. Lessons Learnt and sustainability

The involvement of selected communities, right from the beginning of the project implementation, was crucial for the smooth implementation of this project, although some indicators were adjusted in order to take into account some technical constraints encountered during the project implementation. These constraints were based on findings of technical surveys carried out during the project implementation. It was noted a keen interest of local communities and other stakeholders in various technical trainings carried out through the implementation of this project (identification and selection of medicinal plant species of high priority and interest for them, production of seedlings with the establishment and management of nurseries, silviculture-based methods for planting medicinal trees, etc.).

FORIG, as the national institution in charge of the implementation of national forestry research policies in Ghana, had contributed to put in place nurseries for the production of seedlings of medicinal trees for the needs of agroforestry activities leading to the ex-situ and in-situ conservation of medicinal trees in Ghana. FORIG will continue to provide appropriate technical supports to local communities involved in the project implementation, while continuing to monitor the ex-situ and in-situ conservation plots of medicinal plant species established by those communities. More specifically, over 100 participants from various communities were trained in nursery establishment and silviculture-based field management with medicinal trees. This provided an avenue for the participation of communities in the continuation of the production of needed priority seedlings for planting medicinal trees.

VI. Concluding Remarks

As the ITTO Secretariat received the Project Completion Report, as well a satisfactory Final Financial Audit Report, the Committee may wish to declare the Project PD 424/06 Rev.2 (F) as completed. Soft copies of abovementioned reports can be made available, upon request, by the Secretariat.

(5) PD 441/07 Rev.2 (F) Institutional Strengthening of ANAM for Integrated Fire Management in the Tropical Forests of Panama

Budget and Funding Sources:

Total Budget:		US\$	758,415
ITTO Budget:		US\$	463,115
Government of Japan:	US\$	413,115	
Government of U.S.A.:	US\$	50,000	
Government of Panama:		US\$	295,300

Implementing Agency: Ministry of Environment of Panama (MIAMBIENTE) [formerly National Environmental Authority (ANAM)]

Session of Approval: ITTC Session XLIII, November 2007, Yokohama, Japan

Starting Date and Duration: July 2010 / 36 months

Approved Revised Date of Project Completion: First extension until December 2014 (No. F.13-0253)
Second extension until December 2015 (No. F.15-0015)

I. Introduction

The Council approved the project at its Forty-third Session in November 2007 and full financing for its implementation was pledged during the Forty-fourth Session in November 2008. The final agreement regulating the implementation of the project was duly signed in March 2009. The first installment of funds was transferred in June 2010, after the submission, by the Executing Agency, of the first Yearly Plan of Operations, a request for the no-objection of the project's key personnel and a notification that implementation is about to begin, and the approval of the aforementioned by the Secretariat. During 2010 and 2011 ANAM went through a period of political uncertainty which seriously delayed the implementation of most of the project's activities, even though ANAM did consistently continue to provide close to US\$ 100,000 in counterpart funding to the project throughout this complicated period. However, after a PSCM held in May 2012 at ANAM, the project began to be reactivated and therefore the second disbursement of funds was released at the end of May 2012. The 3rd disbursement was released in November 2013, the 4th in November 2014, the 5th in September 2015 and the 6th and last in December 2015. The 3rd and 4th meetings of the Project Steering Committee respectively took place in Panama City and project sites in November 2013 and November 2014. The project's completion report, several technical documents and several articles for the TFU, and the final audited report were submitted to the Secretariat in early 2016, together with several technical documents and other related project outputs. The 5th and last meeting of the Project Steering Committee took place in June 2016 at Panama City and project sites, at which the aforementioned final reports and products were reviewed and one of the fire observation towers was inaugurated. A discussion on the project's impact and its sustainability after completion also ensued at this last meeting.

II. Project Objective

In Panama large areas are destroyed by forest fires caused by human intervention, so the development objective of this project was aimed at strengthening the capacity of the Ministry of Environment – MIAMBIENTE (Formerly ANAM), the National Commission for Forest Fire Prevention, Management and Control (COMPRECMAIF), local groups and community grassroots organisations, in integrated forest fire management applicable to the tropical forests of Panama. More specifically, it intends to achieve integrated fire management practices with the participation of communities and other national stakeholders in three pilot areas with high forest fire incidence.

III. Project Achievements and Outputs

The Project's field activities were completed in February 2016 and the overall project was reported as completed in June 2016. In accordance with the project document, all the planned activities were carried out during the project's lifespan and its achievements can be summarized by major outputs and products envisaged by the project, as follows:

Output 1: Project's installed capacity established and integrated fire management activities implemented and monitored

All the activities required to achieve this output have been implemented, as follows:

- Three consultative technical committees were established to coordinate the implementation of project activities, one in each pilot area;
- Four workshops were organized to develop the planning of procedures to be followed for project implementation and development of annual work plan for each pilot area;
- Three baseline documents were elaborated, one for each pilot site;
- Nine workshops were organized to promote the adequate use of integrated fire management techniques at the national, regional and local levels;
- Three voluntary forest fire brigades have been established and trained for each of the three pilot areas: the Cerro Guacamaya Hydrological Reserve, the El Montuoso forest Reserve, and the Buenos Aires community in Nürum. In addition, basic fire-fighting equipment was provided to these brigades;
- Fire break rounds were carried out in the three pilot areas, and a total of 14 km of firebreaks were constructed with the help of local volunteers;
- The voluntary forest fire brigades assisted in extinguishing several forest fires in the pilot areas and also other areas with unique ecosystems where extreme fire behaviour occurred;
- A registry of forest fires has been designed at the national level so as to maintain forest fire statistics in Panama and to further control them. In addition, fire data has been uploaded into Panama's forestry statistics database system and currently contains complete data for the last seven years;
- An Early-Warning System to detect and control agricultural and forest fires was established by MIAMBIENTE;
- 6,400 tree seedlings produced by communities were planted in several sites with a view towards rehabilitating burnt over areas; and
- Six sites for the location of forest fire surveillance posts were assessed and evaluated and fire lookout towers were built at three of these locations and fully equipped.

Output 2: Personnel from target communities in pilot areas and officers from relevant institutions in the field informed and trained on integrated fire management

This output has been 100% successfully achieved. Major achievements are as follows:

- A training programme in integrated fire management was developed and agreed by the 3 established technical consultative committees and further taught in accordance to the implementation schedule. Integrated fire management policy guidelines and methodological procedures for the use and application of the information provided by the Early-Warning System developed by the project were integrated into training manuals and training sessions were imparted to the staff at the MIAMBIENTE Regional Administrations of Cocolé, Herrera, and Ngäbe-Bugle;
- Many pamphlets, brochures and other educational materials were prepared to promote the prevention of forest fires and distributed at schools located in the pilot areas;
- Six forest fire-fighter courses, eight forest fire prevention courses and two first aid courses were carried out in the pilot areas to the benefit of the volunteer community fire-fighters and staff from the MIAMBIENTE Regional Administrations;
- Three training courses focusing on: a) the assessment of environmental damages caused by forest fires, b) the investigation of the causes of forest fires, and c) the evaluation, quantification and management of forest fuels, were organized and conducted to the benefit of the staff of the institutions belonging to the National Commission for Forest Fire Prevention, Management and Control (COMPRECMAIF);
- In 2012, the project participated at a meeting of the Mesoamerican Forest Fires Network and the Latin American Forum on Integrated Fire Management held in Cali, Colombia, at which the results and experiences generated by the project were presented;
- In 2015, project staff actively participated at the 6th International Wildland Fire Conference held in Pyeongchang, South Korea.
- Many educational sessions and environmental festivals were carried out in the schools at each of the 3 pilot sites, at which animated presentations, lectures, and contests allusive to the issue of forest fire prevention and others were performed;

- Three TV programs related to the objectives and interim achievements of the project have been broadcast locally and fifteen short radio programs on forest fire prevention aired throughout Panama's rural areas; and
- Three articles were published by the national newspapers and local media on the objectives and achievements of the project.

IV. Outcomes and Impacts

The project's objectives were mainly achieved due to the active involvement of community residents and institutions linked to the issue of fire management. Most of the impacts generated during execution of the project are the outcome of the comprehensive actions that were developed through the training sessions and home visits made in order to generate changes in population's improper use of fire.

Among the most tangible outcomes of the project, the following can be highlighted:

1. The creation of three Volunteer Forest Firefighting Brigades, each integrated by twelve volunteers who have actively participated in the construction of fire breaks, in firefighting missions, and in the rehabilitation of burnt over areas;
2. The creation of three environmental groups, each integrated by twelve persons, who constantly work on forest fire prevention activities in their communities;
3. 216 community residents were trained in forest fire prevention techniques. These people became multipliers in generating a change in the use of fire, which has resulted in a decrease in the occurrence of forest fires in their communities;
4. Training of 72 officials belonging to the institutions that are part of to the National Commission for Forest Fire Prevention, Management and Control (COMPRECMAIF) on topics such as a) the assessment, quantification and management of forest fuels, b) the research of causes of occurrence of forest fires and c) the valuation of environmental damage caused by forest fires;
5. The construction and equipping of forest fire surveillance towers in three strategic areas;
6. Rehabilitation of forests in areas affected by fire occurrences; and
7. Many educational workshops held at schools in the pilot areas, in order to raise awareness and generate changes of attitude towards the use of fire in the student population.

In addition to the above results, the project produced several products, including technical documents, training manuals, maps, videos and others, among which the following are worthwhile mentioning:

1. Baseline studies in forest fire prevention and control for each of the pilot areas.
2. Manual for the prevention of forest fires.
3. Manual for controlled burning and prescribed fires.
4. Forest fire surveillance tower observation and monitoring manual for the watchman.
5. Action Protocol for members of volunteer forest firefighting brigades.
6. Report of rehabilitation of areas affected by forest fires.
7. Compendium of experiences of activities undertaken by the project.

Most of the aforementioned documents have been or will be uploaded onto the ITTO website for further dissemination to all our member countries and other interested parties. The project has also provided several articles for ITTO's Tropical Forest Update journal.

V. Lessons Learnt and sustainability

Among the many lessons learnt, the following can be highlighted:

- The formation of local advisory committees, whose members represented the different communities, facilitated the decision making and the active participation of the local communities in the project's activities and generated great interest in replicating the experiences of community organization observed in the pilot areas to other regions of the country.
- Another notable aspect is the involvement of natural resource institutional actors in the local community advisory committees, which helped to strengthen local organizations, creating a process that will transcend beyond the duration of the project, as a great deal of interest was generated by both the residents of the communities and institutions in relation to forest fire prevention and control activities.
- The implementation of integrated fire management practices, such as fire breaks, controlled burning and prescribed fires, assisted many participating communities to visualize fire as a tool for the conservation

of natural forests rather than creating degradation or an ecological imbalance, and occurrence of forest fires in the pilot project areas has decreased notoriously since the implementation of the project.

Moreover, the sustainability of the project in the medium and long term is guaranteed, because during the project's implementation awareness was achieved among residents of the communities on the importance of forest fire prevention and control, and the positive influence it had on their livelihoods and the local economy.

VI. Concluding Remarks

Overall, the project has made a significant contribution towards the implementation of community-based forest fire prevention and control activities in Panama.

As the ITTO Secretariat has received the Project Completion Report, several technical reports and the Final Financial Audit, this project can be reported as completed. Copies of the Completion Report and other technical documents are available either upon written request from the Secretariat or can be downloaded in digital format via the online project search engine on ITTO's website at: <http://www.itto.int>

(6) PD 577/10 Rev.1 (F) Management of the Emerald Triangle Protected Forests Complex to Promote Cooperation for Transboundary Biodiversity Conservation Between Thailand, Cambodia and Laos (Phase III)

Budget and Funding Sources:

Grand Total Budget:	US\$	\$2,619,441
Total ITTO Budget:	US\$	2,051,039
Government of Japan (through JICA)	US\$	2,051,039
Government of Thailand:	US\$	339,552
Government of Cambodia:	US\$	228,850

Implementing Agency:	Royal Forest Department (main agency) (Thailand) Forestry Administration (Cambodia)
Period of Approval:	Autumn 2010
Starting Date and Duration:	August 2012 / 36 months
Approved Revised Date of Project Completion:	Cambodia component: First extension until March 2016 (NOL Ref No. F.16-0007) Second extension until July 2016 (NOL Ref No. F.16-0082)

I. Introduction

The project was approved under Autumn 2010 Project Cycle and financed at the ITTC Session XLVI in November 2010 under the ITTO/CBD Collaborative Initiative for Tropical Forest Biodiversity. The agreement regulating the implementation of the project was duly signed by the Royal Forest Department (RFD) of Thailand, the Forestry Administration (FA) of Cambodia and ITTO in May 2012 after concluding a long internal procedure of the government of Thailand relating to signing international project agreements. After establishing a MoU between between the RFD and the FA on the implementation of the project, it became operational on 1 August 2012 in Cambodia and on 1 September in Thailand for a period of three years. While the Thai component was timely completed without any extension, the Cambodia component received two extension grants until July 2016 without additional ITTO funds by the ITTO Secretariat.

II. Project Objective

The development objective of the project was to contribute to conserving transboundary biodiversity in the Emerald Triangle Protected Forests Complex situated between Thailand, Cambodia and Lao PDR in a framework of the trans-boundary biodiversity conservation area (TBCA). The protected areas of the Emerald Triangle comprise habitats of a diversity of wildlife species. Large species, such as the wild elephant,

banteng and tiger, are observed along the national borders and seasonally migrate across the tri-national boundaries. The Emerald Triangle has some of the most extensive unfragmented natural forests in Southeast Asia containing large numbers of globally threatened species as a last refuge for sixteen “critically Endangered” and “Endangered” species from the IUCN Red List. Specifically, the project aimed to strengthen the protection of transboundary habitats of the protected wide-ranging wildlife species in the Emerald Triangle.

III. Project Achievements and Outputs

Project interventions in Phase III had been focused on strengthening ecosystem management by increasing the understanding of wildlife distribution patterns as a means of integrating transboundary biodiversity conservation efforts across the three participating countries. The main achievements in relation to the three outputs include:

Output 1: Management plans incorporating research results on wide-ranging species and ecological processes, which are compatible between countries, are established and implemented

Cambodian component:

- Conducted analyses of land use and land cover changes in the Preah Vihear Protected Forest (PVPF) and estimated carbon stocks changes in the PVPF based on the analyses of the land use and land cover change;
- Gathered wildlife distribution information and conducted botanical studies in and around the PVPF and published technical papers on the results of research findings; and
- Organized "Regional Conference on Biodiversity Conservation in Tropical Forests of the Greater Mekong Sub-region" in Siem Reap, Cambodia, on 23-25 March 2016. There were 108 participants including officials from Greater Mekong Sub-region countries. The proceedings of the regional conference was published and disseminated to interested parties.

Thai component:

- Collected wildlife distribution data in the Emerald Triangle Forest Complex (ETFC); wildlife trainings/workshops were organized with participation of Champasack University, Lao PDR;
- Strengthened the capacity for Cambodian and Laotian officials on GIS for modeling land-use and species distribution through engagement of a GIS consultant from Kasetsart University, Thailand;
- Conducted a joint research by the three countries on wide-ranging species distribution in the Emerald Triangle with support of a wildlife consultant from Kasetsart University; and
- A paper on consequences of land-use change on wide-ranging species distributions was sent to a journal.

Output 2: Capacity of multi-stakeholders in biodiversity conservation and monitoring is strengthened.

Cambodian component:

- Conducted regular law enforcement patrols in the PVPF to reduce incidences of illegal forest activities in target sites in cooperation with military police; confiscated 1,385 kg of wild meat and 135 m³ of sawnwood of rosewood (*Dalbergia cochinchinensis*), and other species in the project sites (O Chuh, Ksant, Robonh and Sen Teches villages); provided monitoring equipment including six motorcycles, two 4WD pick-up trucks, four laptop computers, and three GPS units;
- Coordinated quarterly meetings and workshops with relevant stakeholders on trans-boundary biodiversity conservation; conducted a training course on “Using Drone-GIS technology integrated with mobile devices” to determine locations of forestland encroachment and forest crimes; organized “National Conference on Forest Biodiversity and the Conservation of Carbon Stocks in the Permanent Forest Estate” in Phnom Penh on 16-18 December 2015;
- Organized training programs on forest conservation, forest climate change mitigation, REDD+, and law enforcement for relevant stakeholders and organized workshops to disseminate information on law enforcement and international conventions related to biodiversity conservation, such as CITES and the Convention on Biological Diversity; and
- Organized training on domestication of wild flora and fauna for local communities by identifying 15 species of orchids, 22 species of edible plants, including rattan shoots, mushrooms, and herbs, as well as 4 species of amphibians, and 46 medicinal plants for local markets.

Thai component:

- Conducted forest law enforcement workshops/trainings in November 2013 and February 2014 in collaborate with forest protection units and local NGOs to prevent wildlife poaching, illegal logging, illegal trading and the collection of wild plants; provided necessary equipment and facilities to protection units for effective patrolling and protection; meetings were organized to follow up the patrolling once a month during the field visit of the project staff; and
- Organized a training workshop on buffer zone management in May 2014 in cooperation with universities and NGOs. The communities in the buffer zone increased their knowledge of the buffer zone management for protection of natural resource in the long run. It was attended by 42 participants including local community leaders.

Output 3: Local communities are empowered to implement activities linking livelihoods improvement to reduced dependence on resources of protected areas.

Cambodian component:

- Conducted an assessment for sustainable livelihoods and potential ecotourism development in the five targeted local communities; organized pilot sustainable agriculture and agroforestry practices and community-based ecotourism in the buffer zones of the PVPF;
- Maintained the existing integrated conservation development projects (ICDP) established under Phase II and provided additional funding for domesticated wild flora and fauna pilot programs. Around 91,850 native commercial trees and fruit trees were delivered to local communities;
- Scaled up local community fora and networks to facilitate biodiversity conservation in the PVPF through two exchange visits, one for 20 commune council members and village chiefs and the other for 20 farmers from local communities. These include 19 females; and
- A total of 59 training and awareness raising meetings organized with participation of 3,185 participants, including representatives of local communities and military families; built a small school building for the O Chunh primary school with desks and chairs.

Thai component:

- Strengthened local community fora and networks for biodiversity conservation through a series of workshops and trainings on community development as well as meetings between local people and NGOs for selection of new integrated conservation development projects (ICDP);
- Monitored the operation of the existing 6-ICDPs (two home-stay and eco-tourism, one agro forestry-food bank, one handicrafts from bamboo and two wild orchid tissue culture projects) established under Phase II;
- Organized fund raising meetings with potential donors and NGOs to sustain ICDP activities to promote potential activities and best practices; and
- Conducted outreach programs to local schools and local communities to raise awareness on conservation benefits associated with TBCA. A total of 17 biodiversity conservation drawing contests in elementary schools in the project sites were organized.

Several technical reports resulting from the project were uploaded on the ITTO website at http://www.itto.int/project_search/detail/?proid=PD577%2F10+Rev.1+%28F%29. These include:

- Land use change and wildlife distribution modeling in the Emerald Triangle Forest Complex;
- Wildlife resources in the Emerald Triangle Protected Forest Complex between Thailand and Lao PDR;
- Integrating forest biodiversity resource management and sustainable community livelihood development in the Preah Vihear protected forest; and
- Management Plan for 2016-2020 for Preah Vihear protected forest for plant and wildlife genetic resource conservation.

IV. Outcomes and Impacts

The project has resulted in the increased information and knowledge, and partnerships for trans-boundary biodiversity conservation in the Emerald Triangle landscape between the three countries. The main outcomes and impacts of the project include:

- Information on wildlife distribution patterns in the the Emerald Triangle landscape between the three countries has been crucial for the conservation and sustainable management planning and monitoring. The collaboration between the three countries was successful at the technical level;

- Maps indicating the habitats of wide-ranging, and landmark wildlife species in the Emerald Triangle landscape are now used for coordinating activities to conserve trans-boundary biodiversity in the Emerald Triangle;
- The FLEG capacities of project staff, rangers, border patrol police, and local communities were strengthened with equipment and training;
- The results of research conducted among the three countries were incorporated into revised and updated management plans such as 2016-2020 Preah Vihear Protected Forest in Cambodia and the Pha Taem National Park in Thailand;
- Local communities increased their understanding of alternative income generating opportunities and were able to actively participate in resource management programs; significant improvements in the livelihoods of local communities along with reduced encroachment of protected areas;
- Resource managers who received refined and expanded forest resources and wildlife databases, more reliable information, and advanced GIS research techniques were able to increase their contributions in decision-making processes; and
- Park and protected area rangers increased their understanding of conservation management planning and were able to increase their patrolling performances.

The collective efforts of the Cambodia and Thailand Project Components and representatives of Chamrasack University in Lao PDR include the development of a common vision for long-term management of the Emerald Triangle Protected Forests Complex in order to strengthen the protection of the trans-boundary habitats of wide ranging wildlife species and increase its land use and climate changes adaptation capability. It is expected that this common vision will contribute to transforming the Emerald Triangle Protected Forests Complex into an international symbol of trans-boundary biodiversity conservation.

V. Lessons Learnt and sustainability

There have been several lessons learned from the implementation of the project. Key lessons include the following:

- The political support of every participating country is essential to the ultimate success of trans-boundary conservation. Support from higher levels of the Forestry Administration of Cambodia and the Royal Forest Department of Thailand has been crucial to the design and implementation of the project;
- Technical cooperation, particularly in the early stages of activities, directed collective efforts between the participating countries. The JICA in Cambodia, and Kasetsart University in Thailand have assumed critical roles in expanding technical cooperation. The participation of the Chamrasack University in Lao PDR in the trans-boundary biodiversity cooperation has been instrumental amid the difficulty of engaging relevant Lao government departments;
- Regular meetings of the Project Steering Committee (PSC) and joint technical meetings contributed to the efficient planning and monitoring of the project;
- The effective participation of stakeholders, in particular, local communities, is a necessary component for ensuring the longevity of on-going activities;
- The capacities and capabilities of stakeholders, especially government authorities and local communities, should be well-understood prior to developing training programs and organizing workshops. Efforts to raise their awareness of the importance of conservation in trans-boundary conservation initiatives should be an on-going process; and
- The engagement of the CBD Secretariat in PSC meetings and the regional workshop under the ITTO/CBD Joint Initiative on Tropical Forest Biodiversity has substantially contributed to the visibility of the project in international conservation communities.

Since many of the interventions in Phase II, as well as in Phase III were consisted of capacity building, training, and awareness raising, several post-Phase III project activities will be sustainable through extended work of concerned institutions including research work. In line with the common vision for long-term management of the Emerald Triangle Protected Forests Complex, joint activities will be generated. In particular, the initiation of efforts to institutionalize cross-border relationships through periodic 'bilateral' meetings between Cambodia and Thailand will support sustainable joint management of the Emerald Triangle Protected Forests Complex, especially with regard to increasing cooperation on trans-boundary wildlife law enforcement activities.

VI. Concluding Remarks

Project interventions in Phase III were successful in strengthening ecosystem management by increasing the understanding of wildlife distribution patterns as a means of integrating transboundary biodiversity conservation efforts across the three participating counties. Under the dedicated work of the two project leaders in Cambodia and Thailand, numerous trainings and workshops contributed to the improvement of local community livelihoods under the integrated conservation and development programs. Sharing research results was also institutionalized as the basis of the formulation of sustainable management strategies of the Emerald Triangle Protected Forests Complex.

Since the ITTO Secretariat has received the project completion report, several technical reports, and financial audit report, the Committee may wish to consider this project as completed.

(7) PD 673/12 Rev.1 (F) Strengthening the Capacity in Forest Law Enforcement and Governance of the Permanent Forest Estates in Kratie and Monduliri Provinces of Cambodia

Budget and Funding Sources:

Total Budget:		US\$	\$555,527
ITTO Budget:		US\$	464,033
Government of Japan:	US\$	444,033	
Government of Korea	US\$	20,000	
Government of Cambodia		US\$	91,494

Implementing Agency: Forest Administration of Cambodia

Session of Approval: ITTC Session XLVIII, Nov.2012, Yokohama, Japan

Starting Date and Duration: May 2013 / 36 months

Approved Revised Date of Project Completion: First extension until June 2016 (NOL Ref No. F.16-0048)
Second extension until July 2016 (NOL Ref No. F.16-0119)

I. Introduction

The project was approved under Autumn 2012 Project Cycle and was financed at ITTC 48 in November 2012. The agreement regulating the implementation of the project was finalized in January 2013. After completion of all administrative arrangements for the implementation of the project, the project became operational in May 2013. Two project extensions were granted until July 2016 without additional ITTO funds by the ITTO Secretariat. The EA submitted the project completion report and the final financial audit report as well as project technical reports for the completion of the project in July 2016.

II. Project Objective

In the context of strengthening the forest law enforcement and governance program of the Forest Program (2010-2029) to improve sustainable forest management and benefits to local people by curbing and eliminating all kinds of forest offences, the project was designed to contribute to SFM in Cambodia through suppression of illegal forest activities. The project aimed specifically at strengthening forest law enforcement in the Permanent Forest Estates (PFEs) of Monduliri and Kratie provinces which have been suffered from inadequate capacities in controlling illegal forest activities although the two provinces are among the richest in terms of forest and biodiversity resources.

III. Project Achievements and Outputs

The project has been built on the platform of forest law enforcement and governance established in the country with support of many partners. The project main achievements in relation to the three outputs include the following:

Output 1: Enhanced operational capacity of Forestry Administration in enforcing forest laws in the PFEs of Mondulkiri and Kratie provinces

Activities	Achievements
Activity 1.1: Promote application of developed technical guidelines for forest law enforcement	<ul style="list-style-type: none"> 100 copies of updated forest patrolling field guide printed and disseminated to FA cantonments of Kratie and Mondulkiri provinces
Activity 1.2: Train sufficient number of FA staffs to support law enforcement in the PFEs of Kratie and Mondulkiri provinces	<ul style="list-style-type: none"> A total of 80 Kratie and Mondulkiri FA Cantonments trained on FLEG operations
Activity 1.3: Procure needed equipment and facilities for law enforcement in the PFEs	<ul style="list-style-type: none"> 61 units of equipment and facilities for FLEG operations purchased
Activity 1.4: Establish and operate forest crime information systems for the PFEs	<ul style="list-style-type: none"> A total of 53 FA staff in Phnom Penh, Kratie and Mondulkiri Cantonments trained on Forest Crime Information System (FCIS) Technical guidelines for Case Tracking System for Forest Crime Monitoring (CTS) updated; Simple guide for using electronic messages (Viber, WhatsApp, etc.) developed
Activity 1.5: Produce updated forest cover maps of the PFEs to facilitate efficient field operations	<ul style="list-style-type: none"> 2013 Forest Cover maps of PFEs in Kratie and Mondulkiri provinces produced in English (200 sheets) and Khmer (400 sheets) and widely disseminated
Activity 1.6: Publish and disseminate 2013 Booklet of Forest Cover	<ul style="list-style-type: none"> 500 copies of 2013 Booklet of Forest Cover in Kratie and Mondulkiri provinces in English and Khmer disseminated

Output 2: Improved awareness and incentive for local communities in supporting FLEG initiative

Activities	Achievements
Activity 2.1: Raise awareness of local communities on the importance of FLEG initiatives	<ul style="list-style-type: none"> A total of 608 community members of 20 CFs involved in the dialogues on the importance of FLEG
Activity 2.2: Review existing requirements and procedures for community forests	<ul style="list-style-type: none"> A total of 243 community members of 4 CFs consulted on sustainable income generating activities in Kratie and Mondulkiri provinces
Activity 2.3: Establish 4 demo plots of agro-forestry system	<ul style="list-style-type: none"> A total of 28 ha of agro-forestry systems and 1,200 m² small-scale nurseries established at 4 sites involving 101 community members, including 56 women
Activity 2.4: Train 90 community leaders in agro-forestry and small-scale nursery development techniques	<ul style="list-style-type: none"> A total of 90 community leaders and members in 4 districts of Kratie and Mondulkiri provinces trained
Activity 2.5: Establish 4 CSEs for demonstration of forest-based business development	<ul style="list-style-type: none"> 4 CSEs on forest-based business established at 4 CFs in Kratie and Mondulkiri provinces; a total of 60 participants from 4 CFs trained on bamboo processing techniques
Activity 2.6: Train 80 community leaders on skills of forest law enforcement	<ul style="list-style-type: none"> A total of 82 community leaders and members from 4 CFs trained on skills for implementing selected FLEG activities
Activity 2.7: Organize two provincial workshops on the critical role of local communities in implementing forest law enforcement and sustaining PFEs	<ul style="list-style-type: none"> With support of RECOFTC, 2 provincial workshops on "Critical role of local communities in implementing forest law enforcement and sustaining PFEs" organized in Kratie and Mondulkiri provinces with a total 181 participants
Activity 2.8: Construct two small CF extension offices, one in each of Kratie and Mondulkiri provinces	<ul style="list-style-type: none"> 2 small extension offices constructed to facilitate frequent gathering of CF leaders and members

Output 3: Promoted collaboration between Forestry Administration and stakeholders

Activities	Achievements
Activity 3.1: Launch a strong nation-wide campaign on FLEG and SFM	<ul style="list-style-type: none"> A strategic plan for national campaign on FLEG and SFM developed and implemented 9,000 pieces of 6 kinds of forestry posters printed and

	widely disseminated in the country with 2,000 pieces of 2015 and 2016 year calendar; 1,500 copies of a comic book entitled "Forest is Life" printed and disseminated <ul style="list-style-type: none"> 1,273 T-Shirts and 1,273 hats with ITTO logo at the National Arbor Day on 9 July 2016, Preah Vihear province
Activity 3.2: Develop a sound forestry extension program for each province	<ul style="list-style-type: none"> 100 copies of forestry extension programme published in English and Khmer disseminated to the two target province FA Cantonments
Activity 3.3: Train sufficient extension officers on extension program	<ul style="list-style-type: none"> A total of 58 FA Cantonment staff of Kratie and Mondulkiri trained on forestry extension
Activity 3.4: Establish and operate a multi-stakeholder forum	<ul style="list-style-type: none"> 4 multi-stakeholders forums organized in Kratie and Mondulkiri provinces with a total 185 participants
Activity 3.5: Organize one national workshop on forest extension and SFM	<ul style="list-style-type: none"> A national workshop on FLEG: "Lessons learned from CF management in Cambodia" organized in Phnom Penh in 2016 with a total 87 participants

IV. Outcomes and Impacts

The target beneficiaries of the project were local communities residing in and around the PFEs of Kratie and Mondulkiri provinces, Forestry Administration (FA) at different levels (central, cantonment, division and triage), local private firms and governments of Kratie and Mondulkiri provinces. The main outcomes and impacts of the project include the following:

- Enhanced operational capacity in implementing FLEG program of FA at different levels were attributable to availability of operational equipment and facilities, both hardware and software, sufficient trained personnel, improved strategy development for FLEG and SFM and improved coordination and communication with relevant authorities;
- The local communities have now gained the better understanding on FLEG initiatives and their livelihood improvement potential through sustainable forest management. Their improved skills of developing agro-forestry system, implementing selected FLEG activities, making of bamboo products and managing small business enterprises resulted in increased livelihoods;
- The local private sector gained benefits from the project by having skillful laborers available for developing forest-based business. In addition, local private firms have ample opportunity to improve quality of forest-based products and sell such products at higher prices; and
- Improved security of the PFEs due to enhanced capacity of FA in enforcing forest law and regulations also benefits local governments contributed to more job opportunities.

Involvement of target beneficiaries in the project implementation was triggered by the dynamic communication and consultation undertaken by the FA, Executing Agency, since the development stage of the project. Various project activities had been well captured in the Project's Facebook called "FLEG in Cambodia: FA-ITTO partnership in Kratie and Mondulkiri provinces" and the Project's website at: www.twgfr.org/ittopd673 linked with TWG-FR for information sharing. In the context of more effective implementation of the FLEG Program, one of the priority programs of the 2010-2029 National Forest Program, FLEG operations are now being much more effective compared to pre-project situation by using the tools and means generated by the project.

V. Lessons Learnt and sustainability

The main lessons learnt from the design and implementation of the project include the following:

- In project identification and design, the clearly identified cause-effect relationship of the key problem had facilitated construction of a sound project design that had eased the operational planning and facilitated the smooth project implementation with only minor adjustments to planned activities;
- In project implementation, a small Project Management Unit (PMU) proved able to adequately perform the project operational management in an efficient manner. The solidity of team work contributed to effective communicate with stakeholders and partners;
- The monitoring and evaluation of progress in implementation of the project had been performed through frequent meetings of PMU and four PSC meetings which had greatly contributed to the successful project implementation.
- The strategy pursued in implementing the project, defined during the formulation stage and adapted to developing circumstances during the course of project implementation, was a participatory and

- collaborative approach in nature. It proved working effectively on achieving the project's objectives; and
- Extending FLEG efforts requires continued political and financial support by the government at different levels, provision of livelihood incentives for local communities and enhanced cooperation between FA and stakeholders.

To sustain the project's impacts and benefits after its completion, the Forestry Administration has taken action to make institutional arrangements for the implementation of critical activities through its concerned department including the Department of Legislation and Law Enforcement. Forest patrolling operations and management of the Forest Crime Information System (FCIS) will be sustained in close cooperation with the two FA Cantonments in Kratie and Mondulkiri provinces. Based on the promising result of the project intervention, the FA is seeking for external assistance to continue undertaking the critical activities initiated under the project. Follow-up activities are intended to commence within the shortest period of time possible in order to preserve the already created good momentum for alleviating illegal forest practices.

VI. Concluding Remarks

This project directly addressed the critical need of strengthening forest law enforcement in the Permanent Forest Estates (PFEs) of Mondulkiri and Kratie provinces. Many project activities had been implemented in cooperation with key stakeholders including the local governments, NGOs, and community leaders under the dedicated work and professionalism of the project leader of the EA. The project has made a good outreach effort through creation of the Project's Facebook.

Since the ITTO Secretariat has received the project completion report, several technical reports, and financial audit report, the Committee may wish to consider this project as completed.

(8) PD 724/13 Rev.1 (F) Guidelines for the Management of Tara (*Caesalpinea spinosa*) Plantations with a View to the Rehabilitation of Waste Lands in the Sub-Humid Tropics of the Coastal Region of Peru

Budget and Funding Sources:

Total Budget:		US\$	364,942
ITTO Budget:		US\$	149,632
Government of Japan:	US\$	149,632	
APAIC:		US\$	215,310

Implementing Agency: APAIC – ASOCIACION PRO DESARROLLO AGROINDUSTRIAL DE CAMANA

Period of Approval: Autumn 2013

Starting Date and Duration: February 2015 / 24 months

I. Introduction

The project was approved under the Autumn 2013 Project Cycle through the electronic approval system and full financing for its implementation was pledged during the Fiftieth Session in November 2014. The final agreement regulating the implementation of the project was duly signed in February 2015. The first installment of funds was transferred in February 2015. The second disbursement of funds was transferred to APAIC in July 2015. The 3rd and 4th disbursements were respectively released in December 2015 and March 2016. All funds were disbursed after verifying the executing agency's compliance with the conditions established for these. The 1st meeting of the Project's Technical Committee took place in Lima in October 2015. The project's draft completion report, several technical documents and the draft final audited report were submitted to the Secretariat by mid-2016, together with several technical documents and other related project outputs. A monitoring mission and meeting took place in August 2016 at Arequipa, Camana and other project sites, at which the aforementioned draft reports and products were reviewed by beneficiaries for its finalization. A discussion on the project's impact and its sustainability after completion also ensued at this last meeting.

II. Project Objective

This small project derived from project PD 583/10 Rev.1 (F), which was implemented to assess the feasibility of restoring arid or sub-humid ecosystems in the southern coastal region of Peru and which has proven to be highly beneficial from an environmental and socioeconomic viewpoint after reforesting 75 hectares with *Caesalpinea spinosa* in *eriaza* (waste) lands that previously had no economic or environmental value. As a result of that project phase, it was possible to develop a new flora and fauna ecosystem of considerable significance and the future outlook of nearly one million hectares in this Peruvian coastal ecosystem has been improved by contributing not only to the socioeconomic development of the region but also to carbon sequestration, increasing CO₂ storage levels from 0 to an average 8-10 Mt/ha/year. This is fully consistent with the concepts and strategies of climate change mitigation and rehabilitation of degraded forest lands.

This project was implemented in the Province of Camaná, Department of Arequipa, in Southern Peru. Given its ecological, environmental and socioeconomic conditions, this region is highly significant and representative of tropical semi-arid or sub-humid areas in Peru, where social, economic and environmental alternatives need to be adjusted to the shortage of water for both irrigation and human consumption, so as to generate economic income to help improve the living standards of the rural population. The specific objective of the project aimed to develop guidelines for SFM and agroforestry systems with a view to the rehabilitation of degraded lands in the Peruvian coastal region and develop a technological package that can be used for reforestation with *Caesalpinea spinosa* and agroforestry systems.

III. Project Achievements and Outputs

The Project's field activities were completed in July 2016 and the overall project was reported as completed in September 2016. In accordance with the project document, all the planned activities were carried out during the project's lifespan and its achievements can be summarized by major outputs and products envisaged by the project, as follows:

Output 1: Establishment of high productivity 30-ha module in agroforestry systems associated with Tara (*Caesalpinea spinosa*) plantations

- 32 ha of experimental plantation plots were established: 5 ha at La Joya, 5 at El Pedregal, 10 at Pucchun, and 17 at Las Lomas de Atiquipa, utilizing 6 different provenances of *Caesalpinea spinosa* (i.e. Ayacucho, Cajamarca, Ancash, Junín, La Joya, and Camaná);
- Detailed inventories were carried out at these plots in order to analyse the general conditions of the plantation or natural forest, the natural ecosystems and the biomass, and the irrigation and management conditions;
- A rapid rural assessment was carried out and a biophysical and socioeconomic baseline developed;
- Two 25,000 seedlings/year forest nurseries were established;
- Two water wells were constructed;
- Soil studies were carried out;
- 10 ha of experimental plantations were established in Pucchun based on an irrigation system with underground water;
- Technical assistance was provided to small farmers and other interested beneficiaries;
- 15,000 seedlings were distributed among small farmers to promote the establishment of Tara plantations; and
- A regional workshop was organized at Arequipa and Camana in August 2016 to disseminate the project's results and promote the restoration of degraded arid lands with *Caesalpinea spinosa*.

Output 2: Development of technological package that may be replicated in other coastal regions of the Peruvian coast

- Technical and socioeconomic information on Tara plantations was systematized and documented in a technical report.

Output 3: Development of guidelines for the sustainable management of Tara plantations

- An outline for the guidelines for the sustainable management of Tara plantations was developed based on several ITTO and FAO guidelines;
- A Regional Committee for the Restoration of Degraded Areas on the Southern Coast of Peru was created to provide sustainability to the project's activities and meets regularly;
- A workshop was organized at Arequipa in December 2015 to discuss, refine and validate the aforementioned guidelines;
- The final guidelines were systematized and documented in a technical report; and
- A project proposal was formulated to develop a regional strategy for the recovery and restoration of degraded lands along the Peruvian southern coast.

IV. Outcomes and Impacts

Among the project's many outcomes, the following can be highlighted:

- i) The consolidation of technical experiences in the management and competitive production of Tara in the southern coastal region of Peru;
- ii) The development of a technological package for the management of Tara and associated agroforestry systems; and
- iii) Guidelines for SFM in Tara plantations and rehabilitation of degraded and barren lands to be applied throughout the coastal region of Peru.

Moreover, the project has also produced several documents, among technical reports, studies, training materials and others, the 2 main ones being the following:

1. A technological package, containing information collected on the field for Tara plantations, natural ecosystems, research studies (soils, water, biodiversity, irrigation); and
2. Guidelines for the sustainable management of Tara plantations and rehabilitation of degraded and barren lands.

Most of these documents have been or will be uploaded onto the ITTO website for further dissemination to all our member countries and other interested parties.

V. Lessons Learnt and sustainability

The main lessons learned from the implementation of the project include:

1. The introduction or promotion of forest and agroforestry practices among traditional farmers dealing with customary agricultural monocultures is very challenging and difficult. However when these activities do not directly compete or conflict with the traditional ones, the people are much more cooperative and ready to participate.
2. The best way to introduce forest activities among farmers is by restoring barren or degraded land areas, particularly if these forest activities could provide additional economic resources for small or medium agricultural operators.
3. Soils do not limit afforestation, reforestation or agroforestry activities, in as long as the appropriate tree species are selected. There are shrubs and trees for any climate and soil conditions.
4. For land restoration or rehabilitation programme to succeed, it is necessary to generate a critical mass of users and operators. Nevertheless, political will is the main key for sustainability in the long term.

VI. Concluding Remarks

Overall, the project has made a significant contribution towards the rehabilitation process of degraded lands in the Peruvian coastal region, providing poor farmers with additional incomes.

As the ITTO Secretariat has received the Project Completion Report, several technical reports and the Final Financial Audit, this project can be reported as completed. Copies of the Completion Report and other technical documents are available either upon written request from the Secretariat or can be downloaded in digital format via the online project search engine on ITTO's website at: <http://www.itto.int>

- **COMPLETED PRE-PROJECT**

None.

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