



PROJECT MID-YEAR REPORT

1st January 2022 to 30th June 2022

<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: 30 June 2024
Implementing Agency	Center for Standardization of Sustainable Forest Management Instruments, Agency for Standardization of Environment and Forestry Instruments <i>(Prior to internal organizational restructuring: Forest Research and Development Center (FRDC), Ministry of Environmental and Forestry)</i>
Participating Country(ies)	Indonesia
Project Site	1. Tropical peatlands forest of Forest Area with Specific Purpose of Kepau Jaya and Forest Management Unit of Minas Tahura in Siak District, Riau Province; 2. Mangrove ecosystem in Ampang Plampang Forest Management Unit, Sumbawa District, West Nusa Tenggara Province; 3. Karst and lowland ecosystem of Forest Management Unit of Bulusaraung, in Maros district, South Sulawesi province
Target Area¹	Primary target area: Priority Area 2 – Supporting research and development in climate change approaches Secondary target area: Priority Area 1 – Initiating customized restoration and reforestation models
Budget and Source of Finance	Total: US\$ 800,000 - AFoCO: US\$ 700,000 - National: US\$ 100,000 - Others: US\$ 0
Annual Budget and Source of Finance	Total: US\$ - AFoCO: US\$ - National budget: US\$ _____ - Others: US\$ _____ (to be specified)

<Implementing Agency Profile>

Name	Center for Standardization of Sustainable Forest Management Instruments, Agency for Standardization of Environment and
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¹ Refer to the list of target areas which is in accordance with the objectives and prevailing strategic plan of AFoCO (provided by the Secretariat).

	Forestry Instruments	
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Notes to the Authors & Readers

The project mid-year report should present information that is managerial in nature, such as the description of activities started or completed during the period covered, the percentage of work undertaken, and the costs incurred.

The report is expected to provide simple and concise information on project progress in accordance with the formats provided below. If deemed necessary, the Appendices may include further elaborations on parts of the report.

Use of gender-fair language in the preparation of the report is highly recommended. The list of recommended gender-fair language is attached hereto for reference.

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1. Project Overview

The project aims 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 improve biodiversity landscapes to support the achievement of the Sustainable Development Goals (SDGs), in particular SDGs 1, 8, 13 and 15.

Objectives:

- a) 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;
- b) To facilitate the preparation of business plans of the Forest Management Units (FMUs) at three study sites;
- c) To 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;
- d) To 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.

Expected Outputs:

- Map of existing biophysical condition and baseline data of biophysical condition of three study sites (Riau, West Nusa Tenggara, and South Sulawesi) produced through GIS mapping and analysis by the first semester of Year 2.
- Current status and baseline data of socio-economics condition of three study sites (Riau, West Nusa Tenggara, South Sulawesi) made available by the first semester of Year 2.
- Commodities that have good market opportunities identified in three study sites by semester1 Y2.
- Strengthened capacity of FMUs and community in business plan development at three study sites.
- Developed Business Plans of the FMUs in three study sites.
- Three sites for demonstration plot establishment appropriately located and technically designed.
- Demonstration plots in 3 types of areas established in three sites at least 10 ha each site.
- Demonstration plot at each project site is well maintained and monitored at the interval of 6 months after planting.
- Technique and awareness of the project model transferred to project stakeholders through workshops, policy briefs, and publications.

2. Implementation Progress & Review of Performance

Activity No.	Activity	Timeline	Performance Indicators		Percentage Executed (Financial performance)	Progress Description
			Baseline	Achieved		
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 1. Map of existing biophysical condition and baseline data of biophysical condition of three project sites (Riau, Bali, and South Sulawesi) produced through GIS mapping and analysis by the first semester of Year 2						
1.2	Kick off meeting	-	-	-	100% (51.71%); (51.71%)	'- remaining budget unused, the activity is completed. Request to be allocated to other activities
1.4	Collect and analyze data and information for scoping and spatial analysis	Q4 2021, extended to Q1-Q2 2022	<ul style="list-style-type: none"> Three meetings /consultations with the local government/FMUs. Maps and Data sets for each project site obtained from the scoping and spatial analysis 	<p>① Tropical peatland site in Riau Province</p> <ul style="list-style-type: none"> Several meetings/maintenance 5 were conducted in Q4 2021 with Minas Tahura FMU, Kepau Jaya FWSP, and the Riau Province Forestry Service (completed). Maps and Data sets in Minas Tahura FMU Riau have been obtained from the scoping and spatial analysis (completed). The research results from activity 1.4 in 	100%; (74.00%); (74.00%)	<p>The activities 1.4 in three locations were completed as planned. The executed activities are:</p> <ol style="list-style-type: none"> Peatland Ecosystem in Riau <ul style="list-style-type: none"> The data collection, field surveys, data analysis, results presentation, as well as final report of Activity 1.4 in Riau were completed. Karst Ecosystem in South Sulawesi <ul style="list-style-type: none"> The data collection, field surveys, data analysis, presentation of the results of the activity, and submission of final report of activity 1.4 in South Sulawesi were completed. Mangrove Ecosystem in West Nusa Tenggara <ul style="list-style-type: none"> The data collection, field surveys, data analysis presentation of the results of the activity, and submission of final

				<p>Riau have been presented by the national expert, and the final report has been submitted in Q1 2022 (completed).</p> <p>② Karst lowland site in South Sulawesi Province</p> <ul style="list-style-type: none"> • Several meetings/maintenance 6 were conducted in Q4 2021 with Bulusaraung FMU Officials (completed). • Maps and Data sets in Bulusaraung FMU have been obtained from the scoping and spatial analysis (completed). • The research results from activity 1.4 in South Sulawesi have been presented by the national expert, and the final report has been submitted in Q1 2022 (completed). <p>③ Mangrove site in West</p>		<p>report activity 1.4 in West Nusa Tenggara were completed. The final report already submitted in the 2nd week of July 2022.</p>
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				<p>Nusa Tenggara</p> <ul style="list-style-type: none"> • Several meetings/maintenance 7 were conducted in Q1 2022 with Ampang Plampang FMU Officials and West Nusa Tenggara Province Environment and Forestry Service (completed). • Maps and Data sets in Ampang Plampang FMU, West Nusa Tenggara have been obtained from the scoping and spatial analysis (completed). • The research results from activity 1.4 in West Nusa Tenggara have been presented by the national expert, and the final report has been submitted in the 2nd week of July 2022 (completed). 		
1.5	Collect and analyze baseline data and information of carbon stock, emission,	Q4 2021, extended to Q1 and Q2 2022	<ul style="list-style-type: none"> • Baseline dataset of carbon stock and emission assessment before project obtained within 6 months Q4 	<p>① Tropical peatland site in Riau Province</p> <ul style="list-style-type: none"> • Baseline dataset of carbon stock and emission 	50% (48.95%); (97.31%)	<p>The activities 1.5 in three locations were completed as planned. The executed activities are:</p> <ol style="list-style-type: none"> 1. Peatland Ecosystem in Riau <ul style="list-style-type: none"> • The data collection and field surveys, data analysis, results presentation, and

	<p>biodiversity; and identification of potential commodities in three sites (Riau, West Nusa Tenggara, South Sulawesi)</p>		<p>of Y1</p> <ul style="list-style-type: none"> • Baseline dataset of biodiversity assessment before project in three sites (Riau, Bali, South Sulawesi) obtained within 6 months Q4 of Y1 • Potential commodities list based on site resources obtained within 6 months Q4 of Y1 	<p>assessment before project in Minas Tahura FMU obtained in Q1 2022 (completed).</p> <ul style="list-style-type: none"> • Baseline dataset of biodiversity assessment before project in Minas Tahura FMU obtained in Q1 2022 (completed). • Potential commodities list based on on-site resources in Riau obtained in Q1 2022 (completed). • The research results from activity 1.5 in Riau have been presented by the national expert, and the final report has been submitted in Q1 2022 (completed). <p>② Karst lowland site in South Sulawesi</p> <ul style="list-style-type: none"> • Baseline dataset of carbon stock and 		<p>final report of Activity 1.5 in Riau were completed.</p> <ol style="list-style-type: none"> 2. Karst Ecosystem in South Sulawesi <ul style="list-style-type: none"> • The data collection and field surveys, data analysis, results presentation, and final report of Activity 1.5 in South Sulawesi were completed.. 3. Mangrove Ecosystem in West Nusa Tenggara <ul style="list-style-type: none"> • The data collection and field surveys, data analysis and results presentation of Activity 1.5 in West Nusa Tenggara were completed. The final report will be submitted in the 2nd week of July 2022 (committed).
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				<p>emission assessment before project in Bulusaraung FMU obtained in Q1 2022 (completed).</p> <ul style="list-style-type: none"> • Baseline dataset of biodiversity assessment before project in Bulusaraung FMU obtained in Q1 2022 (completed). • Potential commodities list based on on-site resources in South Sulawesi obtained in Q1 2022 (completed). • The research results of activity 1.5 in South Sulawesi have been presented by the national expert, and the final reports has been submitted in Q1 2022 (completed). <p>③ Mangrove site in West Nusa Tenggara</p>		
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				<ul style="list-style-type: none">• Baseline dataset of carbon stock and emission assessment before project in Ampang Plampang FMU obtained in Q2 2022 (completed).• Baseline dataset of biodiversity assessment before project in Ampang Plampang FMU obtained in Q2 2022 (completed).• Potential commodities list based on on-site resources in West Nusa Tenggara obtained in Q2 2022 (completed).• The research results from activity 1.5 in West Nusa Tenggara have been presented by the national expert in Q2 2022 (completed). While the final report will be submitted in the 2nd week of July 2022 (committed).		
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Output 2. Current status and baseline data of socio-economics condition of three project sites (Riau, South Sulawesi, West Nusa Tenggara) made available by the first semester of Year 2						
2.1	Survey and assess data and information of Socio-economic (livelihood, economic assessment, market analysis) at the beginning and end of the project	Q1 and Q2 2022	<ul style="list-style-type: none"> Number of respondents (max. 30 participants) for socio-economics survey in each site Three meetings (with the communities in each site). Baseline dataset and information of Socio-economic condition (livelihood, economic assessment, market analysis) before project in three study sites (Q1 Y2) 	<p>① Tropical peatland site in Riau Province</p> <ul style="list-style-type: none"> Survey, observation, and interview with 35 respondents in Kepau Jaya FWSP and Minas Tahura FMU were conducted in Q2 2022 (completed). At least 2 meetings were conducted with the communities and village officials in Kepau Jaya FWSP and Minas Tahura FMU in Q2 2022 (completed). Baseline dataset and information of socio-economics condition are still being 11aintena. The research results and final report will be submitted in August 2022 (committed). <p>② Karst lowland site in South Sulawesi</p>	41.67% (23.20%) / (46.33%)	<p>Overall the activity 2.1 in three sites were executed well with some adjustments and extended times. The executed activities in each site are as follow:</p> <p>1. Peatland Ecosystem in Riau</p> <ul style="list-style-type: none"> The survey should be done in Q1, but due to the appointed researcher for National Expert (NE) moved to another institution (the National Research and Innovation Agency/BRIN) in different area, therefore we had to do a change of NE. And it took times, coupled with the fasting (Ramadhan) months in April and May that hindered to do the survey to the community. Therefore the survey only can be carried out in June and July. So for this activity, we extended the period to August 2022 to give time for the NE to analyze and write the final report. <p>2. Karst Ecosystem in South Sulawesi</p> <ul style="list-style-type: none"> The surveys was conducted in three villages with 60 respondents within and surrounding area of Bulusaraung FMU. The survey includes study of socio-economic and culture, community perception, gender analysis and stakeholder analysis. The research results and final report as the baseline dataset and information of socio-economics condition will be submitted in

				<ul style="list-style-type: none"> • Survey, observation, and interview with 60 respondents in Bulusaraung FMU were conducted in Q2 2022 (completed). • At least 2 meetings were conducted with the communities and village officials in Bulusaraung FMU in Q2 2022 (completed). • Baseline dataset and information of socio-economics condition are still being maintained. The research results and final report will be submitted in August 2022 (committed). <p>③ Mangrove site in West Nusa Tenggara</p> <ul style="list-style-type: none"> • Survey, observation, and interview with 60 respondents in Ampang Plampang FMU were conducted in Q1 		<p>the 2nd week of July 2022 (committed).</p> <p>3. Mangrove Ecosystem in West Nusa Tenggara</p> <ul style="list-style-type: none"> • The surveys was conducted in Q1 2022 with interview of 60 respondents, consisting 35 respondent from the mangrove forest area and 25 respondent from the villages out of mangrove area (agriculture area). The research results have been presented in Q2 2022 and the final report of activity has been submitted in 1st week of July 2022 (completed).
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				<p>2022 (completed).</p> <ul style="list-style-type: none"> At least 2 meetings were conducted with the communities and village officials in Ampang Plampang FMU in Q1 2022 (completed). Baseline dataset and information of Socio-economic conditions (livelihood, economic assessment, market analysis) before project in Ampang Plampang FMU were obtained (complete). The research results of activity 2.1 in West Nusa Tenggara have been presented by the national expert, and the final report has been submitted in Q2 2022 (completed). 		
Output 3. Prospective Commodities that have good market opportunities identified in three study sites by the first semester of year 2						
3.1	Investigate and conduct value chain analysis and market		<ul style="list-style-type: none"> Value chain result for each potential commodity and its market analysis in 	<p>① Tropical peatland site in Riau Province</p> <ul style="list-style-type: none"> Investigation and 	83.33% (64.77%); (64.77%)	Overall the activity 3.1 in three sites were executed well with some adjustments and extended times. The executed activities in each site are as follow:

	analysis of potential commodities		<p>one time</p> <ul style="list-style-type: none"> The highest and most prospective commodity value in one time 	<p>data collection for value chain analysis and market analysis of potential commodities are still ongoing. The first survey has been conducted in Q2 2022, additional surveys are still ongoing in July (ongoing).</p> <p>② Karst lowland site in South Sulawesi</p> <ul style="list-style-type: none"> Investigation and data collection for value chain analysis and market analysis of potential commodities in Bulusaraung FMU were conducted in Q2 2022 (completed). The analysis to find the highest and most prospective commodity value are still ongoing. The research results and the final report will 	<ol style="list-style-type: none"> Peatland Ecosystem in Riau <ul style="list-style-type: none"> The survey should be done in Q1, but due to the appointed researcher for National Expert (NE) moved to another institution (the National Research and Innovation Agency/BRIN) in different area, therefore we had to do a change of NE. And It took times, coupled with the fasting (Ramadhan) months in April and May that hindered to do the survey to the community. Therefore the survey only can be carried out in June and July. So for this activity, we extended the period to August 2022 to give time for the NE to analyze and write the final report. Karst Ecosystem in South Sulawesi <ul style="list-style-type: none"> The investigation and data collection for value chain analysis and market analysis of potential commodities have been conducted in Q2. The research results have been presented in Q2 2022 and the final report as the baseline dataset and information of value chain analysis and market analysis of potential commodities will be submitted in the 2nd week of July 2022 (committed). Mangrove Ecosystem in West Nusa Tenggara <ul style="list-style-type: none"> The investigation and data collection for value chain analysis and market analysis of potential commodities have been conducted in Q2. The research results
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				<p>be submitted in August 2022 (committed).</p> <p>③ Mangrove site in West Nusa Tenggara</p> <ul style="list-style-type: none"> Investigation and data collection for value chain analysis and market analysis of potential commodities in Ampang Plampang FMU were conducted in Q2 2022 (completed). The analysis to find the highest and most prospective commodity value are still ongoing. The research results and the final report will be submitted in the 2nd week of July 2022 (committed). 		<p>have been presented in Q2 2022 and final report as the baseline dataset and information of value chain analysis and market analysis of potential commodities will be submitted in the 2nd week of July 2022 (committed).</p>
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						
Output 6. Three sites for demonstration plot establishment appropriately located and technically designed						
6.1	Participatory rural appraisal (PRA) on demonstration	Q4 2021	<ul style="list-style-type: none"> Participant of 25-30 farmers at each site One FGD at each 	<p>④ Tropical peatland site in Riau Province</p> <ul style="list-style-type: none"> There were 4 	100% (56.01%); (56.01%)	The first preliminary surveys in the three sites were conducted in Q4 2021. The activities 6.1 in three locations were completed as planned. The

	plant site matching		project site to select plant species based on tree-site matching and other criteria.	<p>(four) meetings of FGD at Minas Tahura FMU which have been conducted at Kepau Jaya FWSP in Q4 2021 with a total of the participants about 75 respondents (completed).</p> <ul style="list-style-type: none"> • The data analysis and final report of activity 6.1 in Riau have been submitted in Q1 2022 (completed). <p>⑤ Karst lowland site in South Sulawesi</p> <ul style="list-style-type: none"> • There was one meeting of preliminary FGD at South Sulawesi in Q4 2021 (about 50 participants) (completed). • There were three additional meetings of FGD in Q1 2022 with a 	<p>executed activities are:</p> <ol style="list-style-type: none"> 1. Peatland Ecosystem in Riau <ul style="list-style-type: none"> • The data collection, interviews and FGDs, data analysis, results presentation, and final report of Activity 6.1 in Riau were completed. 2. Karst Ecosystem in South Sulawesi <ul style="list-style-type: none"> • The data collection, interviews and FGDs, data analysis, results presentation, and final report of Activity 6.1 in South Sulawesi were completed. 3. Mangrove Ecosystem in West Nusa Tenggara <ul style="list-style-type: none"> • The additional survey in West Nusa Tenggara were conducted in Q1 2022 to find a new demonstration plot for mangrove restoration. • The data collection, interviews and FGD, data analysis, and results presentation of Activity 6.1 in West Nusa Tenggara are complete (completed). The final report will be submitted in the 2nd week of July (committed).
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				<p>total participant about 90 participants (completed).</p> <ul style="list-style-type: none">• The data analysis and final report of activity 6.1 in Riau have been submitted in Q1 2022 (completed). <p>⑥ Mangrove site in West Nusa Tenggara</p> <ul style="list-style-type: none">• The data collection, interviews, and one meeting of FGD have been conducted in Q1 2022 with a total participant about 79 participants (completed).• The data analysis and results have been presented in Q2 2022 (completed). The final report will be submitted in the 2nd week of July 2022 (committed).		
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Output 7. Demonstration plots in 3 types area established in three sites at least 10 ha each site						
7.1	Establishing demonstration plots	Q4 2021	<p>-Planting stocks individuals by species at least 5000 seedlings per site</p> <p>-Temporary nurseries are established</p> <p>-Planting seedlings</p>	<p>① Tropical peatland site in Riau Province</p> <ul style="list-style-type: none"> Planting stocks prepared are liberica coffee (<i>Coffea liberica</i>) (1450), cajuput (<i>Melaleuca leucadendra</i>) (1000), <i>Shorea</i> spp. (650), pinang batara (<i>Areca catechu</i>) (750), tampui (<i>Baccaurea macrocarpa</i>) (650), petai (<i>Parkia speciosa</i>) (150), pulasan (<i>Nephelium mutabile</i>) (500), aren (<i>Arenga pinnata</i>) (500), and matoa (<i>Pometia pinnata</i>) (500), in total about 6.150 planting stocks. One working hut and boreholes water well were 	<p>83.33% (68.86%); (68.86%)</p>	<p>Overall the activity 7.1 in three sites were executed well with some adjustments and extended times. The executed activities in each site are as follow:</p> <ol style="list-style-type: none"> Peatland Ecosystem in Riau <ul style="list-style-type: none"> Previously there are two locations of peatland demplot, 5 ha in Kepau Jaya FWSP and 5 ha in Minas Tahura FMU. But, since the results of first survey in Minas Tahura FMU showed that the peat in the area was quite deep (>10 m) with forest coverage of over 95% thus improving carbon stock in the area is irrelevant, then the adjustment was made to relocate the demplot into 10 ha in Kepau Jaya FWSP. The working hut and boreholes (water well) were already done. The hut and water well were built in the agroforestry block because these structures would support the agroforestry activity. In the agroforestry block (3 ha), land preparation, stake planting, planting holes, and seedlings planting were already accomplished. The seedlings planted in this block were liberica coffee (<i>Coffea liberica</i>) (endemic peat area), cajuput (<i>Melaleuca leucadendra</i>), and <i>Shorea</i> spp. In the palm oil block (3 ha), stake

				<p>built.</p> <ul style="list-style-type: none"> As 30 June 2022, the block of agroforestry A and B were planted with 1.875 tree seedlings of liberica coffee, cajuput, and <i>Shorea</i> spp. <p>② Karst lowland site in South Sulawesi</p> <ul style="list-style-type: none"> Planting stocks were prepared with mixed of MPTS (1.140 seedlings) and mixed forest trees (4.375 tree seedlings), in total about 5.515 planting stocks. Two temporary nurseries were established, one in Makassar for transit nursery and another one on-site for acclimatization nursery. 		<p>planting, planting holes, and seedlings of liberica coffee (<i>Coffea liberica</i>) and <i>Shorea</i> spp. Were done.</p> <ul style="list-style-type: none"> The development of the secondary forest block (4 ha) is planned to be accomplished by the end of July, with the availability of the required seedlings as the critical point. <p>2. Karst Ecosystem in South Sulawesi</p> <ul style="list-style-type: none"> The first survey in 2021 have decided to build demonstration plot about 10 ha in Dusun Tala-tala, within Bulusaraung FMU, Makassar, South Sulawesi Province. The executed activities in establish demplot are: designed demplot together with Activity 6.1, prepared the planting stocks and seedlings, established the temporary nursery, built the working hut and water well as well as installed water irrigation, planted the seedlings, and 19aintenance with fertilizer and pesticides. Planting is designed with an agroforestry pattern with a combination of plant types: forestry (Mahogany (<i>Swietenia mahagoni</i>), Red Jabon (<i>Neolamarckia macrophylla</i>), White Jabon (<i>Neolamarckia cadamba</i>), Tanjong (<i>Mimusops elengi</i>), Nyatoh (<i>Palaquium obtusifolium</i>), Ebony (<i>Diospyros celebica</i>)) and MPTS plants (Multi Purpose Tree Species) in the form of Rambutan (<i>Nephelium lappaceum</i>),
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				<ul style="list-style-type: none"> Plantation: in total 4000 tree seedlings were planted in the main research plot with spacing 5x5 m, with additional tree seedlings in surrounding of plot by community. <p>③ Mangrove site in West Nusa Tenggara</p> <ul style="list-style-type: none"> The planting stock previously was prepared by the community by propagules of mangrove trees from the surrounding area, but the growth rate is low, less than 15%. The available planting stock for the community is around 7000 seedlings. The rest about 24.000 pcs are 		<p>Mango (<i>Mangifera indica</i>), Breadfruit (<i>Artocarpus altilis</i>), Durian (<i>Durio</i>), Nutmeg (<i>Myristica fragrans</i>), <i>Calliandra</i> and <i>Eucalyptus</i>. To make it easier to distinguish the types of plants, each types of plants are labeled with different colors according to the colors on the design. In this design, 4 treatments of agroforestry cropping patterns were designed with 3 blocks of each treatment as replication.</p> <ul style="list-style-type: none"> Monitoring and evaluation of growth rate are still being carried out. <p>3. Mangrove Ecosystem in West Nusa Tenggara</p> <ul style="list-style-type: none"> The survey to find a new location for mangrove site have been done in Q1 2022. The demonstration plot for mangroves was built in Sinar Jaya hamlet, Sepayung village, Plampang sub-district, Sumbawa district. Administratively, the location is included in the management area of the Ampang Plampang FMU Sumbawa, the demonstration plot location is an encroached area of former logging intended for the expansion of aquaculture (illegal fish ponds) areas. Naturally, there are several types of mangroves that can be found around the demonstration plot locations, namely: <i>Rhizophora mucronata</i>, <i>Avicennia alba</i>, and <i>Sonneratia alba</i>. The demonstration plot was developed in collaboration with a local farmer group, namely the Nanga Gali
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				<p>purchased from mangrove tree breeders in Lombok.</p> <ul style="list-style-type: none"> • One temporary nursery was established for propagating and acclimatization process. • Per June 30, about 19,000 seedlings have been planted, with details of 7,000 from groups and 12,000 seeds from breeders. The types of mangrove planted are <i>Rhizophora mucronata</i> and <i>R. apiculata</i> with the condition of the plants up to now is quite good and the growth percentage is above 90%. 		<p>Farmer Group in Sinar Jaya Hamlet.</p> <ul style="list-style-type: none"> • So far, 19,000 seedlings have been planted, with details of 7,000 from groups and 12,000 seeds from third parties. The types of mangrove planted are <i>Rhizophora mucronata</i> and <i>R. apiculata</i> with the condition of the plants up to now is quite good and the growth percentage is above 90%. Currently in the process of acclimatization as many as 12,000 seedlings and will soon be planted when the seeds are ready. The demonstration plot construction will be completed in July 2022.
Output 8. Demonstration plot at each project site is well maintained and monitored at the interval of 6 months after planting						
8.1	Maintenance	Q1 and	Growth data set	The maintenance and	6.67%	Due to unfinished the activity 7.1

	growth monitoring of the demonstration plots	Q2 2022	includes the survival rate, height, diameter (after seedling reaching > 1.3 m), health status at, 6 MAP, 12 MAP, 18 MAP, 24 MAP, and 30 MAP.	growth monitoring will be start on July in 10 ha of karst demplot in South Sulawesi; 10 ha of mangrove demplot in West Nusa Tenggara, and in August of 6 ha peatland in Riau Province.	(1.15%); (3.46%)	demonstration plots in Riau and West Nusa Tenggara, the activity 8.1 was delayed to be implemented. The completed activity is the monitoring of 1 month demplot in South Sulawesi.
Objective 4: To transfer techniques and awareness of project model establishment to relevant stakeholders through Synthesis, policy practice recommendations, and disseminations						
Output 9. Technique and awareness of project model transferred to project stakeholders through workshops, policy briefs, and publications						
9.2	Publication and dissemination (workshop, seminar, conference, publications)	Q2 2022	<ul style="list-style-type: none"> One international conference will be attended (WFC-May 2022) 	A team from AfoCO 023/2021 attended the Annual Technical Meeting of AfoCO and the World Forest Congress in Seoul from 28 April to 7 May	12.5% (19.67%); (117.42%)	A team from AfoCO/023/2021 consisting of the Director of CSSFMI, the Project Manager, The former Project Manager, and the Program Officer were attended the Annual Technical Meeting of AfoCO and the World Forest Congress in Seoul from 28 April to 7 May. The project only funded 2 people, the former project manager and the program officer and the additional day costs for Director and PM.
9.3	Review, monitoring, evaluation: mid-term, annual review, and reporting substance and financial	Q4 2021	<ul style="list-style-type: none"> Review, monitoring, evaluation: mid-term, annual review, and reporting substance and financial 	To ensure project activities are going according to project plan and to overcome obstacles in the field, a number of meetings and coordination have been held, both in-field visits and online meetings.	33.33% (39.23%); (264.64%)	During the 1 st semester of 2022, there were 2 field visits and 3 meetings online with local stakeholders. The meeting lists as follows: 7-9 March 2022: AfoCO team visited Kepau Jaya FWSP as a plantation site and met the Head of Riau Province Environment and Forestry Service. 15-18 June 2022: AfoCO team visited Ampang Plampang FMU to supervise the progress of the mangrove plantation and discuss with the Head of West Nusa Tenggara Province Environment and Forestry Service.
9.4	Management for support operation	Q4 2021	Office supplies, computers, AIO printer	Office supplies, office cabinet, portable	58.33% (52.04%);	In the 1 st semester of 2022 we purchased office cabinet for storing the project files/documents,

			with scanner, subscribe to Wifi/internet connection, LCD projector, drone, camera, consumables, and domestic duty travel	soundssystem, zoom pro subscription, google one subscription (google drive quota), and consumables	(84.43%)	portable soundssystem for supporting our activity, subscribed zoom pro for host an online meeting, and subscribed google one to increase our google drive quota which will be used for document storage and data backup. Other office supplies procurement will be carried over to Semester 2 (Q3 Q4) 2022 (GPS and board).
9.5	Staff resources	Q4 2021	- Monthly salary receipts - Bills and receipts of all expenditures .	<ul style="list-style-type: none"> • Monthly honorarium receipts • Bills and receipts of all expenditures. 	33.33%; (30.74%); (92.22%)	Monthly honorarium for Project Coordinator, Program officer, administration staff, and finance staff were already paid for 6 months (January-June 2022). This percentage is refer to total budget for 3 years project.

3. Issues, Concerns and Actions Taken

3.1. Issues & Lessons Learned

Description of Issues	Actions Taken and Lessons Learned
Authority change of Forest Management Unit	<p>By Government Law Number 33 Year of 2021, the authority of Forest Management Unit to run a commercial business in forest area is no longer allowed. Thus, the project objectives number and (2) : “To facilitate the preparation of business plans of the Forest Management Units (FMUs) at three study sites” and target output “Developed Business Plans of the FMUs in three study sites” should be adapted.</p> <p>Discussion with stakeholders suggested that the business plan can be targeted to business development of the farmer groups which in line with FMU Management Plan.</p>
Remain budget from several activities	<p>Project activities finished in this semester leave some budget. The remaining budget occurs due to hiring several experts which come from the same province, therefore airfare is not needed. In addition, the exchange rate of US dollar to rupiah is quite high, causing smaller budget in US dollar to conduct activities.</p> <p>Below the completed activities which have remaining budget from Q1 and Q2 Year 2:</p> <ul style="list-style-type: none"> ▪ 1.2 : Kick Off meeting: 817.59 USD 100% (51.71%); (51.71%) ▪ 1.4. Remote sensing, GIS data collection and analysis : 3,447.19 USD 100%; (74.00%); (74.00%) ▪ 6.1 Participatory Research Action on tree-site matching: 13,549 USD 100% (56.01%); (56.01%) <p>We will propose those remaining budget to be added to the capacity building budget (ouput 4 & 5); and output 9</p>
Changing site for mangrove restoration	<p>Previously in 2021 the survey in Bali resulted that the demonstration site for mangrove restoration in Bali was unavailable. Therefore, we had surveyed the potential site in West Nusa Tenggara. There are 2 (two) potential sites, namely Rinjani Timur FMU in Lombok and Ampang Plampang FMU in Sumbawa. Based on the observation about the access, the biophysics condition, and the community participation, the project management and stakeholders decided to have the</p>

	demonstration plot in Ampang Plampang FMU, Sumbawa, West Nusa Tenggara. To recruit the national experts we communicated with the Center for the Application of Environmental and Forestry Standards Instrument (CAEFSI) Mataram (previously the FOERDIA Agency). We cooperated with 4 experts from CAEFSI Mataram and 2 experts from BRIN (previously FRDC Bogor) to execute the research activities.
Changing National Experts: Due to the organizational movement from MOEF to BRIN, there are 2 national experts from Riau resigned because they also moved to another area.	We communicated with the head of CAEFSI Riau to appoint new national experts for Activity 2.1 and 3.1 in Riau. We held a zoom meeting to bridge the previous plans of activity from the former Nes to the new Nes. We extend the period of activity to Q3 (July-August) 2022 to give time for Nes to collect data and write the final report.
The unsuitable area for peatland restoration in KPH Minas Tahura, Riau	Based on the spatial, biodiversity, and forest cover surveys, the appointed 5 ha area in Minas Tahura FMU was irrelevant to be the restoration area. The peat in the area was quite deep (>10 m) with forest coverage of over 95% and a high density, thus improving carbon stock in the area is irrelevant since the forest is relatively in good condition. Then we communicate with the management of Minas Tahura FMU and Kepau Jaya FWSP and decided to have a full 10 ha of demonstration plot of peatland in the Kepau Jaya FWSP. Adjustments were then made on plot design, forest farmer group, and planting species to accommodate the change of plan. Currently, the plantation is finished in 6 ha or area, and the rest will be carried out in Q3 2022 (extended time for Activity 6.2 in Riau).
Maintenance growth monitoring of the demonstration plots delayed waiting the activity 7.1 finish	Due to unfinished the activity 7.1 demonstration plots in Riau and West Nusa Tenggara, the activity 8.1 was delayed to be implemented.

3.2. Photo Record

 <p>Activity 1.4 Land Cover at Ampang Plampang FMU, West Nusa Tenggara (Remote sensing and GIS data collection)</p>	 <p>Activity 1.4 Land Cover at Bulusaraung FMU in South Sulawesi (Remote sensing and GIS data collection)</p>
 <p>Activity 1.5 Weighing litter samples in the field of Ampang Plampang FMU, West Nusa Tenggara (Carbon stock, emission and biodiversity data collection)</p>	 <p>Activity 1.5 Taking soil sample for carbon stock assessment in Pine Forest, Bulusaraung FMU, South Sulawesi (Carbon stock, emission and biodiversity data collection)</p>
 <p>Activity 2.1 Interview with local communities of Ampang Plampang FMU, West Nusa Tenggara (Socio-economic data assessment)</p>	 <p>Activity 3.1 Visiting bamboo harvesting locations which are potential commodities from Ampang Plampang FMU, West Nusa Tenggara (Investigate and conduct value chain analysis)</p>



Activity 6.1 Interview with member from forest farmer group in Tala-tala Village, Bulusaraung FMU, South Sulawesi Province (PRA on tree-site matching)



Activity 6.1 FGD and Interview with community groups in Ampang Plampang FMU, West Nusa Tenggara



Activity 7.1 Coffee seeds planting in Kepau Jaya FWSP (Demo-plot establishment)



Activity 7.1 Work hut and water installment were built near the site location in Bulusaraung FMU, and seed arrangement at nursery (Demo-plot establishment)



Activity 9.3 Coordination with stakeholders from Minas Tahura FMU, Riau Province (Monitoring and evaluation)

Activity 9.3 Coordination with stakeholders from Ampang Plampang FMU and Environment and Forestry Service, West Nusa Tenggara Province, and field visit for activity progress updates (Monitoring and evaluation)

1. Appendices

4.1. Updates on the project map



Figure 1. Demonstration Plot Map Kepau Jaya Forest Area with Specific Purpose



Figure 2. Demonstration Plot Map Minas Tahura FMU

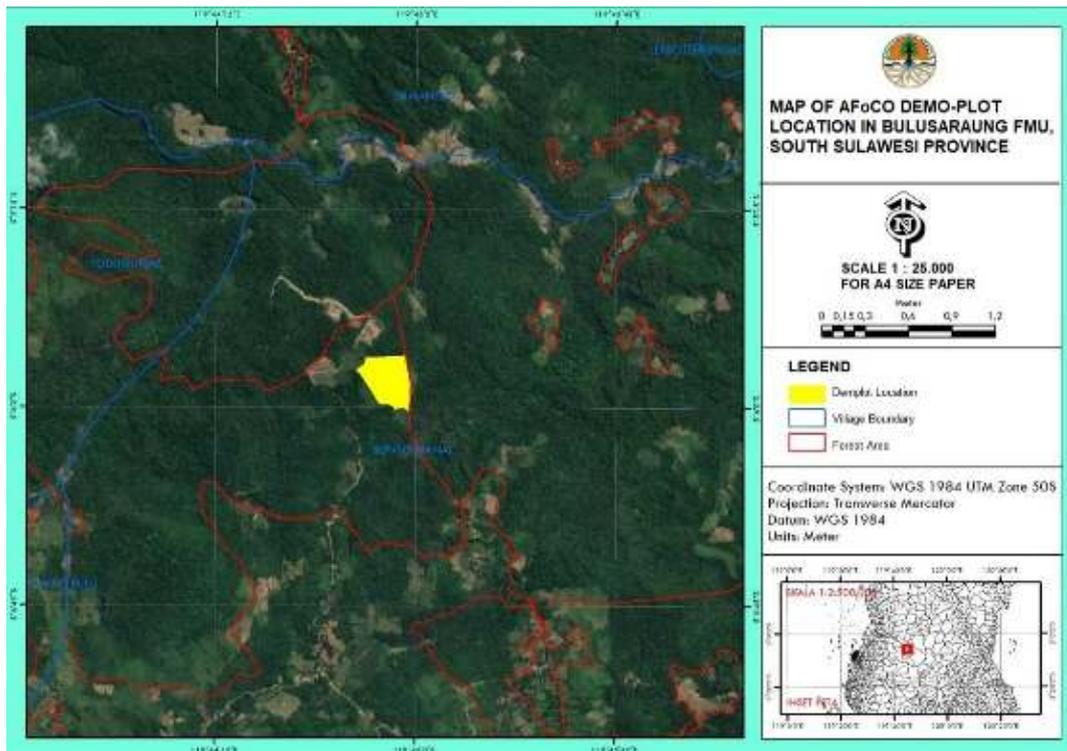


Figure 3. Demonstration Plot Map in Bulusaraung FMU

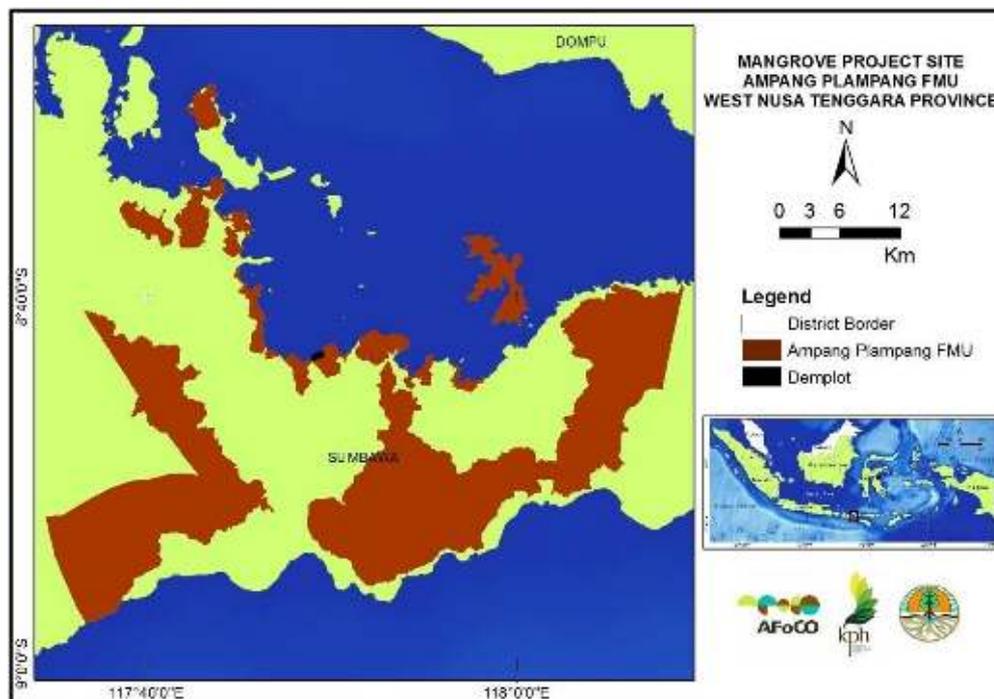


Figure 4. Mangrove Ecosystem Project Site in Ampang Plampang FMU, West Nusa Tenggara



Figure 4. Condition of Mangrove site in Ampang Plampang FMU, West Nusa Tenggara

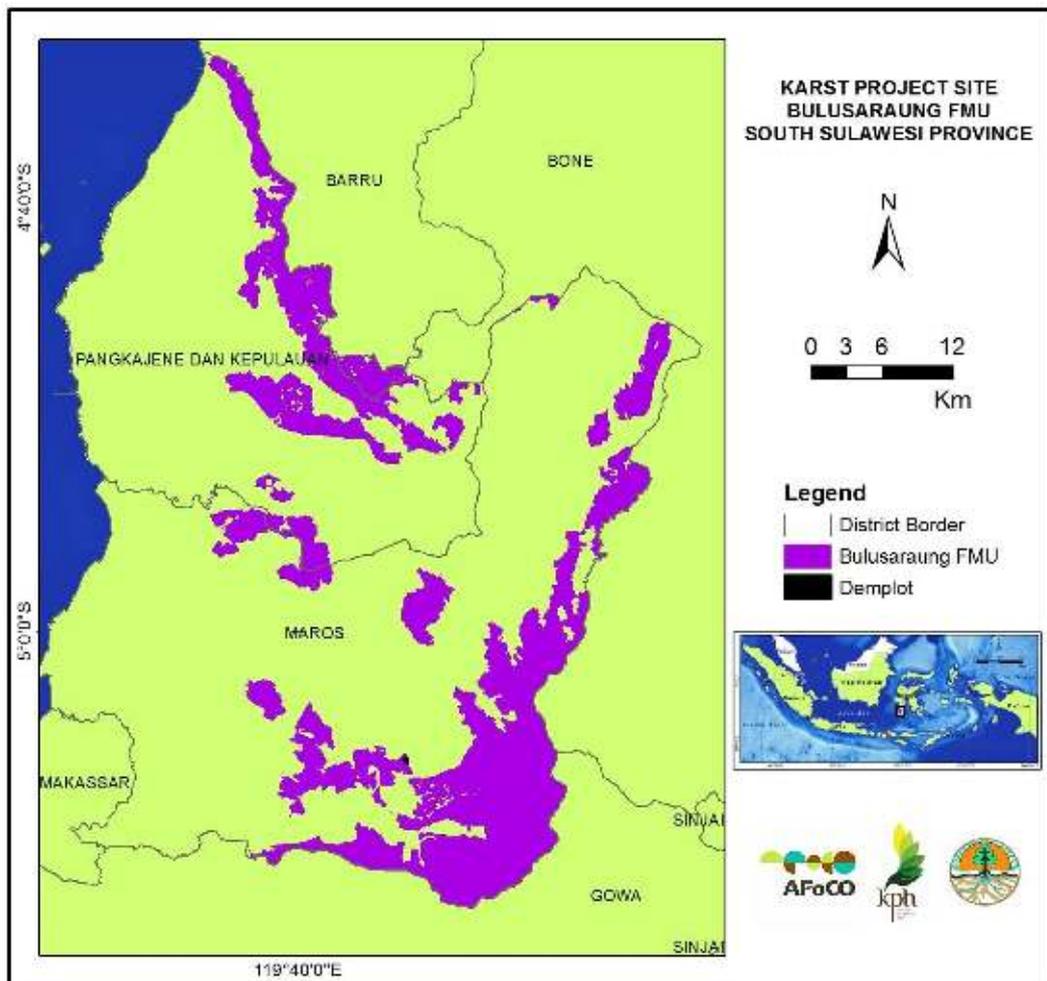


Figure 5. Karst Project Site Map at Bulusaraung FMU

4.2. Updates on the capacity development activities (training / meetings / workshops)

Outputs/ Activities	2022						Main target					
	Total number	Achieved		Total number	Achieved			Total number	Achieved			
		Male	Female		Male	Female			Male	Female		
6.1. PRA on tree Site matching in West Nusa Tenggara				22	20	2						

4.3. Updates on the advocacy materials

No.	Inventory code	Type	Title	Number	Year	Language	Submission to the Secretariat
1	SA.02/A.9.1/AFOCO/023/4/2022	Audio-visual presentation	Project Profile Video	2	2022	Indonesian and English	June 30, 2022
2	-	News articles	-	-	-	-	-
3	SA.01/A.1.3/AFOCO/023/7/2021	Brochure	Info Brief	1	2021	Indonesian	January 15, 2022
4	-	Manual	-	-	-	-	-
5		Research article	-	-	-	-	-
6	-	Proceedings	-	-	-	-	-

4.4. Updates on the procurement status

No.	Inventory code	List (model description)	Plan	Actual	Location	Remarks
1	HA.01/A.9.4/AFOCO/023/10/2021	Lenovo Desktop AIO IdeaCentre A340-24IWL Color: Black CPU: Intel i3-10110U 2.1 GHz SSD: 512 Gb RAM: 4 Gb OS: Win 10 Home SL Display: 23.8" LED Panel Monitor Keyboard & Mouse: USB Wired	1 qty	1 qty	Bogor	
2	HA.02/A.9.4/AFOCO/023/10/2021	Lenovo Notebook IdeaPad 5 14ITL05	1 qty	1 qty	Bogor	

No.	Inventory code	List (model description)	Plan	Actual	Location	Remarks
		Color: Graphite Grey CPU: Intel i5-1135G7 2.4 GHz SSD: 512 Gb RAM: 8 Gb GPU: GeForce MX450 Display: 14" FHD IPS Battery: 3 Cell OS: Windows 11 Home SL				
3	HA.03/A.9.4/AFOCO/023/10/2021	HP Printer Ink Tank 315 All-in-One Color: Black Print: - Print Speed : ISO Black 8 ppm Color 5 ppm / Draft Black 19 ppm Color 16 ppm - Max. Resolution : 4800 x 1200 dpi - Max. Media Size : A4 Scan: - Type: Flatbed - Resolution: Up to 1200 x 1200 dpi - Scan speed (normal, A4): Up to 21 seconds - Max. Media Size: 216 x 297 mm Copy: - Speed Copy: Black & Color Up to 600 x 300 dpi	1 qty	1 qty	Bogor	
4	HA.04/A.9.4/AFOCO/023/10/2021	HP Printer DeskJet Ink Advantage 2336 All-in-One Color: White Print: - Print Speed (ISO) Black: 7.5 ppm; Color: 5.5 ppm - Warranty (on site one to one exchange): 3 years - Page yield: 480 (B) / 150 (C) - Up to 1000 pages - Media sizes supported: A4; B5; A6; DL envelope - Media types: Plain paper, Photo paper, Brochure paper Scan: - Scan Resolution,	1 qty	1 qty	Bogor	

No.	Inventory code	List (model description)	Plan	Actual	Location	Remarks
		<p>Hardware Up to 1200 x 1200 dpi</p> <ul style="list-style-type: none"> - Scan Resolution, Optical Up to 1200 dpi - Scan file format: JPEG, TIFF, PDF, BMP, PNG - Color scanning: Yes - Scan size, maximum: 216 x 297 mm <p>Copy:</p> <ul style="list-style-type: none"> - Copies, maximum: Up to 9 copies - Copier settings: Auto-enlarge - Colour copy capability: Yes 				
5	HA.05/A.9.4/AFoCO/023/10/2021	<p>Epson EB-E500 XGA 3LCD Projector Color: White</p> <ul style="list-style-type: none"> - Projection Technology: RGB liquid crystal shutter projection system (3LCD) - Brightness: White Light Output (Normal/Eco): 3,300 lm - Connectivity: USB Interface: USB Type B: 1 (For Firmware Update, Copy OSD Settings) - Screen Size (Projected Distance): Standard Size: Tele: 22" to 259" [0.87 to 10.34 m] Wide: 30" to 350" [0.87 to 10.34 m] - Dimension Excluding Feet (W x H x D): 302 x 77 x 234 mm - LCD: Native Resolution: XGA (1024 x 768) Size: 0.55" (C2fine) - Maintenance Cycle: 6,000 / 12,000 hours*3 	1 qty	1 qty	Bogor	
6	HA.06/A.9.4/AFoCO/023/10/2021	<p>Sony CyberShot DSC-H300 Camera Color: Black Product Highlights:</p>	1 qty	1 qty	Bogor	

No.	Inventory code	List (model description)	Plan	Actual	Location	Remarks
		<ul style="list-style-type: none"> - 20.1 MP 1/2.3" Super HAD CCD Sensor - 35x Optical Zoom 4.5-157.5mm Lens - 25-875mm (35mm Equivalent) - 3.0" 461k-Dot Clear Photo LCD Screen - 1280 x 720 HD Video Recording at 30 fps - Optical SteadyShot Image Stabilization - ISO Range of 80-3200 - Built-In Flash - Face Detection, Panorama, & Other Modes - Works with 4 AA Battery - Warranty 1 year from Sony Indonesia 				
7	HA.07/A.6.1/AFOCO/023/12/2021	<p>Sony Voice Recorder ICD-PX740</p> <p>Specification: Dimension: 38.3 x 114.1 x 19.3mm Built-in Memory: 4GB Built-in Stereo Microphone Recording Format: MP3 / L-PCM Playback Format: MP3 / WMA / AAC-LC / L-PCM Battery Type: Dry Battery 2 x AAA Battery Maximum files (total): 5000</p>	1 qty	1 qty	Bogor	
8	HA.08/A.9.4/AFOCO/023/2/2022	<p>High Filing Cabinet Swing GLS PA</p> <p>Specifications: Material: Steel with powder coating Product dimensions: 90 x 40 x 185 cm Shelf capacity: up to 40 kg Cabinet filing plate thickness: >0.7 mm Length: 90 cm Width: 40 cm Height: 185 cm Number of Office Cabinets: 5 Office Cabinet With Lock : yes Cabinet Leg Material: metal Cabinet Frame Material:</p>	1 qty	1 qty	Bogor	

No.	Inventory code	List (model description)	Plan	Actual	Location	Remarks
		metal				
9	HA.09/A.9.4/AFoCO/023/6/2022	HUPER JL-12 Speaker Soundssystem Portable Wireless Specification: 12 Inch Loud Power 150 Watt Bluetooth Available USB port Mic Wireless Handheld, 2 unit Mic Cover, 10 pcs Battery Type: Dry Bater, 4 x AA Battery	1 qty	1 qty	Bogor	