



## Annual Progress Report 2020

January – December 2020

### <Project Profile>

<b>Project code</b>	AFoCO/010/2016
<b>Project Title</b>	Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand
<b>Project Duration</b>	Start Date: 19 May 2016 End Date: 18 May 2022
<b>Implementing Agencies</b>	Forest Research Institute Malaysia (FRIM) Royal Forest Department (RFD), Thailand
<b>National Focal Point(s)</b>	N/A
<b>Project Site</b>	Malaysia- FRIM Research Station at Bidor, Perak Thailand- Mae Moh Mine, Lampang - Takua Pa , Phang Nga
<b>Target Area</b>	Primary target area: PA 2 (Supporting Research and Development in Climate Change Adaptation Approaches)
<b>Budget and Source of Finance</b>	Total: US \$5,293,920 - AFoCO: US \$1,200,000 (\$600,000 / \$600,000), funded by KFS - Malaysia (in-kind): US \$2,947,470 - Thailand (in-kind): US \$1,146,450
<b>Annual Budget and Source of Finance in 2020</b>	Total: US \$1,089,080.82 ( <i>excluding carry over</i> ) - AFoCO: US <b>\$187,984.82</b> ( <b>\$115,955</b> / \$78,251), funded by KFS - Malaysia (in-kind): US <b>\$491,246</b> - Thailand (in-kind): US \$542,550

### <Implementing Agency Profile>

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<b>Declaration</b>	√ This report includes all the essential information on executed activities, achieved outputs, issues and challenges encountered in the period covered by the report meant for higher level of administration. √ This project was prepared by the Project Manager and the staffs.

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<b>Declaration</b>	√ This report includes all the essential information on executed activities, achieved outputs, issues and challenges encountered in the period covered by the report meant for higher level of administration. √ This project was prepared by the Project Manager and the staffs.

## **Abbreviations and Acronyms**

AFoCo	ASEAN-ROK Forest Cooperation
AFoCO	Asian Forest Cooperation Organization
ASEAN	Association of Southeast Asian Nations
EETS	Endangered, endemic and threatened species
FRIM	Forest Research Institute Malaysia
RFD	Royal Forest Department, Thailand

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## 1. Project Overview

Malaysia and Thailand are a mega-biodiversity landscape and the rapid development and changes of climate had inevitably caused degradation of terrestrial ecosystems. The problem of forest degradation and potential biodiversity loss is critical and Malaysia and Thailand are addressing the problems through research and development activities. Domestication of endangered, endemic and threaten species (EETS) is one of the effective approaches to conserve the germplasm. This project aims to strengthen bilateral cooperation between the two nations focused on biodiversity conservation, domestication and eco-tourism through pilot testing, workshops on best practices and technology transfer and capacity development to ASEAN countries, funding by AFoCO Secretariat. The project plots will be a seed production area of EETS after the project finished in 2022.

### Immediate Objectives

- To domesticate national red-list species in both countries
- To strengthen cooperation between Malaysia- Thailand on conservation of biodiversity, domestication techniques and technology transfer.
- To exchange knowledge and lessons learned on best practice of rehabilitation and biodiversity conservation.

### Expected Outputs

- At least 2 to 5 species of EETS shall be domesticated per year through the cooperation between Malaysia-Thailand.
- Country report of the project is documented and shared through regional workshops.
- Capacity building through short-term training course, internship programme, and publications.

## 2. Implementation Progress

### 2.1 Overall Progress

#### 2.1.1 Malaysia

Activity No.	Key Activity	Progress Description	Timeline		Percentage Executed
			planned	actual	
<b>A Site Characteristics</b>					
A.1	Site characterization	-	-	-	-
A.1.3	Producing Site Locality Map	A site locality map (2 ha) produced ( <b>Annex-1</b> ).	Jan – Dec 2020	Dec 2020	100
A.2	Procurement of EETS	-	-	-	-
A.3	Establishment of model plots	-	-	-	-
A.3.3	Tending of 2017 planting including refilling	Application for maintenance has been submitted and awaiting internal evaluation prior to appointment of contractor	Jan – Dec 2020	Jun 2021	40
A.4	Documentation of site properties	-	-	-	-
A.4.2.1	Purchase of height meter	Not purchased yet	Dec 2020	Jun 2021	0
A.4.3	DSA for documentation of site properties	Tree height and survival measured, soil properties determined ( <b>Annex-2</b> ).	Dec 2020	Dec 2020	100
<b>B Regional Seminar</b>					
-	-	-	-	-	-
<b>C Technology Transfer and Capacity Development</b>					
C.1	Cross visits	Not conducted due to global Covid-19 pandemic	-	-	-

Activity No.	Key Activity	Progress Description	Timeline		Percentage Executed
			planned	actual	
C.2	Knowledge and technology transfer	Publication of: i) Silviculture of Indigenous Trees book	Dec 2020	Sept 2021	95
		ii) Rimba Bidor book	Dec 2020	Apr 2021	95
		iii) Leaflet/ Booklet (Delayed due to Movement Control Order in Malaysia)	Dec 2020	Jun 2021	20
<b>D Local Operation</b>					
D.1	External auditing				
D.2	Attending overseas meetings	One officer attended a local conference SOILS 2020 (6-8 Oct 2020). ANG LH, HO WM & TANG LK. 2020. Domestication of seventeen endemic, endangered and threatened tree species in an Ex-Tin Mine at Bidor, Perak. Pp. 271-276 in Jeyanny V, Wan Rasidah K, Rosazlin A, Daljit Singh K, Teh C, Rozita A, Ho WM, Shamshuddin J & Nurhafiza AH (Eds) Proceedings of the Soil Science Conference of Malaysia 2020, 6-8 October 2020, Johor Bahru. ISBN 978-967-16101-2-1.	Apr 2020	Oct 2020	100
D.3	Project Coordination Meeting (PCM)	7 <sup>th</sup> PCM (29 June 2020) was held using Google Meet hosted by Thailand ( <b>Annex-2</b> ). The 8 <sup>th</sup> PCM (8 Jan 2021) was held via Zoom Meeting.	Jun & Dec 2020	Jun 2020 & Jan 2021	100
D.4	Project staff	One Assistant Research Officer was employed	Jan – Dec 2020	Dec 2020	100
D.5	Annual report	Annual and financial reports submitted in April 2021.	Mar 2021	Apr 2021	100

## 2.1.2 Thailand

Activity No.	Activity	Timeline	Performance Indicators		Executed (%)	Progress Description
			Baseline	Achieved		
<b>A</b>	<b>Site Characterization</b>					
A.1	Selection of planting sites in denuded and disturbed forest, and identification of EETS for domestication	Jun-Dec	Site selection and marking, mapping	-GPS of 2 plot site finished -2018TakuaPa plot site 0.5 ha. -2018Mae Moh plot site 4.8 ha.	100	-GPS mapping finished. Please see more detail in <b>Annex 3</b>
A.2	Procurement of EETS	Jan-Dec	EETS seedling	Seedling for re-plant	90	Expected to finish by June 2021
A.3	Establishment of model plots (Site preparation, planting stock, planting, tending, monitoring)	Jan-Dec	Procurement process for seedlings, planting and tending	Finished Planting	100	Planting activity finished
				Tending 2 plot site Mae Moh and Takua Pa each plot site has 2 plots. Annex II	100	Tending activity is started Jan.- Dec.2020. Please see more detail in <b>Annex 4</b>
A.4	Documentation of biophysical site properties, planting techniques and assessment of growth	Jan-Dec	Assessment of plant growth	Survival of EETS and growth measurement of plants at Mae Moh site and Takuapa were also conducted. Annex III	100	This activity we assign the worker to take the growth measurement. The analysis of growth is done by project staff. The measurement from Jan – Dec. 2020. Please see more detail in Annex III
			Soil analysis	Soil collected from 2 plot site 39 samples. 15 samples from Mae Moh plot site (each sample 1 layer), 24 samples from Takua Pa plot site (each sample 3 layers) and analyze. Annex III	100	Please see more detail in <b>Annex 5</b>

<b>B. Regional Workshop</b>						
B.1	Regional Workshop	Nov 2020	A Regional Workshop in Thailand	Planning to have the Workshop in Nov 2020	0	This activity will be move budget to D.2 Attending Overseas Meeting to attend World Forest Congress in Republic of Korea in 2022
B.2	Domestic Workshop	Feb 2020	Thailand Domestic Workshop	6-7Feb.2020 at RFD and SCG. Annex 6	100	21 participants from EGAT, Faculty of Forestry, RFD and External person. Please see more detail in <b>Annex 6</b>
			National Workshop	14-16 Dec. 2020 Phang-Nga. Annex 6	100	24 participants from private mines. Please see more detail in <b>Annex 6</b>
B.3	PSC meeting (Thailand)	Feb and Aug 2020	Thailand PSC meeting	5 Feb. and 3 August 2020at RFD	100	Please see more detail in <b>Annex 6</b>
<b>C Technology Transfer and Capacity Development</b>						
C.1	Cross visits	Jan-Dec	-	-	-	
C.2	Knowledge and technology transfer		-Project website	The Project website Banner was link with <a href="http://WWW.forest.go.th">WWW.forest.go.th</a> (AFoCO EETS Banner)	100	
			-Soil manual	Dec.2020	50	Expected to finish by June 2021
<b>D Local Operation</b>						
D.1	External Auditing	Jan-Dec	External Financial Auditing	2 years of financial each country	100	Year 2018 and 2019 (Thailand)
D.2	Attending Overseas Meeting	Nov-Dec	Attending local/overseas conferences	Will attend the International conference in Korea 2021	0	This activity will be move to World Forest Congress in Republic of Korea in 2022
D.3	Inception meeting	-	-	-	-	-
D.4	Annual Report	Dec	annual report publish	Annual report	100	2019 was published

D.5	Miscellaneous	Jan-Dec	Local part-time coordinator	Local part-time staff	100	
D.6	PCC/PCM Meeting	Jan-Dec	7 <sup>th</sup> PCM and 8 <sup>th</sup> PCM	7 <sup>th</sup> PCM in 29 Jun. 2020 and 8 <sup>th</sup> PCM in 24 Nov. 2020. <b>Annex 8 and 9</b>	100	7 <sup>th</sup> PCM and 8 <sup>th</sup> PCM by Teleconference. Please see more detail in <b>Annex 8 and 9</b>

## 2.2 Key Decisions of Project Coordination Meeting in 2020

Main Issues	Decisions	Follow-up Actions
<b>7<sup>th</sup> PCM, 29 June 2020, Google Meet (Annex-xx)</b>		
Income generation for local people.	Malaysia to promote agroforestry to local community near to forest buffer zone.	Malaysia to promote agroforestry in the next project.
Delay in procuring the microclimate station.	Reminder by AFoCO Secretariat.	Procurement needs to be sought from local supplier (same state) as advised by FRIM Procurement Branch.
Usage of remaining budget.	Remaining budget to be used for planting one hectare new plot in 2021.	Application for procurement of seedlings, planting and tending in progress.
Thailand request to move Activity B. Regional Workshop Activity B.1 Domestication of EETS in ASEAN countries in November 2020	The meeting was decided that Thailand will move Activity B.1 in November 2020 to early year of 2021	Thailand will prepare a document to invite ASEAN countries member to attend the regional workshop.
Thailand requested for 8 <sup>th</sup> PCM will be a Teleconference	The meeting was decided that Thailand will set 8 <sup>th</sup> PCM as a teleconference	Thailand will prepare a document to invite Malaysia and the Secretariat to attend the teleconference.
<b>8<sup>th</sup> PCM, 8 and 14 January 2021, Zoom Meeting (Annex-xx)</b>		
Difficulty in finding reliable contractors for the implementation of the Project due to national administration protocols.	The Meeting requested Secretariat to issue an official reminder/follow-up letter to FRIM to facilitate the procurement of the microclimate stations	The Secretariat will need to provide a letter to facilitate this matter.
Damages by wildlife and encroachment of farm animals to the project sites.	The Meeting decided to further discuss the matter at the next PCM.	To be decided at 9 <sup>th</sup> PCM.
Regional Workshop may not be feasible due to Covid-19 pandemic and regulations in countries.	The Meeting considered to organize the Regional Workshop as a side event at the World Forestry Congress 2022 in the ROK. The Meeting agreed for Malaysia to organize the event which is subjected to the lifting of COVID-19 travel restrictions.	To be discussed at 9 <sup>th</sup> PCM.

Financial audit either for 2020-2022 or the whole project period.	Secretariat to consult with donor agency.	To be discussed at 9 <sup>th</sup> PCM.
Thailand request to move Activity B. Regional Workshop  Activity B.1 Domestication of EETS in ASEAN countries in early year of 2021 to D.2 Attending overseas meetings in 2022	The meeting was decided that Thailand and Malaysia should be move Activity B. Regional Workshop to Activity D. 2 Attending overseas meetings then set a site event in World Forest Congress at republic of Korea in 2022.	Malaysia and Thailand will be discuss about site event and budget.
Two PCMs to be organized every year.	The 9 <sup>th</sup> and 10 <sup>th</sup> PCM will be organized by Malaysia. The Meeting was informed that Malaysia will organize these meetings as a teleconference.	9 <sup>th</sup> PCM meeting will be in June.
Remaining activities and budget of previous years are difficult to be monitored.	It is agreed that remaining activities and budget of previous years should be presented in a separate table.	All information was submitted to AFoCO Secretariat after 8 <sup>th</sup> PCM. The final work and budget plan will be included into 2021 AWB.

## 2.3 Review of Performance Indicators and Activities

### 2.3.1 Malaysia

Activity No.	Key Activity	Objectively Verifiable Indicators in 2020		Comments
		Target	Accomplishments	
<b>A. Site Characterization</b>				
<b>A.1 Selection of planting sites in denuded and disturbed forest, and identification of EETS for domestication</b>				
A.1.1	Site Selection	NA	NA	NA
A.1.2	GPS mapping (2 ha )	NA	NA	NA
A.1.3	Producing Site Locality Map	2 ha map	2 ha map produced	20 sets of site locality maps produced
<b>A.2 Procurement of EETS</b>				
A.2.1	Purchase of seedlings or saplings	NA	NA	NA
<b>A.3 Establishment of Model plots (Site preparation, planting stock, planting, tending, monitoring)</b>				
A.3.1	Site preparation	NA	NA	NA
A.3.2	Planting & Tending	NA	NA	NA
A.3.3	Tending of 2017 planting including refilling	Tending for 1,500 plants	Procurement for tending of 1,500 plants approved	Contractor for tending only provided service for five (5) months and left. A new procurement is being sought.
<b>A.4 Documentation of biophysical site properties, planting techniques and assessment of growth</b>				
A.4.2.1	Purchase of height meter (vertex)	Purchase of 2 units	Height meter not purchased	Height meter will be purchased in 2021
<b>B. Regional Workshop</b>				
B.1	Regional Workshop	NA	NA	NA
<b>C. Technology Transfer and Capacity Development</b>				
C.1	Cross visits	2 persons, 2 trips	All cross visits cancelled	Cross visits cancelled due to global Covid19 pandemic
<b>C.2 Knowledge and technology transfer</b>				
C.2.1	Manual	NA	NA	NA
C.2.2	Leaflet	NA	NA	NA
C.2.3	Poster and roll up	NA	NA	NA

Activity No.	Key Activity	Objectively Verifiable Indicators in 2020		Comments
		Target	Accomplishments	
<b>D. Local Operation</b>				
D.1	External audit	NA	NA	
D.2	Attending overseas meetings	1 trip	One officer attended a local conference SOILS 2020 (6-8 Oct 2020) and a paper was published in a proceedings.	Attending overseas meetings cancelled due to global Covid19 pandemic.
D.3	Project Coordination Meeting (PCM)	2 PCM (hosted by Thailand)	7 <sup>th</sup> PCM (29 June 2020) was held via Google Meet & 8 <sup>th</sup> PCM (8 Jan 2021) was held via Zoom Meeting.	No physical meetings were conducted due to global Covid-19 pandemic.
D.4	Project staff	1 assistant research officer	1 assistant research officer employed	Ms Tang Lai Kuen employed for a one-year period by contract.
D.5	Annual report	Annual and financial reports	Submission of reports in April 2021	Report submitted on 5 <sup>th</sup> Apr 2021 but to be revised according to AFoCO latest format.

2.3.2 Thailand

Activity No.	Key Activity	Objectively Verifiable Indicators in 2020		Comments
		Target	Accomplishments	
<b>A. Site Characterization</b>				
<b>A.1 Selection of planting sites in denuded and disturbed forest, and identification of EETS for domestication</b>				
A.1.1	Site selection and identification of EETS for domestication	1 site 3 ha and 6 EETS	2 sites 5.3 ha and 12 EETS - Mae Mot 4.8 ha 11 EETS - Takua Pa 0.5 ha 4 EETS	12 EETS includes 6 new species and 6 old species planted in 2016, plant included in 300 big holds 2018 plot at Mae Moh plot site.
A.1.2	GPS mapping	3 ha	5.3 ha	0.5 ha at Takua Pa was done in 2019. 4.8 ha.at Mae Moh was done in 2020.
A.1.3	Producing Site Locality Map	60	120	A map at Takua Pa site and Mae Moh plot site were produced.
<b>Activity A.2 Procurement of EETS</b>				
A.2.1	Purchase of seedlings or saplings	2,815 EETS seedlings	There are 4,935 seedlings (include nurse plant)	The remained seedlings will be purchased later depend on availability in market.
<b>A.3 Establishment of Model plots (Site preparation, planting stock, planting, tending, monitoring)</b>				
A.3.1	Planting	3 ha	4.8 ha. at Mae Moh plot site	Mae Moh plot site were finished planting in February 2020.
	Tending	-2016 plot, 3.8 ha. for Mae Moh plot site and 0.5 ha. for Takua Pa plot site.  -2018 plot 4.8 ha. for Mae Moh Plot site and 0.5 ha for Takua Pa site.	-For irrigation is carried out manually at Mae Moh site while drip irrigation system is installed at Takua Pa site. -Watering at Mae Moh site was carried out 6 times, -Drip-irrigation for 2018 plot at Takua pa has been installed.	-For 2016 plot, tending and watering was under contractor.  -For 2018 plot, tending activity begin in January 2020 for Takua Pa plot site and February 2020 for Mae Moh plot site.  -0.5 ha irrigation system has been finished set up at Takua Pa, manual watering at

Activity No.	Key Activity	Objectively Verifiable Indicators in 2020		Comments
		Target	Accomplishments	
			-Mae Moh plot site Watering of 3.8 ha of 2016 plot and 4.8 ha of 2018 plot manually.	-Mae Moh site were deployed from February 2020 to December 2020..
A.3.2	Fire protection line and inspection road	3 km	3 km for Mae Moh plot site  3 km for Takua Pa plot site	Inspection road was in-kind contributed by EGAT. For Mae Moh plot site.  For Takua Pa plot site has been finished by constructor.
A.3.3	Demarcation and wind protecting	3 ha	4.8 ha at Mae Moh and 0.5 ha at Takua Pa	Fencing and protection from direct sunlight installed at Mae Moh site.
A.3.4	Planting & Tending	2,815 EETS plants	2,815 EETS plants were planted at Mae Moh plot site with nurse plants	-600 tree plants and 1,100 banana plants planted as a nurse plant at Mae Moh plot site. -Takua Pa plot site, finished planting in 2019
A.3.5	Monitoring/supervising of site preparation, planting and tending	90 days	36 days	6 trips 36 days
<b>A.4 Documentation of biophysical site properties, planting techniques and assessment of growth</b>				
A.4.1	Soil analysis	39 samples	-15 samples for Mae Moh plot site - 24 samples for Takua Pa plot site - Soil analyze 39 samples	Finished
A.4.2	Purchase of microclimate sensors	0	0	Microclimate sensors were out of order. The Data will be used from Mae Moh Mine and Phang Nga Forestry Research Station.
A.4.3	Purchase of height meter (vertex) /shredder machine	0	0	

메모 포함[RS1]: This is a same remark as 2019's. Would you please clarify whether you are not going to procure them? If it is, please mention the PCM which approved the decision. (e.g. "Following the decision made at \_\_th PCM, the procurement has been re-allocated to ~~~").

Activity No.	Key Activity	Objectively Verifiable Indicators in 2020		Comments
		Target	Accomplishments	
A.4.4	Purchase of diameter tapes/ shredder machine	0	0	
<b>B. Regional Workshop</b>				
B.1	Meeting on Domestication of EETS in ASEAN countries	1	0	Because of outbreak disease (COVID-19) This activity will be moved to D.2 in year 2022.
B.2	Workshop and national workshop (budget moved from Activity D.6)	2	2	1.Internal Workshop 2.National Workshop
B.3	1 <sup>st</sup> and 2 <sup>nd</sup> PSC meeting (Thailand)	2	2	
<b>C. Technology Transfer and Capacity Development</b>				
C.1	Cross visits	0	0	
C.2 Knowledge and technology transfer				
C.2.1	Manual	250	0	Soil manual and leaflet will be published in June 2021
C.2.2	Leaflet	250	0	
C.2.3	Poster and roll up	10 sets	0	
C.2.4	Website maintaining	1 website	1 website	The Banner of AFoCO project is under www.forest.go.th.
<b>D. Local Operation</b>				
D.1	External Auditing	4 financial reports	4 financial reports	Financial year 2018 and 2019
D.2	Attending overseas meetings	1 person	0	
D.3	Inception Meeting	-	-	

Activity No.	Key Activity	Objectively Verifiable Indicators in 2020		Comments
		Target	Accomplishments	
D.4	Annual report	1 report	1 report	2019 annual report
D.5 Miscellaneous				
D.5.1	Office supply	1 year		
D.5.2	Phone, Fax, Mailing costs	1 year	1 year	
D.5.3	Office automation	1 year		
D.5.4	Local part -time administrative officer (contract)	1 person	1 person	
D.6	PCC Meeting	1 meeting	2 PCC meeting	Teleconference by Thailand
D.7	Stakeholder Meeting	-	-	

### 2.3.3 EETS status

	Species (alphabetical order)	IUCN-Red/ Non-IUCN-Red	Location of plantation	Actual number of planting seedlings, including re-planting ones	Survival rate (as of 2020) (%)	Remarks
1. Malaysia (Bidor, 6.8 ha in total, 1 <sup>st</sup> plot- 3.0 ha, 2 <sup>nd</sup> plot- 3.8 ha)						
1	<i>Aquilaria malaccensis</i>	IUCN-Red List	1 & 2	300 & 300	75.7 & 95	Mortality is mainly due to wildlife
2	<i>Dipterocarpus cornutus</i>	IUCN-Red List	2	3	100	Mortality is mainly due to wildlife
3	<i>Dipterocarpus baudii</i>	IUCN-Red List	2	300	39.3	Mortality is mainly due to wildlife
4	<i>Dipterocarpus kunstleri</i>	IUCN-Red List	2	180	90.6	Mortality is mainly due to wildlife
5	<i>Dryobalanops aromatica</i>	IUCN-Red List	2	150	58.6	Mortality is mainly due to wildlife
6	<i>Hopea helferi</i>	IUCN-Red List	1 & 2	179 & 80	88.8 & 98.15	Mortality is mainly due to wildlife
7	<i>Lagerstroemia langkawiensis</i>	IUCN-Red List	1 & 2	301 & 50	98.3 & 100	Mortality is mainly due to wildlife
8	<i>Shorea glauca</i>	IUCN-Red List	1 & 2	250 & 50	88.25 & 99	Mortality is mainly due to wildlife
9	<i>Shorea longisperma</i>	IUCN-Red List	2	100	98	Mortality is mainly due to wildlife
10	<i>Shorea multiflora</i>	IUCN-Red List	2	53	94.35	Mortality is mainly due to wildlife
11	<i>Shorea platyclados</i>	IUCN-Red List	2	200	89.5	Mortality is mainly due to wildlife
12	<i>Shorea sumatrana</i>	IUCN-Red List	1 & 2	50 & 150	94 & 96.7	Mortality is mainly due to wildlife
13	<i>Parashorea stellate</i>	IUCN-Red List	1 & 2	80 & 170	91.2 & 96.10	Mortality is mainly due to wildlife
14	<i>Dipterocarpus chartaceus</i>	IUCN-Red List	1	140	75.7	Mortality is mainly due to wildlife
15	<i>Hopea ferruginea</i>	IUCN-Red List	1	56	7.1	Mortality due to root diseases
16	<i>Neobalanopcarous heimii</i>	IUCN-Red List	1	165	84.6	Mortality due to wildlife
17	<i>Dryobalanops oblongifolia</i>	IUCN-Red List	1	50	74	Mortality due to wildlife
18	<i>Palaquium maingayi</i>	IUCN-Red List	1	60	98.3	Mortality due to wildlife

\*Note:

- 1) Survival rates with 2 decimal points are averages of initial planting and refill.
- 2) Reference: Presentation by Malaysia during 8<sup>th</sup> PCM.

	Species (alphabetical order)	IUCN-Red/ Non-IUCN-Red	Location of plantation	Actual number of planting seedlings, including re-planting ones	Survival rate (as of 2020) (%)	Remarks
2. Thailand (9.68 ha in total, Mae Moh- 8.68 ha, Takua Pa- 1 ha)						
1	<i>Aquilaria crassna</i>	National Rare, Non- IUCN-Red	- Mae Moh  - Takua Pa	1. 300 2. 225  1. 100	1. 24.33 2. -  1. 54.00	As Nov 2019
2	<i>Aquilaria malaccensis</i>	National Rare and Threatened, Non- IUCN-Red	- Mae Moh  - Takua Pa	2. 25  2. 100	2. -  2. -	
3	<i>Cotylelobium lanceolatum</i>	National Rare and Threatened, Non- IUCN-Red	- Mae Moh  - Takua Pa	1. 300 2. 25  1. 100	1. 28.00 2. -  1. 74.00	
4	<i>Dalbergia cochinchinensis</i>	Vulnerable IUCN-Red	- Mae Moh	1. 730 2. 550	1. 88.67 2. -	
5	<i>Dalbergia cultrata</i>	Near threatened IUCN-Red	- Mae Moh	2. 420	2. -	
6	<i>Dalbergia oliveri</i>	Endangered IUCN-Red	- Mae Moh	1. 300 2. 275	1. 67.33 2. -	
7	<i>Dillinia ovata</i>	National Threatened, Non- IUCN-Red	- Mae Moh	2. 200	2. -	
8	<i>Magnolia rajaniana</i>	National Rare and Threatened, Non- IUCN-Red	- Mae Moh  - Takua Pa	2. 350  2. 100	2. -  2. -	
9	<i>Magnolia sirindhorniae</i>	National Rare, Non- IUCN-Red	- Mae Moh	2. 75	2. -	

메모 포함[RS2]: The yellow information is the 2019's. Please update it to 2020;s.

10	<i>Neobalanocarpus heimii</i>	National Rare, Threatened and Critically endangered, Non- IUCN-Red	- Mae Moh - Takua Pa	1. 300 2. 25  1. 100 2. 100	1. 5.33 2. -  1. 63.00 2. -	
11	<i>Parkia sumatrana</i> subsp. <i>streptocarpa</i>	National Threatened, Non-IUCN-Red	- Mae Moh - Takua Pa	2. 225 2. 100	2. - 2. -	
12	<i>Vatica diospyroides</i>	National Rare and Threatened, Non- IUCN-Red	- Mae Moh - Takua Pa	1. 396 2. 25  1. 100	1. 69.33 2. -  1. 80.00	
1	<i>Acacia auriculiformis</i>	Nursing plant	- Mae Moh	2. 300	-	
2	Banana	Nursing plant	- Mae Moh	1. 1,800 2. 1,000	-	
3	<i>Cassia siamea</i>	Nursing plant	- Mae Moh	2. 300	-	
4	<i>Chrysopogon zizanioides</i>	Nursing plant	- Mae Moh	2. 54,250	-	

2.3.4 Capacity building activities (training / meetings / workshops)

Outputs/ Activities	2016			2017			2018			2019			2020		
	Total number	Achieved		Total number	Achieved		Total number	Achieved		Total number	Achieved		Total number	Achieved	
		Male	Female												
<b>1 Malaysia</b>															
National Workshop on Domestication of Climax Rainforest Species in Problematic Sites 15-17 November 2016	<b>25</b>	17	8	-	-	-	-	-	-	-	-	-	-	-	-
Seminar on Reclamation, Rehabilitation and Restoration of Disturbed Sites: Planting of National and IUCN Red List Species 15-17 August 2017	-	-	-	<b>40</b>	22	18	-	-	-	-	-	-	-	-	-
Regional Workshop on Domestication of Endangered, Endemic and Threatened Species in Disturbed Terrestrial Ecosystems 7-8 November 2019	-	-	-	-	-	-	-	-	-	<b>20</b>	12	8	-	-	-
1 <sup>st</sup> PCM in Malaysia	8	5	3	-	-	-	-	-	-	-	-	-	-	-	-
2 <sup>nd</sup> PCM in Malaysia	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-

Outputs/ Activities	2016			2017			2018			2019			2020		
	Total number	Achieved		Total number	Achieved		Total number	Achieved		Total number	Achieved		Total number	Achieved	
		Male	Female												
5 <sup>th</sup> PCM in Malaysia	-	-	-	-	-	-	-	-	-	9	5	4	-	-	-
6 <sup>th</sup> PCM in Malaysia	-	-	-	-	-	-	-	-	-	7	3	4	-	-	-
2 Thailand															
PSC meeting in Thailand	15	10	5	-	-	-	-	-	-						
Inception meeting	11	8	3	-	-	-	-	-	-						
PCC meeting in Thailand	10	5	5	-	-	-	15	9	6						
Stakeholders meeting	111	61	50	36	27	9	-	-	-						
Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem	-	-	-	-	-	-	47	29	18						
Evaluation workshop (ccv to ROK)	-	-	-	-	-	-	-	-	-	11	6	5			

메모 포함[RS3]: Please update about Thailand parts in 2020.

### 2.3.5 Advocacy materials and publications

	Type	Title	Number	Year	Language
1. Malaysia					
1	Journal	Ho WM, Ang, LH & Tang LK. 2016. Important Roles of Species-Site Matching in Afforestation of an Ex-Tin Mine. <i>International Journal of Agriculture, Forestry and Plantation</i> . 4(Dec): 63–67. ISSN 2462-1757	1	2016	English
2	Oral paper	Ang LH. 2016. Introduction to domestication of tropical rainforest species. Paper presented at the National Workshop on Domestication of Climax Rainforest Species in Problematic Sites, 15-17 November 2016. Forest Research Institute Malaysia, Kepong.	1	2016	English
3	Oral paper	Ang LH. 2016. Growing trees on urban soils, landfill site and ex-tin mine. Paper presented at the National Workshop on Domestication of Climax Rainforest Species in Problematic Sites, 15-17 November 2016. Forest Research Institute Malaysia, Kepong.	1	2016	English
4	Journal	Ho WM, Ang, LH & Tang LK. 2016. Important Roles of Species-Site Matching in Afforestation of an Ex-Tin Mine. <i>International Journal of Agriculture, Forestry and Plantation</i> . 4(Dec): 63–67. ISSN 2462-1757	1	2017	English
5	Proceedings	Ang LH, Ho WM, Tang LK & Hazarimma SO. 2017. Increasing tree diversity index through planting of 30 indigenous rainforest tree species on a 5 ha slime tailings. Pp 102–106 in Ho WM, Jeyanny, V, Sik HS & Lee CT (Eds) Proceedings of the Seminar on Rehabilitation and Restoration of Disturbed Sites: Planting of National and IUCN Red List Species. Forest Research Institute Malaysia, Kepong. eISBN 978-967-2149-08-8.	1	2017	English
6	Proceedings	Ang LH, Ho WM & Tang LK. 2017. Domestication of ten endemic, endangered and threatened tree species in a degraded terrestrial ecosystem in Peninsular Malaysia. Pp 114–118 in Ho WM, Jeyanny, V, Sik HS & Lee CT (Eds) Proceedings of the Seminar on Rehabilitation and Restoration of Disturbed Sites: Planting of National and IUCN Red List Species. Forest Research Institute Malaysia, Kepong. eISBN 978-967-2149-08-8.	1	2017	English
7	Proceedings	Ho WM, Ang LH, Tang LK & Siti Zaharah MI. 2017. Can ex-tin mine be a depository for indigenous and red list species? Pp 119–123 in Ho WM, Jeyanny, V, Sik HS & Lee CT (Eds) Proceedings of the Seminar on Rehabilitation and Restoration of Disturbed Sites: Planting of National and IUCN Red List Species. Forest Research Institute Malaysia, Kepong. eISBN 978-967-2149-08-8.	1	2017	English
8	Oral paper	Ho WM, Ang LH, Tang LK & Siti Zaharah MI. 2017. Ex-tin mine as a depository for indigenous and res list species in Peninsular Malaysia. Paper presented at the 3 <sup>rd</sup> Global Forum of Ecological Economics in Forestry. 20–21 May 2017, Nanchang	1	2017	English
9	Poster	Ang LH, Ho WM, Tang LK, Kang HS & Lee DK. 2017. The survival of a 36-month-old enrichment planting under a greened slime tailings in Tin Tailings Afforestation Centre, Bidor, Perak. Poster presented at the 3 <sup>rd</sup> Restoring Forests Congress, 12–14 September 2017, Lund.	1	2017	English
10	Poster	Ang LH, Ho WM & Tang LK. 2017. Natural regeneration of a greened ex-tin mine. Poster presented at the 3 <sup>rd</sup> Restoring Forests Congress, 12–14 September 2017, Lund	1	2017	English

11	Journal	Lai Hoe Ang , Wai Mun Ho , Lai Kuen Tang , Ho Sang Kang and Don Koo Lee. 2018. The survival and Vegetative Growths of a 60 Month-Old Tropical Rainforest Tree Species Trial Established under a <i>Hopea odorata</i> Nurse at an Ex-Tin Mine in Peninsular Malaysia. Journal of Environmental Science and Engineering B 7 (2018) 131-140	1	2018	English
12	Proceedings	Ang LH, Ho WM & Tang LK. 2018. Survival of ten endemic, endangered and threatened tree species grown on slime tailing at six months after planting. Pp 238-239 in Che Fauziah I, Mohd Izuan EH, Daljit SK, Muhammad Firdaus S & Annur MR (Eds) Proceedings of the 10 <sup>th</sup> International Symposium on Plant-Soil Interactions at Low pH June 25-28, 2018, Putrajaya. ISBN 978-967-16101	1	2018	English
13	Brochure	Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand	1	2018	English
14	Oral paper	Ho WM, Ang LH, and Tang LK. 2018. Using Indigenous and Red List Species for Enhancing Biodiversity of an Ex-tin Mine in Peninsular Malaysia. Paper presented at the 4 <sup>th</sup> International Congress on Planted Forests- A Solution for Green Development 23-27 October 2018 Beijing, China	1	2018	English
15	Oral paper	Tang, L.K, L.H. Ang, W.M. Ho and Madzlan Zainuddin 2018. Domestication of Endemic, Endangered and Threatened Rainforest Tree Species at Slime Tailings. Paper presented at the 28th Malaysian Society of Plant Physiology Coference (MSPPC 2018) Challenges and Strategies for Plant Productivity and Resilience, 28-30th August 2018 Kota Bharu, Kelantan.	1	2018	English
16	Oral paper	Ang LH. 2019. Challenges of reclamation, rehabilitation and restoration of an ex-tin mine. Paper presented at the Regional Workshop on domestication of endangered, endemic and threatened species in disturbed terrestrial ecosystems, 7-8 November 2019, FRIM, Kepong.	1	2019	English
17	Oral paper	Ang LH. 2019. Domestication of endangered, endemic and threatened species on a degraded terrestrial ecosystem. Paper presented at the Regional Workshop on domestication of endangered, endemic and threatened species in disturbed terrestrial ecosystems, 7-8 November 2019, FRIM, Kepong	1	2019	English
18	Oral paper	Ang LH. 2019. Paper presented at the Workshop on Enhancing Capacity in International Forest Cooperation, 19 December 2019, Daejeon.	1	2019	English
19	Poster	Ang LH, Ho WM, Tang LK, Kang HS & Lee DK. 2019. The survival and vegetative growth of a 60-month-old tropical rainforest tree species trial established under <i>Hopea odorata</i> nurse stand at an ex-tin mine in Peninsular Malaysia. Poster presented at the Malaysian Society of Plant Physiology Conference, 27-29 August 2019, Kota Kinabalu	1	2019	English
20	Proceedings	Ang LH, Ho WM & Tang LK. 2020. Domestication of seventeen endemic, endangered and threatened tree species in an Ex-Tin Mine at Bidor, Perak. Pp. 271-276 in Jeyanny V, Wan Rasidah K, Rosazlin A, Daljit Singh K, Teh C, Rozita A, Ho WM, Shamshuddin J & Nurhafiza AH (Eds) Proceedings of the Soil Science Conference of Malaysia 2020, 6-8 October 2020, Johor Bahru. ISBN 978-967-16101-2-1.	1	2020	English

2. Thailand

메모 포함[RS4]: Please update on 2020's

1	Audio-visual presentation	Project Website	1	2016-2019	English
2	Report	Annual Report 2016 and Annual Report 2017	30, 20	2016, 2017	English
3	Brochure	AFoCo Regional Project: Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand	500	2016	English
4	Manual	Weed manual of Mae Moh Mine Project Site 2018	250	2018	English

### 2.3.6 Procurement status

No.	List (model description)	Plan	Actual	Location	Remarks
Country: Malaysia					
1	GPS			FRIM, Bidor, Malaysia	2017
2	Height meter	2	2	FRIM, Bidor, Malaysia	2017
3	Diameter tape	3	3	FRIM, Bidor, Malaysia	2017
Country: Thailand					
1	Purchase of microclimate sensors	4	5		3 data loggers and 1 USB with interface cables in 2016,2017 (Waste)
2	Height meter (vertex)	2	2	Northern Forest Tree Seed Center and Southern Forest Tree Seed Center	2017
3	Diameter tape	4	4	Northern Forest Tree Seed Center and Southern Silvicultural Research Center	2017
4	High resolution digital camera	2	2	Northern Forest Tree Seed Center and Forest Tree Seed Research and Management section	2016
5	Samsung Galaxy S7 edge	3	3	Northern Forest Tree Seed Center , Forest Research and Development Bureau and Forest Tree Seed Research and Management section	2016
6	Notebooks	2	2	Northern Forest Tree Seed Center and Forest Tree Seed Research and Management section	2016

No.	List (model description)	Plan	Actual	Location	Remarks
7	Projector	1	1	Forest Tree Seed Research and Management section	2016
8	Digital cameras	1	2	Northern Forest Tree Seed Center and Forest Tree Seed Research and Management section	2016
9	Printers	2	2	Northern Forest Tree Seed Center and Forest Tree Seed Research and Management section	2016
10	Shredder machine	1	1	Northern Forest Tree Seed Center	2018
11	Insect sprayers	2	2	Northern Forest Tree Seed Center and Southern Silvicultural Research Center	2018
12	Scanner		1	Forest Tree Seed Research and Management section	2017
13	Monitor		1	Forest Tree Seed Research and Management section	2017

### 3. Financial Report

#### 3.1 Malaysia

##### 3.1.1 Statement of Cash Flow

#### Statement of Cash Flow (SOC)

**Project Number:** AFoCo/010/2016 **Reporting Period:** 2 January – 31 December 2020

**Project Title:** Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand **SOE Number:** 01/2020

Component	Timeline									
	2016-01	2016-02	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02	2020-01	2020-02
<b>1 CASH IN (USD)</b>		<b>175,000</b>	<b>161,576</b>	<b>65,000</b>	<b>150,284</b>	<b>41,000</b>	<b>23,371</b>	<b>87,426</b>	<b>46,303</b>	<b>67,600</b>
Balance		0	161,576	37,563	35,939	1,625	(304)	(4,854)	21,398	25,505
Funds received		175,000	0	27,437	114,345	39,375	23,675	92,280	24,905	42,095
Bank interest	Not Applicable (NA)	0	0	0	0	0	0	0	0	0
<b>2 CASH OUT (USD)</b>		<b>13,417</b>	<b>124,013</b>	<b>29,061</b>	<b>148,659</b>	<b>41,304</b>	<b>28,225</b>	<b>66,028</b>	<b>20,798</b>	<b>1,349</b>
Expenditure of the year		13,410	124,013	29,061	148,659	41,304	28,225	66,028	20,798	1,349
Bank charge		7	0	0	0	0	0	0	11	0
<b>3 BALANCE (USD)</b>		<b>161,576</b>	<b>37,563</b>	<b>35,939</b>	<b>1,625</b>	<b>(304)</b>	<b>(4,854)</b>	<b>21,398</b>	<b>25,505</b>	<b>66,251</b>

Note: Balance in 2019-02 included funds retained by AFoCo in 2017 amounting to USD37,562.

## 3.1.2 Balance Sheet

**Balance Sheet (B/S)**

<b>Project Number:</b>	AFoCo/010/2016	<b>Reporting Period:</b>	2 January – 31 December 2020
<b>Project Title:</b>	Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand	<b>B/S Number:</b>	01/2020

Component	Remaining Funds (A)	Approved Budget (B)	Expenditures to Date			Available Funds (F = A + B - E)
			Committed (C)	Paid (D)	Total (E = C + D)	
<b>Funds received (USD)</b>						
I. Total AFoCo funds received by the reporting period	58,960.91	67,000.00				
<b>Expenditures by Implementing Country (USD)</b>						
<b>A. Site Characteristics</b>						
A.1 Site Characterization	15,760.51	3,955.00.00	0	5,181.33	5,181.33	14,534.18
A.2 Procurement of EETS	(30,520.09)	0	0	0	0	(30,520.09)
A.3 Establishment of Model Plots	8,356.38	19,305.00	(26,797.97)	11,885.86	(14,912.11)	42,573.49
A.4 Documentation of Site Properties	(9,124.81)	3,150.00	0	14,669.63	14,669.63	(20,644.44)
<b>II. Sub Total A</b>	<b>(15,528.01)</b>	<b>26,410.00</b>	<b>(26,797.97)</b>	<b>31,736.82</b>	<b>4,938.85</b>	<b>5,943.14</b>
<b>B. Regional Seminar</b>						
B.1 Domestication of EETS in ASEAN Countries	21,299.92	0	0	0	0	21,299.92
<b>III. Sub Total B</b>	<b>21,255.92</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21,255.92</b>
<b>C. Technology Transfer and Capacity Development</b>						
C.1 Cross Visit	28,174.36	7,670.00	0	0	0	7,670.00
C.2 Knowledge and Technology Transfer	15,584.14	0	0	121.10	121.10	15,463.04

Component	Remaining Funds (A)	Approved Budget (B)	Expenditures to Date			Available Funds (F = A + B - E)
			Committed (C)	Paid (D)	Total (E = C + D)	
<b>VI. Sub Total C</b>	<b>43,758.50</b>	<b>7,640.00</b>	<b>0</b>	<b>121.10</b>	<b>121.10</b>	<b>51,307.40</b>
<b>D. Local Operation</b>						
D.1 External Auditing	1,983.51	0	0	0	0	1,983.51
D.2 Attending Oversea Meetings	1,356.87	9,090.00	0	236.02	236.02	10,210.85
D.3 Project Coordination Meeting	4,212.69	7,250.00	0	0	0	11,462.69
D.4 Project Staff	(922.39)	16,200.00	0	16,839.65	16,839.65	(1,562.04)
D.5 Annual Report	926.09	300.00	0	0	0	1,226.09
D.6 Miscellaneous	1,924.73	80.00	0	0	0	2,004.73
<b>VII. Sub Total D</b>	<b>9,481.50</b>	<b>32,920.00</b>	<b>0</b>	<b>17,075.67</b>	<b>17,075.67</b>	<b>25,325.83</b>
<b>E (Output 5)</b>						
E.1 Nil	NA	0	0	0	0	0
<b>VIII Sub Total E</b>	<b>NA</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>F. Contingency/Other expenditure</b>						
Bank charge	(7.00)	0	0	11.53	11.53	(18.53)
<b>VIII Sub Total F</b>	<b>(7.00)</b>	<b>0</b>	<b>0</b>	<b>11.53</b>	<b>11.53</b>	<b>(18.53)</b>
<b>XII. Total Funds Retained by AFoCo Secretariat:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>GRAND TOTAL</b>	<b>58,960.91</b>	<b>67,000.00</b>	<b>(26,797.97)</b>	<b>48,945.12</b>	<b>22,147.15</b>	<b>103,813.76</b>

\* Note: Figures in "Committed, Paid and Total" are converted from Ringgit Malaysia to USD using an average conversion rate of 3.64379.

### 3.1.3 Supplementary Funding

Description	Amount (USD)
Office space (headquarter and project site)	3,600
Electricity use (for office and project site)	1,200
Water (for office and laboratories)	1,200
Land for reclamation areas (based on current market price)	404,645
Telephone and Internet	600
Salary for project personnel	100,000
<b>Total</b>	<b>511,245</b>

### 3.2 Thailand

#### 3.2.1 Statement of Cash Flow

##### Cash flow 2016

Item	Received		Expensed(Baht)	Balance(Baht)	Remark
	Baht	\$			
Brought forward				-	
Transfer23/08/16	6,097,727.25	175,000.00			
Expensed 2016			4,714,749.98		
<b>Total</b>	<b>6,097,727.25</b>	<b>175,000.00</b>		<b>1,382,977.27</b>	

##### Cash flow 2017

Item	Received		Expensed(Baht)	Balance(Baht)	Remark
	Baht	\$			
Brought forward				1,382,977.27	
Transfer26/05/17	305,013.37	9,006.88			
Transfer18/08/17	901,511.50	27,210.00			
Expensed 2017			1,429,487.50		
<b>Total</b>	<b>1,206,524.87</b>	<b>36,216.88</b>		<b>1,160,014.64</b>	

##### Cash flow 2018

Item	Received		Expensed(Baht)	Balance(Baht)	Remark
	Baht	\$			
Brought forward				1,160,014.64	
Transfer09/02/18	2,577,600.00	81,200.00			
Transfer11/10/18	2,809,084.00	85,920.00			
Expensed 2018			1,762,638.66		
<b>Total</b>	<b>5,386,684.00</b>	<b>167,120.00</b>		<b>4,784,059.98</b>	

##### Cash flow 2019

Item	Received		Expensed(Baht)	Balance(Baht)	Remark
	Baht	\$			
Brought forward				4,784,059.98	
Transfer04/09/19	1,419,117.01	46,544.82			
Transfer15/10/19	771,695.50	25,485.00			
Expensed 2019			2,264,774.04		
<b>Total</b>	<b>2,190,812.51</b>	<b>72,029.82</b>		<b>4,710,098.45</b>	

##### Cash flow 2020

Item	Received		Expensed(Baht)	Balance(Baht)	Remark
	Baht	\$			
Brought forward				4,710,098.45	
Transfer19/05/20	1,112,595.52	34,992.00			
Transfer20/10/20	1,344,854.90	43,259.00			
Expensed 2020			3,940,822.64		
<b>Total</b>	<b>2,457,450.42</b>	<b>78,251.00</b>		<b>3,226,726.23</b>	

## 3.2.2 Balance Sheet

**Balance Sheet (B/S)**

Project Number: 010/2016

Reporting Period: 01/01/20-3/11/20

Project Title: Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand

B/S Number:

Component		Approved Budget (A)	Expenditures to Date			Available Funds (E = A - D)	
			Committed (B)	Paid (C)	Total (D = B + C)		
<b>Funds received</b>							
I.	Committed AFoCo funds received by the reporting period 2016	USD2,601.48	2,601.48	-	2,601.48	-	
II.	Committed AFoCo funds received by the reporting period 2017	USD5,359.28	3,008.11	2,351.17	5,359.28	-	
III.	Total AFoCo funds received by the reporting period 2018	USD87,196.43	24,310.12	62,879.18	87,172.81	7.13	
IV.	Total AFoCo funds received by the reporting period 2019	USD48,893.94	22,515.20	26,378.74	52,709.94	-	
V.	Total AFoCo funds received by the reporting period 2020	USD78,251.00	61,452.19	16,798.81	78,251.00	-	
<b>Total</b>		USD222,302.13	113,887.10	108,407.90	222,295.00	7.13	
<b>Expenditures by Implementing Country</b>							
<b>A. (Output 1)</b>							
A1	Selection of planting sites in denuded and disturbed forest, and identification of EETS for domestication	2018	22,100.00	11,305.13	10,794.87	22,100.00	-
		Total	22,100.00	11,305.13	10,794.87	22,100.00	-
A2	Procurement of EETS	2018	26,351.46	4,634.61	21,716.85	26,351.46	-
		Total	26,351.46	4,634.61	21,716.85	26,351.46	-
A3	Establishment of Model plots (Site preparation, planting stock, planting, tending, monitoring)	2016	584.27	584.27	-	584.27	-
		2017	3,742.36	1,391.19	2,351.17	3,742.36	-
		2018	21,436.02	16.49	21,419.53	21,436.02	-
		2019	28,103.00	7,576.57	20,526.43	28,103.00	-
		2020	25,906.00	18,433.22	7,472.78	25,906.00	-
		Total	79,771.65	28,001.74	51,769.91	79,771.65	-

Component		Approved Budget (A)	Expenditures to Date			Available Funds (E = A - D)
			Committed (B)	Paid (C)	Total (D = B + C)	
A4 Documentation of biophysical site properties, planting techniques and assessment of growth	2016	1,860.00	1,860.00	-	1,860.00	-
	2018	3,703.88	141.68	3,562.20	3,703.88	-
	2019	400.00	400.00	-	400.00	-
	Total	5,963.88	2,401.68	3,562.20	5,963.88	-
<b>II. Sub Total A</b>		<b>134,186.99</b>	<b>46,343.16</b>	<b>87,843.83</b>	<b>134,186.99</b>	<b>-</b>
<b>B. (Output 2)</b>						
B1 Domestication of EETS in ASEAN countries	2020	19,705.00	19,705.00	-	19,705.00	-
	Total	19,705.00	19,705.00	-	19,705.00	-
B2 Domestic Workshop	2018	2,851.17	-	2,844.04	2,844.04	7.13
	Total	2,851.17	-	2,844.04	2,844.04	7.13
B3 PSC meeting (Thailand)	2018	3,878.14	1,336.45	2,541.69	3,878.14	-
	Total	3,878.14	1,336.45	2,541.69	3,878.14	-
<b>III. Sub Total B</b>		<b>26,434.31</b>	<b>21,041.45</b>	<b>5,385.73</b>	<b>26,427.18</b>	<b>7.13</b>
<b>C. (Output 3)</b>						
C.1 Cross visits (USD1700/person/trip TH, MY, IN,PH,SG)	2018	2,885.70	2,885.70	-	2,885.70	-
	2019	2,291.99	2,291.99	-	2,291.99	-
	2020	3,400.00	3,400.00	-	3,400.00	-
	Total	8,577.69	8,577.69	-	8,577.69	-
C.2 Knowledge and technology transfer	2017	1,568.64	1,568.64	-	1,568.64	-
	2018	3,990.06	3,990.06	-	3,990.06	-
	2019	8,452.00	8,452.00	-	8,452.00	-
	2020	300.00	300.00	-	300.00	-
	Total	14,310.70	14,310.70	-	14,310.70	-
<b>VI. Sub Total C</b>		<b>22,888.39</b>	<b>22,888.39</b>	<b>-</b>	<b>22,888.39</b>	<b>-</b>
<b>D. (Output 4)</b>						
D.1. External Auditing	2020	6,000.00	655.77	5,344.23	6,000.00	-
	Total	6,000.00	655.77	5,344.23	6,000.00	-

Component		Approved Budget (A)	Expenditures to Date			Available Funds (E = A - D)	
			Committed (B)	Paid (C)	Total (D = B + C)		
D.2.	Attending overseas meetings	2016	157.21	157.21	-	157.21	-
		Total	157.21	157.21	-	157.21	-
D.4	Annual report	2019	2,000.00	745.87	1,254.13	2,000.00	-
		2020	1,050.00	1,050.00	-	1,050.00	-
		Total	3,050.00	1,795.87	1,254.13	3,050.00	-
D.5	Miscellaneous	2017	48.28	48.28	-	48.28	-
		2019	6,574.00	1,975.82	4,598.18	6,574.00	-
		2020	10,920.00	6,938.20	3,981.80	10,920.00	-
		Total	17,542.28	8,962.30	8,579.98	17,542.28	-
D.6	PCC Meeting	2019	1,072.95	1,072.95	-	1,072.95	-
		2020	10,970.00	10,970.00	-	10,970.00	-
		Total	12,042.95	12,042.95	-	12,042.95	-
<b>VII.</b>	<b>Sub Total D</b>		<b>38,792.44</b>	<b>27,430.10</b>	<b>15,178.34</b>	<b>42,608.44</b>	<b>-</b>
	<b>F. Contingency/Other expenditure</b>						
	e.g. Bank charge		-	-	-	-	-
<b>VIII.</b>	<b>Sub Total F</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>XII.</b>	<b>Total Funds Retained by AFoCo Secretariat:</b>						
	<b>GRAND TOTAL</b>		<b>222,302.13</b>	<b>113,887.10</b>	<b>108,407.90</b>	<b>222,295.00</b>	<b>7.13</b>

Note: Budget Components are those detailed in the Project Document.

- I. Committed expenditure (B): expenditures incurred during the reporting period, but not yet settled.
- II. Available funds (E) represent the unused budget and surplus budget combined.
- III. Any contingency expenditures including bank charge should be listed under Component F and reflected underneath "Cash Out" of Statement Cash Flow.

### 3.2.3 Supplementary Funding(Country in-kind contribution)

Description	Amount (USD)
Office car ข 6 621 ลำปาง 22 days	2,750
Office car ยง 4253 เชียงใหม่ 8 days	1,000
Office car 2กน 2370 กทม 13 days	1,625
Office car กจ 2638 สงขลา 26 days	3,250
Office car สน 8560 กทม 21 days	2,625
Office car ฉน 8898 กทม 2 days	250
Office space at RFD	2,000
Office at Northern Seed Center, Ngao Lampang	1,000
Planting area 4.8 ha at Mae moh mine	134,400
Electricity	1,000
Water supply for offices and planting sites	3,500
Telephone and internet for 21 officers	300
Salary for 21 officers for 12 months	383,250
Meeting rooms for PSC, Domestic Workshop and 7 <sup>th</sup> PCM and 8 <sup>th</sup> PCM at RFD a 5 day (contribute by Kasetsart University)	5,000
CAT Motor Grader 2 days (clearing inspection road and fire line) (contribute by EGAT)	500
Renovation of fence	100
Total	542,550

## 4. Issues & Lessons Learned

### 4.1 Malaysia

No.	Description of Issues	Actions Taken and Lessons Learned
1.	Contractor for maintenance of 2017 plot only carried out works for five (5) months and did not turn up for work after that.	The procurement procedure through FRIM does not guarantee a good supplier is selected because of policy matter that favors the work is to be offered only to the local contractor of Perak state. This has limited the more experience and better suppliers from other states. For the future development project with Malaysia, to avoid such problem is for AfoCo to appoint contractor directly. The specifications and monitoring can be carried out by the collaborators in Malaysia.
2.	The weather station is not purchased and being delayed till to-date.	The procurement policy only allows for the local suppliers of Perak to supply the instrument. Presently, there is no branch of potential suppliers of the instrument in the state, hence, we would need a letter of support from AFoCO to appeal for the policy to waive in the purchase. I strongly recommended that for any future development project with FRIM or Malaysia, it is better for AFoCO to have a field office and project is to be implemented directly by AFoCO staff but work with the identified government agencies in this country.

### 4.2 Thailand

No.	Description of Issues	Actions Taken and Lessons Learned
1.	High mortality rate at Mae Moh plot site due to the dry season while flooding at Takuapa plot site.	Re-planting and intensive care
2.	Insect attack and Disease at Takua Pa plot site and Mae Moh plot site	- Chemical and Bio-chemical treatment - Insect specialist as new staff (Mrs. Napalai Samerjai)
3.	Animal (Cow) come to eat tree shoot	<i>Negotiate with the farmer</i>
4.	Tree fell down and branch or shoot broken from storm and big tree fell over	Wind break and supporter
5.	Enhance mortality and growth rate	Micro-climate study, soil and nutrition study
6.	Biodiversity information	Compare biodiversity among and after the project

(Photos are in **Annex-xx**.)

## 5. Conclusion and Recommendation

### 5.1 Malaysia

- Quality assessment on the annual achievements

The model plots were established and they can be then used as a demonstration plot for domestication of endangered, endemic and threatened tree species on ex-tin mine. The mixed stand covering 6.5 ha will eventually be converted seed production area.

- Narrative outcome assessment

The project is being carried out according to the schedule but due to Pandemic COVID-19, the activities under seminar and capacity building of sections B&C are not being able to be implemented in the fiscal year of 2020-2021. As recommended by the guidelines of AFoCO issued on the activities affected the pandemic Covid-19, this project should be making into a documentary video. We will take this proposal up to the coming 9<sup>th</sup> PCM in June 2021. The implementation of some activities under documentation or section A were not carried out due to the national policy of procurement process. Remedial measures were discussed and adopted in the 8<sup>th</sup> PCM and some will be further discussed in the 9<sup>th</sup> PCM.

- Recommendations on project management

If there is a future large-scale R&D project of this nature to be implemented in Malaysia, it is good that AFoCO may have a regional site office set up in this country, so that the purchase or procurement of the development component is to be done through the regional office directly. The regional office should adhere to the protocol of procurement adopted by AFoCO and all the financial operations are also to be strictly regulated according to the operating system of AFoCO. Only the funding on the research and training components to be channel to the collaborators or national agencies. The component of external auditing for the whole project other than intermediate auditing at periodical intervals should be part of the project budget and be carried out by different auditing companies and this includes also the governance and practices of the regional office.

### 5.2 Thailand

- Quality assessment on the annual achievements

Because of the southern part of Thailand has a storm and heavy rain in October to mid of December, caused flooded in the row of *Aquilaria malaccensis* and *Magnolia rajaniana* of 2018 plot site replication 1. These rows are deep area as a canal and keep water too long that root rot occurred in *Magnolia rajaniana*. Caused died of *Magnolia rajaniana* in replication 1. *Aquilaria malaccensis* is more tolerance flooded than *Magnolia rajaniana*. (Annex 7)

The recommendation is flatten and prepare the area before re-planting.

- Narrative outcome assessment

- Recommendations on project management

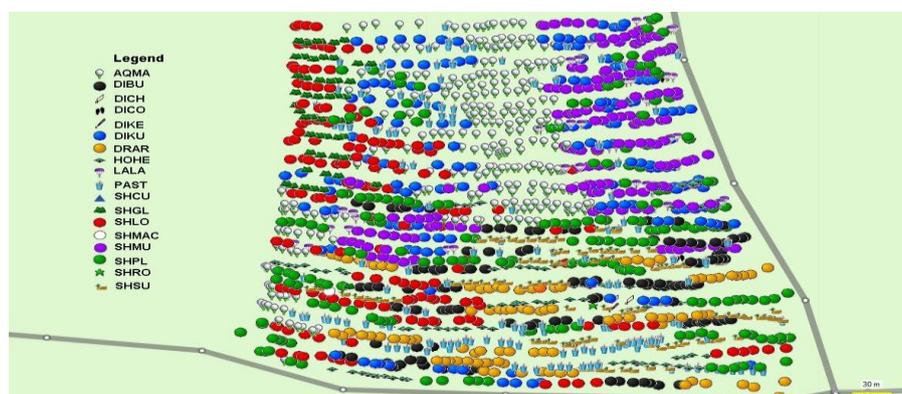
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## 6. Annexes

### Annex 1. Distribution maps of individual trees in model plots marked by Global Positioning System (GPS), Malaysia



**Figure 1.** The distribution of the individual species in AFoCO plot established in 2016. The legends include AQMA, DICH, DIKE, DROB, HOFE, HOHE, HOMY, LALA, NEHE, PAMA, PAST, SHCU, SHGL, SHLE, and SHSU which denotes *Aquilaria malaccensis*, *Dipterocarpus chartaceus*, *D. kerrii*, *Dryobalanops oblongifolia*, *Hopea ferruginea*, *H. helferi*, *H. myrtifolia*, *Lagerstroemia langkawiensis*, *Palaquium maingayi*, *Parashorea stellate*, *Shorea curtisii*, *S. glauca*, *S. leprosula* and *S. sumatrana*, respectively marked by Global Positioning System (GPS) as in April 2020.



**Figure 2.** The distribution of *Aquilaria malaccensis* (AQMA), *Dipterocarpus baudii* (DIBU), *D. chartaceus* (DICH), *D. cornutus* (DICO), *D. kerrii* (DIKE), *Dryobalanops aromatica* (DRAR), *Hopea helferi* (HOHE), *Lagerstroemia langkawiensis* (LALA), *Parashorea stellate* (PAST), *Shorea curtisii* (SHCU), *S. glauca* (SHGL), *Shorea longisperma* (SHLO), *S. macroptera*, *S. multiflora* (SHMU), *S. platyclados* (SHPL), *S. roxburghii* (SHRO) and *S. sumatrana* (SHSU), marked by GPS as in September 2020.



Figure 3. The location of the two AFoCO plots as shown in yellow, and the middle plot is the regeneration plot as mapped by GPS.

## Annex 2. Detailed Results of Key Activities, Malaysia

### Activity A.4: Documentation of Site Properties



Figure 1: Average stand height was about 1.5 m at initial planting.



Figure 2: The tallest tree of *Palaquium maingayi* has reached 11.9 m and diameter at breast height of 11.4 cm at about four years after planting. The mean stand height of 3-year-old stand was 4.3 m.



Figure 3: The AFoCO 2017 plot is behind the signboard at about 4 years after planting. A video clip of the planting was also submitted as part of this report.



Figure 4: *Shorea multiflora* with top height of 4.6 m and diameter at breast height of 3.5 cm at about 2 years after planting.



Figure 5: The planting behind the signboard is the AFoCO 2019 plot. A video clip of the plot is also submitted as part of this report.

#### Activity D.3: Project Coordination Meeting (PCM)



Figure 6: 7<sup>th</sup> PCM organized by RFD via Google Meet on 29 June 2020.

Annex 3. Map of Location of Existing trees and Planted trees of 2018 plot

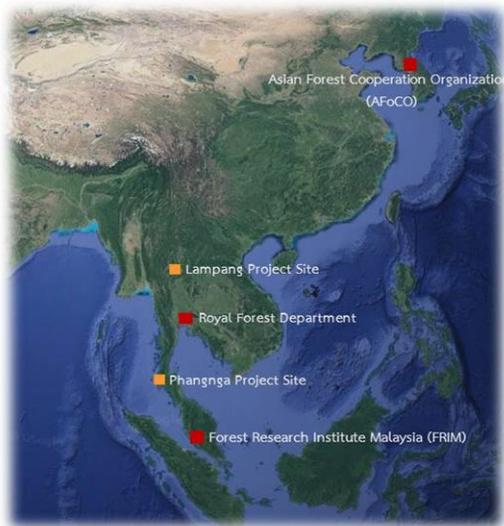
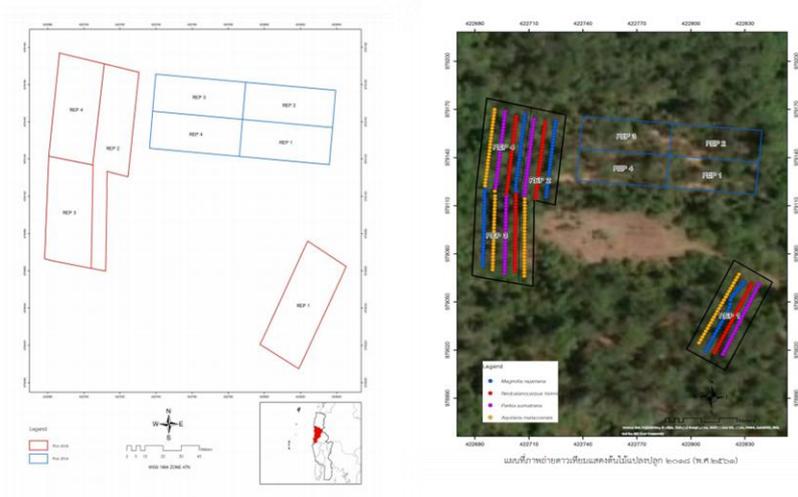


Figure 1: Location map of 2 plot site, Mae Moh plot site at Lampang province and Takua Pa plot site at Phangnga province.



แผนที่แสดงตำแหน่งแปลงปลูกต้นไม้ที่ศึกษาวิจัยบนภาคเหนือ จำนวน ๒ แปลง ได้แก่แปลงปลูกต้นไม้ ๒๐๑๖ (ท.ท.๒๐๑๖) และแปลงปลูกต้นไม้ ๒๐๑๘ (ท.ท.๒๐๑๘)

Figure 2: 4 replications Plot and Planting Layout for each tree specie 2018 plot at Takua Pa site.

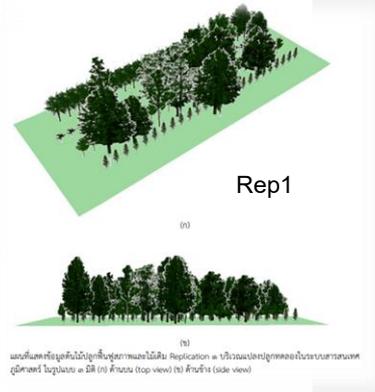
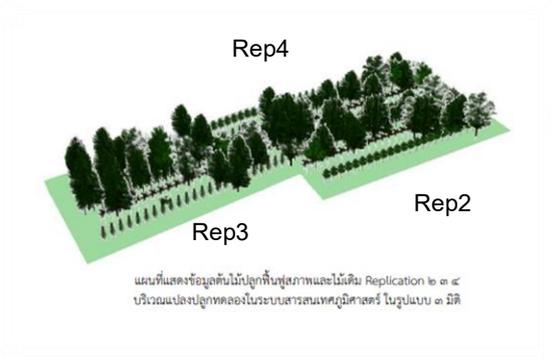
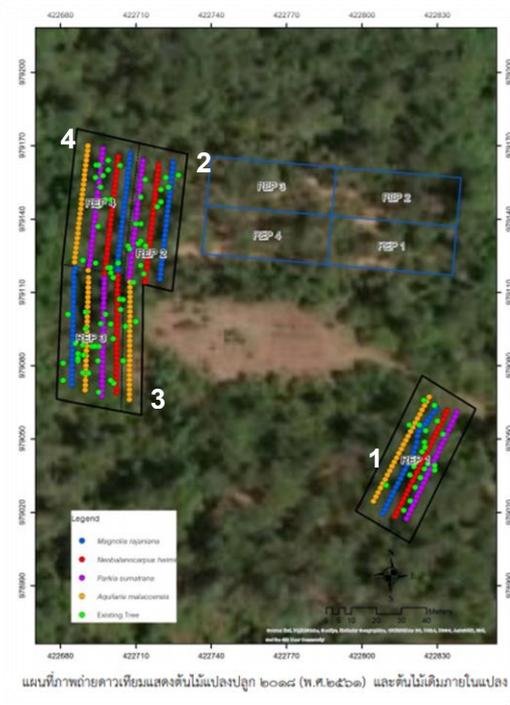


Figure 3: Up) Planted trees and Existing tree Lay out. Down) 3 D Profile of 2018 Takua Pa plot site.

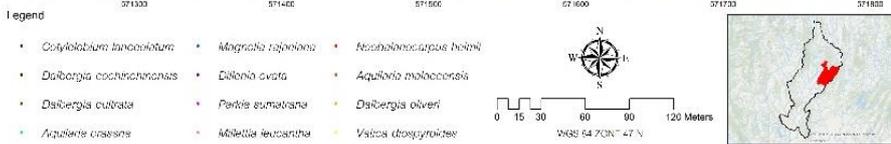
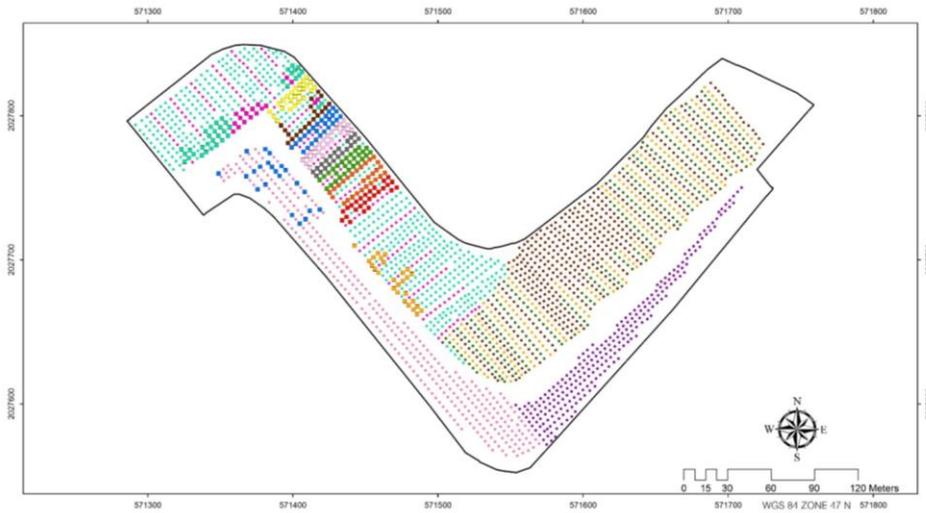


Figure 4: Up) Planting layout for each selected species of 2018 Mae Moh plot site.  
Down) Planting layout for each selected species of 2018 Mae Moh plot site overlay satellite image.

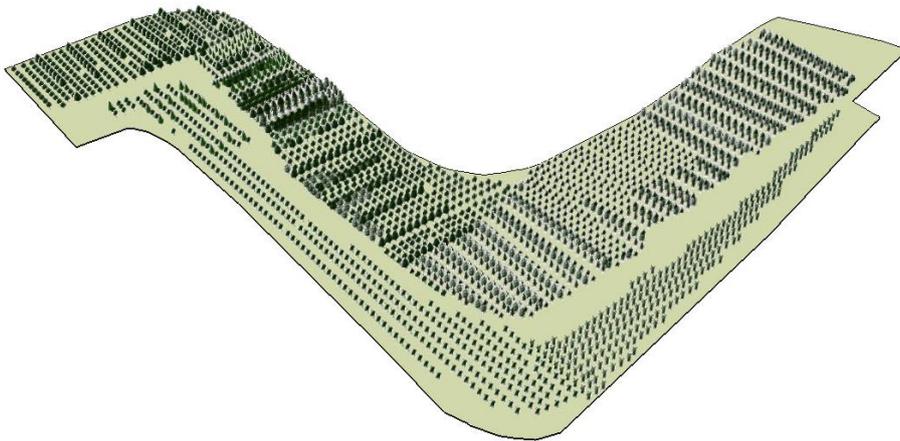


Figure 5: Up) Planting species and Existing trees layout of 2018 Mae Moh plot site.  
Down) 3 D Profile of Planted species and Existing tree.

Annex 4. Establishment of model plots (Site preparation, planting stock, planting, tending, monitoring)



Figure 1: Manual Irrigation at Mae Moh plot site.



Figure 2: Dripping Irrigation at Takua Pa plot site.



Figure 3: Sun shading at Mae Moh plot site in dry season.



Figure 4: Mulching by cover with coconut husk and rice straw at Mae Moh plot site in dry season.



Figure 5 and 6: Apply Fertilizer at Takua Pa (left) and Mae Moh (right) plot sites.



Figure 7: Weeding and Shoveling at Takua Pa plot site.



Figure 8: Weeding Shoveling at Mae Moh plot site.



Figure 9: Re-planting at Takua Pa plot site.



Figure 10: Re-planting at Mae Moh plot site.



Figure 11: Irrigation system maintenance at Takua Pa plot site.

Annex 5. Documentation of biophysical site properties, planting techniques and assessment of growth



Figure 1: Data collection, Takua Pa plot site.

● **Growth and percent survival**

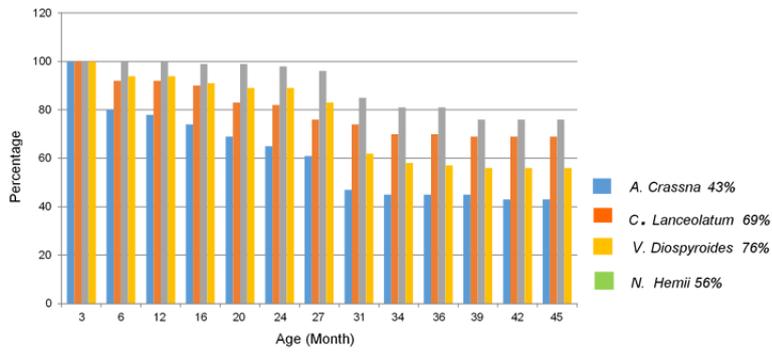


Figure 2: EETS Survival percentage of 2016 Takua Pa plot site during 4 years.

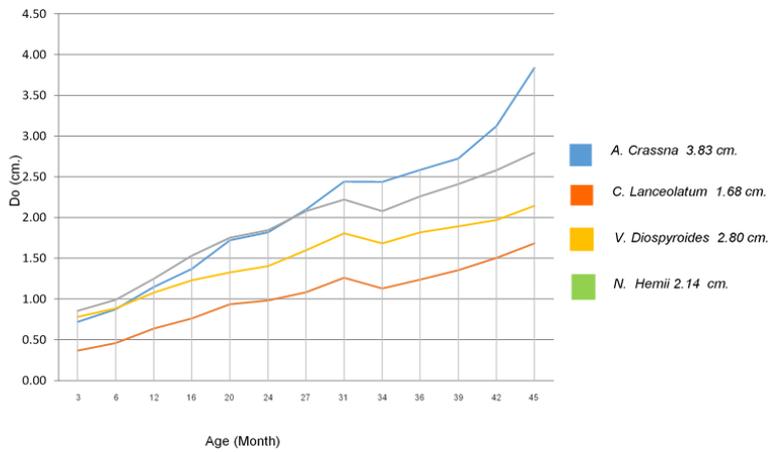


Figure 3: EETS D<sub>0</sub> growth of 2016 Takua Pa plot site during 4 years.

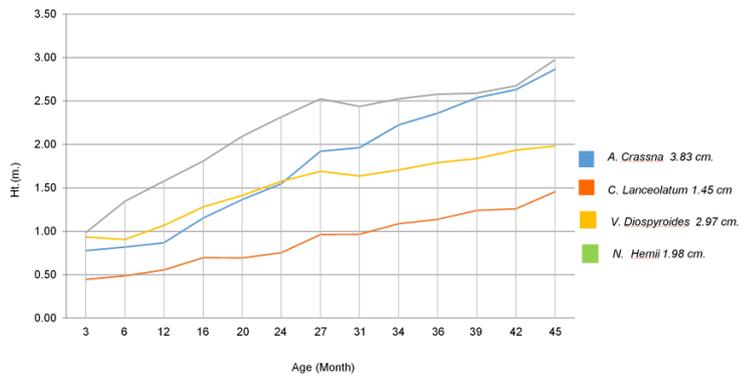


Figure 4: EETS Height growth of 2016 Takua Pa plot site during 4 years.

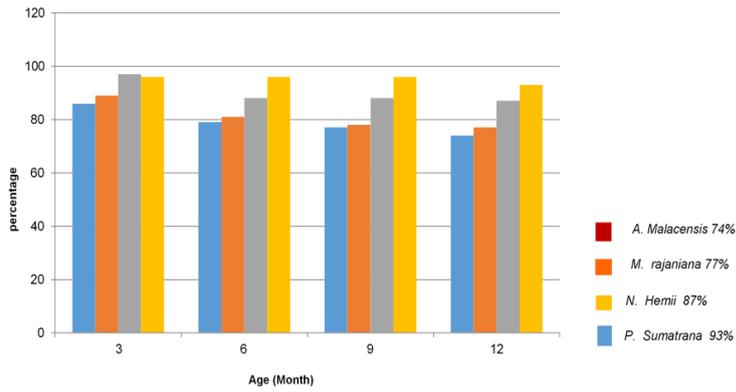


Figure 5: EETS Survival percentage of 2018 Takua Pa plot site during 1 years.

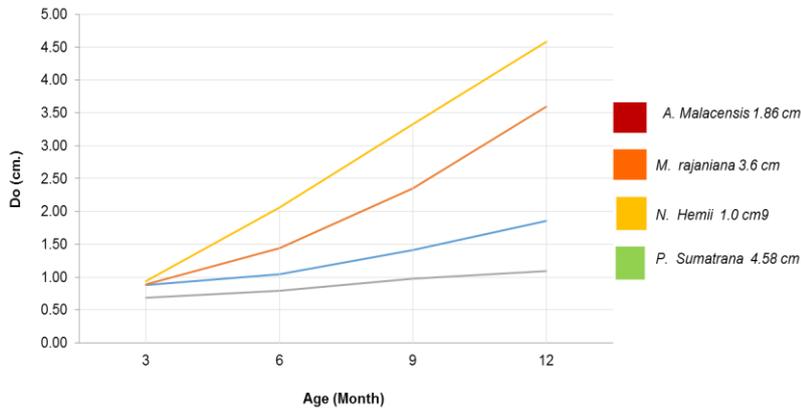


Figure 6: EETS D<sub>0</sub> growth of 2018 Takua Pa plot site during 1 year.

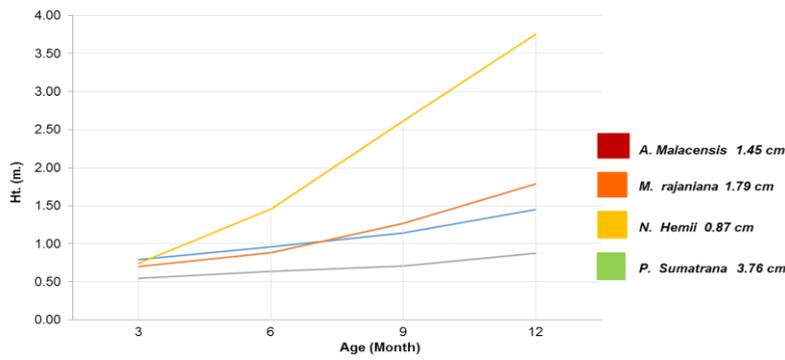


Figure 7: EETS Height growth of 2018 Takua Pa plot site during 1 year.

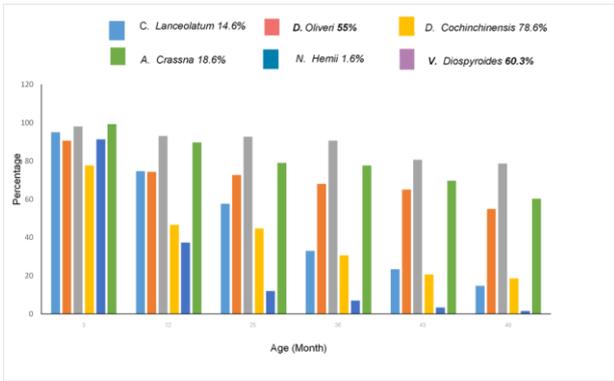


Figure 8: EETS Survival percentage of 2016 Mae Moh plot site during 4 years.

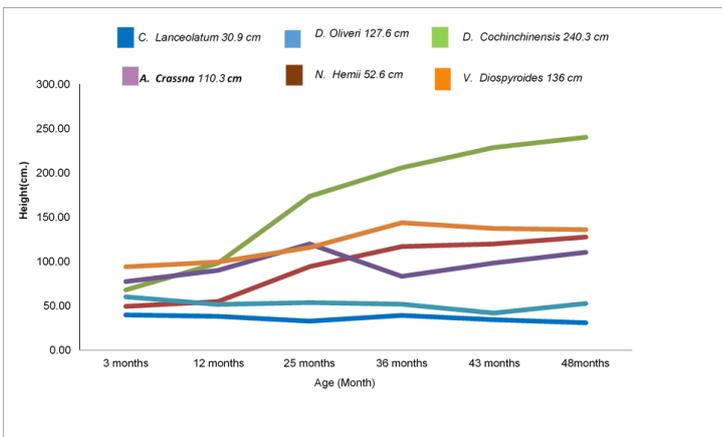


Figure 9: EETS Height growth of 2016 Mae Moh plot site during 4 years.

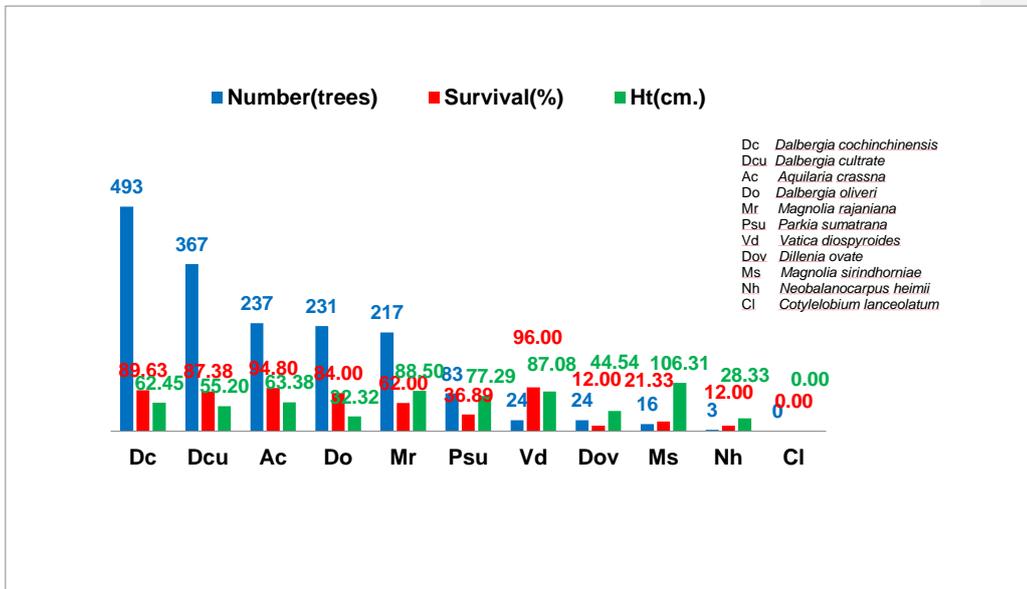


Figure 10: EETS tree number, Survival percentage and Height growth of 2018 Mae Moh plot site during 1 year.

- **Soil analysis**

Analysis of soil from 2 plot site, Mae Moh plot site 15 soil samples at 0-50 cm. depth and Takua Pa plot site soil samples at 3 layers depth., 0-15, 15-30 and >30 cm.

메모 포함[RS6]: Please describe the analysis. There is no analytical descriptions here.

Chemical Properties of 2018 Mae Moh plot site and 2018 Takua Pa plot site

	Mae Moh		Takuapa	
	50 cm.	0-15 cm.	15-30 cm.	> 30 cm.
	Average	Average	Average	Average
pH	7.59 (slightly alkaline)	5.21 (strongly acid)	5.92 (moderately acid)	5.90 (moderately acid)
OM (%)	6.20 (moderately low)	3.65 (low)	0.37 (very low)	0.19 (very low)
Avai.P (mg/kg)	2.15 (low)	211.90 (very high)	5.51 (low)	1.83 (very low)
Exch.K (mg/kg)	126.28 (high)	18.15 (very low)	3.74 (very low)	2.36 (very low)
Exch.Ca (mg/kg)	13,559 (high)	974.63 (very low)	127.05 (very low)	99.76 (very low)
Exch.Mg (mg/kg)	804 (low)	114.76 (very low)	65.24 (very low)	2.51 (very low)
Exch.Na (mg/kg)	63.43 (very low)	31.24 (medium)	21.70 (low)	18.94 (very low)
CEC (Cmol/kg)	18.87 (moderately high)	7.01 (moderately low)	1.88 (very low)	1.44 (very low)
BS (%)	405 (medium)	70.69 (medium)	64.08 (medium)	47.96 (medium)

## Annex 6. Project Steering Committee (Thailand) Meeting, Internal Workshop and National Workshop

- ***Project Steering Committee (Thailand) Meeting***

2 Project Steering Committee (Thailand) Meeting, 1<sup>st</sup> PSC on 5 February 2020 to discuss and prepare for the 7<sup>th</sup> and 8<sup>th</sup> PCM plus internal work shop and 2<sup>nd</sup> PSC Thailand on 3 August 2020 to discuss about budget and activity modification cause by COVID-19



Figure 1: PSC Thailand meeting on 5 February 2020



Figure 2: 2<sup>nd</sup> PSC Thailand on 3 August 2020

- **Domestic Workshop**

Domestic workshop on domestication plant species and diversity conservation in disturbed ecosystem (Tree planted in Mining area) to improve knowledge and relationship of project officials, on 6-7 February 2020 at Royal Forest Department and Field Trip to Siam Cement Group at Saraburi province.



Figure 3: Workshop on Domestication Plant Species and diversity conservation in Disturbed Ecosystem (Tree planted in Mining area) on 6 February 2020



Figure 4: Visiting Siam Cement Group (SCG) at Saraburi Province on 7 February

- **National Workshop**

To promote the project, National workshop was set a course at Phang Nga Forest Research Phang Nga province, Faculty of Forestry Kasetsart University on “How to do easily successful for mining restoration process”. during 14-16 December 2020. 24 Participants from 20 private mines which mining owner or responsible person on mining rehabilitation.



Figure 5: Participants on national workshop



Figure 6: Introduction of EETS Project by Project manager and Lecture on “How to do easily successful for mining restoration process” by Dr. Sakarn Teejantuk



Figure 7: Field Practice, planted trees



Figure 8: Plot site visit, 2016 and 2018 Takua Pa plot site



Figure 9: Question and Answer part  
by Mr. Phusit Bhormmanop, Director of Forest Research and Development Bureau  
and Mr. Sapol Boonsermsuk, Director of Forestry Foreign Affairs Office.



Figure 10: Certificate of the workshop course ceremony

## Annex 7. Impact of unexpected within year 2020 and solution

There was a storm and heavy rain at Takuapa plot site more than half a month for 2 months. And caused flooded in the row of *Aquilaria malaccensis* and *Magnolia rajaniana* Of 2018 plot site replication 1. And other cases such as disease insect attack and animal attack.



Figure 1: The sample trees in the row are dead or nearly die. Anyhow, it can be noticed that *Aquilaria malaccensis* resist to flooding better than *Magnolia rajaniana* under the same condition.



Figure 2: Root rot disease, digging soil to see the root of dead tree



Figure 3: Insect Attack, leaf of *N. hemii* and trunk of *V. diospyroides*



Figure 4: To investigate and find out how to solve the problem with specialist

Figure 5: *Dalbergia oliveri* shoot new leaf after eaten by Cow



Figure 6: Storm attack, Branch and shoot damaged from big tree fallen.

- **Solution the cases**

No.	Case	Resolved
1.	High mortality rate at Mae Moh plot site due to the dry season while flooding at Takuapa plot site.	Re-planting and intensive care
2.	Insect attack and Disease at Takua Pa plot site and Mae Moh plot site	- Chemical and Bio-chemical treatment - Insect specialist as new staff (Mrs. Napalai Samerjai)
3.	Animal (Cow) come to eat tree shoot	Negotiate with the farmer
4.	Tree fell down and branch or shoot broken from storm and big tree fell over	Wind break and supporter
5.	Enhance mortality and growth rate	Micro-climate study, soil and nutrition study
6.	Biodiversity information	Compare biodiversity among and after the project

## Annex 8. Record of Discussions on the 7th PCM



### Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand

(AFoCO/010/2016)

#### 7 th Project Coordination Meeting

29 th June 2020, teleconference using Google Meet Application

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#### Record of Discussion

(Adopted)

##### Introduction

1. The 7 th Project Coordination Meeting (PCM or the Meeting) for the regional project “Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand” (AFoCO/010/2016) (the Project) was held on 29th June 2020 through teleconference using Google Meet Application due to global Coronavirus (COVID-19) pandemic and Malaysia’s National Movement Restriction Order. The main objectives of this Meeting were to review the progress of project implementation in 2020 and to conduct a technical discussion for smooth implementation of the Project in accordance to Work and Budget Plan of 2020 (WBP of 2020). The Meeting was attended by the officials responsible for the implementation of the Project from Malaysia, Thailand and Asian Forest Cooperation Organization Secretariat (AFoCO Secretariat). The list of participants is attached in ANNEX 1.

##### Opening session

2. Mr. Jirasak Chukwamdee, the Deputy Director General of Royal Forest Department (RFD), Thailand, gave an opening remark as the host country and Project Director of Thailand side. In his opening remarks, he warmly welcomed all delegates to the Meeting. He expressed appreciation to the Republic of Korea (ROK) for the support, as well as to Malaysia for the collaboration. He looked forward to the successful implementation of the Project. His opening remark is attached in **ANNEX 2**.

##### Agenda 1: Election of Chair

3. Mr. Suchat Kalyawongsa, Director of Forestry Research and Development Bureau, Royal Forest Department, was unanimously elected as the Chairman of the Meeting.

##### Agenda 2: Adoption of Agenda

4. The Meeting considered and adopted its agenda, which is attached in **ANNEX 3**.

### **Agenda 3: Review on the Progress of Implementation of the Project**

5. Mr. Sapol Boonsermsuk, Director of Forestry Foreign Affair Office, Royal Forest Department, Thailand, presented the progress of project implementation. His presentation covered the wide range of project implementation in Mae Moh Project Site and Takua Pa Project Site including planted species, GIS mapping, maintenance of project sites, growth rate, soil analysis etc. He concluded his presentation by highlighting some challenges, particularly the high mortality rate at Mae Moh Project Site because of the extremely dry condition and insect attack at Takua Pa Project Site. He also mentioned about the difficulties on the domestication of moisture-loving plants in degraded land areas which are usually degraded and dehydrated.

6. The presentation by Thailand is attached in **ANNEX 4**.

7. Dr. Ang Lai Hoe, the National Project Coordinator of Malaysia, presented the progress of the project implementation in Malaysia between June 2019 – June 2020. He highlighted the achievement of project implementation by each activity. He also informed the Meeting on the regeneration study under the Activity A1 (GPS Map) in which the inventory must be done in 2020. The survival and growth rates were also reported during the Meeting. The project site maintenance was regularly implemented in accordance with the WBP. He concluded the presentation with the Project must be properly and closely monitored to ensure that quantity of Red List Species must not be less than the committed number of more than 6 plant species and more than 3000 stems covering at least 6 ha. The refills should be enlarged to include other Red List Species.

8. The presentation by Malaysia is attached in **ANNEX 5**.

### **Agenda 4: Technical Discussion**

9. Refills must be carried out to replace the numbers of mortality for each species grown on the project sites. Damages which leading to the death of the trees are mainly due to wildlife and insect attacks, and some trees are destroyed by fallen of nurse trees during wet seasons. The quantity and quality of the stand are ensured at the completion of the Project if the present proper monitoring system which is based on micro-management of each tree grown at the site is to be sustainably practiced.

10. Refilling of damaged or dead plants for Malaysia is included as part of the planting contract. All dead plants must be refilled before in the next survival enumeration. Meanwhile, the planting and refilling for Thailand are separate activities (separate contracts).

11. The Meeting also considered income generation for local people (non-timber forest product (NTFP) collection, labor, etc.). For Malaysia, community participation in this Project is only limited in employing the local aborigines as the laborers, but there are no agricultural produces like banana and fruits from the Project. FRIM is a government research agency, and accessibility of the public is limited. Malaysia will try to promote agroforestry for the local community that are living near to forest buffer zone and for those who are depending on the forest for their livelihood in the next Project. While Thailand allowed local people to pick banana or other NTFP and also the possibility to hire the local people to work for the Project.

12. Thailand will further consider the regeneration activities by internal consultation. In addition, Thailand had collected ground positioning information of existing trees and planted trees.

13. The progress of each activity is based on the percentage of its physical achievement; it was calculated based on the physical implementation of each activity for Malaysia and Thailand.

#### **Agenda 5: Review on the Work and Budget Plan for the Year 2020**

14. Ms. Phuangphan Whuangplong, Forestry Technical Officer, Senior Professional Level, National Project Coordinator of Thailand, presented the WBP of 2020 for Thailand. She proposed to discuss on Activity B Regional Workshop and Activity D.6 PCC meeting due to the COVID-19 pandemic. Malaysia suggested allocating the budget for planting activity. The AFoCO Secretariat recommended to consider alternative activities to utilize such fund in relation to the project objectives and outputs to avoid delay or extension of the project period. Malaysia further commented that other activities such as Activity C Technology Transfer and Capacity Development, which is also affected by the COVID-19 pandemic should be replaced by alternative activities.

15. The Meeting recommended postponing the Activity B Regional Workshop of Thailand until the year 2021 and Activity D.6 PCC meeting will be conducted through teleconference. In order to complete all project activities and outputs within the project implementation period, the Meeting will further consider alternatives to activities that cannot be implemented due to COVID-19 pandemic.

16. The AFoCO Secretariat informed the Meeting the need to refer to the targeted activities and outputs, as stated in the Memorandum of Agreement (MOA).

17. Considering the accumulated delays in the procurement of microclimate station, AFoCO Secretariat reminded Malaysia on the need to procure the said equipment within the year 2020.

18. The Meeting agreed to update their WBP, including the utilization of remaining or surplus budget and to share the information. The AFoCO Secretariat will share procurement guidelines for reference and guidance.

19. Dr. Ang Lai Hoe, the National Project Coordinator of Malaysia, presented the WBP of 2020 of Malaysia. Malaysia has proposed to reallocate the remaining budget from 2019 for planting 1 ha of new plot in 2020, and one more year tending for the plot established in 2019 which will be ended in April 2021. The AFoCO Secretariat requested Malaysia to submit an official letter for the proposed relocation for approval. The WBP of 2020 of Malaysia is attached as **ANNEX 6**.

#### **Agenda 6: Other Matters**

20. The Korea Forest Service (KFS) had requested though AFoCO Secretariat to include KFS logo in the Project documents since KFS is providing a financial contribution to the Project. The Meeting had discussed and agreed as requested.

21. The draft reports of financial audit 2018 – 2019 are currently being reviewed by Malaysia and Thailand accordingly. Agenda 7: Adoption of the Record of Discussion of the Meeting.

22. The Meeting considered and adopted the Record of Discussion of the 7 th Project Coordination Meeting by e-mail circulation.

### **Closing Session**

23. Mr. Suchat Kalyawongsa, as the Chairperson of the Meeting, thanked the Forest Research Institute Malaysia (FRIM) and the AFoCO Secretariat for the effort and cooperation. The delegates thanked the Royal Forest Department for hosting the Meeting and excellent arrangement. The Meeting was held in the traditional spirit of AFoCO and cordiality.

29th June 2020, teleconference using Google Meet Application

Bangkok, Thailand

Kepong, Selangor, Malaysia

Seoul, Republic of Korea

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## Annex 9. Record of Discussions on the 8th PCM



### **Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand**

**(AFoCo/010/2016)**

#### **8<sup>th</sup> Project Coordination Meeting**

January 8 and 14, 2021, Teleconference using Zoom Meet Application

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#### **Record of Discussion**

**(Adopted)**

#### **Introduction**

1. The 8<sup>th</sup> Project Coordination Meeting (PCM) (hereinafter, the Meeting) for the regional project “Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystem in Malaysia and Thailand” (AFoCo/010/2016) (hereinafter, the Project) was held on 8<sup>th</sup> January 2021 through Teleconference using Zoom Application due to national Movement Restriction Order to prevent the infection of Coronavirus (COVID-19) pandemic. The main objectives of this Meeting were to review the progress of project implementation in 2020 and to discuss and exchange lessons learned from the project implementation as well as consider the Project’s Work and Budget Plan (WBP) of 2021. The Meeting was attended by the officials responsible for implementation of the Project from Malaysia, Thailand and Asian Forest Cooperation Organization Secretariat (AFoCO Secretariat). The list of participants is attached in **ANNEX 1**.

#### **Opening session**

2. Mr.Sapol Boonsermsuk, Director of Forestry Foreign Affairs Office, Royal Forest Department, Thailand gave an opening remark as the host of the Meeting. In his opening remarks, he warmly welcomed all delegates to the Meeting. He expressed appreciation to the Republic of Korea (ROK) for the support, as well as to Malaysia for the collaboration. He looked forward to the successful implementation of the Project. His opening remark is attached in **ANNEX 2**.

#### **Agenda 1: Election of Chair**

3. Mr.Sapol Boonsermsuk, Director of Forestry Foreign Affairs Office, Royal Forest Department was unanimously elected as the Chairman of the Meeting.

#### **Agenda 2: Adoption of Agenda**

4. The Meeting considered and adopted its agenda, which is attached in ANNEX 3.

#### **Agenda 3: Review on the Progress of Implementation of the Project**

5. Mr. Sapol Boonsermsuk, Director of Forestry Foreign Affairs Offices, Royal Forest Department, Thailand presented the progress of project implementation. His presentation covered a wide range of project implementation concerns and achievements since the beginning of the project from 2016 up to present in Mae Moh Project Site and Takua Pa Project Site. These include plantation development, GIS mapping, maintenance of project sites, growth rate, soil analysis etc. He concluded his presentation by highlighting some challenges such as species tolerance in different climate zones, unexpected circumstances (flooded, wind, pest disease), high mortality rate, farm animal issues, biodiversity etc. The presentation of Thailand is attached in ANNEX 4.

6. Dr. Ang Lai Hoe, National Project Coordinator of Malaysia presented the progress of the project implementation in Malaysia between June – December 2020 after the 7<sup>th</sup> PCM. He started his presentation with the financial report of Malaysia. He also stressed on the importance of financial usage and management issues that need to be further discussed among the PCM members due to several circumstances including COVID-19 pandemic. The project updates cover the establishment of an additional 1 ha of the project area, regeneration study, GPS mapping and site maintenance, including general physical performances and survival and growth rates. He recommended that all relative information including GPS location and growth information of each individual tree being regularly recorded. Likewise, the research paper from this project must also be published as one of the knowledge transfer channels. Malaysia will continue to update the progress of project implementation in the 9<sup>th</sup> PCM. The presentation of Malaysia is attached in ANNEX 5.

#### **Agenda 4: Technical Discussion**

7. Thailand proposed for a discussion on the flood issue in Takua Pa Project Site. This flood situation is an occasional event due to continuous rain and location of project site on low land with lack of drainage. Dr. Ang Lai Hoe recommended the construction of canals to connect planting rows in order to allow water flow as well as to reduce flooding in other rows. If Thailand decides to replant the entire row, Dr Ang suggested Thailand to consider filling up the row or shifting it to a higher area.

8. Some of the challenges in the project implementation include those activities that were postponed due to the COVID-19 pandemic, i.e. wild animal issues (e.g., wild boars) and absence of contractor appointed for plot maintenance in Malaysia. Dr Ang informed the Meeting of the

difficulty in finding reliable contractors for the implementation of the Project due to national administration protocols. In this regard, the Meeting requested Secretariat to issue an official reminder/follow-up letter to FRIM to facilitate the procurement of the microclimate stations.

9. Malaysia and Thailand had a similar situation on of damages by wildlife and encroachment of farm animals to the project sites (wild boar and monkey in Malaysia, cow in Thailand). In this regard, the Meeting shared a common view that the issue may be regarded as a perennial concern that can affect the sustainability of the project vis-à-vis threatening the survival rate of seedlings. In this regard, the Meeting decided to further discuss the matter at the next PCM to arrive at measures to ensure project sustainability.

#### **Agenda 5: Review on the Work and Budget Plan for Year 2020**

10. Ms. Phuangphan Whuangplong, Forestry Technical Officer, Senior Professional Level, National Project Coordinator of Thailand presented Thailand's financial report for 2020. In summary, the budget of \$222,302.13 was approved at the beginning of the Project. At the end of 2020, Thailand had spent \$124,680.85, while remaining \$97,621.28 is the committed budget. The balance sheet of Thailand's project budget is attached in **ANNEX 6**.

11. The Meeting took note that Malaysia had presented its Work and Budget Plan for 2020 by integrating with the progress project implementation in Agenda 3.

12. The Meeting had decided to suspend the Meeting due to the time limitation on 8<sup>th</sup> January 2021 at 4.30 pm (GMT +7). The Meeting had resumed on 14<sup>th</sup> January 2021 via Teleconference using Zoom Meet Application

#### **Agenda 6: Work and Budget Plan for Year 2021**

13. Ms. Phuangphan Whuangplong presented the Work and Budget Plan for 2021 of Thailand as attached in **ANNEX 7**. She also proposed the re-allocation of available budget which consisted of un-used budget/savings for those activities had accomplished their targets and indicators and remaining/carried-over budget for those activities that carry over to implement in 2021.

14. Dr. Ang Lai Hoe presented the Work and Budget Plan for 2021 of Malaysia as well as the progress of activities as informing some difficulties to finalize the Work and Budget Plan for 2021 due to the uncertainties of the of COVID-19 pandemic situation His presentation is attached in **ANNEX 8**.

15. AFoCO Secretariat provided recommendations on budget reallocation among activities in line with the decision of the 4<sup>th</sup> PCM stipulated in Paragraph 15, particularly for remaining budget from activities that could not be implemented due to the COVID-19 pandemic. Regarding the said allocation work, the Secretariat further requested the Meeting to consider that the budget allocation of an activity to another would be worthy only after the activity meets its physical target.

16. AFoCO Secretariat requested the implementing countries to submit the WBP of 2021 and a tentative WBP of 2022 to ensure that the overall budget is sufficient to implement the Project until the completion date. The Meeting agreed to provide the said information while updating on the Progress Logs.

17. The Meeting discussed on challenging issues and coping up measures under COVID-19 situations as follows:

17.1 The Meeting shared the idea of Regional Workshop activity with regards to the COVID-19 pandemic and regulations all the member countries of AFoCO and ASEAN countries. The Meeting considered to organize the Regional Workshop as a side event at the World Forestry Congress 2022 in the ROK in order to benefit more participants through knowledge and technology transfer of the Project and agreed to further discuss this activity at its next PCM.

17.2 The Meeting discussed on knowledge transfer activities which was affected by the COVID-19 pandemic. The Meeting considered the suitability of the ROK, Malaysia or Thailand to host the activities. The Meeting agreed for Malaysia to organize such knowledge transfer activities in an appropriate venue among implementing countries and the ROK subject to the lifting of COVID-19 travel restrictions.

18. The Meeting discussed the financial audit arrangements. With reference to the previous decision of PCM, the PCM agreed that Malaysia and Thailand alternatively conduct the financial audit of the Project at 2 years interval: 2016-2017 by Malaysia, 2018-2019 by Thailand, and 2020-April 2022 by Malaysia. Considering the instructions in AFoCO Project Manual about final financial audit report which should cover the whole project period, the Meeting requested the Secretariat to further consult with the donor agency. Accordingly, the Secretariat committed to follow it up until the next PCM.

19. The Meeting discussed the observed delay in the implementation of some activities and corresponding ways to achieve planned targets until the end of the Project. The Meeting shared a common understanding on the importance of indicators of each activity to assess and guide its completion, in accordance with the Project Document under the Memorandum of Agreement (MOA).

20. The Meeting considered and approved the Work and Budget Plan for 2021 of Malaysia and Thailand. Regarding the utilization/reallocation of prospective savings which may be created by conducting alternative activities of COVID-19, the Meeting decided to continue discussion for the said at the next PCM.

21. As requested by the Secretariat, Malaysia and Thailand will submit information to the Secretariat as to how respective project management will address the above-cited project implementation issues including timelines. Upon submission, said information will form part of the Records of Discussion of the subject PCM and will serve as basis in project monitoring at all levels.

#### **Agenda 7: Report on Project Monitoring and Endorsement of the Project Progress Logs**

21. AFoCO Secretariat reported on the Project Progress Logs (a.k.a multi-year physical and financial performance matrix) as a follow-up action discussed at the 7<sup>th</sup> PCM, in order to help the implementing countries to track their project progress both financially and physically. The Secretariat further shared the main utilization of the said logs as sharing the Report on the Monitoring and Analysis in 2020 as attached in **Annex 9**.

22. The Meeting also noted that the management under this Project is supervised through PCM which may be different from the Project Implementation Regulation guide by the AFoCO Assembly as this project was approved before the establishment of AFoCO. This is in addition to the notification on the transition of the management of the on-going projects implemented under the ASEAN-ROK Forest Cooperation to Asian Forest Cooperation Organization Secretariat (The AFoCO Secretariat letter dated 18 January 2019 REF.NO.: SO-14). In this regard, the Meeting took note that the said information to also serve as basis in the conduct of end-of-project evaluation.

23. The Meeting finally endorsed the Project Progress Logs to use it until the end of the Project as a main project record-keeping document. The Meeting further agreed to attach the Logs after including to-date records, in consultation with the Secretariat. Accordingly, Thailand and Malaysia had updated the matrix as attached in **Annex 10**.

#### **Agenda 8: Adoption of the Record of Discussion of the Meeting**

24. The Meeting agreed that the 9<sup>th</sup> PCM will be hosted by Malaysia in June 2021. The date of the meeting will be decided in due course.

25. The Meeting considered and adopted the Record of Discussion of the 8<sup>th</sup> Project Coordination Meeting by e-mail circulation.

#### **Closing Session**

26. Mr.Sapol Boonsermsuk, as the Chairperson of the Meeting, thanked the Forest Research Institute Malaysia (FRIM) and the AFoCO Secretariat for the effort and cooperation in this Project. The delegates thanked Royal Forest Department for hosting the meeting and excellent arrangement. The Meeting was held in the traditional spirit of AFoCO and cordiality.

8<sup>th</sup>, 14<sup>th</sup> January 2021, Teleconference using Zoom Application.

Bangkok, Thailand

Selangor, Malaysia

Seoul, Republic of Korea