



Monitoring Report

Project Profile	
Project Code	AFoCO/023/2021
Project Title	Innovative Solutions for Climate Change and Biodiversity Landscape Strategy to Support SDGs in Indonesia
Project Duration	Start date: 1 July 2021 End date: 31 December 2024 (no-cost extension granted)
Implementing Agency	Center for Standardization of Sustainable Forest Management Instruments, Agency for Standardization of Environment and Forestry Instruments, Ministry of Environmental and Forestry <i>(Prior to internal organizational restructuring: Forest Research and Development Center (FRDC), Ministry of Environmental and Forestry)</i>
Participating Countries	Indonesia
Project Site	<ol style="list-style-type: none"> 1. Mangrove ecosystem of Ampang Plampang Forest Management Unit, Sumbawa Regency, West Nusa Tenggara Province (15 ha demonstration plot, PSPs) 2. Karst and lowland ecosystem of Bulusarang Forest Management Unit, Maros Regency, South Sulawesi province (15 ha demonstration plot, PSPs) 3.1 Tropical peatland forest of Kepau Jaya Forest Area with Specific Purpose (FWSP), Kampar Regency, Riau Province (10 ha demonstration plot) 3.2 Sampling plots in Minas Tahura FMU, Siak Regency, Riau Province (PSPs) <p><small>*PSP – Permanent Sampling Plots</small></p>
Main Objective	<ol style="list-style-type: none"> 1. Establish baseline information by mapping the existing biophysical (spatial temporal), socio-economic condition (before and after the project), and potency of natural resources in the three study sites in the beginning of the project. 2. Facilitate the preparation of long-term forest management plans* for the Forest Management Units (FMUs) at three study sites. 3. Develop demonstration plots of at least 10 ha in each study site for carbon stock enhancement in FMUs or Forest Area with Specific Purpose (KHDTK) areas. 4. Transfer techniques and raise awareness of project model establishment to relevant stakeholders through the synthesis of knowledge and experiences, recommendations on policy practices, and dissemination of project outputs. <p><small>*Originally stated as 'business plans' in the Project Document, but due to regulation changes resulting in FMUs being unable to conduct revenue-generating activities, the project developed long-term forest management plans for each FMU</small></p>
Budget and Source of Finance	Total: US\$ 800,000 <ul style="list-style-type: none"> • AFoCO: US\$ 700,000 • National: US\$ 100,000

Overview of Monitoring Trip	
Monitoring Period	27 May 2024 – 31 May 2024
Monitoring Site	Demonstration plot of mangrove forest restoration and silvofishery managed by Amplang Plampang Forest Management Unit (FMU), Plampang Sub-district, Sumbawa Regency, West Nusa Tenggara Province
Monitoring Check Points	<ul style="list-style-type: none"> • 10 ha demonstration plot of mangrove forest restoration • 3 ha additional demonstration plot of mangrove forest restoration • Status of silvofishery livelihood development activities in the project site • Status of the Permanent Sampling Plots (PSP) establishment in Sumbawa and Siak Regencies
Summary of Monitoring Outcomes	
<p>Based on the results of the monitoring that has been carried out, several things can be concluded, namely:</p> <ol style="list-style-type: none"> 1. At the mangrove demonstration plot in Sumbawa Regency, West Nusa Tenggara, the original 10-ha demonstration plot established in 2022 shows promising seedling growth, both from planted and naturally regenerated species. Observations and discussions indicate evidence of ecosystem succession in parts of the plot, highlighted by the presence of naturally growing <i>Avicennia alba</i>, which usually grows on mudflats that are regularly inundated by seawater. However, future maintenance should be planned to carefully control the regeneration density of existing species within the demonstration plots, as the growth rate of these pioneer species may overwhelm the planted seedlings due to their strong environmental adaptability. 2. In the same FMU mangrove area in Sumbawa Regency, the additional 5-ha mangrove demonstration plot has not seen much progress due to unforeseen circumstances. However, the IA has succeeded in finding a new location and established a new Forest Farmers Group (FFG) for the planting and maintenance activities. The planting in the new site is expected to be conducted in June 2024. The same FFG is managing the silvofishery demonstration plots which consists of three (3) mud crab enclosures in an existing mangrove forest. 3. Out of the additional 5-ha karst demonstration plot planned for establishment in Maros Regency, South Sulawesi Province, only 3 ha (1908 seedlings) have been planted. The planting of the remaining 2 ha will take place by July 2024. 4. The establishment of PSPs using project savings is still undergoing for the two project sites located in Sumbawa Regency (West Nusa Tenggara) for mangrove site and Maros Regency (South Sulawesi) for karst site and expected to be completed in August 2024. 5. The project has achieved a significant milestone in enhancing forest governance by pioneering the development of three (3) long-term forest management plans incorporating climate adaptation and mitigation strategies for the participating FMUs in Riau, Sulawesi, and West Nusa Tenggara Provinces. These plans are aligned with Indonesia's FOLU Net Sink 2030 policy actions, and are the first of its kind to be initiated in Indonesia. 6. The activities planned in Q3 and Q4 of 2024 include the finalization of forest area management plan documents for the participating FMUs, planting on the remaining areas of the expanded demonstration plots in South Sulawesi and West Nusa Tenggara Provinces, completion of 	

project impact assessments based on end-line data, conduct of dissemination workshops, and preparation of the final project report.

ACRONYMS

AFoCO	Asian Forest Cooperation Organization
BRIN	National Research and Innovation Agency (<i>Badan Riset dan Inovasi Nasional</i>)
CSSFMI	Center for Standardization of Sustainable Forestry Instruments
CAEFSI	Center for the Application of Environmental and Forestry Standards Instruments
FFG	Forest Farmer Group
FMU	Forest Management Unit
FWSP	Forest With Specific Purposes
IA	Implementing Agency
MAP	Months after planting
MPTS	Multi-purpose Tree Species
PMT	Project Management Team (under the IA)
SJB	Long-term Rehabilitation Strategy (or <i>Strategi Jangka Benah</i>)

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1. INTRODUCTION

AFoCO's project on "*Innovative Solutions for Climate Change and Biodiversity Landscape Strategy to Support SDGs in Indonesia* [AFoCO/023/2021]" is being implemented to introduce innovative solutions on sustainable management practices and enhance the capacities of Forest Management Units (FMUs) and local communities on contributing to Indonesia's emissions reduction targets and also to improve biodiversity landscapes to support the achievement of the Sustainable Development Goals (SDGs), in particular SDGs 1, 8, 13 and 15. The 10-ha demonstration plots established in the three (3) sites support the project's main objective of implementing solutions to reduce carbon emissions while helping improve farmers' livelihood through empowerment in agroforestry schemes.

The Center for Standardization of Sustainable Forestry Instruments (CSSFMI) of the Agency of Standardization of Environment and Forestry Instruments under the Ministry of Environment and Forestry of Indonesia is the Implementing Agency (IA). The project was incepted on 24 June 2021 and project implementation commenced from 1 July 2021. The Annual Project Progress report for FY2023 has been submitted in January 2024.

The 1st project monitoring visit carried out in 12-15 June, 2023, to two (2) project sites in Riau (peatland site) and South Sulawesi Provinces (karst site) successfully assessed the project implementation progress, and provided recommendations and suggestions for the effective implementation of the remaining project activities. The following actions were undertaken based on the AFoCO monitoring team's recommendations:

- To optimize the project impacts, the IA's requests to utilize project savings resulted in the planning and implementation for the expansion of mangrove and karst demonstration plots 5 ha respectively; the development of permanent sample plots (PSP) in the three (3) project sites; and the release of a semi-popular book on the project achievements. (*Ref. No. PM-403 / S.605/PUSTARHUT/PSIPLK/KLN.0/9/2023*)
- The IA and the AFoCO Secretariat agreed on a no-cost extension for the project to accomplish activities that were affected by the COVID-19 pandemic. The 6-month extension of the project resulted in completion date of the project to be adjusted to 31 December 2024. (*Ref. No. PP1-ODA-487/ S.833/PUSTARHUT/PSIPLK/KLN.0/11/2023, PP1-ODA-489*)

The overall objective of the 2nd project monitoring visit was to check the implementation progress of the third demonstration plot in Sumbawa Regency, West Nusa Tenggara Province, and obtain progress updates from July 2023 to May 2024.

This monitoring report provides a detailed and comprehensive view of the current implementation progress, necessary way forwards, and recommendations for the rest of the project period.

2. MONITORING SCOPE & METHODOLOGY

The monitoring trip included on-site visits to one (1) out of three (3) project sites in Sumbawa Regency, West Nusa Tenggara Province (Appendix 3). The monitoring of the PSPs was replaced with a desk review of activity reports and interviews with the IA due to the time constraints during the monitoring trip. The key findings are detailed in Section 3. The overall objectives of the monitoring trip are as follows:

- Monitor the project progress in the original (10 ha) and additional (5 ha) mangrove demonstration plots in Sumbawa Regency, West Nusa Tenggara Province
- Discuss the project closure process with the IA
- Discuss any other project-related matters

The participants of the monitoring trip are as follows:

Monitoring Team from AFoCO:

	Name	Affiliation
1	Pham Duc Chien	Director, Project & Program Division
2	Lee Seonghan	Team Leader, ODA Project Team, Project & Program Division
3	Emily Marie Lim	Program Officer, Strategic Planning Team, Planning & Operations Division
4	Eko Sutrisno	Fellowship Official, Strategic Planning

IA Project Management Team from Indonesia:

	Name	Affiliation
1	Ayun Windyoningrum	Project Manager/Coordinator, Senior Policy Analyst, CSSFMI, Agency for Standardization of Environment and Forestry Instruments
2	Husnul Khotimah	Project Staff, Researcher of National Research and Innovation Agency
3	Siti Nurjanah	Project Accountant, freelancer
4	Muhammad Hilman Aulia	Project Officer, freelancer

The monitoring team focused on the progress of the following project activities of AFoCO/023/2021:

Activity No.	Activity	Performance Indicator	Monitoring Method	
			Quantitative	Qualitative
Objective 1	To establish baseline information by mapping the existing biophysical (spatial temporal), socio-economic condition (before and after the project), and potency of natural resources in the three study sites in the beginning of the project			
Output 3	Prospective commodities that have good market opportunities identified in Amplang Plampang FMU site			
A.3.1	Investigate and conduct value chain analysis and market analysis of potential commodities	One (1) report on the value chain and potential market of prospective commodities		○
Objective 2	To facilitate business plans of the FMUs at three study sites			
Output 5	Developed business plans* for the FMU <i>*Due to a change in government regulations that prohibit FMU's from engaging in profit-generating activities, the development of business plans (as stated in the Project Document) were replaced by the development of long-term forest management plans in line with the Indonesia government's FOLU 2030 action plans</i>			
A.5.1	Workshop on developing scenario of business	One (1) viable business plan for project site		○
Objective 3	To develop demonstration plots for carbon stock enhancement in FMUs or Forest Area with Specific Purpose (KHDTK) areas 10 ha each site			
Output 7	Demonstration plots established (at least 10ha)			
A.7.1	Establishing demonstration plots in forest area of Amplang Plampang FMU	10 ha demonstration plot established + 5 ha expansion site		○
	Establishing demonstration plots in forest area of Bulusarang FMU	5 ha expansion site		Verification of photo records
Output 8	Demonstration plot at each project site is well maintained and monitored at the interval of 6 months after planting			
A.8.1	Maintenance growth monitoring of the demonstration plots	One (1) report on the growth of the demonstration plot and temporary nursery		○

3. IMPLEMENTATION STATUS OF PROJECT ACTIVITIES

The following table describes the implementation status of project activities based on the document review. Detailed progress updates will be provided by the IA together with the mid-year report of 2024.

The list of Activity Reports drafted by the 18 National Experts for activities 1.4, 1.5, 2.1, 3.1, 6.1 and 7.1 are in Appendix 2 (List of References).

Table 1. The progress project updates per activities

Activity no.	Activity description	Planned	Status (as of May 2024)	Observation and further checkpoints, if any, based on the document review
<i>Objective 1 To establish baseline information by mapping the existing biophysical (spatial-temporal), socio-economic condition (before and after the project), and potency of natural resources in the three study sites in the beginning of the project</i>				
<i>Output 1: Map of existing biophysical condition and baseline data of biophysical condition of three project sites (Riau, South Sulawesi, and West Nusa Tenggara) produced through GIS mapping and analysis by first semester of Year 2</i>				
1.1	Inception meeting (Meeting between IA, PSC and AFoCO secretariat)	<i>Q4 2021</i>	<i>Completed</i>	-
1.2	Kick-off meeting (Meeting between IA, PSC and relevant stakeholders)	<i>Q4 2021</i>	<i>Completed</i>	-
1.3	Stakeholders meeting (Meeting between IA and site coordinator)	<i>Q4 2021</i>	<i>Completed</i>	-
1.4	Collect and analyze data and information for scoping and spatial analysis	<i>Q1, Q2 2022</i>	<i>Completed</i>	-
1.5	Collect and analyze baseline data and information on carbon stock, emission, biodiversity; and identification of potential commodities in three sites (Riau, South Sulawesi, West Nusa Tenggara)	<i>Baseline: Q1, Q2 2022</i> <i>Endline: Q1, Q2, Q3 2024</i>	<i>Baseline assessment completed in 3 sites (3/3);</i> <i>Endline assessment incomplete (1/3)</i>	The Endline carbon stock analysis for Kepau Jaya FWSP in Riau has been conducted in May 2024. Analyses for sites in South Sulawesi and West Nusa Tenggara are planned in Q3 2024.
<i>Output 2: Current status and baseline data of socio-economics condition of three project sites (Riau, South Sulawesi, West Nusa Tenggara) made available by first semester of Year 2</i>				
2.1	Survey and assess data and information on Socio-economic (livelihood, economic	<i>Baseline: Q1, Q2 2022</i>	<i>Baseline assessment</i>	The endline socio-economic analysis has been completed in South Sulawesi and West Nusa Tenggara.

Activity no.	Activity description	Planned	Status (as of May 2024)	Observation and further checkpoints, if any, based on the document review
	assessment, market analysis) at the beginning and end of the project	<i>Endline: Q1, Q2, Q3 2024</i>	<i>completed in 3 sites (3/3); Endline assessment incomplete (2/3)</i>	The analysis in Kepau Jaya FWSP in Riau Province is planned in June 2024.
Output 3. Prospective Commodities that have good market opportunities identified in three study sites by semester1 Y2				
3.1	Investigate and conduct value chain analysis and market analysis of potential commodities	<i>Q1, Q2 2022</i>	<i>Completed</i>	Original report submitted
Objective 2: To facilitate business plans of the FMUs at three study sites				
Output 4: Strengthened capacity of FMUs and community in business plans development at three project sites				
4.1	Conduct capacity building on GIS and Remote sensing analysis for FMU Officers at three project sites	<i>Q4 2022</i>	<i>Completed 3 trainings</i>	Original report submitted
4.2	Conduct capacity building on accounting of carbon stocks and emissions reduction, for FMU officers in the three project sites	<i>Q3 2022 Q1, Q2 2023</i>	<i>Completed 3 trainings</i>	This activity has been updated in the annual report of 2023
4.3	Conduct Capacity building/training on initiating and promoting eco-tourism for FMU personnel at the three project sites	<i>Q1, Q2 2023</i>	<i>Completed 3 trainings</i>	
4.4	Conduct Capacity building on startup business (including upgrade products or services through value addition) and online business for FMU personnel at the three project sites	<i>Q1, Q2 2023</i>	<i>Completed 3 trainings</i>	
Output 5: Developed Business Plans of the FMUs in three study sites				
5.1	Workshop on developing scenario of Long-term Forest Management Plans (forest-based ecotourism, etc., based on site resources potential and market opportunities) for the three project sites	<i>Q3, Q4 2023 Q1, Q2 2024</i>	<i>Completed</i>	18 out of the 18 trainings planned for the project have been implemented. The IA intends to implement the remaining training activities by the end (Q4) of 2023. The finalized Long-term Forest Management Plans are approved by the Head office of Forestry Service Province and the MoEF
5.2	Share learning and policy dialogue (workshop & FGD) in the district and provincial level on the developed Business Plan of the FMUs	<i>Q3, Q4 2023 Q1, Q2, Q3 2024</i>	<i>3 Final Workshops to be conducted in Q3, Q4 2024</i>	15 out of the 18 trainings planned for the project have been implemented. The IA intends to implement the remaining workshop/FGD activities in the three provinces from September-October 2024.
Objective 3. To develop demonstration plots for carbon stock enhancement in FMUs or Forest Area with Specific Purpose (KHDTK) areas 10 ha each site in Q4 of Y1				

Activity no.	Activity description	Planned	Status (as of May 2024)	Observation and further checkpoints, if any, based on the document review
<i>Output 6. Three sites for demonstration plot establishment appropriately located and technically designed</i>				
6.1	Participatory rural appraisal (PRA) on demonstration plot site matching	Q4 2021 Q1, Q2 2022	Completed	Original report submitted
<i>Output 7: Demonstration plots in 3 types of area established in three sites at least 10 ha each site</i>				
7.1	Establishing demonstration plots	Q4 2021 Q1, Q2, Q3 2022	Completed	Based on the project plan for a no-cost extension of project time to December 2024, it is allowed to expand the demonstration plot. The location will be conducted in West Nusa Tenggara and South Sulawesi sites which are of each location can be expanded to an area of 5 ha.
<i>Output 8. Demonstration plot at each project site is well maintained and monitored at the interval of 6 months after planting</i>				
8.1	Maintenance growth monitoring of the demonstration plots	Q1, Q2, Q4 2022 Q2, Q4 2023 Q2 2024	Ongoing	The maintenance was being conducted by the forest farmers groups under the control of sites counterpart. Furthermore, the Secretariat has been updated by the national experts on the survival rate and the performance of the planted species in the demonstration plot.
Objective 4: To transfer techniques and awareness of project model establishment to relevant stakeholders through Synthesis, policy practice recommendations, and disseminations				
<i>Output 9. Technique and awareness of project model transferred to project stakeholders through workshops, policy briefs and publication</i>				
9.1	Organize workshop for the midterm and end project results	Q4 2022 Q4 2023		This activity will be updated in the mid-year report of 2024
9.2	Publication and dissemination (workshop, seminar, conference, publications)	Q4 2023	Ongoing	
9.3	Review, Monitoring, Evaluation: mid-term, annual review, and reporting substance and financial	Q1, Q3 2022 Q1, Q3 2023 Q1 2024	Ongoing	
9.4	Monitoring and Evaluation of each output	Q1, Q3 2022 Q1, Q3 2023 Q1 2024	Ongoing	
9.5	Staff Resources (Allowance or honorarium of project personnel)	Q3, Q4 2021 Q1Q2Q3Q4 2022 Q1Q2Q3Q4 2023 Q1, Q2 2024	Ongoing	

4. KEY FINDINGS

4.1. Mangrove demonstration plot establishment in West Nusa Tenggara Province

Ampang Plampang FMU is one of the FMUs of Sumbawa Island, Sumbawa Regency, West Nusa Tenggara Province. The forest area under the administration of Ampang Plampang FMU is about 73,184 ha and consists of dryland forests and mangrove forests. The mangrove forests are distributed along the coast and its area is around 1,100 ha. One of the major problems faced by the FMU in the management of their forest areas is forest encroachment. Most of the dryland forest areas were converted for dryland farming and mangrove forests were converted into fishponds.

4.1.1. Original planned 10-ha demonstration plot establishment

➤ Description of 10-ha demonstration plot

The demonstration plot is located in Sinar Jaya hamlet, Sepayung village, Plampang district, Sumbawa Regency, which is included in the management area of Ampang Plampang FMU. All stages of activities in the field are coordinated by Ampang Plampang FMU. The Nanga Gali Forest Farmer Group (FFG) of Sinar Jaya hamlet, Sepayung Village, consisting of 25 farmers, plays a role in providing seeds, and labor as site counterparts. On the other hand, the assistance is conducted by FMU Ampang Plampang Officer to land preparation process, temporary nursery operations, planting, and maintenance.

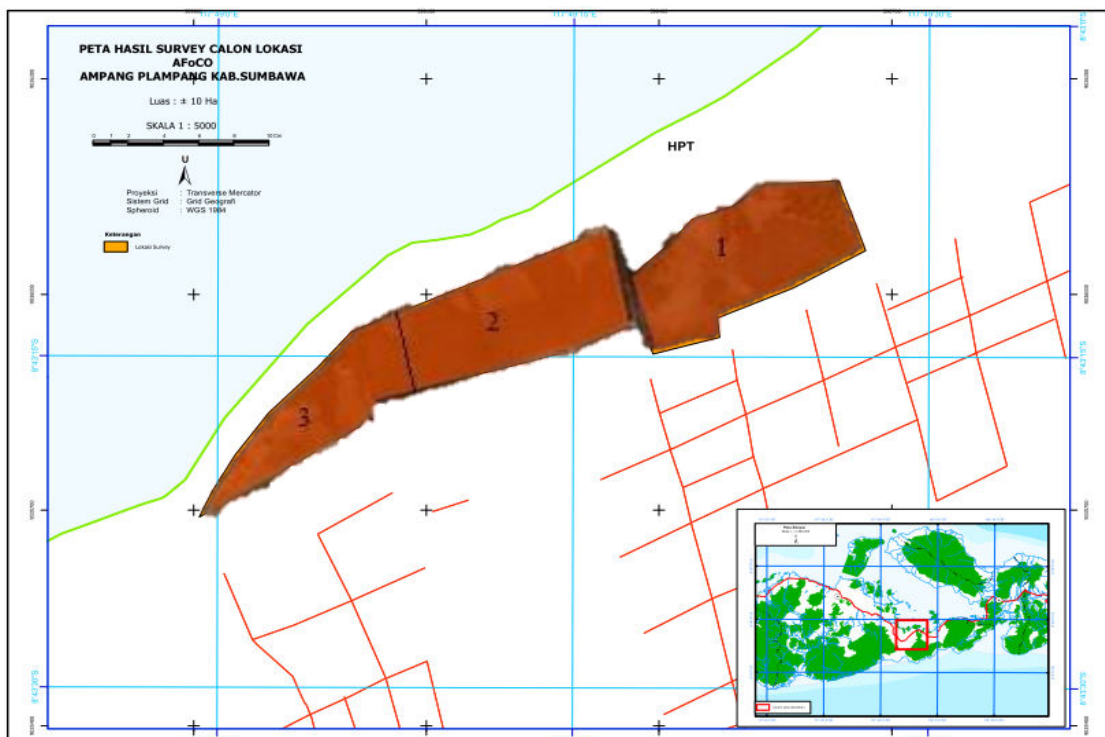


Figure 1. Map of 10-ha demonstration plot in Plampang Sub-district, Sumbawa Regency, West Nusa Tenggara Province

Planting was completed in July 2022, and a total of 31,000 seedlings of three (3) mangrove species were planted in the plot — *Rhizophora mucronate*, *Rhizophora apiculata*, and *Bruguiera gymnorrhiza* (Table 2).

Table 2. Updated information of planted species in mangrove demo plot

No.	Species	No. planted	% of surviving plants (2022)	% of surviving plants (May 2023)
1.	<i>Rhizophora mucronata</i>	31,000 seedlings were planted initially (an additional 2,000 were planted to replace dead seedlings)	88.60	Based on the monitoring report on May 2023, the survival rate after supplementary planting is ~95% (site counterpart did not calculate for each species)
2.	<i>Rhizophora apiculata</i>		80.95	
3.	<i>Bruguiera gymnorrhiza</i>		87.25	
TOTAL		31,000	87.48	

Based on the monitoring in May 2023, the growth of mangrove plants had a good performance. The monitoring parameters consist of height, diameter, and the leaf amount. The conditions of each parameter are described below:

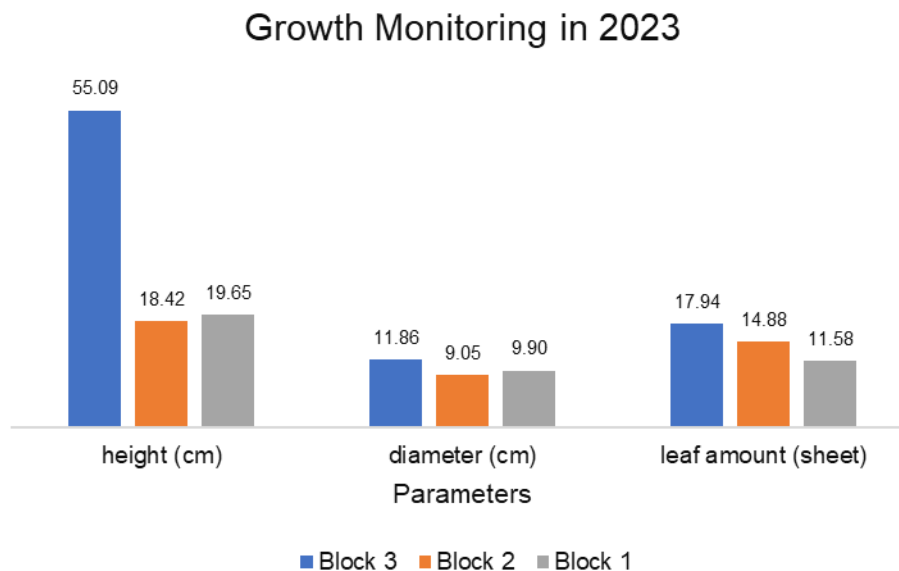


Figure 2. The performance of parameter growth in the mangrove demo plot

Based on the information from the site counterpart, the replanting is conducted to fill up the population without a species-specific design. Figure 2 shows three blocks with different site conditions where block 1 and block 3 represent the demonstration plot edge and block 2 is the middle of demonstration plot respectively. Block 3, without intervention by *Avicennia alba*, showed the best performance compared to the other demo plots. The low seedling performance in block 2 and 1 which are attended by *Avicennia alba* seems to be due to the the competition of available resources with this naturally grown species. *Avicennia alba* is classified as a pioneer species existing in natural mangrove forest between land and sea of the project area (Figure 3). On the other hand, its presence in the demonstration plot is a positive indicator of the project’s success in creating conditions conducive to the natural regeneration of existing mangrove species.



➤ Issues & Concerns

In the mangrove demonstration plot, the planted mangrove species were carefully chosen for their carbon storage capacity and potential for developing various mangrove livelihood products such as soap, food, fruits, mangrove coffee, etc. Both *Rhizophora* and *Avicennia* species are widely used in mangrove forest rehabilitation and restoration in Indonesia. Observations and discussions indicate evidence of ecosystem succession in parts of the demonstration plot, highlighted by the presence of naturally growing *Avicennia alba*, which typically thrives on mudflats regularly inundated by seawater. The IA and experts believe that natural dispersion by seawater could be related to the introduction of this new seedlings, originally not planted in the demonstration plot area since *Avicennia alba* can be seen further away from the shoreline in the seaward zone and was previously not found to grow in the demonstration plot area.

As pioneer colonizers on mudflats, *Avicennia* species play a crucial role in resisting waves and currents, leading to sediment deposition and the formation of tide pools. These tide pools would decrease in salinity and oxygen over time, creating favorable conditions for other mangrove species like *Rhizophora* and *Bruguiera* to colonize and establish a zonation pattern¹ (Figure 4). As the naturally growing *Avicennia alba* species are perceived as pioneer species in newly formed mangrove ecosystems and have been found to dominate mangrove areas that are constantly flooded at low

¹ Othman, M. A. (1994). Value of mangroves in coastal protection. *Hydrobiologia*, 285(1), 277-282.

tide², the trees were left uncut and allowed to continue growing on the site considering their potential contributions to carbon stock enhancement while ability to provide NTFPs for local communities in the long-term.

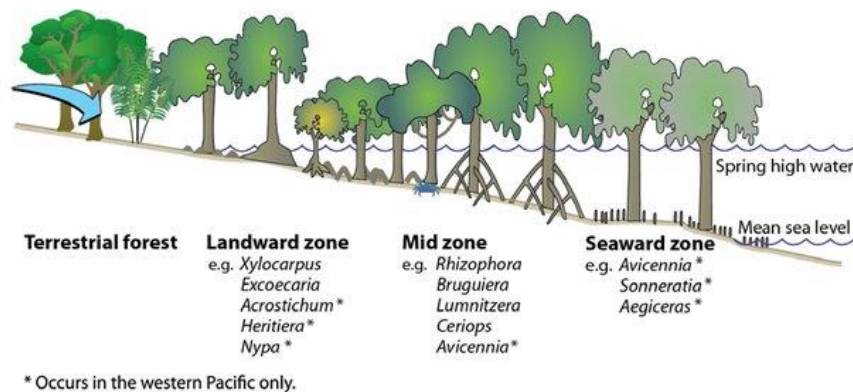


Figure 4. Three zones typical of mangrove habitats showing the differences in mangrove species typical of each zone³

During the monitoring visit, the team consulted an expert from the Central Management of Regional River Flow (BPDAS) of Unda Anyar, Ministry of Environment and Forestry, Republic of Indonesia. Mr. Budi Purnomo (Head of Forest and Water Rehabilitation Division), explained that the presence of both species in the same area indicates the occurrence of mangrove succession. The newly formed ecosystem will see an increase in other plant species that can grow in brackish conditions. Although *Avicennia alba* is a fast-growing species with a high germination capacity, Mr. Purnomo explained that it would be able to contribute to the overall ecosystem health. Furthermore, he also explained that the spread of some mangrove species occurs naturally. He also mentioned that the natural dispersion of mangrove species is facilitated by the morphology of their propagules, which germinate easily once matured. These propagules, dispersed by currents, wind, and animals, allow for efficient mass propagation, provided they are precisely selected and collected as seedling sources.

The mangrove restoration efforts have successfully initiated a process of natural succession, with *Avicennia alba* playing a pivotal role in shaping the ecosystem dynamics. The planted species have not only enhanced the area's carbon stock but also supported the formation of conditions conducive to a diverse mangrove ecosystem. The continued growth of *Avicennia alba* can contribute to maintaining ecological balance, resisting coastal erosion, and providing long-term benefits through non-timber forest products for local communities. However, if the IA wishes to monitor the growth of planted *Rhizophora* and *Bruguiera* for research purposes, they may consider clearing.

4.1.2. Establishment of additional 5-ha demonstration plot and silvofishery model

Utilizing the project savings, the IA planned to establish an additional 5-hectare mangrove demonstration plot focused on silvofishery through mud crab cultivation in another area managed by Amplang Plampang FMU.

² Sukuryadi, S. (2021). Structure and composition of mangrove vegetation in Lembar bay area, West Lombok District, Indonesia. *Short Communication: Structure And Composition Of Mangrove Vegetation In Lembar Bay Area, West Lombok District, Indonesia*, 22(12), 5585-5592.

³ Waycott, M., McKenzie, L. J., Mellors, J. E., Ellison, J. C., Sheaves, M., Collier, C., & Schwarz, A. M. (2011). Vulnerability of mangroves, seagrasses and intertidal flats in the tropical Pacific to climate change.

➤ **Description of 5-ha demonstration plot**

The demo plot is located in Labuan Songoro hamlet, Brang Kolong village, Plampang sub-district, Sumbawa Regency, as part of the forest area managed by Amplang Plampang FMU. The project began planting mangrove seedlings over an initial 3 hectares of land in March 2024, with plans to continue planting on an additional 2 hectares. However, they were unable to gain the support of the local communities in the area. After discovering that some of the planted seedlings had been plucked by local farmers, the IA decided to abandon the 3-hectare site following discussions with the FMU. Subsequently, the IA and FMU identified another area for the establishment of the 5-hectare demonstration plot and formed a new FFG (Labu Ujung) to maintain the plot. Due to this unforeseen circumstance, the planting is expected to begin in June 2024. Details on the number of seedlings planted and updates on the planting situation after planting will be reported in the Mid-year Progress Report 2024 to be submitted by the IA.

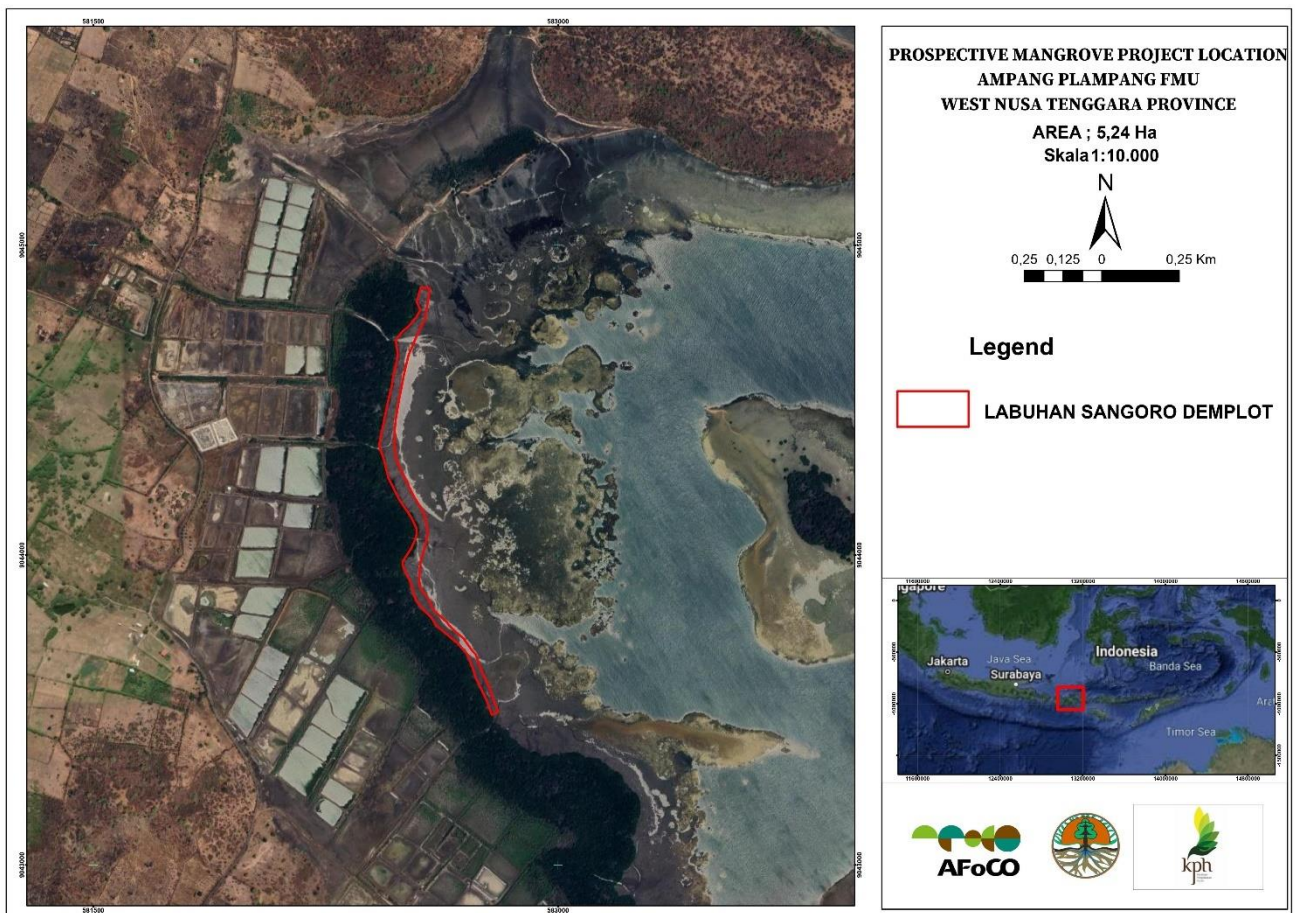


Figure 5. Map of 5-ha mangrove demonstration plot in Labuhan Sangoro hamlet, Plampang Sub-district, Sumbawa Regency, West Nusa Tenggara Province

Near the demonstration plot, in Labuan Ujung hamlet, Brang Kolong village, the project also established a silvofishery model/pilot area with three (3) mud crab enclosures. A total of 100 mud crabs were provided for cultivation in one of the three mud crab enclosures in May 2024. Another 200 mud crabs will be provided for the other two enclosures in June - August 2024.

Although this is the first attempt for the participating farmers to cultivate mud crab in a mangrove forest, they, based on the technical training provided under this project, have shown high confidence in the successful implementation and expectations for their livelihood. Furthermore, this demonstration plot has been acknowledged by the provincial Forest Service as a potential learning center for the sustainable use of mangrove forests in the West Nusa Tenggara Province.



Figure 6. Map of 5-ha mangrove demonstration plot in Labuhan Sangoro hamlet (indicated by the red box) and location of mudcrab enclosures in mangrove silvofishery demonstration plot in Labuhan Ujung hamlet (indicated by the pink box) – both hamlets are in Brang Kolong village, Plampang Sub-district, Sumbawa Regency, West Nusa Tenggara Province





Figure 7. Photos of mangrove 'Silvofishery Demplot' taken on 29 June 2024

(Top left: AFoCO Project signboard of Silvofishery Demplot; Top right: External view of mud crab enclosure) (Bottom left: View of the mud crab enclosure; FFG leader checking the health of mud crabs; Bottom right: FFG leader holding up a mud crab (*Scylla serrata*))

➤ Issues & Concerns

During the discussions with the FFGs, several farmers feedback that they would prefer having proper benefit-sharing mechanisms put in place to ensure the fair distribution of profits from the sale of mud crabs from the project's silvofishery models/enclosures. The FMU officials also explained that capacity-building activities were more focused on the cultivation and harvesting of mud crabs, without sharing of knowledge and information on post-harvest processing and market access. To resolve this, the FMU is planning to utilize other forms of financial support to provide additional training post-project.

In addition, a major obstacle faced is the limited knowledge of mud crab seed production through cultivation. So far, the supply of mud crab seeds/broodstock relies on natural catches. This condition is not reliable to guarantee the sustainability of production. In addition, knowledge of feed management is also needed. Training activities that has been carried out so far for mud crab cultivation mainly focused on maintenance and increase of the crab weight only.

If possible, FFGs involved in this mud crab farming business should be linked with livestock instructors. This is an effort to sustain the business even after the project has been completed. The presence of a livestock instructor is expected to help with the production process and facilitate the communication between FFG and the local government. This would provide easier access to business development opportunities and integration with local government plans/programs.

During the monitoring and evaluation of mid-year 2024 activities, the monitoring team also held discussions with FFGs in each of the demonstration plots (participant list in Appendix 4). They appreciated the assistance provided by AFoCO through project 023/202, generally. So far, the project activities have successfully provide alternative livelihoods for the FFGs and have supported their household economies.

4.2. Updates on Karst demonstration plot expansion in Bulusarang FMU, South Sulawesi Province

The management area of Bulusarang FMU covers a total area of 51,406 ha (including 7,809.8 ha of karsts). The area is composed of Protected Forest (HL) - 23,765 ha, Limited Production Forest (HPT) - 8,459 ha, and Permanent Production Forest (HP) - 19,182 ha.

The pine forest in Tala-Tala Hamlet, Bonto Manai Village, Maros Regency/District is one of the production forest areas of the Bulusaraung FMU. Pine trees and understory vegetation were damaged by lightning-induced forest fires in 2016. Hence there was a need for forest rehabilitation to improve land conditions and retrieve the lost carbon stock. Based on the consultations with local communities, agroforestry-based rehabilitation approach was adopted through the planting of forest plant species, MPTS, and crops. The 10-ha agroforestry-research plot was established in July 2022.

Referring to the annual report 2023 in activity 7.1 (establishing demonstration plots) and the recommendation of the last PSC meeting, demo plot expansion was included by covering area and seed collection for planted with no-cost project extension. For the maintenance in this site, a FFG consisting of 25 farmers from Tala-Tala Hamlet organized to patrol, monitor, and maintain plants in the demo plot, technically. The establishing of additional demonstration plots in Tala-Tala Hamlet has gone well. The participation and enthusiasm of the local community, especially members of KTH Cahaya Tala-Tala, is still high in participating in all stages of demonstration plot development activities. The construction of additional demonstration plots continues to use the agroforestry model. Demonstration plots that have been built still require maintenance until the plants are stable enough until 3 years old after planted.

➤ Description of 5-ha demonstration plot

The IA utilized the project savings to expand the existing 10-ha plot. The 3-ha demo plot from 5 ha targeted is located cross to the original plot which was conducted by delineating and fencing (Figure 8).

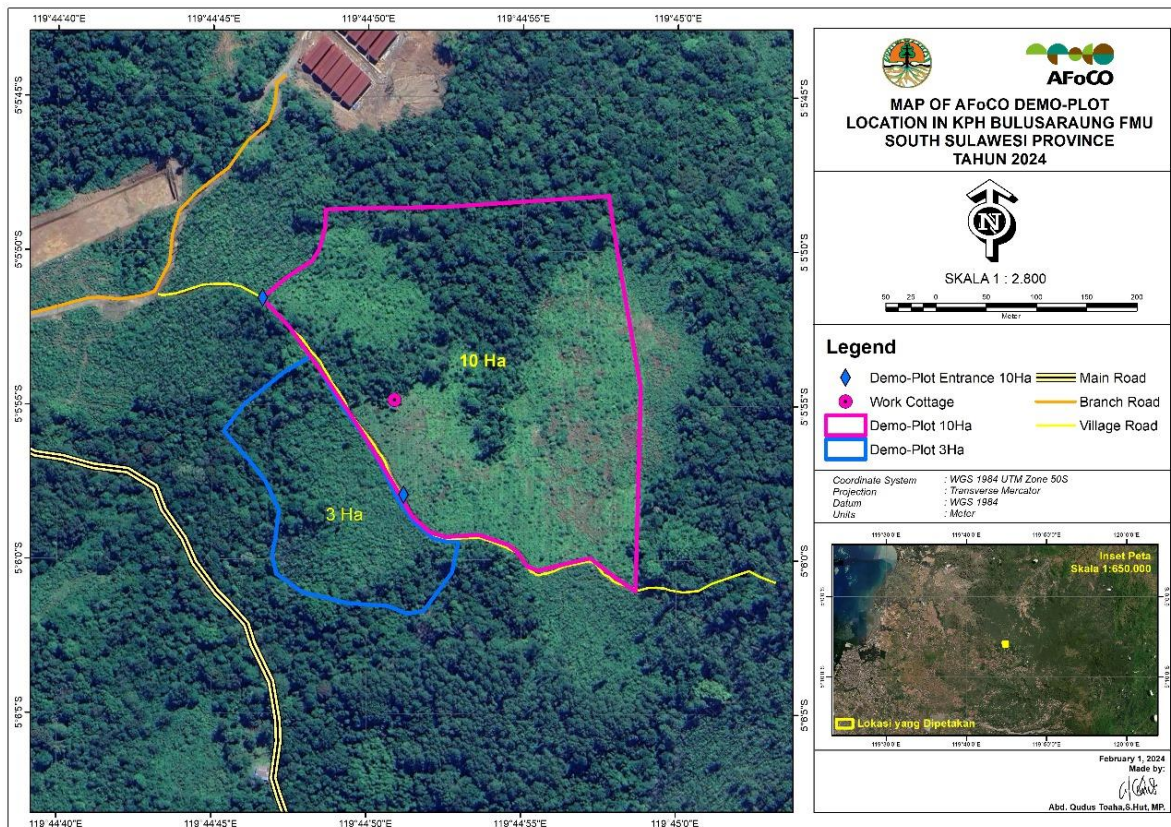


Figure 8. Map of karst demonstration plot (*5-ha expansion plot and 10-ha original plot) in Maros Regency, South Sulawesi province
*Only 3 hectares have been planted out of the total 5 ha planned for expansion

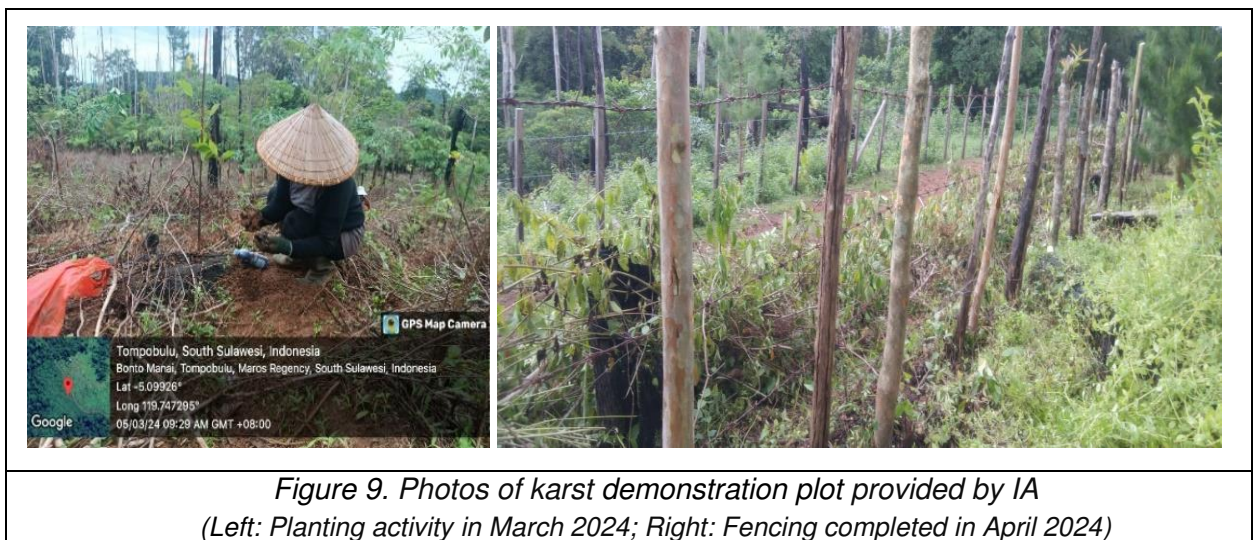


Figure 9. Photos of karst demonstration plot provided by IA
(Left: Planting activity in March 2024; Right: Fencing completed in April 2024)

Based on information provided by the IA, the demonstration plot was established with 3 ha with a total of 1,908 seedlings planted in March 2024. The remaining 2 ha will be planted in August 2024. The FFG managing the expanded plot is Tala-Tala FFG, the same FFG managing the original 10-ha demonstration plot. The list of seedlings planted in expansion demo plot is in the following table.

Table 2. Species planted in the 5-ha expansion demo plot

No.	Species planted	No. of seedlings planted in 3 ha
1.	Durian (<i>Durio zibethinus</i> Murray)	114
2.	Red Jabon (<i>Anthocephalus macrophyllus</i> (Roxb) Havil)	105
3.	White Jabon (<i>Anthocephalus cadamba</i> Roxb)	102
4.	Calliandra (<i>Calliandra calothyrsus</i>)	540
5.	Cajuputi (<i>Melaleuca cajuputi</i>)	186
6.	Mahagony (<i>Swietenia macrophylla</i> King.)	249
7.	Mango (<i>Mangifera indica</i> L.)	15
8.	Mangosteen (<i>Garcia mangostana</i> L.)	15
9.	Nyatoh (<i>Palaquium spp.</i>)	195
10.	Nutmeg (<i>Myristica fragrans</i> Houtt)	129
11.	Rambutan (<i>Nephelium lappaceum</i> L)	99
12.	Breadfruit (<i>Artocarpus altilis</i> (Park.) Fosberg)	12
13.	Tanjung (<i>Mimusops elengi</i> L.)	147
TOTAL		1908

4.3. Updates on establishment of Permanent Sampling Plots (PSPs)

The IA has established a total of nine (9) PSPs in the area managed by Minas Tahura FMU, Siak Regency, Riau Province. The established PSPs are spread across several typologies of areas to represent the entire peat ecosystem in Minas Tahura FMU. The PSPs represent the typologies of peat open areas (877,192 ha) with medium (154,538 ha) to high density (68,269 ha) (Figure 10). Based on observations during the construction of the PSPs, several animals were seen there (Figure 12). More details on the condition of the PSPs (biodiversity index, abundance, and individual importance values) will be described in the project annual report 2024.

PSPs in the areas managed by Amplang Plampang FMU in Sumbawa Regency and Bulusarang FMU in South Sulawesi Province will be established in all three sites in July 2024. An overview of the PSPs in each site is shown in the following table.

Table 3. Status of PSPs establishment

Province (ecosystem)	Overall management of PSPs	Number of PSPs	Status of Establishment
West Nusa Tenggara (mangrove)	Amplang Plampang FMU	~10	Planned in July 2024
South Sulawesi (karst)	Bulusarang FMU	~10	Planned in July 2024
Riau (tropical peatland)	Minas Tahura FMU	9	Completed in May 2024

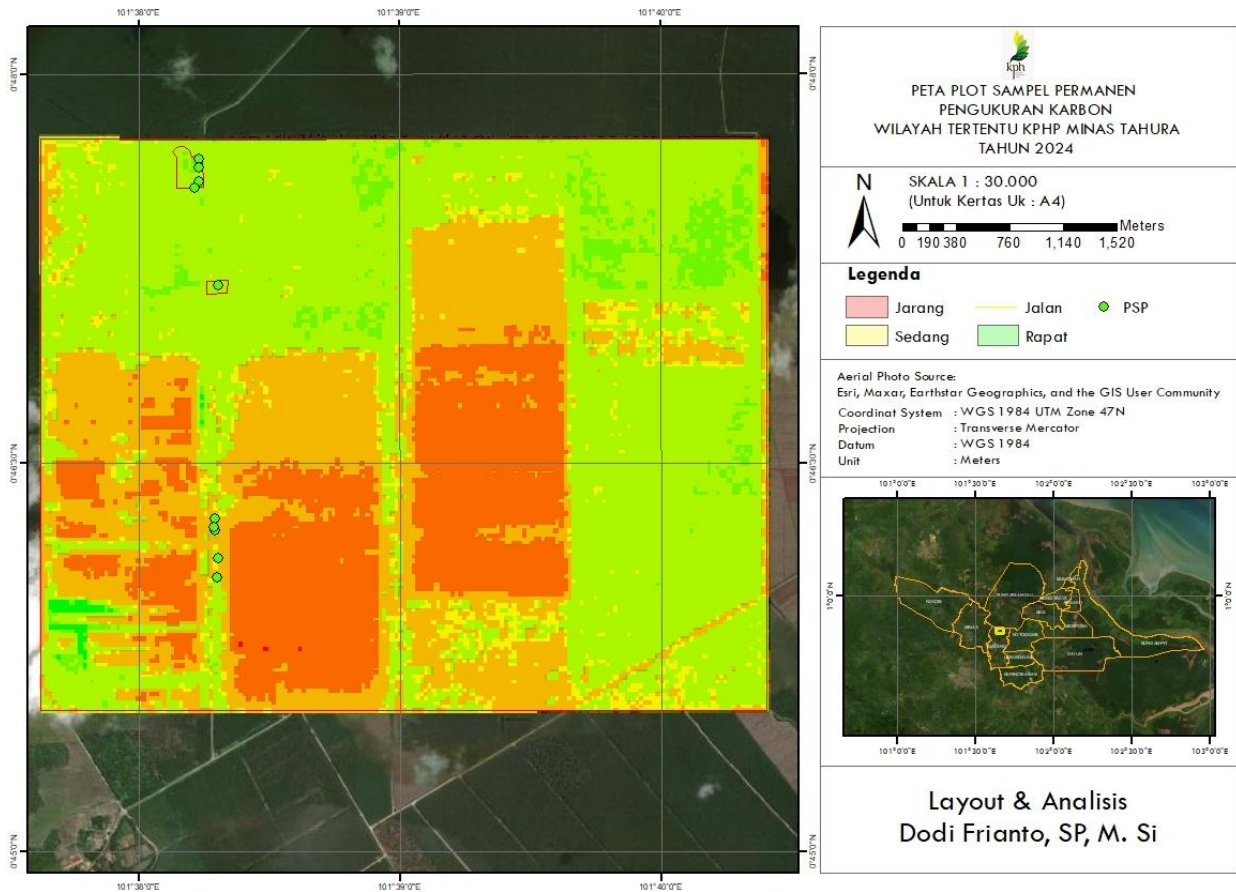


Figure 10. Location of PSPs established in Minas Tahura FMU in May 2024





Figure 11. Photos of PSP plots in the forest area managed by Minas Tahura FMU in Riau Province



Figure 12. Biodiversity surrounding PSPs Minas Tahura FMU
(From left – 1st and 2nd photos: Aves family; 3rd and 4th photos: Mammalia family)

4.4. Other updates

The project's long-term sustainability is being ensured by the FMU-FFG cooperation. The IA (CSSFMI) has an MoU with each participating FMU (Minas Tahura FMU in Riau, Bulusarang FMU in South Sulawesi, and Amplang Plampang FMU in West Nusa Tenggara) which manages the project at the site level, including the relationship with the FFGs, on behalf of the IA. Each FFG is registered officially in the government system to receive advisory and technical support from the FMU. The FMU also signed project agreements with each FFG to engage them in the project activities, with the duration of the agreement covering the entire project duration, while post-project management will be subject to FMU and government support. After the completion of project, the FFGs will continue to work with the FMUs.

Each FFG consists of a group of supportive and proactive farmers who work closely with the FMU to maintain, protect and monitor the demo plots. The members of FFGs also benefit from additional income from their involvement and participation in the planting and demonstration plot maintenance (Table 4). In the case of Amplang Plampang FMU's mangrove ecosystem, a total of two FFGs were formed to maintain the original (10 ha) and new (5 ha) mangrove plots. Interviews with the FMU

officials reveal that the farmers would be able to share benefits from the sale of mud crabs during the harvest season.

Table 4. Status of FMU-FFG involvement in the management of demo plots

Province	Overall management of demo plot	FFG	Daily pay for plot maintenance
West Nusa Tenggara (10-ha plot)	Ampang Plampang FMU	Nanga Gali FFG (25 farmers)	IDR 100.000/person/day
West Nusa Tenggara (5-ha plot)	Ampang Plampang FMU	Labu Ujung FFG (20 farmers)	IDR 100.000/person/day
South Sulawesi (10-ha plot)	Bulusarang FMU	Tala-tala Hamlet (25 farmers)	IDR 100.000-120.000/person/day
South Sulawesi (5-ha plot)	Bulusarang FMU	Tala-tala Hamlet (25 farmers)	IDR 100.000-120.000/person/day
Riau (10-ha plot)	Kepau Jaya FWSP	2 farmers and 5 non-government FWSP officers	IDR 150.000/person/day

The PSPs will be also maintained by each FMU from the three locations. These PSPs are planned as a baseline for monitoring ecosystem conditions in the FMU areas. The PSPs will include flora inventory parameters, carbon potential, and emission potential. This data is also used as a reference for the development of area management plans by FMUs. Thus, all project activities comprehensively support climate change resilience efforts and become a solution to landscape change.

5. SYNTHESIS OF PROJECT CONTRIBUTIONS & IMPACTS

The project is a multi-faceted one with varied and significant contributions to research, community livelihoods, and capacity development of forestry sector officials, forest managers, and local communities.

● **Policy Significance of Long-term Forest Management Plan**

The project is intrinsically linked to enhancing forest governance as it is implemented based on the MoUs between the IA and the FMUs. As the capacity building activities targeted at the FMU officials trained them in the utilization of GIS tools and forest carbon stock assessment while imparting an understanding of the concepts and methods applied in the development of Indonesia's Forestry and Other Land Use (FOLU) Net Sink 2030 (the newest forest policy in Indonesia that identifies the FOLU sector as a net sink). This policy is supported by a provincial-level operational plan that includes 12 mitigation action plans that aim to enhance carbon sequestration and reduce emissions across Indonesia's forestry and land sectors: Prevention of deforestation in peat and mineral areas, prevention of concession degradation, plantation forest development, natural forest enrichment, application of reduced impact logging, increasing carbon storage with and without rotation, peat water management, peat restoration, protection of high conservation value areas, and mangrove management.

To guide the implementation of these mitigation actions, the AFoCO project has assisted three (3) FMUs from Riau, South Sulawesi and West Nusa Tenggara Provinces to develop long-term forest management plans based on climate change adaptation and mitigation. These long-term plans have included specific mitigation activities in terms of the types of activities, locations, time, and costs required. The IA explained that these plans are the first of its kind for FMUs in Indonesia, and have received positive responses from the Ministry. They are currently being validated by the Ministry. Among the remaining project activities, Activity 5.2 (Share learning and policy dialogue (workshop & FGD) in the district and provincial level on the developed Long-term Forest Management Plans of the FMUs) will involve the dissemination of the developed plans to the provincial officials.

● **Research contributions**

The project has a strong research aspect as Activities 1.4 (Collect and analyze data and information for scoping and spatial analysis), 1.5 (Collect and analyze baseline data and information of carbon stock, emission, biodiversity; and identification of potential commodities in three sites), 2.1 (Survey and assess data and information of Socio-economic (livelihood, economic assessment, market analysis) at the beginning and end of the project), 3.1 (Investigate and conduct value chain analysis and market analysis of potential commodities), 6.1 (Participatory rural appraisal (PRA) on demonstration plot site matching) and 7.1 (Establishing demonstration plots). The achievements from the data analysis were published in international proceedings and journals (Table 4).

Table 4. Research articles developed based on project activities

Associated Project Activities	Site	Status	Title
Activity 1.5 Collect and analyze baseline data and information of carbon stock, emission, biodiversity; and identification of potential commodities	South Sulawesi Province	Published 2024.4.23	Forest cover change and its carbon dynamic of the karst area in Bulusaraung, South Sulawesi, Indonesia https://doi.org/10.1080/21580103.2024.2343344
	Riau Province	Accepted 2024.5.1	Carbon stock dynamics of forest to oil palm plantation conversion for ecosystem rehabilitation planning https://www.gjesm.net/article_712925.html
	West Nusa Tenggara Province	Manuscript under preparation	
Activity 3.1 Investigate and conduct value chain analysis and market analysis of potential commodities	Riau Province	Published 2022.11.24	Value chains and market analysis for the potential commodity of Buah Tani Tonggak Negeri forest farmers group https://iopscience.iop.org/article/10.1088/1755-1315/1182/1/012024

6. RECOMMENDATIONS

Discussions with FMU officials and FFG members revealed a strong desire to extend the project into a second phase to ensure the long-term sustainability of its impacts. Although agreements between FMUs and FFGs are in place to provide incentives for maintaining the demonstration plots, forest commodities from these plots cannot be harvested within a short timeframe. Despite the project's effective participatory approaches, which have successfully engaged communities and considered farmer preferences for forest commodities in species selection, the short duration of the project means participating farmers cannot "reap what they sow" within this period (harvest and sell NTFPs).

Despite the formalization of FMU-FFG cooperation, the reality is that payments and incentives to FFGs are currently only guaranteed for the project's duration, as FMUs face budgetary limitations that make it challenging to assure consistent payments post-project. If a subsequent project phase is feasible, benefit-sharing mechanisms could be more concretely designed to ensure robust farmer participation and additional support could be provided to the FMUs to allow the planted species in the demonstration plots to mature, enabling farmers to genuinely benefit from alternative livelihoods through the harvest and sale of forest commodities. This approach would help shift farmers away from their reliance on palm oil harvest, representing a genuine transformation of mindsets in a country grappling with illegal encroachment. Alternatively, future projects in Indonesia could be more impactful if designed for longer durations, ideally at least five years, given that the first two years are often spent on internal approvals, formalizing agreements with local counterparts, and initiating actual planting.

Regarding the project management, the monitoring team also recommends that the IA try to complete the remaining project activities (Appendix 1) within the project duration (ending 31 December 2024). In particular, the monitoring team suggests:

- Complete the development of the project publication before the AFoCO Annual Technical Workshop in October 2024, so that the publication can be disseminated at the workshop.
- Complete the financial auditing activities as soon as possible before September-October 2024 to ensure that the draft project completion report can be presented at the Final Coordination and Evaluation Meeting with AFoCO scheduled in November 2024.

- As much as possible, the key deliverables of the project such as the development of Long-term Forest Management Plans for participating FMUs should be disseminated well to promote the visibility and best practices of the AFoCO project. Even though the plans are in Bahasa Indonesia, the key contents could be translated and compiled/summarized in the form of a policy brief in English to reach a wider audience.
- To utilize the project savings, the IA should develop a plan for the re-allocation of these savings to other activities for the Secretariat's internal review.

APPENDIX 1. List of Remaining Activities

Month	Date	Activity	Location
June	3-6 June	8.1 Demoplot maintenance – Kampar Regency, Riau 8.1 Demoplot maintenance – Sumbawa Regency, West Nusa Tenggara (WNT)	Riau and Sumbawa, WNT
	5-6 June	9.2 Writing Workshop for AFoCO Lessons Learned publication	Bogor
	3-8 June	2.1 Survey and assess socio-economic data and information on livelihood, economic assessment, market analysis (Endline assessment for Post-project Impact Analysis)	Riau and Makassar, South Sulawesi (SS)
	10-25 June	1.5 Collect and analyse carbon and emissions data (Endline assessment for Post-project Impact Analysis); and establish PSPs from project savings	Makassar, SS and Sumbawa, WNT
	20-21 June	9.2 Validation and public consultation of non-carbon benefits standard	Bogor
	25-26 June	5.1 PRA and Public Consultation for Long-term Forest Management Plan based on climate change adaption and mitigation	Sumbawa, Riau
July	2-3 July	5.1 PRA and Public Consultation for Long-term Forest Management Plan based on climate change adaption and mitigation	Makassar, SS
	30 July	9.1 National Symposium	Jakarta
August	5-6 August	5.1 PRA and Public Consultation for Long-term Forest Management Plan based on climate change adaption and mitigation	Pekanbaru, Riau
	28-29 August	5.2 Share learning and policy dialogue (workshop and FGD) at the district and provincial levels	Mataram, WNT
September	2 September	9.3 Project Financial Audit (1 st and 2 nd Year)	Jakarta/Bogor
	10-12 September	5.2 Share learning and policy dialogue (workshop and FGD) at the district and provincial levels	Makassar, SS
	Mid-September	4.3 Conduct capacity building/training on initiating and promoting ecotourism for FMU personnel (material promotion for honeybee and ecotourism)	Riau and Makassar, SS
October	8-9 October	5.2 Share learning and policy dialogue (workshop and FGD) at the district and provincial levels	Riau
	Mid October	International Conference	
November	12-14 November	AFoCO Final Coordination and Evaluation Meeting	Makassar, SS
December	December	9.3 Project Financial Audit (3 rd Year)	
	1-28 December	Final Reporting an internal process for project closure	Bogor/Jakarta

APPENDIX 2. List of Activity Reports

The following list includes the 18 activity reports written by a National Experts (each supported by a team of 1~4 experts). These reports were referred to extensively in the desk review process.

No.	Activity	Activity Report Title (used as references in research articles)	Drafter (National Expert)	Date
1	Activity 1.4 Collect and analyze data and information for scoping and spatial analysis	(Activity Report – Riau)	Rinaldi Imanuddin Researcher of National Research and Innovation Agency (BRIN)	November 2021 – February 2022
2		(Activity Report – South Sulawesi)	Dr. Budi Hadi Narendra Researcher of BRIN	November 2021 – February 2022
3		(Activity Report – West Nusa Tenggara)	Dr. Ogi Setiawan Researcher of BRIN	March 2022 – May 2022
4	Activity 1.5 Collect and analyze baseline data and information of carbon stock, emission, biodiversity; and identification of potential commodities in three sites	(Activity Report – Riau)	Wahyu Catur Adinugroho Researcher of BRIN	November 2021 – February 2022
5		(Activity Report – South Sulawesi)	Fajri Ansari Researcher of BRIN	November 2021 – March 2022
6		(Activity Report – West Nusa Tenggara)	Wahyu Catur Adinugroho Researcher of BRIN	March – June 2022
7	Activity 2.1 Survey and assess data and information of Socio-economic (livelihood, economic assessment, market analysis) at the beginning and end of the project	(Activity Report – Riau)	Dodi Frianto Staff of BPSI LHK Kuok	June - August 2022
8		(Activity Report – South Sulawesi)	Isdomo Yuliantoro Staff of BPSI LHK Makassar	March – June 2022
9		(Activity Report – West Nusa Tenggara)	Dhany Yuniati Researcher of BRIN	March – June 2022
10	Activity 3.1 Investigate and conduct value chain analysis and market analysis of potential commodities	(Activity Report – Riau)	Eko Sutrisno Staff of BPSI LHK Kuok	July – August 2022
11		(Activity Report – South Sulawesi)	Indah Novita Dewi Staff of BPSI LHK Makassar	March – June 2022
12		(Activity Report – West Nusa Tenggara)	Rubangi Al Hasan Researcher at BRIN	March – May 2022
13	Activity 6.1 Participatory rural appraisal (PRA) on demonstration plat site matching	(Activity Report – Riau)	Andhika Silva Yunianto Researcher of BRIN	November – December 2021
14		(Activity Report – South Sulawesi)	Nur Hayati Staff of BPSI LHK Makassar	November 2021 – Februari 2022
15		(Activity Report – West Nusa Tenggara)	Husnul Khotimah Researcher of BRIN	March – June 2022
16	Activity 7.1 Establishing demonstration plots	(Activity Report – Riau)	Eka Novriyanti, Researcher of BRIN	December 2021 – June 2022
17		(Activity Report – South Sulawesi)	C. Andriyani Prasetyawati Staff of BPSI LHK Makassar	November 2021 – August 2022
18		(Activity Report – West Nusa Tenggara)	M. Hidayatulah Staff of BPSI LHK Mataram	March – July 2022

** Other reports can be found in the Google Drive below:

<https://drive.google.com/drive/folders/1WvIEVPy0JA6ZeutzR9dMFVmTIH4YexzJ?usp=sharing>

APPENDIX 3. 2nd Project Monitoring Visit Schedule

Date/Time	Activity	Remarks
27 May 2024, Monday		
17:50 – 23:50	Incheon to Bali	Korean Air (KE629)
23:50	Arrival in Bali	
00:30 – 01:00	Move to hotel	Swiss-Bell hotel Tuban
(14.00 – 17.00)	<i>Jakarta to Lombok</i>	<i>Indonesia Project Management Team (PMT)</i>
28 May 2024, Tuesday		
07:00	Check out from hotel	Swiss-Bell hotel Tuban
07:00 – 7:20	Move to Airport	
08.35 – 10.15	Bali to Sumbawa	Wings Air (IW-1854)
(09.30 – 10.15)	<i>Lombok to Sumbawa</i>	<i>Indonesia project team</i>
10.30 – 13.00	Trip to Teluk Santong	
13.00 – 14.00	Lunch	
14.00 – 16:00	Ground-checking of mangrove demo plot for 023/2021	
15.30 – 17.30	Trip to hotel	Grand Sumbawa Hotel
29 May 2024, Wednesday		
09:00 – 11:00	Ground-checking of mangrove demo plot for 023/2021 (silvofishery)	
12:00 – 13:00	Lunch	
13:00 – 15:00	Discussions with 1 st and 2 nd FFGs (KTH Mangrove Teluk Raya and KTH Nanga Gali)	
15:00 -	Return to hotel	Grand Sumbawa Hotel
30 May 2024, Thursday		
09:30 – 11:00	Trip and discussion with FMU Batu Lanteh Officers	
11:00 – 14:00	Trip to the candidate site carbon project (Nanga Lidam) with FMU Batu Lanteh delegate	
16:00 – 18:00	Wrap-up meeting with Indonesia Project Management Team	Grand Sumbawa Hotel
31 May 2024, Friday		
10:35 – 12:25	Sumbawa to Bali	Wings Air (IW-1857)
12:25 – 14:30	Lunch	
14:30 – 16:00	Site Visit to Central Management of Regional River Flow (BPDAS) of Unda Anyar	
18.40 – 19.40	<i>Bali to Jakarta</i>	<i>Indonesia PMT</i>
1 June 2024, Saturday		
01:10 – 09:20	Bali to Incheon	Korean Air (KE629)
09:20	Arrival at Incheon	