



**INTERNATIONAL TROPICAL
TIMBER COUNCIL**

**COMMITTEE ON
REFORESTATION AND FOREST MANAGEMENT**

Distr.
GENERAL

CRF(LIII)/2
11 October 2019

Original: ENGLISH

FIFTY-THIRD SESSION
2 - 7 December 2019
Lome, Togo

**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**

A) COMPLETED PROJECTS

- (1) PD 456/07 Rev.4 (F) **Building the Capacities of Forestry Training Institutions Members of the Network of Central African Forestry and Environmental Training Institutions (RIFFEAC) For Providing SFM Training for Forest Concessions**
“Capacity Building for Sustainable Management of Tropical Rainforests and Biodiversity Conservation in the ITTO Congo Basin Countries” (ITTO)

Budget and Funding Sources:

Total Budget:		US\$	4,000,981
ITTO Budget:		US\$	3,890,681
Government of Japan (JICA+MOFA)	US\$	3,523,645	
Government of Switzerland	US\$	270,000	
Government of Belgium	US\$	97,036	
RIFFEAC Training Institutions:		US\$	110,300

Implementing Agency: RIFFEAC Secretariat

Period of Approval: Spring 2011

Starting Date and Duration: March 2012 / 60 months

Approved Revised Date of Project Completion: 1st extension: March 2018 (NOLF.17-0067)
2nd extension: March 2019 [NOLF.18-0037 & JICA(6R) 5-31001]

I. Introduction

The Council approved the project at its Forty-second Session in Port Moresby, Papua New Guinea, in May 2007. Financing was not allocated at that time, but the Council authorized the Executive Director to start implementation as soon as earmarked funds for the total ITTO contribution became available in the Special Account. Belgium pledged US\$97,037 in January 2008, as a partial funding for a total ITTO budget of US\$1,080,741 for this regional project. A consultant was engaged to convert this project into a phased project (Phase I with an ITTO budget of US\$569,689 and Phase II with US\$511,052) in order to facilitate its additional financing by potential donors of ITTO. No additional financing was allocated by donors to the phased project version.

The project was further revised under the ITTO/CBD collaborative initiative to conserve tropical forest biodiversity [Council Decision 6(XLVI)], in close collaboration with the RIFFEAC institutions and the CBD Secretariat. Its budget was increased from US\$1,080,741 to US\$4,408,557. In conformity with the provisions of the Council Decision 4(XLVI), the revised version was posted on the ITTO internet homepage and approved through the time bound process on 6 July 2011. This project was partially financed at the Forty-seventh Session of the Council in Guatemala, in November 2011. The Agreement regulating the project implementation was signed in March 2012. The first disbursement of ITTO funds was made in March 2012.

The ITTO project budget was revised to match with the amount of US\$3,890,681.00 secured from donors (Belgium, Japan and Switzerland) and subsequent to that revision an Addendum to the Agreement regulating the project implementation was duly signed by the Executing Agency (RIFFEAC Secretariat) on 21 July 2015 and the ITTO Secretariat on 29 July 2015. JICA contribution to this project was not impacted by the financial impairment issue. However, the ITTO budget from other donors was reduced from US\$593,327.69 to US\$555,555.69 [referring to Decision 6(LII) of the 52nd Session of the Council and subsequent requirements], as it was impacted by the financial impairment.

Two project extensions were granted until March 2019, 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 August 2019,

the project operation period had lasted 89 months instead of 60 initially designed by the implementing agency (RIFFEAC Secretariat). The project final financial audit report was also submitted in August 2019 by the implementing agency, allowing this project to be documented for the completion and closure procedures.

II. Project Objective

Overall, this project contributed to building human resource capacity required to achieve sustainable forest ecosystem management in the Congo Basin. More specifically, the project intended to build the capacity for environmental and forestry training institutions in Central Africa, in order to ensure that they are capable to train the personnel able to implement sustainable forest management in Congo Basin countries.

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 disbursement of funds from June to November 2016 because of the financial impairment crisis. The main achievements and related outputs, at the project completion, in March 2019, can be summarized as follows:

- The table of capital goods for the benefit of 7 RIFFEAC training institutions, directly involved in the project implementation, is presented as follows:

Training institution and Country	Type of capital goods
CRESA-Yaoundé, Cameroon [JICA funds]	One 30-seat Toyota Coaster bus for the field trips of students
	Set of 7 computers and related accessories for use by students in an ICT center established in the training institution
	Rehabilitation of a building with 2 teaching rooms of 30 student places each and 7 office rooms for professors
	Forestry equipment and materials for use by students during practical courses and field visits
ENEF-Mbalmayo, Cameroon [JICA funds]	One 30-seat Toyota Coaster bus for the field trips of students
	Construction of a building with 4 teaching rooms and library
FASA-Dschang University, Cameroon [JICA funds]	One 30-seat Toyota Coaster bus for the field trips of students
	Set of 7 computers and related accessories for use by students in an ICT center established in the training institution
	Construction of a building with 4 teaching rooms of 60 student places each, 2 teaching rooms of 80 student places each, 4 office rooms for professors and 6 toilets
	Forestry equipment and materials for use by students during practical courses and field visits
ISDR-Mbaïki, Central African Republic [JICA funds]	Set of 25 computers and related accessories for use by students in an ICT center established in the training institution
	Construction of one building with 3 teaching rooms of 50 student places each and second building with 3 administration offices and one meeting room for professors
	Forestry equipment and materials for use by students during practical courses and field visits
ENSAF-Brazzaville (ex. IDR), Rep. of Congo [JICA funds]	One Toyota Land-Cruiser pick-up for the field trip of students
	Set of 7 computers and related accessories for use by students in an ICT center established in the training institution
	Forestry equipment and materials for use by students during practical courses and field visits
	Construction of a building with 3 teaching rooms of 40 student places each, 4 office rooms for professors, 4 administration offices and 4 toilets
ERAIFT-Kinshasa, D. R. Congo [JICA funds]	One 30-seat Toyota Coaster bus for the field trips of students
	Set of 17 computers and related accessories for use by students in an ICT center established in the training institution
	Forestry equipment and materials for use by students during practical courses and field visits

<p>ENEF-Libreville, Gabon [Non-JICA funds]</p>	<p>Construction of a building for sheltering a wood processing and carpentry workshop</p>
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- Reference training modules/programmes and associated teaching methodologies (at university level and at lower level) were prepared and finalized by the University of Laval and CERFOR Technical Forestry Centre of Canada in consultation with all RIFFEAC training institutions, directly or indirectly involved and/or linked to the project implementation, as well as with other forestry-related public and private institutions operating Congo Basin countries.

The list of training modules (University level and Technician level) is as follows:

- Module 1 : Sustainable Forest Management (SFM) : overview based on ITTO Criteria and Indicators for SFM
- Module 2 : Appropriate strategies for the preparation forest management plans
- Module 3 : Biodiversity conservation in forest concessions operating in Congo Basin countries based on the ITTO-IUCN guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests
- Module 4 : Forest management within the framework of REDD+ strategies in Congo Basin countries
- Module 5 : Implementation of forest management plans
- Module 6 : Multi-purpose forest inventory

The editing and printing of the training modules had been undertaken and hardcopies had been distributed to all RIFFEAC training members (23 members) in the Congo Basin countries (ITTO and non-ITTO member countries). The hardcopies of these training modules are very useful in order to facilitate their use in most training institutions which are regularly facing the electric power cut, in most Congo Basin countries.

In addition to the hardcopies, the executing agency (RIFFEAC Secretariat) had also disseminated the electronic version of the reference training modules/programmes and associated teaching methodologies. The training modules are available in the ITTO website through the following link: https://www.itto.int/project/id/PD456_07-Rev.4-F

- The international conference on forestry training in Congo Basin countries, which was held on 5-7 March 2018, in Douala (Cameroon), was attended by more than one hundred experts from Congo Basin countries and from ITTO member countries in Africa, as well as from other continents (America, Asia and Europe).

This international conference on forestry training in Congo Basin countries was a good opportunity for the formal technical endorsement of training modules and related teaching methodologies. The conference was also a good opportunity for sharing the forestry-related training experiences and challenges in Congo Basin countries. The conference opening ceremony was attended by two representatives of JICA Office in Cameroon (Junko MASUDA and Muneyuki KOZU), as well as by Gerhard DIETERLE (Executive Director of International Tropical Timber Organization - ITTO).

The speeches of the opening ceremony, as well as interviews of selected participants, including Madam Junko MASUDA, have been made available on ITTO website through the following link: https://www.youtube.com/playlist?list=PL-8vSyKsrN_1v67kfGli113yUKFseXqzI

- Six Thematic Working Groups (TWGs) had been established and mobilized for the operationalization and/or implementation of these training modules/programmes and associated teaching methodologies in all 23 RIFFEAC training institutions, including those not directly supported by the implementation of the project PD 456/07 Rev.4 (F).

These TWGs had contributed to the gradual internalization of the reference training modules/programmes in each RIFFEAC training institution. The ownership/internalization process in each Congo Basin country is a key condition for the sustainability of this important project outcome dealing with the reference training modules/programmes and associated teaching methodologies listed here above.

IV. Outcomes and Impacts

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

Training Modules	Number of Students subject to the training sessions with six modules in each of seven training institutions directly supported by the project PD 456/07 Rev.4 (F) during 2018-2019 school year							
	CRESA Yaoundé Cameroon	ENEF Mbalamayo Cameroon	ENSAF Brazzaville Congo	ERAIFT Kinshasa DR Congo	FASA Dschang Cameroon	ISDR Mbaïki CAR	ENEF Libreville Gabon	TOTAL
Module 1 / U-L	26	62	12	18	63	48	23	252
Module 2 / U-L	26	62	86	42	63	48	24	351
Module 3 / U-L	26	62	-	18	90	48	35	279
Module 4 / U-L	26	62	-	18	50	48	14	218
Module 5 / U-L	26	62	17	24	63	48	28	263
Module 6 / U-L	26	62	44	42	63	48	36	321
Module 1 / T-L	-	181	-	-	86	-	-	267
Module 2 / T-L	-	181	-	-	86	-	-	267
Module 3 / T-L	-	181	-	-	-	-	-	181
Module 4 / T-L	-	181	-	-	-	-	-	181
Module 5 / T-L	-	106	-	-	55	-	-	161
Module 6 / T-L	-	181	-	-	86	-	-	267
Number of graduates / diploma holders (2017-2018 school year)	20 M.	19 I. 154 T.	10 M. 53 I.	42 M.	45 M. 25 I. 33 T.	20 I.	4 M. 22 I.	121 M. 139 I. 187 T.

Source: Regional Coordination of RIFFEAC and 7 Training Institutions

Note: U-L: University level / T-L: Technician level / M: Master degree / I: Bachelor degree / T: Technician degree

These six reference training modules had been subject to dissemination to all 23 forestry training institutions which are members of RIFFEAC, not only to 7 forestry training institutions supported by the implementation of the project PD 456/07 Rev.4 (F). This shows that the impact of the project is far beyond the five ITTO member countries in Congo Basin (Cameroon, Central African Republic, Congo-Brazzaville, Congo-Kinshasa and Gabon).

V. Lessons Learnt and sustainability

It was important to establish six Thematic Working Groups (TWGs) which had played a crucial role for the operationalization/implementation and ownership of these training modules/programme and associated teaching methodologies in all RIFFEAC training institutions, including in those not directly supported by the project PD 456/07 Rev.4 (F) and also in those in non-ITTO member countries.

With the aim to consolidate the main project outcomes, the Executive Secretary of the Commission for Central African Forests (COMIFAC) submitted, on behalf its member countries, to the Embassy of Japan and JICA Office in Cameroon, the profile-document of the second phase of this project, for possible funding through the mechanisms of the 7th Tokyo International Conference for African Development (TICDA-7).

VI. Concluding Remarks

As the ITTO Secretariat received the Project Completion Report and the six reference training modules, as well as an acceptable Final Financial Audit Report, the Committee may wish to declare the Project PD 456/07 Rev.4 (F) as completed. Soft copies of the project-related reports and publications can be made available, upon request, by the Secretariat.

(2) PD 470/07 Rev.1 (F) Development and Implementation of Criteria and Indicators for Sustainable Management of Planted Forests and Community Forests (Thailand)

Budget and Funding Sources:

Total Budget:		US\$	258,674
ITTO Budget:		US\$	209,574
Government of Japan:	US\$	209,574	
Government of Thailand:		US\$	49,100

Implementing Agency: Royal Forest Department in collaboration with the Department of National Park, Wildlife and Plant Conservation, Thailand

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

Starting Date and Duration: August 2013 / 69 months

Approved Revised Date of Project Completion: Extension until 31 December 2017 (NOLF.16-0066)
Extension until 31 December 2018 (NOLF.18-0026)
Extension until 30 April 2019 (NOLF.19-0007)

I. Introduction

The Council approved the project at its Forty-third Session in November 2007. Financing was allocated at the Forty-fourth Session of the Council in November 2008. The agreement regulating the implementation of the project was sent to the Royal Forest Department (RFD) in January 2009. After a long delay due to internal issues in Thailand, the project agreement was duly signed on 1 March 2011. After completion of the necessary administrative arrangements for the implementation of the project, the project became operational in August 2013. There was again a long delay in implementing the planned activities after the project started due to flooding, political change in Thailand and reshuffle of officers in RFD, and later conflicts and difficulties to process documents and all formalities. To address the long delay of project implementation, a new project manager has been engaged since January 2018. With the active work of the new project manager, all project activities were completed in April 2019 and all documents for the completion of the project have been submitted to ITTO.

II. Project Objective

The underlying issues of slow progress towards SFM in Thailand included the inadequate supply of timber and non-timber forest products from sustainable sources. This leads to continuing deforestation and forest degradation and persistent poverty among forest dependent people in rural areas. In order to contribute to the improved availability of timber and non-timber forest products from sustainable and legal sources in Thailand, the project aimed to establish a comprehensive system of criteria and indicators for sustainable management of planted forests and community forests.

III. Project Achievements and Outputs

The project objectives have been achieved through the development of Thai Criteria and Indicators (C&I) for sustainable management of planted forests and community forests based on a series of consultation meetings, taking into account the "ASEAN Regional Criteria and Indicators for Sustainable Management of Tropical Forests" which was adopted by the ASEAN Ministers on Agriculture and Forestry (AMAF) in 2007. The project also developed Thai Chain of Custody (CoC) certification, taking into the CoC certification standards of the Forest Stewardship Council (FSC) and the Program for Endorsement for Forest

Certification (PEFC) as well as ISO/PC 308 and ISO/PC 287 Standard 1.4 and relevant Thai national standard which focuses on documenting, quantity and quality control, and traceability.

Among the main achievements of in relation to the project's outputs, the following can be highlighted:

Development of Thai Criteria and Indicators (C&I) for sustainable management of planted forests and community forests

- The overall aim of criteria and indicators is to promote more sustainable forest management practices, taking into consideration the social, economic, environmental, cultural and spiritual needs of different stakeholders.
- The DG of Royal Forest Department (RFD) established National Working Group (NWG) and Sub-working groups on 18 July 2017. 3 sub-working groups include: Working Group (WG) for development of C&I for planted forests, WG for development of C&I for community forests and WG for development of CoC. NWG members were representatives from the offices of RFD, academic society and the private sector.
- 3 working groups with consultants had developed several draft C&I and after more than 6 consultation meetings, the draft C&I was finalized in the end of December 2018.
- In total, there are 7 criteria and 35 indicators for Thai C&I. The 7 criteria include: (i) Compliance with national laws, policies and strategies; (ii) Extent and condition of forests; (iii) Forest ecosystem health and adaptation; (iv) Forest production and ecosystem services; (v) Forest biodiversity; (vi) Soil and water conservation; and (vii) Economic, social and cultural of local communities.

Development of Thai Chain of Custody (CoC) certification

- The Sub Working Group on CoC of the National Working Group (NWG) established by RFD had reviewed the draft CoC certification prepared by two national consultants from the Kasetsart University.
- The national consultants conducted a pilot field testing in Mae Tha (Chiang Mai) and Santisuk (Nan) in March 2019. The draft CoC was used with small holders in Nan as they were interested in market development. The smallholders in Nan were introduced to timber companies engaged in teak timber business.
- Thai Chain of Custody (CoC) starts with the tree before cutting, by checking movement to the point where the logs are cut and removed from the forest using documents and records within the forest area. Its principles include: i) Within the forest; ii) Transportation; iii) Storage; and iv) Inside processing facilities. It also provides guide on requirements for supervisors and auditors.

For the effective use of the Thai C&I and CoC for sustainable management of planted forests and community forests, a training workshop was organized in Chachangsao and Sra Kaew on 11-14 December 2018. There were 35 participants from RFD, the private sector, civil society organizations, NGOs and community forest leaders. This training workshop contributed to transferring of the project's main outcomes. The public consultation on the draft C&I and CoC included their posting on the RFD website for a public hearing. Moreover, the project organized a training workshop to introduce Thai C&I and CoC on 22 April 2019 with participation of 110 RFD officers.

IV. Outcomes and Impacts

The project has shown that the development of C&I and CoC for sustainable forest management has become a vital part of the timber legality and sustainability in the region. The project's stakeholders noted that if all countries in ASEAN developed their own C&I and CoC for sustainable forest management, the progress of sustainably managing tropical forests would be further enhanced in the region. One of the most significant outcomes is the development of Thai C&I and CoC for sustainable management of planted forests and community forests which will be used as an internal auditing guide of RFD, Thailand. As the Law of Community Forests was passed in May 2019 in Thailand and it is under implementation, the project's C&I and CoC will be a key tool for auditing of SFM and marketing of forest products in the country.

Another important outcome of the project is that policy makers of RFD have enhanced their knowledge of forest governance under the framework of C&I and CoC. In particular, they have engaged in the process of developing the 7 criteria and 36 indicators and CoC for sustainable management of planted forests and community forests. The project designed and tested the C&I and CoC as an internal auditing system of RFD

although the project's C&I and CoC could not be endorsed as a national standard due to time and budget limits. During the implementation of the project, 10 RFD members had a study visit to Japan including the Sustainable Green Ecosystem Council (SGEC) from 17 to 21 March 2019 and learned about the importance of C&I for sustainable forest management in the region.

In addition, the capacity of Thai stakeholders to timber certification has been improved through their participation in C&I and CoC consultation meetings and training workshops. A C&I and CoC guideline handbook was produced for extension. Beside the handbook, an Info-graphic media on SFM, C&I and CoC, VDO on Women in SFM and mobile posts were produced and disseminated.

The project has enhanced collaboration opportunities between government bodies, NGOs, community organizations and the private sector in the development and practice of C&I and CoC for sustainable forest management in Thailand. The project has also contributed to the research programs of Thai's academic society in particular the Faculty of Forestry, Kasetsart University as several professors as national consultants have facilitated the formulation of Thai C&I and CoC.

V. Lessons Learnt and sustainability

There have been several lessons from the implementation of the project. Key lessons can be summarized as follows:

- C&I and CoC framework demonstrates as an efficient tool to monitor the sustainable management of planted forests and community forests. The tool is essential to certify forest management and forest products produced from sustainable sources. It is also a way to promote public awareness of sustaining tropical forests and safeguards to the environment and peoples.
- Participatory process in formulating and testing the draft C&I and CoC was effective but requires longer time and resources. Communications with key stakeholders and public consultation process provided good opportunities for awareness and collaboration.
- For C&I and CoC development to be effective, the engagement of competent resource persons is critical. The establishment of a national working group and three sub-working groups demonstrated the will of RFD and contributed significantly to the development of Thai C&I and CoC. National consultants from experienced professors of Kasetsart University were critical to the work of the national working group.
- The project has received several extensions due to a long delay in implementing the planned activities. The engagement of a competent project team in particular a competent project coordinator was a challenge to efficient project implementation. The significant progress of project implementation has been made after recruitment of a new project manager in January 2018. She has substantially contributed to the effective completion of the project.

The Royal Forest Department (RFD) is expected to endorse the project's C&I and CoC for sustainable management of planted forests and community forests as a national standard after a pilot phase as an internal auditing system for sustainable forest management. In line with the commitment of RFD to the effective implementation of the Law of Community Forests which was passed in May 2019, the project's C&I and CoC are expected to make valuable contributions in safeguarding the conservation and sustainable management of tropical forests in Thailand. Through RFD annual programs for SFM, the project work of C&I and CoC will be sustained and expanded.

VI. Concluding Remarks

As the ITTO Secretariat has received the Final Financial Audit Report and several technical reports, the project PD 470/07 Rev.1 (F) can be reported as completed. Soft copies of the project-related reports can be made available, upon request, by the Secretariat.

(3) PD 477/07 Rev.4 (F) Improving Forest Functions in Bengkulu Province through Community Participation in Rehabilitation of Degraded Forest by Using Local Prospective Commodities (Indonesia)

Budget and Funding Sources:

Total Budget:		US\$	430,424
ITTO Budget:		US\$	338,256
Government of Japan:	US\$	338,256	
Government of Indonesia		US\$	92,168
Implementing Agency:	Department of Watershed Control and Forest Protection, Ministry of Environment and Forestry of Indonesia		
Session of Approval:	Spring 2009 Approval of validity extended during ITTC Session XLVI, Nov. 2010, Yokohama, Japan		
Starting Date and Duration:	December 2015 / 38 months		
Approved Revised Date of Project Completion:	Extension until January 2019 (NOL.Ref.no.F.18-0102)		

I. Introduction

This project was approved under Spring 2009 Project Cycle and the validity of the approval was extended at the Forty-sixth Session of the ITTC until Spring 2013. The project was ultimately financed at the Forty-eighth Session of the ITTC held in November 2012 and the project agreement was duly signed in October 2014. The Executing Agency submitted the Inception Report with a yearly plan of operation (YPO) for the first year and started the implementation of project activities in December 2015.

The significant delay in the implementation of this project in its preparatory stage resulted from the shift in the Executing Agency from the Provincial Government of Bengkulu, the proponent of this project, to the Ministry of Forestry. The project implementation further delayed due to the structural reform of the Government of Indonesia and the suspension of all installments of funds to ITTO projects in June 2016. The implementation of project activities was revitalized with receipt of the reduced fourth installment in Feb 2017. With the new project coordinator's active work, all project activities were completed in January 2019.

II. Project Objective

The aim of this project was to rehabilitate and restore forests in Bengkulu Province and improve livelihoods of local communities through their involvement in the plantation of locally adapted and prospective commodity species. The specific objectives of this project were : (i) to implement suitable technology for the production of high quality planting materials of locally adapted and prospective commodity species; and (ii) to improve stakeholders' involvement and community prosperity through successful plantation of these commodity species.

III. Project Achievements and Outputs

All project's activities have been carried out well and produced outputs even though certain activities were not realized based on the planned schedule. The details of the project's outputs are summarized as follows:

Output	Activities	Completion status/remarks
Output 1.1 Seed sources of selected species identified and their suitable technology developed	1.1.1. Identification of seed sources for 2 selected indigenous species (<i>Azadirachta excelsa</i> and <i>Durio spp</i>),	Completed. <i>Azadirachta excelsa</i> (Kayu Bawang) seed sources and <i>Durio spp</i> (Bentara Durian) mother trees are available.
	1.1.2. Development of propagation and plantation techniques for the selected species,	Completed. Techniques on propagation and plantation for Kayu Bawang dan Bentara Durian are developed
Output 1.2 Technical guidelines for handling the selected species developed and disseminated	1.2.1. Preparation and development of technical guidelines on seed handling and planting for the species	Completed. Technical guidelines are available
	1.2.2. Workshop on plantation technologies of the selected species	Completed. Report of the workshop is available.
Output 2.1 High quality planting materials for plantation produced and distributed	2.1.1. Improve nursery technology to produce and distribute planting materials	Completed. High quality plantation materials have been produced from a nursery that developed by community.
	2.1.2. Distribute high quality planting materials to participating communities	Completed. Communities grow/ cultivate high quality seedlings.
Output 2.2 Community - forestry plantation model developed	2.2.1. Review and refine the existing community forestry plantation model	Completed. 1) Baseline data of vegetation and community socio-economic are collected and 2) Technical models are developed.
	2.2.2. Develop and establish model in 2 districts	Completed. Models are developed in Seluma District and North Bengkulu District.

IV. Outcomes and Impacts

One of the significant outcomes is that the project outputs were accomplished through an adequate participatory process involving the community and other stakeholders and took an initiative on forest landscape restoration activities by promoting the planting of prospective local species.

The developed forest plantation model demonstrates not only the potential of Kayu Bawang wood, but also the potential of non-wood forest product of the Bentara Durian. It was estimated that Bentara Durian will produce fruits at the age of 6-7 years. Bentara Durian is a high quality variety of durian with a very good price in the market. Planting Kayu Bawang in combination with Bentara Durian will benefit farmers. During the harvesting time of Durian Bentara, tour packages could be organized for durian lovers to visit the planting villages. Therefore, the developed forest plantation models in the District of Seluma and the District of North Bengkulu have provided learning opportunities for the communities.

V. Lessons Learnt and Sustainability

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

- Many unexpected cases occurred when the project activity was implementing. Consequently, several modifications to the project's design were taken. The changing circumstances became technical/non-technical, managerial, as well as human resource problems of the project. The encountered problems were partly due to long gap between the project proposal formulation and its implementation.
- The project actually had technical activities in the field (Bengkulu Province) whereas the project management was controlled by the Project Team based in the Headquarters of the Executing Agency in Jakarta. This situation led to the inefficiency project management control and high operational costs.

The sustainability of the project is foreseen:

- The enthusiasm of the community to develop plantations of the two species (Kayu Bawang and Bentara Durian) is very high. They have developed confidence through the technical and managerial trainings provided by the project.
- The Provincial Forestry Service of Bengkulu Province has taken up the responsibility to follow up the project's results and ensures the allocation of provincial budgets to further facilitate the community to develop their own Kayu Bawang and Bentara durian plantations.
- The Executing Agency has committed to developing further promotion action plans to attract investors to develop a business oriented plantation of the two species.

VI. Concluding Remarks

As the ITTO Secretariat has received the Final Financial Audit Report and several technical reports, the project PD 477/07 Rev.4 (F) can be reported as completed. Soft copies of the project-related reports can be made available, upon request, by the Secretariat.

(4) PD 563/09 Rev.5 (F) Community-Based Forest Management of Sungai Medihit Watershed Sarawak (Malaysia)

Budget and Funding Sources:

Total Budget:		US\$	666,710
ITTO Budget:		US\$	73,710
APFNet:	US\$ 460,000	US\$	133,000
Government of Malaysia:			

Implementing Agency: Forest Department of Sarawak

Period of Approval: Spring 2011

Starting Date and Duration: September 2015 / 34 months

Approved Revised Date of Project Completion: Extension until 31 May 2018

I. Introduction

This project was approved under 2011 Spring Project Cycle and financed by the Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet) under the MoU between ITTO and APFNet on promotion of sustainable forest management. The project agreement between APFNet, ITTO and Sarawak Forest Department was finalized on 23 March 2015 with a launching ceremony of the project in Miri, Sarawak which was attended by Executive Director of ITTO, Executive Director of APFNet and Minister of Planning and Resource Management of Sarawak. After concluding the necessary administrative arrangements, the project became operational in September 2015. In project implementation, ITTO has facilitated the implementation of the project as a supervisory agency. All project activities were completed in June 2018 and reporting for the completion of the project was finalized in December 2018.

II. Project Objective

The project aimed to promote sustainable forest management in Sungai Medehit Watershed through community capacity building and improved governance mechanisms on community development. Sungai Medihit catchment is located in Ulu Limbang Division, north Sarawak in a remote and hilly 35,400 ha area where the Kelabit and Penan indigenous communities subsist on shifting agriculture and resources collected from increasingly disturbed forests. The specific objectives of the project were: to improve sustainable forest management through rational forest management plans, applying innovative forest management techniques and establishing effective forest management mechanisms; to enhance the communities' capacity for sustainable forest management and livelihood development; and to improve the community living conditions

by renovating the service infrastructure. The project beneficiary groups are indigenous peoples of Kelabit and Long Napir communities.

III. Project Achievements and Outputs

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

Output 1 Community forest management improved

- Baseline surveys of community socio- economic status, forest resources, biodiversity and traditional cultures completed; two community level forest management plans developed; demonstration activities on sustainable forest management carried out; and a community-based forest management platform and mechanism developed.
- Relationship between the target communities' socio-economic status and catchment resources availability had been clarified and the target communities' needs and obstacles to their socio-economic development were identified. Assessment on the forest resources had been better understood in terms of forest stand density, species composition, size class distribution; standing commercial timber volume, potential timber volume, growth performance of non-dipterocarp and dipterocarp species.
- A nursery for high value local tree species was developed and the location of conservation areas/demonstration sites agreed on. The conservation areas were important as contractors had started to operate the License for Planted Forest (LFP 1961) in Ulu Medihit.
- Field activities of sustainable community forest management practices had been implemented in the two communities. Activities include agroforestry systems, high ecological value forest protection, high commercial value tree species planting, collection and processing of NTFPs, and training on silviculture treatments such as planting, grafting, tendering and low-impact logging.

Output 2: Capacity of the community on development enhanced

- Alternative livelihood activities for the communities had been emphasized. These include fish raising and poultry raising to address the hunting threat to wildlife, vegetable cropping to tackle the short supply of vegetables, and promoting homestay for eco-tourism as an innovative approach to generate economic benefits for the communities. Village level infrastructures were also improved, including graveling 7 km of road from Camp Kilo 0 to Long Napir, construction of 1.5 km of road to old Long Napir, and building a school guest house and alternative energy facilities for demonstration.
- Each selected household learned at first-hand new skills to increase their livelihood. Each selected household's income was increased hence lessening their dependence on forest resources for their livelihood and other households gained inspiration from seeing their neighbours succeed with the new methods. The construction of infrastructures had benefitted households' daily access to electricity from solar power system and road access to both Long Napir and Kampong Bahagia villages hence improving their economy activities.

IV. Outcomes and Impacts

By project completion, the main project outcomes and impacts, in relation to the expected outputs, can be summarized as follows:

- The project demonstrates the State Government's policies on poverty alleviation. This was the reason why a high priority was given to increase incomes of the villagers through rural development programs, such as farming, tourism and handcrafts-making activities by utilizing the available resources surrounding the village areas.
- The prevailing situations after project completion include: the villagers' income increased to introduced alternative livelihood activities, especially vegetable growing and handicrafts; access of villagers to market their products was much better with the construction of a road to connect the village with the main road; the established participatory community forest management mechanism will be operationalized pending formal approval from the authority; and the tagang system had a great potential for the villagers' income generation and will be further facilitated by the Agriculture Department of Sarawak.

V. Lessons Learnt and Sustainability

- The problems addressed by the project were identified with the participation of stakeholders and the process of a comprehensive problem analysis was essential to establishing the sense of belonging and ownership of the local communities to project activities. The implementation of a pre-project had contributed to a sound design of the project elements.
- In the first year of its implementation, the project had been encountered with weak coordination between the first Project Manager, the EA and ITTO. It was solved by establishing a competent project management team at the Forest Department Sarawak in the second year and the new project management team worked closely with partners including village administrations and consultants.
- One of the critical problems facing the project operations was the accessibility of target villages, especially during the rainy seasons that had to be regularly visited under the heavily damaged road network. The project would have been managed more efficiently and achieved its objectives more effectively if the road conditions were improved.
- Trust building between the project team and the communities was the key to the success of implementing field-based projects. The project team's effective communication skills with the local people were important. Prior to the implementation of the project, conveying the project idea, scope, and intervention to the communities is recommended to avoid misunderstanding and false expectations.
- Although ITTO is the supervisory agency, its function should be further enhanced in APFNet decision making for the effective implementation of the project.

The target communities' perceived attitudes will contribute to the sustainability of the project work as they now look to outside sources to earn income rather than dependence on the dwindling forest resources. Thus, the Kelabit community was keen to proceed with a tagang project to rear fish in the rivers, assisted by the Agriculture Department Sarawak. The Penan had come to rely on the handicraft industry, with now 10 of the Kampung Bahagia ladies involved, and with at least two families able to send their children to train in Kuching and Miri. Also the homestays in both communities were operating. The communities themselves are in the best position to implement new activities and their attitudes have started to open. The local government is expected to help them under its social development programs.

VI. Concluding Remarks

An internal terminal evaluation of the project led by ITTO was conducted in August 2018. The evaluation concluded that the project specific objectives were mostly achieved. The communities have been benefited from the project's infrastructure improvements, SFM capacity building and alternative livelihood activities. However, the communities pointed out that there is a need to continue capacity building for the effective implementation of the forest management plans developed by the project in a co-management system with support to productive economic activities, including NTFPs and skills on eco-tourism.

As the ITTO Secretariat received the Project Completion Report, as well the Final Financial Audit Report, the Committee may wish to declare the Project PD 563/09 Rev.5 (F) as completed. Soft copies of the project-related reports can be made available, upon request, by the Secretariat.

(5) PD 601/11 Rev.3 (F) Strengthening Mangrove Ecosystem Conservation in the Biosphere Reserve of Northwestern Peru

Budget and Funding Sources:

Total Budget:		US\$	958,220
ITTO Budget:		US\$	496,290
Government of Japan:	US\$	490,067	
Government of USA:	US\$	6,223	
Regional Governments of Tumbes and Piura:		US\$	386,300
MDA:		US\$	75,630
Implementing Agency:	MDA		

Period of Approval:	Spring 2012
Starting Date and Duration:	November 2014 / 24 months
Approved Revised Date of Project Completion:	Extension until November 2017 (NOLF.17-0020)

I. Introduction

This project was approved under the Spring 2012 Project Cycle and was fully financed at the Forty-ninth Session in November 2013 at Libreville, Gabon. The agreement regulating the implementation of the project was duly signed in September 2014. The first instalment of funds was transferred in November 2014, 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 was about to begin, and the approval of the aforementioned by the Secretariat. The second disbursement of funds was transferred in December 2015, the third disbursement in March 2017 and the fourth (final) in July 2017.

In June 2016 MDA was informed by the ITTO Secretariat that all project fund disbursements needed to be suspended until further notice due to ITTO's financial impairment. Based on this, MDA decided to put the project on hold until March 2017 when ITTO funding recommenced with the transfer of the third instalment of funds (net of an agreed 10% reduction in the remaining balance to be paid to help deal with the financial impairment). A revised work plan was submitted and approved to allow completion of all activities by early 2018.

II. Project Objective

Mangrove forests constitute one of the most vulnerable ecosystems to climate change, while at the same time being an ecosystem that can sequester and store amongst the highest volumes of carbon. Peru's National System for Natural Protected Areas (SINANPE) has contributed to the sustainability of mangrove ecosystems by establishing the National Sanctuary of Tumbes Mangroves (Santuario Nacional de los Manglares de Tumbes – SNLMT). However, there are insufficient participatory mechanisms for the overall conservation of mangrove forest ecosystems in the Piura and Tumbes regions in the northern part of the country bordering Ecuador. This in turn leads to low living standards for the communities living in degraded mangrove ecosystem areas, and the resultant loss of biodiversity.

To address this situation, the objective of this project was to improve the standard of living of the population in mangrove ecosystem areas in the regions of Tumbes and Piura. More specifically, it increased the number of participatory mechanisms for mangrove forest protection, conservation and rehabilitation in the regions of Tumbes and Piura through: (1) adequate use of legal powers by regional and local governments for the conservation of mangrove forests; (2) improving the level of forest administration and management so as to preserve mangrove ecosystems; and (3) developing and implementing financial sustainability strategies for mangrove forests.

III. Project Achievements and Outputs

The project completed all activities under the revised 2017-18 work plan within the framework of the four main outputs of the overall project: (1) legal competencies implemented in regional and local governments for mangrove conservation; (2) management and forest management to preserve the mangrove ecosystem improved; (3) strategies for financial sustainability of mangroves defined and in process of implementation; and (4) project management.

After the project restarted in 2017, activities were developed to establish meetings and coordination with public and private institutions and key local actors, with the aim of establishing agreements for the operation of the project in 2017-18. The main partners consulted included the National Service of Natural Protected Areas in the region of Tumbes; the Headquarters of the National Sanctuary Los Mangos de Tumbes, and the Unified Headquarters of the National Park Cerros de Amotape and the National Reserve of Tumbes.

The activities undertaken in 2017-18 were framed to ensure the management of the mangrove ecosystem in the wider context of the Northwest Biosphere Reserve Amotape-Manglares, part of the Regional System of Conservation of the Regional Government of Tumbes and recently recognized by UNESCO and the Biosphere Reserve Bosques de Paz Biosphere between Peru and Ecuador. The project

provided training to public officials and key local actors to strengthen the institutions of local governments to understand the importance of this ecosystem and the mechanisms for its conservation.

Another issue addressed by the project was the management of the mangrove ecosystem through the establishment of new conservation areas or conservation modalities, as well as the characterization and delimitation of this ecosystem in the regions of Tumbes and Piura, with the participation of regional and local governments. Work was also carried out on financial sustainability strategies, elaborating business plans and projects for the benefit of the organizations that use the mangrove resources, seeking their financing in local and regional governments through relevant laws and national programs.

Activities on organizational strengthening, training in the management of mangrove resources, identification and elaboration of financial sustainability mechanisms and management of natural resources of the mangrove ecosystem were also undertaken.

During the period to the end of project implementation, results achieved include the following:

- Creation of the "Manglares de Chulliyache" Environmental Conservation Area (ECA), in the province of Sechura, Region of Piura, as a new conservation area, with an area of almost 1600 ha. The creation of the ECA was established by Municipal Ordinance, with the objective of protecting and conserving the ecosystem and its existing biodiversity, as well as to realize the sustainable use of its resources.
- Elaboration of business plans for local organizations that use the mangrove ecosystem.
- Elaboration of projects to be funded by the regional government in the framework of (i) the strengthening of the proposal for the Tumbes-Bahía Puerto Pizarro Delta Mangrove Environmental Conservation Area and (ii) the National Agricultural Innovation Program, to be implemented in the buffer zone of the Amotape National Park in the framework of the strengthening of the Biosphere Reserve.
- Technical assistance for the preparation of a public investment project to strengthen the ECA Manglares del Estero la Chepa -Corrales.
- Presentation of the technical and financial proposal for the application of the Management Agreement for the National Sanctuary of the Manglares de Tumbes by the Manglares Consortium of Northwest Peru, made up of 6 organizations that use the area. The whole process was assisted by the project as part of the strengthening of grassroots organizations.
- Mapping of the mangrove ecosystem, as part of the ecosystem's forest management and in coordination with the forest authority so that resulting maps are part of the Forestry Zonation of the region.
- Training activities in the management of mangrove resources were completed with the participation of educational centers in the regions of Tumbes and Piura.
- Preparation of the final technical report and final financial audit.

IV. Outcomes and Impacts

The main project outcomes achieved are: (i) Strengthening the management capacity for the conservation of mangrove forests in two regional governments and two municipalities; (ii) Establishing three protected areas: the Mangrove /Dry Forest Biological Corridor, the San Pedro de Vice Mangrove Forest and the New Vichayal Mangrove Forest; (iii) Improving the management efficiency of the National Sanctuary of Tumbes Mangroves (SNLMT); (iv) Promoting through the implementation of 10 sub-projects for sustainable economic activities the appropriate use of resources (forest and hydro-biological resources) in mangrove forests; and (v) Promoting financial mechanisms to contribute to the sustainability of mangrove forests. These outcomes had significant positive impacts on the ability of local communities to sustainably manage and conserve mangrove ecosystems and thereby improve economic livelihoods in the region covered by the project.

V. Lessons Learnt and Sustainability

The key lessons learnt in the implementation of this project related to the importance of working closely with local communities to sustainably manage and conserve mangrove ecosystems. The need to involve other land-users and stakeholders in planning mangrove utilization/conservation was also an

important lesson learned during the project, as was the need for local government support to ensure project success.

Sustainability of project outputs/outcomes is ensured by the large number of local stakeholders trained in sustainable mangrove management by the project as well as the ongoing funding being provided for such management/conservation through the business plans and projects for local funding developed by the project as described in section III above.

VI. Concluding Remarks

A final project steering committee meeting and monitoring mission was undertaken in December 2017 at which time the project outputs and contributions to community development in Tumbes and Piura were reviewed and confirmed. The project successfully completed all activities in early 2018 and a full completion report was submitted to the Secretariat (Spanish only) in June 2018. The Executing Agency submitted a satisfactory final audit report accounting for the use of ITTO funds shortly after the 52nd CRF Session in 2018. The Committee may therefore wish to declare this project complete at its 53rd Session.

(6) PD 602/11 Rev.3 (F) Tropical Forest Governance in the Region of Darien, Panama

Budget and Funding Sources:

Total Budget:		US\$	616,163
ITTO Budget:		US\$	350,402
Government of Japan:	US\$	300,402	
Government of USA:	US\$	50,000	
WWF - Panama:		US\$	101,961
ANAM:		US\$	163,800
Implementing Agency:	WWF – PANAMA OFFICE		
Period of Approval:	Spring 2012		
Starting Date and Duration:	January 2015 / 24 months		
Approved Revised Date of Project Completion:	Extension until December 2017 (NOLF.17-0066) Extension until July 2018 (NOLF.18-0008)		

I. Introduction

This project was approved under the Spring 2012 Project Cycle and full financing for its implementation was pledged at the Forty-ninth ITTC Session in November 2013 at Libreville, Gabon. The agreement regulating the implementation of the project was duly signed in December 2014. The first installment of funds was transferred in January 2015, 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 was about to begin, and the approval of the aforementioned by the Secretariat. The second and third disbursements of funds were respectively sent in September 2015 and March 2016. The fourth and last disbursement of funds in the amount of US\$ 70,000.00 was delayed due to the financial impairment. Based on this, WWF Panama decided to continue with selected activities of the project using counterpart funds and support from other donors until March 2017 when ITTO funding recommenced with the transfer of the fourth and final instalment of funds (net of an agreed 17% reduction in the remaining balance to be paid to help deal with the financial impairment).

II. Project Objective

This project followed up on one of the outputs of ITTO-financed project PD 405/06 Rev.3 (F): "Extending the area under sustainable forest management in the forest lands of the Emberá-Wounaan Comarca, Darien, Panama", which characterized and described institutional, administrative and socioeconomic factors promoting illegal logging in the region of Darien and, as a result, produced a framework document on guidelines and strategies requiring immediate institutional action to counteract incremental forest degradation, which leads to illegal logging related practices and other unsustainable

activities. This project's primary objective was to support the implementation of the Strategy for Illegal Logging Prevention and Control developed through the previous project, to deal with the out of control problem of illegal logging in Darien. Illegal logging not only hinders forest land management initiatives through unfair price competition and non-payment of stumpage fees but, most importantly, has led to a drastic reduction of the forest cover and continued loss of biodiversity in the country, including in the Darien National Park and other protected areas.

III. Project Achievements and Outputs

Achievements under the project can be summarized by major outputs as follows:

Output 1: An institutional governance strategy for the prevention and control of illegal logging in the region of Darien adopted by multiple social, institutional and private stakeholders.

- Meetings were promoted with the participation of various private and public social stakeholders on the significance of adopting a strategy and reaching agreements to reduce illegal logging and on factors influencing and affecting forest goods and services;
- Major gaps in government standards and regulations as well as in governance structures were identified, with a view towards proposing a new forestry law; and
- An institutional resolution created the National Committee on Forest Management so as to facilitate and promote the adoption of mechanisms for illegal logging control and enhance forest governance and accountability levels.

Output 2: Traceability and chain-of-custody system for verification of origin and movement of timber and timber products from production sites to final processing centers.

- A chain-of-custody system for timber utilizing bar codes/chips was developed and promoted among authorities, forest industries and communities.

Output 3: A streamlined system (and formats) for the issuing of forest harvesting permits, and development of a forest regency scheme.

- A regency system for the co-enforcement of standards and regulations established by government agencies with the participation of the national association of forest professionals was developed and improved;
- The obstacles blocking full adoption of the forest regency system were studied and an action plan to eliminate the barriers was developed;
- A new forest regency regulation was developed;
- Forest activities were characterized by operation size so as to identify fast-track mechanisms for the issuing of harvesting permits; and
- A workshop on the provisions for the issuing of harvesting permits was organized to benefit participants from the government, private forestry sector and forest communities.

Output 4: Two fully equipped checkpoints installed at major ports and road points.

- The timber flows in the Darien Region were characterized and quantified;
- Based on the aforementioned study, the Ministry of Environment established 5 fixed and 19 mobile checkpoints in the Bayano and Darien Sub-regions. The project provided these checkpoints with communication systems and timber chain-of-custody and traceability software. These checkpoints became operational during the 2015 and 2016 logging seasons in Darien; and
- Training of personnel in charge of checkpoints was undertaken and has continued after project completion.

Output 5: Economic and market mechanisms system established for producers committed to sustainable forest management.

- A communication and outreach strategy for the promotion of timber in responsible markets, including development of responsible purchasing awareness campaign and production of outreach materials, was designed and approved by the Ministry of Environment; and
- A cross-sectoral forest governance agreement specifying mechanisms, roles and commitments for illegal forest trade prevention and control for each forest chain stakeholder was finalized and

purchasing policies (agreements, programs and/or plans) were finalized between organized producers and the local forest industry for the use of timber from sustainably managed forests.

IV. Outcomes and Impacts

Project outcomes achieved were: (i) Establishment of an institutional and governance framework for illegal logging prevention and control based on a cross-sectoral agreement and the adjustment of harvesting permits to the size of forest management units (FMU), the allocation of technical and legal responsibilities to forest professionals (forest regency system) and the revision of harvesting standards by local governments (Comarcas and Municipalities); (ii) Incorporation of an efficient timber flow monitoring and control mechanism, including: a) origin and legality; b) rotational forest permit verification systems; c) checking of timber volumes both at processing centers and transport points; d) development of software for production and transport control; and e) establishment of a traceability and chain of custody system; (iii) Development of a proposal on financial mechanisms to promote responsible forest management and trade in the natural forests of Panama by: a) exploring various incentive mechanisms; and b) promoting responsible purchasing policies as an incentive for stakeholders involved in sustainable forest management practices; and (iv) Development of a responsible purchasing campaign so as to raise awareness on the administrative and institutional provisions of the Strategy and promote the certificate of origin “*Darién Responsable*” (*Responsible Darien*) for timber products and by-products from forests under good management practices in the region of Darien. These outcomes had significant positive impacts on forest management, production and trade from the Darien region.

V. Lessons Learnt and sustainability

The key lessons learnt in the implementation of this project related to the importance of involving all stakeholders in efforts to combat illegal logging and illegal timber trade. The importance of developing effective anti-illegal logging policies (at local and federal level) including for regulation, monitoring and traceability was also an important lesson learned during the project, as was the need for local government support to ensure project success.

Sustainability of project outputs/outcomes is ensured by the forest governance agreements and outreach activities described under Output 5 above, both of which are on-going in Darien with government support. Training of checkpoint personnel in monitoring timber flows (including using the traceability system developed) is continuing with government support and also with the support of an ongoing related ITTO project under the TFLET thematic program (TFL-PD 044/13 Rev.2 (M): *Strengthening of ANAM's management capacity to reduce illegal logging and trade in the eastern region of Panama (Bayano and Darien) through monitoring and control mechanisms*) which is also further developing/improving the traceability system.

VI. Concluding Remarks

A final project steering committee meeting and monitoring mission was undertaken in December 2017 at which time all project outputs were reviewed and confirmed. The project successfully completed all activities in mid-2018 and a full completion report and satisfactory final audit report accounting for the use of ITTO funds were submitted to the Secretariat (Spanish only) shortly after the 52nd CRF Session in 2018. The Committee may therefore wish to declare this project complete at its 53rd Session.

(7) PD 710/13 Rev.1 (F) Promoting Conservation of Selected High-Value Indigenous Species of Sumatra (Indonesia)

Budget and Funding Sources:

Total Budget:		US\$	620,209
ITTO Budget:		US\$	479,976
Government of Japan:	US\$	479,976	
Government of Indonesia		US\$	140,233
Implementing Agency:	Forest Research Institute, Forestry and Environment Research and Development Agency (FOERDIA), Ministry of Environment and Forestry		
Period of Approval:	Autumn 2013		
Starting Date and Duration:	January 2015 / 48 months		
Approved Project Completion:	Revised Date of	Extension until 31 August 2018 (NOL.Ref.no.F.18-0010 Extension until 31 December 2018 (NOL.Ref.no.F.18-0069).	

I. Introduction

This project was approved under Autumn 2013 Project Cycle and was financed at ITTC 49 in November 2013. The project agreement for regulating project implementation was finalized in July 2014. After completing of the required administrative arrangements for the implementation of the project, including a detailed yearly plan of operation, the project commenced in January 2015. The project duration was extended to the end of 2018 to fully achieve the objectives of the project.

Sumatra is the largest island in Indonesia and has abundant biological diversity, including many indigenous plant species. Some of the high-value indigenous species are Sumatran yew (*Taxus sumatrana*), and Sumatran merbau (*Intsia palembanica*). However, over exploitation, encroachment, and illegal activities have made many of the high-value species threatened with extinction. High commercially valuable timber species such as Sumatran merbau, Kulim, Andalas, and Giam have been excessively and illegally logged for the past several decades. Lesser-known NTFPs producing species have also been illegally collected, whereas, endemic and relatively limited distribution and small population size, *T. sumatrana* has been threatened by habitat encroachment, population disruption and illegal logging.

II. Project Objective

The overall objective of this project was to contribute to the sustainable management of high-valued indigenous species of Sumatra. The specific objective was to enhance the achievement of conservation goals through revitalization of the existing conservation program, harvest control systems, and regeneration. The expected outputs were (1) accelerated conservation of selected high-value indigenous species; (2) promotion of harvest control of those species; and (3) improving the regeneration capacity of those species. The expected benefits include updated data and information on distribution, the conservation status and protection, and regeneration for selected high-value indigenous species as well as improved socio-economic conditions of the forest-dependent community.

III. Project Achievements and Outputs

All project's activities have been carried out well and the project produced outputs as planned. The details of the project's outputs are summarized as follows:

Objectives	Outputs	Activity	Completion Status/Remark
<p>Development objective</p> <p>To contribute to the sustainable management of conservation and utilization of high-value Sumatran indigenous species</p> <p>Specific objectives</p> <p>To improve the achievement of conservation goal through revitalization of the existing conservation and regeneration program, and harvest control of the high-value Sumatran tropical indigenous species</p>	<p>Output 1</p> <p>Conservation of selected high-value indigenous species accelerated</p>	1.1 To improve knowledge and awareness on the importance of species conservation	A technical report for Output 1 was published.
		1.2 To collect and update biological and ecological data and information on the selected species	Information on selected species was disseminated.
		1.3 To observe genetic diversity and vulnerability of the selected species	Distribution maps of the species were produced.
		1.4 To develop suitable method and strategy for conservation of each selected species based on result of activity 1.2. and 1.3	Scientific findings on genetic information (Activity 1.3) were published.
		1.5 To establish <i>ex-situ</i> conservation of selected species	
	<p>Output 2</p> <p>The harvest control of those species promoted</p>	2.1 To carry out workshops and awareness raising on law enforcement on forest harvest	A technical report for Output 2 was published.
		2.3 To carry out analyses for potential uses of chemical substances of Sumatran yew (<i>T. sumatrana</i>).	Scientific findings on chemical potential of Sumatran yew were published.
	<p>Output 3</p> <p>Regeneration capacity of those species improved</p>	3.1 To explore and identify potential seed sources for selected species	A technical report for Output 3 was published.
		3.2 To collect seeds, wildlings and other vegetative materials to be grown in nursery	Seed sources of the target species were officially certified.
		3.3 To carry out enrichment planting in selected <i>in-situ</i> conservation areas of selected species.	Seed handling manuals of the selected species were prepared and disseminated.

IV. Outcomes and Impacts

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

Four *ex-situ* conservation plots of Sumatran yew, and Sumatran merbau were established in collaboration with three institutions such as Forestry Research Institute (FRI) Kuok as implementing agency, FRI North Sumatra and FRI South Sumatra. In West Sumatra, an *ex-situ* conservation plot of 4 hectares of Andalas, Kulim, Merbau and Giam was established by FRI Kuok with a small area of an educational plot for Andalas in a strategic location. The plots will serve as a preservation area as well as genetic pools of the target species

Identification of potential seed source for the selected species has been intensified with granting a certificate of seed sources and along with Giam seed sources, a certificate for Meranti sapat was also issued for the local people of Guguk Village. The certification was expected to open economic opportunities for the local people to produce qualified seedlings and sell them for additional incomes. The awareness of sustainable harvesting of the target species was promoted through various dissemination efforts including Facebook and Instagram.

The project has raised knowledge and awareness of the recent conditions of the target species and the importance of the conservation and sustainable utilization. Andalas is an important species for West Sumatra Province as it has cultural ties including its mascot flora of the province. Prior to the implementation of the project, less concern was paid to the endangered condition of this species but the West Sumatra Provincial Government started to recognize the importance of re-introducing and preserving this mascot flora. Recently, the Provincial Government launched a planting program for Andalas to encourage people to plant the tree more and develop knowledge on its importance to their socio-cultural environment.

The awareness raising was also initiated for *Taxus (T. sumatrana)*. A technical meeting provided an opportunity to introduce the importance of the plant and the necessity to integrate the conservation and sustainable utilization. The project was the first to initiate the discovery of genetic information on Giam, Kulim and Sumatran merbau. The project sufficiently updated the data and information on biological and ecological conditions of the species. The information was presented in the form of scientific papers, leaflets, and distribution maps. The distribution maps will be posted on the website of FRI Kuok in the near future.

The project findings on potential use of chemical of Sumatran yew supported the testimonies/experiences of local people on medicinal benefits of the plant. The findings show that almost all parts of the plant, except for the wood, have antioxidant substances for anticancer and other health purposes.

Beside the successful establishment of ex-situ conservation plots in the three provinces and scientific research of Sumatran yew, the project developed conservation strategies on the five species. The strategies are under review and will be published as a policy guide.

V. Lessons Learnt and Sustainability

The project stakeholders noted that conservation measures must be in harmony with sustainable use so that people would receive benefits from the species while preserving and protecting the sustainability of the species. From the implemented activities, many people actually realized that certain plant species were facing threats of endanger and extinction.

In terms of project scope and intervention, it was designed to cover large working areas and relatively a large number of target species. In project implementation, the project team had faced several challenges to visit remote sites and local communities. Although the project team could not carry out for all the observations of each species, the project had initiated the conservation efforts for the target species and had created a solid basis for future conservation measures.

The FRI Kuok as the Executing Agency has ensured the sustainability of the project after its completion. Other related authorities have also expressed their commitments to support the respective relevant project's outputs. Sustainability measures of the following activities include:

- Ex-situ conservations plots established by Activity 1.5: The experts of the three FRIs will maintain the plots with the budget provided by these Institutes.
- Certified seed sources by Activity 3.1: Each seed source will be continuously managed and used by respective local peoples.
- Andalas plots established by Activity 3.3: The FRI Kuok has committed to maintain these plots for the purpose of conservation education.

VI. Concluding Remarks

As the ITTO Secretariat received the Project Completion Report, Technical Reports as well the Final Financial Audit Report, the Committee may wish to declare the Project PD 710/13 Rev.1 (F) as completed. Soft copies of the project-related reports can be made available, upon request, by the Secretariat.

(B) COMPLETED PRE-PROJECTS

None.