

Project Completion Report

The Project

for

Increasing Farmers Households' Income through Strengthening Domestic Rice Production in Timor-Leste

Submission Date: November 14th, 2023

Japan International Cooperation Agency (JICA)

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*This Project Completion Report was prepared based on the Writing Guidelines for Project Completion Report of the Japan International Cooperation Agency (JICA).
The Report was prepared mainly by the Project Director, Co-project Manager and Project Sub-manager of the Timor-Leste side and JICA Long-term Expert of the Japan side as follows page.*

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*1 and *2: As of September, 2023

*3: The term of Project Sub-manager means responsible Counterpart Personnel (C/P) for each Output, and the person who was appointed at Joint Coordinating Committee (JCC) meeting as Sub-manager.

The new H. E. Minister of Ministry of the Agriculture, Livestock, Fisheries, and Forestry as well as Secretary of States for Fisheries, Secretary of States for Livestock and Secretary of States for Forestry were appointed at the inception of the 9th Constitutional Government on July 1st, 2023.

The new Director General for Agriculture and the new Director General for Cooperation and Institutional Development were appointed on September 1st, and accordingly, some National Directors were also appointed on the same day.

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Abbreviations

ACIAR	Australian Center for International Agricultural Research
AI-Com	Agricultural Innovations for Communities for intensified and sustainable farming systems in Timor-Leste
CMEA	Coordinating Minister of Economic Affairs
COVID-19	Coronavirus Disease 2019
C/P	Counterpart Personnel
DG	Director General
DSR	Direct-Seeded Rice
FD	Farmers Dialogue
FFS	Farmer Field School
FRL	Farmers Resister List
FS	Field Staff (Project)
FVC	Food Value Chain
GA	Global Agenda (JICA)
GAP	Good Agriculture Practice
GK	Gate Keeper
GKRM	Gate Keeper Regular Meeting
GHG	Greenhouse Gas
GPS	Global Positioning System
HQ	Headquarter
IMM	Irrigation Management Manual
IS	Irrigation Scheme
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
KCCP	Knowledge Co-Creation Program
KONSSANTIL	The National Council for Food Security, Sovereignty and Nutrition in Timor-Leste
LF	Lead Farmer
MAF	Ministry of Agriculture and Fisheries
MALFF	Ministry of Agriculture, Livestock, Fisheries, and Forestry
MF	Model Farmer
MIO	Municipality Irrigation Officer
MoEYS	Ministry of Education, Youth, and Sports
MoF	Ministry of Finance

MRC	Maliana Rice Commission
MS	Monitoring Sheet
MTCI	Ministry of Tourism, Commerce and Industry
ND	National Director
O&M	Operation and Maintenance
NS	National Staff (Project)
OECD-DAC	Organization for Economic Co-operation and Development - Development Assistance Committee
OJT	On the Job Training
OVI	Objectively Verifiable Indicator (of PDM)
PAD	Pratika Agrikola Diak (Good Agriculture Practice (GAP) in Tetun language)
PDM	Project Design Matrix
PIM	Participatory Irrigation Management
PO	Plan of Operation
RD	Record of Discussions
RI	Rotational Irrigation
RM	Representative Meeting
RMEM	Regular Monthly Extension Meeting
RSM	Regular Secretariat Meeting
SECOOP	Secretary of State for Cooperatives
SOP	Standard Operating Procedure
SSG	Scouring Sluice Gate
SW	Socialization Workshop
TG	Task Group
TPR	Trans-Planted Rice
TOMAK	To'os ba Moris Di'ak or Farming for Prosperity
ToT	Training of Trainers
UNTL	National University of Timor Lorasa'e
UWA	University of Western Australia
WFP	World Food Programme
WRC	WUA Regeneration Committee
WUA	Water Users Association

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I. Basic Information of the Project

1. Country

The Democratic Republic of Timor-Leste

2. Title of the Project

The Project for Farmers Households' Income through Strengthening Domestic Rice Production in Timor-Leste

3. Duration of the Project (Planned and Actual)

Planned: 12th September 2016 – 11th September 2021 (5 years)

Actual: 12th September 2016 – 11th December 2023 (7 years and 3 months) (Amended Record of Discussion (RD): November 4, 2020)

4. Background (mainly based on Record of Discussions (RD))

In the Democratic Republic of Timor-Leste (hereinafter referred to as "Timor-Leste"), agriculture is the major industry, accounting for only 8.6% of GDP but employing 26.9% of the population. As the country highly depending on oil and natural gas production, promoting the development of industries based on agriculture is an important issue.

Under the circumstances, the government of Timor-Leste formulated "the Strategic Development Plan 2011-2030" in 2011 as the basis for nation-building until 2030. The plan has prioritized agriculture as one of key development sectors and articulated to achieve rice self-sufficiency by 2020 by setting development goals such as improving farming technologies, increasing food production, and improving the self-sufficiency rate of rice. However, the rice self-sufficiency rate in 2021 is about 30%, and imported rice currently takes up about 70% of domestic rice consumption. In addition, the influx of low-priced imported rice is increasing year by year, while the domestic planted/harvested areas for rice peaked at 46,000ha in 2008 and has since been declining.

In order to improve the food security and food self-sufficiency rate, the challenges are: (1) lack of input materials (high quality seeds, fertilizers, insecticides, pesticides, etc.) and cultivation techniques, (2) unstable water distribution due to improper management of irrigation facilities and organizational system, (3) underdeveloped domestic rice selling/purchasing, post-harvest processing, stock and distribution system in local farmers and private sectors, and (4) untimely manner and unstable by the Governmental support for the purchase and distribution system. This situation has caused a decrease/stagnation in rice productivity, in farmers' motivation to produce rice, and in the proper distribution of domestic rice, thus creating a situation that hinders the supply of domestic rice as a whole. In order to improve the food security and the food self-sufficiency rate in Timor-Leste, it is necessary to realize an appropriate income through rice production, providing incentives for farmers to rice production through a consistently functioning value-chain of production, processing, distribution and marketing.

In light of the above, MALFF¹, NLC² and JICA are implementing *the Project for Increasing Farmers Households' Income Through Strengthening Domestic Rice Production in Timor-Leste* (hereinafter

¹ The election for parliament members was held on May 21, 2023, and the new cabinet was inaugurated on June 21, 2023. On July 3, the new Minister of MAF was appointed and at the same time MAF was reorganized as Ministry of Agriculture, Livestock, Fisheries, and Forestry (MALFF).

² MCIE (Ministry of Commerce, Industry and Environment) was purchasing domestic rice at the time of the Detailed Planning Survey. Now, NLC (National Logistic Center) is in charge of purchasing domestic rice. NLC was under MTCl at the time of Mid-term review, under CMEA when the extension of the Project was decided, and under MTI at present.

referred to as "the Project") targeting the entire country (mainly the Maliana I Irrigation Scheme the Buluto Irrigation Scheme).

The Project aims to;

- (1) improve the farming techniques of rice farmers in selected areas,
- (2) strengthen the operation and maintenance capacity of irrigation facilities,
- (3) build a domestic rice distribution and marketing model by the private sector,
- (4) improve domestic rice purchasing and distribution system by the government,
- (5) share the lessons learned from the Project, and
- (6) prepare options necessary for the policy formulation of domestic rice promotion by stakeholders, thereby increasing farmers' household income in the target area with rice production through the improvement of rice value-chain (production, processing, distribution, marketing and consumption).

Thus, contributing to the improvement of livelihoods of farmers' households.

5. Overall Goal and Project Purpose (from Record of Discussions (RD)³)

5-1. Super Goal

Livelihood of farmers living in Timor-Leste is improved through increase in income by improved rice value-chain.

5-2. Overall Goal

The improved rice value chains are sustained in Buluto and Maliana I.

5-3. Project Purpose

Farmers households' income from rice production in the project sites is increased through the improvement of rice value-chain (Production, Harvesting, Post-harvest and Processing, Distribution, and Sales/Consumption) achieved by collaborative approach*.

*: Collaborative approach requires all stakeholders to understand their appropriate roles and responsibilities and to work together.

6. Implementing Agency

Ministry of Agriculture, Livestock, Fisheries, and Forestry (MALFF), National Logistic Center (NLC), Local Authorities in the Project Sites

7. Project Sites (each Output (Summary of each Output are described in Table 1 in detail))

Output 1: Buluto and Maliana I irrigation schemes, and its surrounding area

Output 2: Buluto and Maliana I irrigation schemes

Output 3: Buluto and Maliana I irrigation schemes, its surrounding area, and Dili

Output 4: Buluto and Maliana I irrigation schemes, and its surrounding area, Rice stockpiling warehouses in Dili and Maliana

Output 5: Areas outside Buluto and Maliana I irrigation schemes

Output 6: Whole country

³ Latest PDM: PDM Ver. 4.0, amended RD dated 24 March, 2023

8. Target Group

Direct Target Groups: Staff of Respective Ministries and Municipalities, Targeted Farmers in Baucau, Manatuto, Bobonaro and other municipalities, and Targeted Rice Retail Traders

Indirect Target Groups: All Farmers in Baucau, Manatuto, Bobonaro and other targeted areas, Private Sector related to Rice Distribution and Marketing, and Consumers

9. Implementing Organization and Joint Coordinating Committee (JCC)

Project Organizational Charts are given in Fig. 1 and Fig. 2. The roles and assignment of Project Director are responsible for overall administration and implementation of the Project and appointed to Director General (DG of Agriculture of MALFF (Fig. 1)⁴.

As mentioned above, for the achievement of the Project Purpose, 6 Outputs were composed and activities in each Output are supervised by the National Director/Executive Director as Project Sub-manager and Japanese Expert.

Joint Coordinating Committee (JCC) was established in order to facilitate inter-organizational coordination (Fig. 2). JCC review the progress, revise the overall plan when necessary, approve work plan, conduct evaluation of the Project, and exchange opinions on major issues that arise during the implementation of the Project⁵.

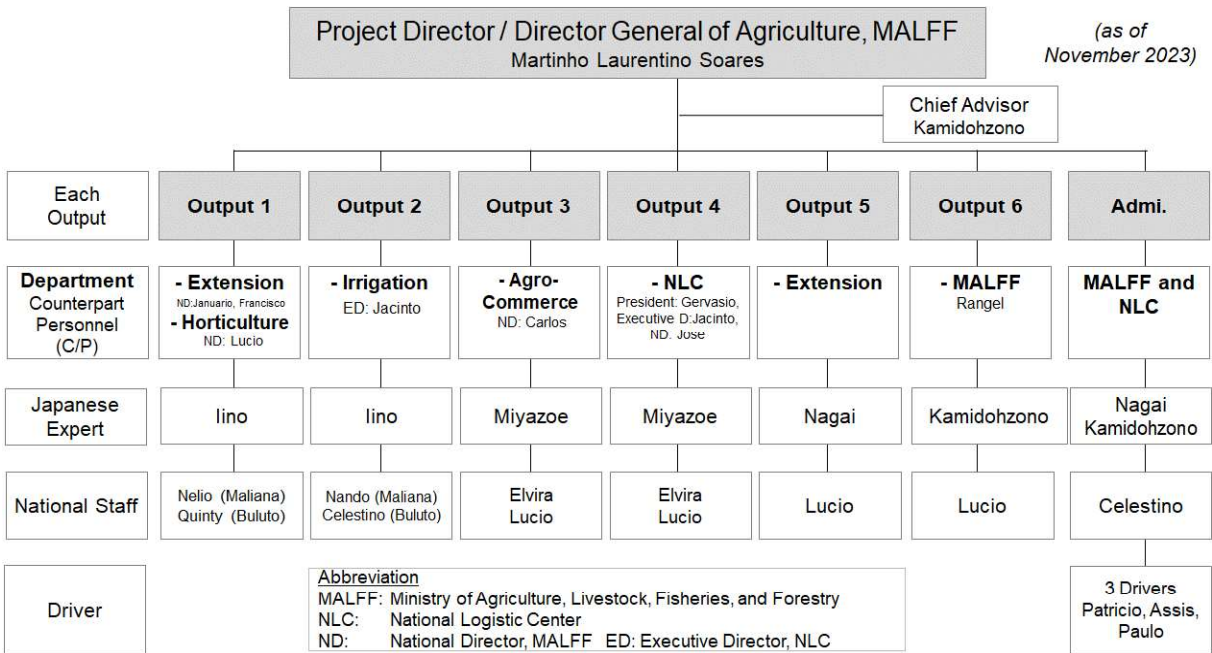


Fig. 1. Project Organization Chart

⁴ Latest Amended Record of Discussion (RD): Minutes of Meeting between Authorities Concerned of the Government of the Democratic Republic of Timor-Leste and Japan International Cooperation Agency for Amendment of the Record of Discussions on the Project for Increasing Farmers Household' Income through Strengthening Domestic Rice Production in Timor-Leste, Dili, 24 March 2023

⁵ -Ditto-

(as of November 2023)

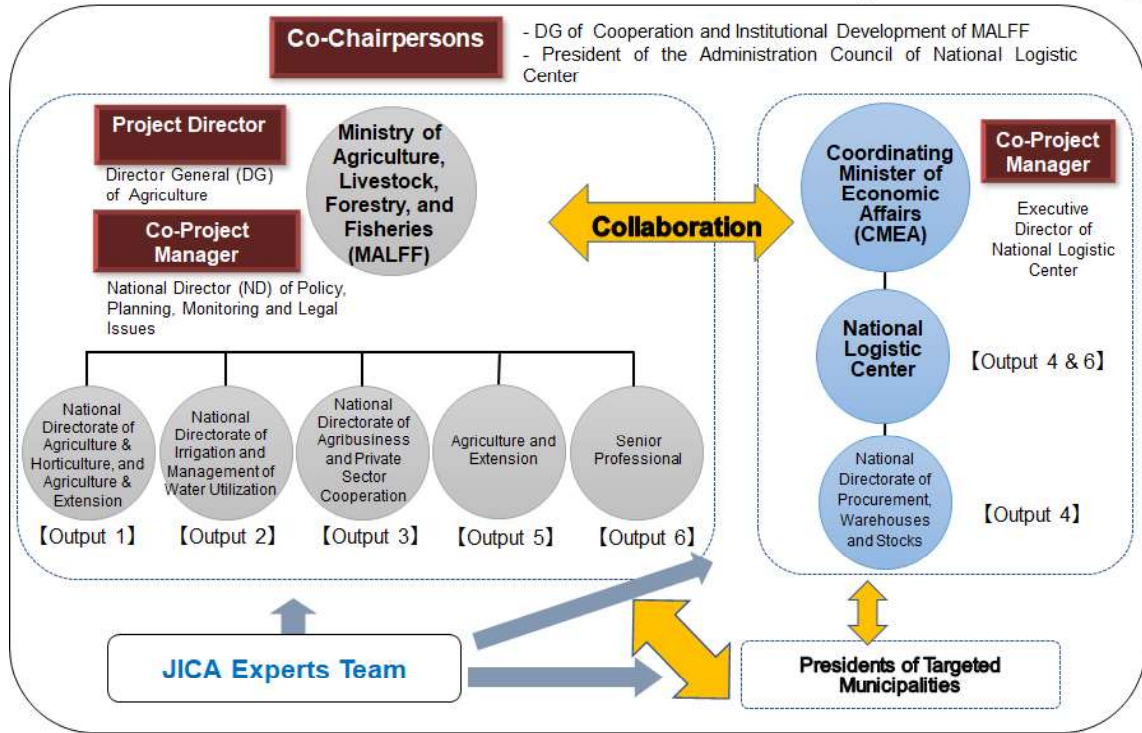


Fig. 2. Project Organization Chart and JCC structure

10. PDM Narrative Summary

Narrative Summary of Project Design Matrix (PDM) of Ver. 0.0 (May 25, 2016), Ver. 1.0 (February 22, 2018), Ver. 2.0 (July 11, 2019), Ver. 3.0 (November 4, 2020) and Ver. 4.0 (March 24, 2023) are shown in Table. 1. History of the PDM Modification is referred to p. 52 in detail.

Table 1. Narrative Summary of PDM Ver. 0.0, 1.0, 2.0, 3.0 and 4.0

	PDM Ver. 0.0 RD: May 25, 2016 (after the Detailed Planning Survey)	PDM Ver. 1.0 Amended RD: February 22, 2018	PDM Ver. 2.0 Amended RD: July 11, 2019 (after the Mid-term Review)	PDM Ver. 3.0 Amended RD: November 4, 2020	PDM Ver. 4.0 Amended RD: March 24, 2023 (after the JICA Consultation Mission)
Super Goal	N/A	<u>Livelihood of farmers living in Timor-Leste is improved through increase in income by improved rice value-chain.</u>	-Ditto-	-Ditto-	-Ditto-
Overall Goal	Livelihood of farmers living in the project sites is improved through increase in income by improved rice production.	Livelihood of farmers living in <u>the targeted municipalities</u> is improved through increase in income by improved rice production.	<u>Farmers households' income from rice production in the targeted municipalities is increased through the improvement of rice value-chain (Production, Harvesting, Post-harvest and Processing, Distribution and Sales/Consumption).</u>	-Ditto-	<u>The improved rice value chains are sustained in Buluto and Maliana I with the initiative of the Government of Timor-Leste.</u>
Project Purpose	Selected farmers households' income from rice produce in the project sites is increased through the improvement of value-chain (Production, Manufacturing & Processing, Distribution and Sales/Consumption).	<u>Farmers households' income from rice production in the project sites is increased through the improvement of value-chain (Production, Manufacturing & Processing, Distribution and Sales/Consumption).</u>	<u>Farmers households' income from rice production in the project sites is increased through the improvement of rice value-chain (Production, Harvesting, Post-harvest and Processing, Distribution and Sales/Consumption).</u>	-Ditto-	-Ditto-

⁶ Collaborative approach requires all stakeholders to understand their appropriate roles and responsibilities and to work together.

Table 1. Narrative Summary of PDM Ver. 0.0, 1.0, 2.0, 3.0 and 4.0 (continued)

Output 1	Cultivation techniques for increasing rice production are improved in the project sites.	-Ditto-	<u>System of rice farming is improved.</u>	-Ditto-	-Ditto-
Output 2	Capacity of operation and maintenance (O&M) for irrigation facilities is strengthened.	-Ditto-	<u>System of irrigation water management among farmers is improved.</u>	-Ditto-	-Ditto-
Output 3	Model(s) of domestic rice distribution/ sales are prepared for the rice branded by the project.	<u>System(s) of domestic rice distribution/ sales are prepared for the rice branded by the project.</u>	<u>System of domestic rice distribution / sales is improved.</u>	-Ditto-	-Ditto-
Output 4	The rice purchasing/ distribution system of government is improved.	-Ditto-	<u>System of domestic rice purchasing / distribution system by the government is improved.</u>	<u>Domestic rice purchasing / distribution system by the government is improved.</u>	-Ditto-
Output 5	N/A	<u>The Project activities are shared with stakeholders in other municipalities such as southern part of Timor-Leste under the initiative of MAF.</u>	<u>The Government promotes domestic rice by planning appropriate policies and disseminating lessons learned from the Project.</u>	<u>The lessons learned from the Project are shared with stakeholders in other municipalities under the initiative of MAF.</u>	-Ditto-
Output 6	N/A	N/A	N/A	<u>Necessary options for formulating domestic rice promotion policies are prepared and shared by the stakeholders.</u>	-Ditto-

*: Underline shows revised project description.

II. Results of the Project

1. Results of the Project

1-1 Input by the Japanese side (Planned and Actual)

1). Dispatch of Experts

Total 12 Long-term Experts and 17 Short-term Experts have been dispatched since the beginning of the Project in September, 2016 (ANNEX 1-1). The fields of Long-term Experts and Short-term Experts are as follows;

[Long-term Expert]

Chief Adviser, Project Coordinator / Training and Extension (Project Coordinator), Rice Cultivation Techniques / Community Development (Rice Cultivation Techniques), Participatory Irrigation Management, Agricultural Distribution and Sales, Rice Purchasing and Distribution

[Short-term Expert]

Rice Cultivation Techniques, Rice Farming Survey, Survey on Rice Distribution and Sales, Irrigation Management, Organization of Water Users' Association (WUA), Operational Guidance, Private Sector Development, Rice Stockpile Management (5S/KAIZEN), Rice Processing Product Development, Rice Policy, Strengthening the organization of the Water Users' Association (WUA), Rice Quality Control, Small-scale Irrigation Canal System Improvement, Facility Repair by Farmers Participation, , Management and Monitoring of Irrigation Facilities, Irrigation Water Management.

2). Training

2 JICA Trainings in Japan were participated by total 4 Counterpart Personnel (C/P)s from Agro-commerce Department, MALFF. Additionally, 6 JICA Online Training on various fields were participated by a total of 15 C/Ps and Project National Staff (NS)s (ANNEX 1-2). Subjects of the JICA Training are as follows;

Establishment and Management of Farmers' Market, Strengthening Safety Management System of Agricultural Products, Participatory Irrigation Management System for Paddies, Promotion of Food Value Chain for Community-Based Agri-Business, Establishment and Development of Farmers' Organizations, Integrated Agriculture and Rural Development through the Participation of Local Farmers, Strengthening Safety Management System of Agricultural Products, Pembangunan Pedesaan (Rural Development) (third country: Indonesia)

In addition to JICA Training, the Project has also implemented many trainings and seminars (ANNEX 1-3).

3). Provision of Equipment

3 vehicles, 25 motorbikes, 2 laptops, 1 printer, and agricultural machines were procured by the Japanese side and already handed over to the Timor-Leste side (ANNEX 1-4).

4). Budget for the Operation Cost

A large portion of the operation cost has been borne by the Japanese side (ANNEX 1-5).

1-2. Input by the Timor-Leste side (Planned and Actual)

1). Allocation of Counterpart Personnel (C/P)

A total of 15 Joint Coordinating Committee (JCC) members and other many non-JCC members have been allocated as a C/P of the Project (ANNEX 1-6).

2). Facility

The Project office spaces with electricity have been provided by the Timor-Leste side in Dili (MALFF National, Buluto, and Maliana (ANNEX 1-7)). The water sanitary supply system was also prepared by the Project office in MALFF.

3). Local Cost

Some expenses, mainly agricultural input and machines for rice production and irrigation facility management, for the Project activities have been also covered by the Timor-Leste side (ANNEX 1-7).

1-3. Activities (Planned and Actual)

The Project activities, both planned and actual, were shown in the sheet of the Plan of Operation (PO) (ANNEX 1-8).

Detail activities in each Output were described as follows.

1). Output 1

(1) Enhance the understanding of the stakeholders on their role and responsibility through Farmers Dialogue (FD) process

Farmers Dialogue (FD) was conducted 4 times up to 2020, and the results of the FDs have already been reported at the JCC meetings and JICA. Baseline data of the yield of the Objectively Verifiable Indicator (OVI)s of 1-1 and 1-2 were referred to the results of the 4th FD and discussed at the 9th JCC meeting and agreed by the participants, thus, finally agreed upon in the Amendment of the Record of Discussions (RD) on November 4th, 2020.

(2). Identify core set of cultivation techniques that should be introduced in order to increase production in the target area.

The core set of cultivation techniques were identified in the early stage of the Project, such as timing of planting, line transplanting, and irrigation water control.

(3). Facilitate/conduct socialization activities for increasing a yield and market-oriented farming through FD process, workshop and follow up meeting among farmers and stakeholders.

The Project conducted a technical review in Regular Monthly Extension Meeting (RMEM) mentioned in Activity (4) below to share and update the results of the rice cropping such as Trans-Planted Rice (TSR) and Direct-Seeded Rice (DSR) method in the rainy season in 2023 with the stakeholders. The meetings were held on June 15th in Maliana 1 Irrigation Scheme (IS) with 7 Extension Officers and on June 21st in Buluto IS with 4 Extension Officers. Demonstration results, yield survey results and recommendations for farmers (referred to Activity (4) as below) were discussed. The JICA Expert also shared his considerations of the analysis of yield data.

The Project Field Staff (FS) began to give feedback with the recommendation sheet and to conduct FFS adoption survey. The recommendation sheet includes the result of each farmer's yield survey, cultivation record, and advice for the next cropping season.

The Project also facilitated harvest ceremonies in each IS at the harvest season in 2023 (Table 2). At Off-take (OT) 16 in Vemassee, Buluto IS, OT 5 in Laleia, Buluto IS, and Kulo-anan, Maliana IS, local authorities planned large harvest ceremonies and invited officials from MALFF Headquarter (HQ), NLC, private sector and other officials. At the harvest ceremonies, the Director of MALFF of Municipalities committed that after the completion of the project, MALFF would continue to follow up project activities and promote the DSR method to other Municipalities.

On October 19th and 27th in 2023, furthermore, the H. E. Minister of MALFF participated in a harvest ceremony for dry season cultivation 2023 in Maliana IS and Buluto IS (Table 2), and he delivered valuable and positive comments as follows;

- i). to be appreciated all of the stakeholders and participants of the Project first,
- ii). to be contributed to increasing rice yields by the TSR and DSR methods and to be promoted by selling huge amounts of paddy from farmers to private sector and governmental organizations including NLC,
- iii). to hope to be expanded of the DSR method with user-oriented drum seeder to other irrigation schemes (new findings and achievements of the DSR were referred to p. 40 - 41, Objectively Verifiable Indicators 1-2, 1) Output 1, 2. Achievement of the Project, and
- iv). finally, hope to continue the Project activities after the Project completion cooperate with the Central Government, Municipalities, private sector and farmers in not only Bobonaro but also Buluto IS located in both Manatuto and Baucau Municipality.

Table 2. Harvest ceremonies in each Municipalities

Location /Date	Major participants	Remarks
OT 16 in Vemasse, Buluto IS, Baucau Municipality (TSR* ¹) 28/4/2023	Director General (DG) of Cooperation and Institutional Development, National Director (ND) of Agriculture and Extension, ND of Irrigation and Management of Water Utilization, Administrator of Vemasse Sub-municipality	Covered by RTTL (National TV)
OT 5 in Laleia, Buluto IS, Manatuto Municipality (TSR* ¹) 25/5/2023	Director of MALFF Manatuto, Director of Food Security from Manatuto Municipality, Representative of Laleia Sub-municipality	Before this area suffered from Water dispute
Kulo-anan (including Holihut), Mariana 1 IS Bobonaro Municipality (DSR* ²) 17/5/2023	ND of Agriculture and Horticulture, Chief of Staff of NLC, ND of Irrigation and Management of Water Utilization, ND of Food Security, ND of Partnership and Cooperation Development, Bobonaro Municipality office, Representative of JICA Timor-Leste office	Exchange visit team from Buluto IS was participated.
Ramaskora, Maliana 1 IS Bobonaro Municipality (DSR) 19/10/2023	H. E. Minister MALFF, DG of Agriculture, ND of Agriculture and Extension, Representative of JICA Timor-Leste office, Secretary of Bobonaro municipality. Municipality Police Commander	This is the First time the Minister participated in the project harvest ceremony.
OT9, Buluto IS Baucau Municipality 27/10/2023	H. E. Minister MALFF, DG of Agriculture, ND of Agriculture and Extension, Representative of JICA Timor-Leste office, Director of Baucau MALFF	The Minister also participated the completion ceremony of Buluto IS.

*1: Trans-Planted Rice, *2: Direct-Seeded Rice



(4). Facilitate coordination of water distribution and multi cropping with proper tractor utilization under collaboration among farmers and stakeholders in order to promote effective utilization of rice field.

RMEMs has been conducted to make plans for FFS activities and to share information on rice cultivation for both the rainy season and dry seasons in 2023. The dates and number of participating extension officers for RMEMs in each site from February 2023 to date are shown in Table 3.

Table 3. Date and number of RMEM in each site from Feb 2023 to date

Place of meeting	Date	Participants
		MALFF Extension Officer
Project Office, Maliana 1	8 th March 2023	8 Extension Officers and 2 from MALFF HQ and Director Bobonaro MALFF
WUA Office Buluto	12 nd April 2023	5 Extension Officers and Administrator of Vemassee
Project Office Maliana 1	19 th April 2023	2 Extension Officers and Chief of Extension HQ
WUA Office Buluto	31 st May 2023	3 Extension Officers and Water Users Association (WUA),

		Gatekeeper (GK), Private company
Project Office Maliana 1	15 th June 2023	7 Extension Officers
WUA Office Buluto	21 st June 2023	4 Extension Officers and Senior Technician (ST) of Department of Agriculture and Extension as C/P
WUA Office Buluto	25 th July 2023	5 Extension Officers and ST, Municipality Irrigation Officer (MIO), Baucau MALFF
MALFF Maliana	2 nd August 2023	3 Extension Officers
WUA Office Buluto	15 th August 2023	4 Extension Officers and ST
MALFF Maliana	24 th August 2023	6 Extension Officers and ST
WUA Office Buluto	28 th Sep 2023	4 Extension Officers and ST

Water distribution was regularly monitored by both Output 1 and Output 2 team, especially when there was trouble at OT gate, tunnel or aqueduct. Both teams and farmers worked together to clear obstacles and to restore normal water flow.

Introduced hand tractors by the Project are used in a timely manner by Model Farmer (MF) and some Lead Farmer (LF) to practice PAD.

Drum seeders for the DSR method were developed in collaboration with local welders and improved over time. The seeders have been handed over to MALFF to further expand the area of wet DSR.

(5). Introduce core set of cultivation techniques identified in activity 1-2 based on each farmer's social and field circumstance in order to increase productivity.

The Project continued to maintain 10 demonstrations fields in the 2023 rainy season and 3 demonstrations in the 2023 dry season.

A series of six (6) FFS workshops was conducted and the results of the number of participants who had been disseminated PAD cultivation techniques in the rainy season of 2023 are shown in Table 4. Extension Officers and Project Field Staff (FS)s also visited farmers' fields regularly and individually to confirm the progress of PAD implementation and instructed farmers to adopt appropriate PAD practices on their own field.

Table 4. Modules and number of participants of FFS workshop in the 2023 rainy season

Modules of FFS workshop	Buluto		Maliana 1	
	Farmers	Extension Officer	Farmers	Extension Officer
1 st : Nursery bed	56 (5)	8	87 (2)	4
2 nd : Transplanting	86 (17)	12	70 (15)	3
3 rd : Weeding	64 (9)	11	89 (4)	7
4 th : Pest and disease	61 (7)	8	81 (7)	6
5 th : Seed maintenance	45 (5)	7	86 (8)	7
6 th : Harvest and post-harvest*	119 (23)	32	90 (14)	13
Total	431 (66)	78	503 (50)	40

The figure in brackets is female numbers to the total.

*Included surrounding farmers who participated.



5th Workshop in Maliana



3rd Workshop in Buluto

(6). Revise core set of techniques identified in Activity 1-2 according to concerns and problems raised by farmers during the project.

Technical instruction materials through the series of FFS of both DSR and TPR were revised based on the results of our FFS and extension activities mainly by Counterpart Personnel (C/P)s and compiled, then submitted to Department of Agriculture and Extension, MALFF as revision of the PAD manual (Fig. 3). Training of Trainers (ToT) training material was also updated by the experiences and lessons learned of FFS and extension activities by the C/Ps.

The ToT presentation material, which was made by the C/P with support from the Project National Staff (NS) and Expert, is ready for use in training after the Project completion in December, 2023.

Additionally, the seasonal report for the 2023 rainy season has been compiled and submitted to MALFF as well, with recommendations for revising the PAD manual, improving extension activities, and identifying future research topics.



Fig. 3. Example of diagram for revision of PAD

(7). Support farmers to design plan of rice-centered farming based on their circumstances in order to promote sustainable rice-centered farming through activities 1 to 6.

The Project has prepared a recommendation sheet for improving farmers' rice cultivation. Extension Officers and FSs compiled these recommendation sheets for all 201 FFS participating farmers in the rainy season of 2023 and provided individual feedback to the farmers. We also conducted FFS adoption survey by interviewing farmers to understand their conditions and demands for rice cultivation.

FFS adoption survey for the 2023 rainy season was conducted from June to July in 2023 as mentioned above Activity (3). The total number of answered farmers was 201 total ($n = 201$). In this survey result, further challenges and needs from farmers have risen after the Project Completion to the MALFF. The most important challenges in both IS was to secure the labor force, and then, farmers answered to be supported chemical fertilizer and pesticide and insecticide by MALFF for sustainability for rice cultivation (Fig. 4).

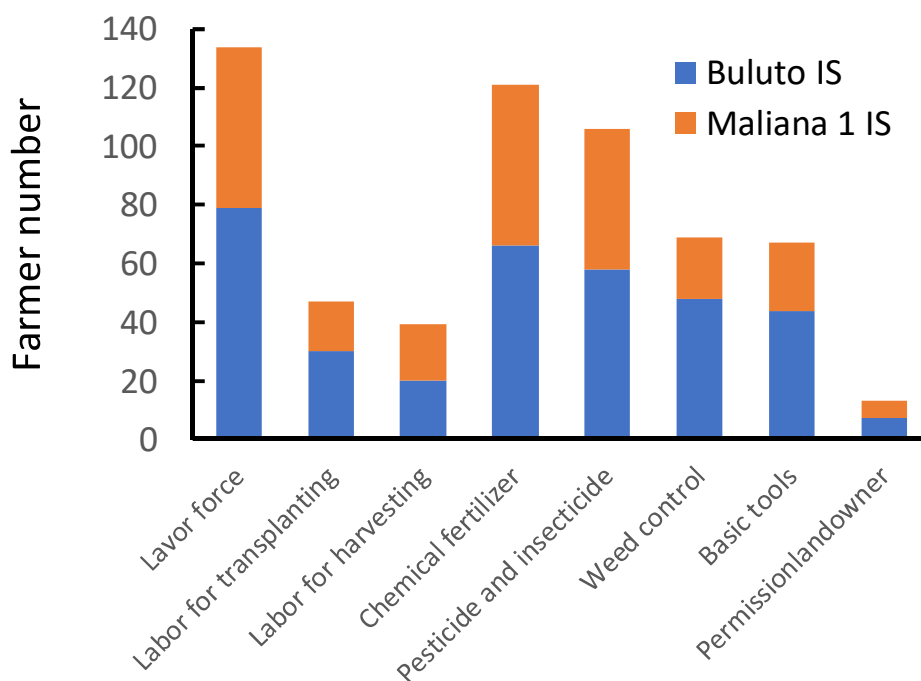


Fig. 4. Survey results for farmers' needs to continue PAD in Buluto IS and Maliana 1 IS.

Department of Agriculture and Horticulture, MALFF are conducting Socialization Workshops for the purpose of expanding rice cultivation and expansion of the main 9 Irrigation Scheme in Timor-Leste for next 2024 rainy cropping season (Fig. 5). The main targets of the Socialization Workshop for farmers are improvement of fertilizer and pesticide and insecticide application and the introduction of machinery.

On this occasion, the Project members, including C/P of the Department of Agriculture and Extension also joined, and explained our experiences and lessons learned at the Workshop for the sustainability after the Project completion for further development of improving rice cultivation method, extension and selling rice in Timor-Leste.

Challenges: Adjustment PAD and FFS of the Project to the big scall demonstration activities (200ha per 9 irrigation schemes in Timor-Leste) supported by the MALFF from 2024.

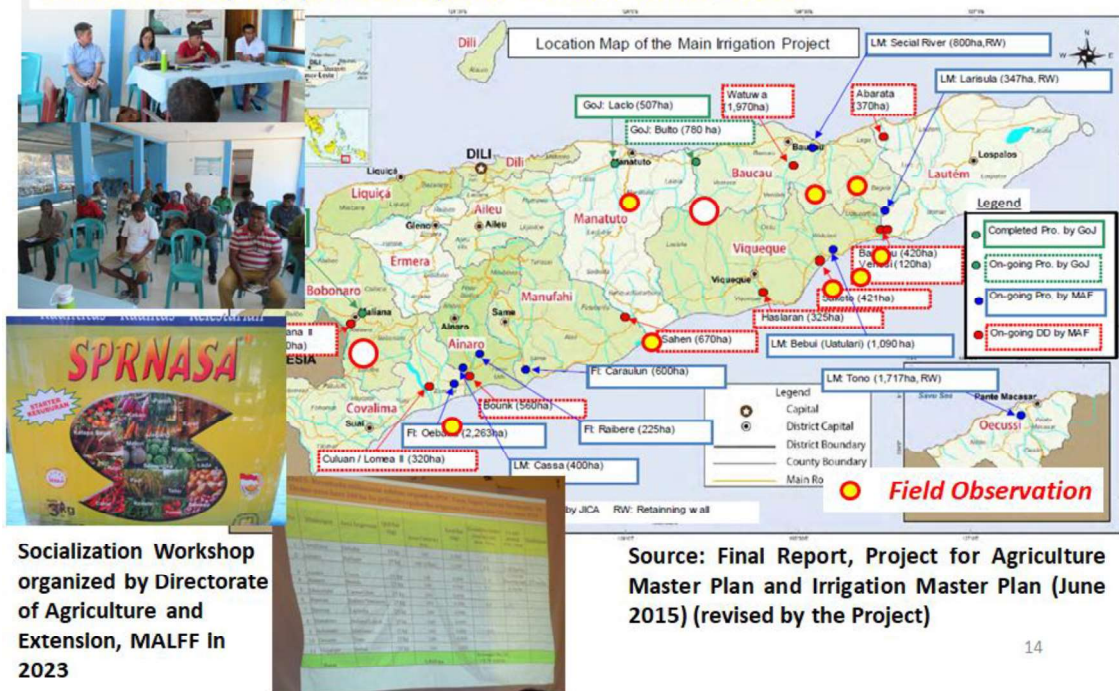


Fig. 5. Holding Socialization Workshop by the Department of Agriculture and Horticulture, MALFF

2). Output 2

(1). Enhance the understanding of the stakeholders on their role and responsibility through Farmers Dialogue (FD) process

Farmers Dialogue (FD) conducted in both IS sites from Nov 2019 to Feb 2020 and NS explained about project activity.

(2). Draft and revise the strategy of irrigation water management.

The strategy was revised in 2019 in collaboration with MALFF HQ.

(3). Set-up the working structure (e.g., Task Group, WUA Regeneration Committee, etc.) for the Project activities

The Task Group (TG) and WUA Regeneration Committee (WRC) were established in 2021 and have been leading the project activities showed in Fig. 6 and Fig. 7.

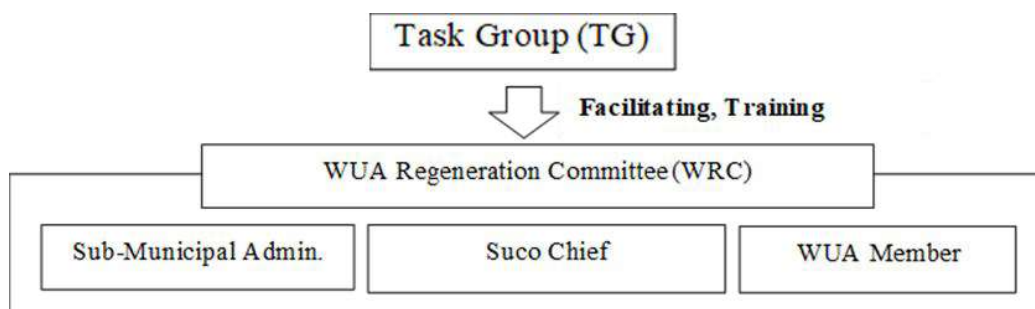


Fig. 6. WUA Regeneration Committee (WRC)

Activity	2021		
	October	November	December
Task Group (TG)			
Kick-off meeting	→		
WUA Regeneration Committee(WRC)			
Drafting and discussion at TG	→		
Workshop(finalizing the WRC)		→	
<i>Work plan for WUA regeneration activity</i>			
<i>Drafting & discussion at TG</i>			→
<i>Finalizing the plan (WRC approval)</i>			→

Fig. 7. Process of establishment of Working Structure for Output 2 activity

(4). Support and facilitate discussion on the rules and regulations of farmers’ groups in Buluto and Maliana1 irrigation schemes among stakeholders. (e.g., existing WUA, Kabu-wees, leaders of farmers’ groups, Suco chiefs and sub-municipality administrators.)

The Project facilitated regular meetings at both the Municipal and HQ level. Gate Keeper Regular Meeting (GKRM) was continuously conducted for both irrigation schemes and discussed about sedimentation, water distribution, rubbish removal, minor damage to facility. Chief of Canals (CC) meetings in Maliana 1 and Kabwee meetings in Buluto were also conducted occasionally to discuss rotational irrigation and Water Fee Collection (WFC). A farmer’s meeting was also conducted in Buluto for those who benefited from OT 5 and OT 6, where water disputes had occurred for a couple of years.

The Project constructed a new diversion facility over the 2022 dry season and encouraged participatory water management among stakeholders and reminded them duties to pay for water fee.



New diversion facility for Bibiten (OT 5) and Garemarak (OT 6) in Buluto (left-hand side: before, right-hand side: after)

(5). Support implementation of water management by farmers’ groups based on the rules and regulations discussed by local stakeholders in Buluto and Maliana1.

The Board Member Regular Meeting (BRM) for the WUA was conducted on both side. The current progress of water fee collection by the CCs was shared at the meeting. Repair of the offtake gates was also discussed.

Repairing of three gates at the secondary canal in Maliana 1 IS was conducted through farmer participation. The repaired gates were OT No. 36 in the Ramaskora secondary canal, and OT No.12 and OT No.10 in Ritabou secondary canal. Those gates were chosen as part of the preparation for rotational irrigation.



New stop log installed at OT 12 in Maliana1 IS

The repair work was done through farmers' participation with technical assistance from the Municipal Irrigation Officer (MIO). Approximately 20 farmers participated in the repair and it took two days to complete the work. This is a good example of participatory repair work for minor maintenance.

The joint On-the-Job (OJT) for GK of both Buluto and Maliana1 was conducted using the irrigation facilities in Buluto IS. 4 GKs of Buluto and 2 GKs of Maliana 1 as well as the WUA presidents of both ISs attended. The main purpose of this OJT was to give GKs of Maliana 1 an opportunity to learn how to operate or maintain the gates, especially for the Scouring Sluice Gate (SSG), which is malfunctioned and is expected to be replaced this year in Maliana 1. Thus, through the OJT, it was expected to improve awareness of GKs of both IS about gate operation and maintenance.



GK of Maliana1 learning how to operate the SSG

GK of Maliana1 learning how to change lubricant of the gearbox

(6). Support establishment of the system to continue water management by farmers' groups in Buluto and Maliana1.

Other than the above mentioned BRM, the second General Assembly meeting (GAM) in Maliana 1 IS was conducted on September 2023. The meeting was attended by 13 out of 39 Chief of Canals. Representatives farmers from each beneficially areas did not participate. The WUA presented activities over the past year and its plan for 2024.



WUA regular meeting in Buluto



GAM in Maliana

(7). Share the results and lesson learned with local and central government for better management in next cultivation, and for better, functioning policy framework.

Participatory Irrigation workshop was conducted at the MALFF National Conference Hall in Dili in April 2023. The workshop was attended by MIO from five other irrigation schemes; Lautem, Covalima, Viqueque, Manufahi and Oe-cussi, accompanied by their MALFF Municipalities Directors. Three MIOs from the related Municipalities at the project sites acted as trainers in this workshop.

The main purpose of the WS was to share not only project activities but also lesson learned and experiences from Maliana 1 and Buluto IS. Participants learned general understanding of WUA and information sharing system about Maliana1 and Buluto IS. They also learned about basic maintenance planning, annual planning, budget keeping and filling out monitoring sheet. On Day 3, participants presented drills they had made on Day 2 to the audience. In addition, irrigation manuals were presented at the workshop.

TG (Task Group) established inside the Irrigation and Water Use Management Department of MALFF with ND of the Department at its head utilized the results or lessons learned from the project activities reported from the project monthly basis, to allow TG to make its irrigation scheme development policy in future.

During the dispatch of the Consultation Mission from November to December, 2022, the Mission has kindly and strongly recommended to project members the importance of cooperation between central government and local municipality especially for irrigation water management and WUA strengthened. After that, we also have tried to promote the good relationship MALFF HQs and Municipalities and WUA as Fig. 8.

Challenges: Further collaboration between Central/MALFF and Local/Municipality and sub-municipality on budget plan and allocation, skilled counterparts, equipment and procurement materials by the Project.

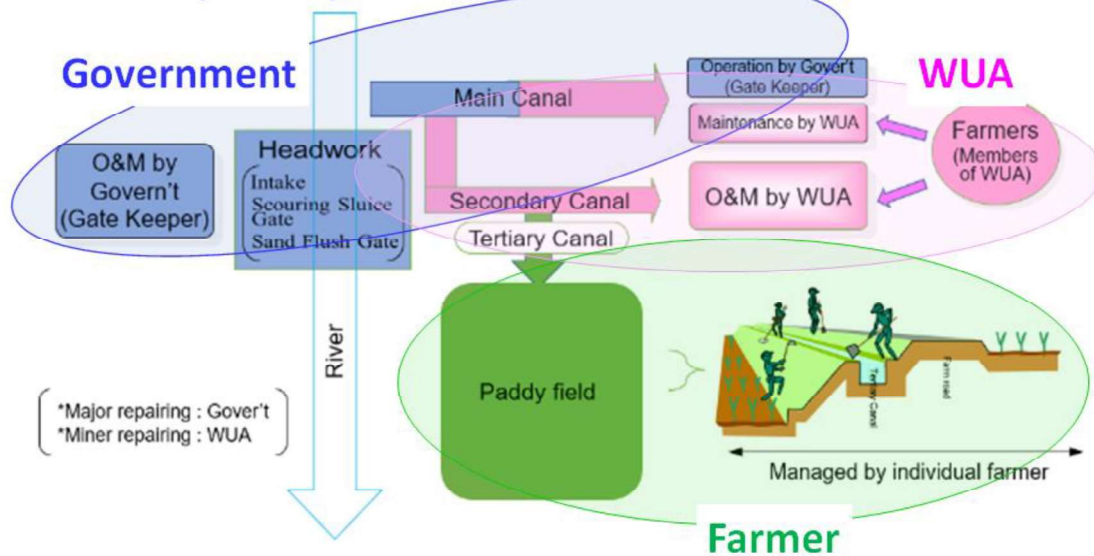


Fig. 8. Responsible and sharing system for O&M: Government and WUA

The Project has been cooperated and monitored in Buluto IS and Maliana 1 IS with "Rehabilitation Project in the Programme for Urgent Rehabilitation of Flood Damaged Infrastructure in Timor-Leste, Grand Aid".

We also participated in the inauguration completion ceremony of the Program in Buluto IS on 27th October 2023. This ceremony was attended by H.E Minister of MALFF, H. E. Minister Public of Work, Japan Ambassador to Timor-Leste, JICA President, Chief Representative of JICA Timor-Leste office, DG of Agriculture, and ND MALFF National, Baucau, and Manatuto Municipality authority, MALFF Baucau and Manatuto, farmers, and project team. We prepared the booth at that time, and in the front of the booth, H. E. Minister MALFF explained to JICA President of our project activities and achievements with high ownership and leadership.



The completion ceremony in Buluto IS with the JICA president



H. E. Minister of MALFF explained the Project activities and materials to the JICA President at the Project display booth.

(3). Output 3

1). Enhance the understanding of the stakeholders on their role and responsibility through Farmers Dialogue (FD) process.

The activity was completed at the end of FY2019.

2). Make implementation plan(s) to improve post-harvest and processing, distribution, and sales/consumption of domestic rice through Farmers' Association(s) and private sector.

- (1). Conduct an explanatory session regarding the distribution of Farmers' Information Cards (FIC) through the pilot project of Maliana Rice Commission (MRC).

Since Maliana rice commission officially launched on Jan. 30th, the Output 3 team discussed with the President of MRC and the Agro-commerce officer from the MALFF Bobonaro regarding on strengthen traceability by data collection. This was achieved by distributing the Farmers' Information Card (FIC), and the information for rice cultivation was provided by the participated farmers, which will serve as crucial data to predict the timing for both the harvest and post-harvest processing stages. This data will be instrumental in developing a model for appropriate timing of harvest and threshing activities, which would help to schedule rental equipment by CAAKUB. Furthermore, the FIC data will aid in determining a targeted paddy purchase date by CAAKUB, which ensures the member farmers in timely earning of cash and improves the quality of paddy by storing in the warehouse quickly.

3). Introduce the implementation plan(s) to farmers, Farmers' Association, Private Sector and all stakeholders through report distribution, workshops, and Farmers' Dialogue.

- (1). Implement the FIC system in Maliana 1 IS.

The collaborative work with the Agro-commerce, MALFF Bobonaro, and CAAKUB FA launched the FIC system at the five targeted Sucos of Lahomea, Raifun, Ritabou, Odmau, and Holsa in Maliana 1 IS in March. The number of participants was listed on Table 5. The participants were divided into four categories, which were A) CAAKUB member who participate Farmers' Field School (FFS), B) CAAKUB member actively engaged with association's activities, C) CAAKUB member occasionally participated with association's activities, and D) FFS participants but not CAAKUB member farmer.

Table 5. Number of farmers who participated in the FIC system to strengthen MRC's traceability.

Group category	Number of participants
A) CAAKUB with FFS Participants (CAAKUB x FFS)	62
B) CAAKUB Active	108
C) CAAKUB Regular	37
D) FFS Participant only (No CAAKUB member)	64
Total Participants	271

Based on data collection through the FIC system, the expected peak harvest would start on the 2nd of May to the end of May.

- (2). An extraordinary meeting at CAAKUB FA (4/28).

CAAKUB FA conducted an extraordinary meeting on the 28th of April to provide the following information.

- CAAKUB announced the paddy purchasing price (0.40 USD kg⁻¹) for 2023. The empty sacs will also be distributed early next month (May).
- CAAKUB announced the threshing machine rental to the group leaders, which will coordinate with an individual group member later. The rental cost of the threshing machine would be a 50 kg paddy, equivalent to 20.0 USD (50 kg x 0.4 USD kg⁻¹).

- The anticipated schedule for purchasing paddy is expected to occur in June though CAAKUB will provide additional updates and announcements as necessary.

(3). Grasp the post-harvest processes through the data collection by FIC system.

Through FIC system, staffs of Agro-commerce, MALFF Bobonaro, and Output 3 collaborated together to collect data and assessed the post-harvest process and moisture content through the drying process. The results were listed in Table 6, and information was shared on the MRC mid-term report and the pilot-project completion report on the 6th of June and 1st of September, respectively.

There were no significant differences among four groups to process threshing paddies shortly after harvest. The average days to complete the entire post-harvest process, including drying paddy, among four groups were also not significantly different. On average, the days after harvesting paddy to the threshing took 3 days and 18 hours, and days after harvesting paddy to complete the entire post-harvest processing took 7 days and 1 hour. There were significant differences between the FFS participant only group and all three groups with CAAKUB member farmers ($p < 0.01$). Overall, the average moisture content was 14.15%.

Table 6. Days to process from harvest to post-harvest processing of threshing and drying paddy with average moisture content.

Group Category	Ave. days to thresh paddy	±error day	Ave. days to complete the post-harvest process [†]	±error day	Average moisture content (%) at the end	±error
A) CAAKUB with FFS Participants (CAAKUB x FFS)	4.1	0.3	7.1	0.5	14.6	0.14
B) CAAKUB Active	3.7	0.2	7.1	0.4	14.5	0.11
C) CAAKUB Regular	3.4	0.3	6.8	0.4	14.3	0.18
D) FFS Participant only (No CAAKUB member)	3.8	0.3	7.3	0.4	13.2*	0.20
Overall Average	3 days 18 hours	-	7 days 1 hour	-	14.15	-

[†]The completion day of post-harvest process was determined when the dried paddies were stored in the farmer's barnyard. Nevertheless, farmers conducted the drying process both in the field and the front yard of their homes to reduce the moisture content to an appropriate level.

*The Tukey HSD test showed that the one or more treatments are significantly different (significant level $p < 0.01$).

(4). Cooperate with ACELDA to distribute paddy purchasing information.

ACELDA's purchasing plan was announced to Buluto IS farmers at the beginning of June. ACELDA announced the paddy purchasing price (0.50 USD kg⁻¹) for both white and red varieties in 2023. Output 3 team helped to circulate purchasing information to the farmers in Buluto IS during May to June.

4). Conduct direct OJT (on the job training) to farmers' association (s) and private sector(s) in order to improve paddy purchasing, paddy drying, milling, packing, distribution, and sales of domestic rice.

(1). Collaborate with CAAKUB's extraordinary meeting (4/28) and equipment demonstration at the harvesting ceremony (5/17).

Output 3 team conduct OJT on the 28th of April to give a threshing machine operating instruction. We give basic instruction for operating and maintaining the machine as well as safety measures like personal protective equipment.

We also gave a demonstration of the threshing machine at the Harvesting ceremony on 17th of May to encourage participated farmers to do the post-harvest processing with the threshing machine and proper way of drying.

(2). Conduct the Mid-term progress report by the MRC.

Output 3 has cooperated with the Agro-commerce, MALFF Bobonaro, to conduct a pilot project to strengthen the supply chain of commercial rice production in Maliana. The MRC focuses on strengthening transparency of information through the rice cultivation of production, post-harvest processing, milling, storage, and marketing, which constitutes an important agricultural business in the Municipality of Bobonaro to generate revenues for farmers and associated stakeholders.

The MRC conducted a mid-term progress meeting to share the MRC activities with the stakeholders on the 6th of June. The following information was shared by the MRC president, the Agro-commerce officer, and the Output 3 expert.

(3). Reviewing objectives of the MRC: *(explained by the MRC president)*.

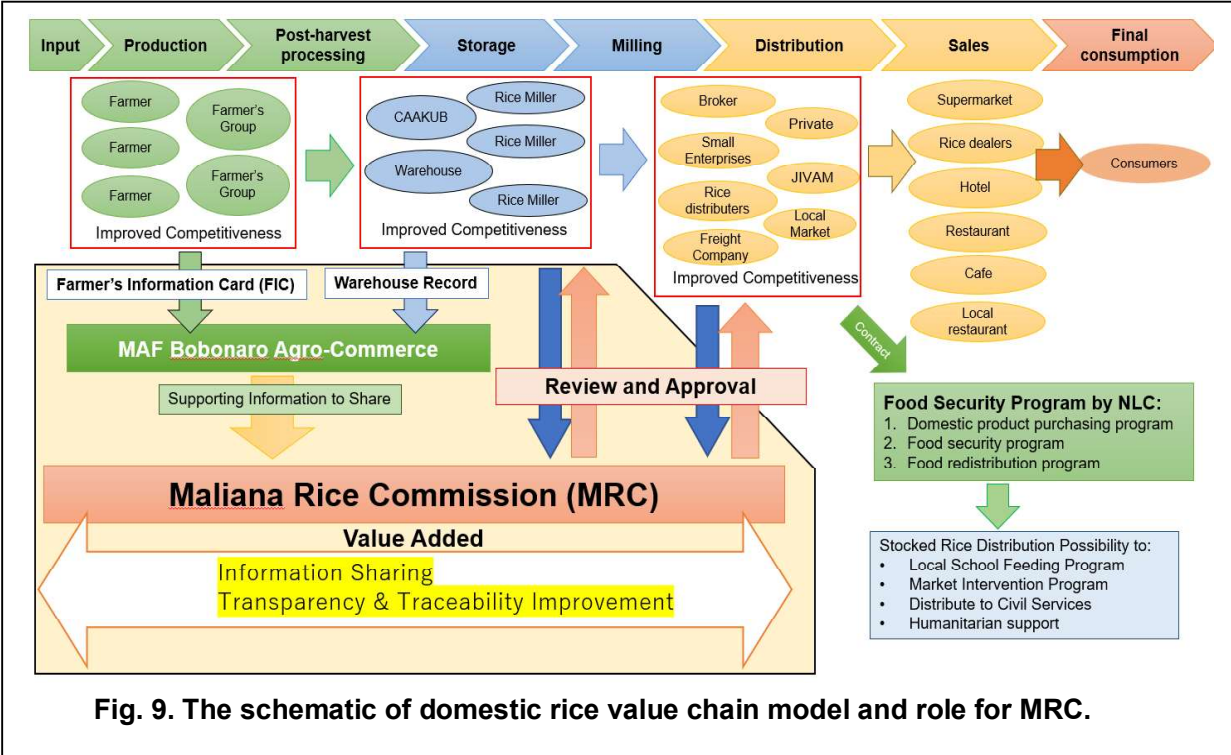
- I. For improving information transparency, an establishment and operation of a quality control system for domestic rice produced in Maliana.
- II. As a supporting function, collect information from production, post-harvest, storage, rice milling, and distribution and implement measures for quality control through a partnership among MALFF Bobonaro, local authorities, and private sectors.
- III. Closely collaborating with stakeholders contribute to improve the quality of "Maliana's rice".

(4). Progress of FIC to obtain information about post-harvest processes (referred as Table 6) *(explained by the Agro-commerce officer, MALFF Bobonaro)*.

(5). Brief explanation of the domestic rice value-chain with Fig. 9 *(explained by Output 3 Expert)*.

- I. The domestic rice industry in Bobonaro is growing steadily, and the supply chain involves many stakeholders.
- II. The price negotiations between growers and buyers impact the competitive structure of commercial rice; however, a lack of information among farmers selling to unknown companies would miss an opportunity for marketability of Maliana's rice.
- III. Close coordination with MALFF Agro-commerce and extension activities provides an opportunity for training and educating stakeholders to develop a collaborative ecosystem.
- IV. The MRC tracks records to improve traceability, ensuring MRC approved rice is made in Maliana.
- V. For rice quality improvement, JICA project has supported rice quality control through OJT, which includes adequate moisture content, broken rice rate, contamination reduction, and record keeping skills. We continued to provide an OJT session on the 20th of July.

Based on the FIC data shared by the Agro-commerce officer, the president of CAAKUB announced purchasing paddy at the end of May. The first purchase of paddy was made on the 1st of June from the farmer who resides in Lahomea Suco.



(6). Conduct the OJT for rice quality control (7/20).

A joint team of Outputs 3 and 4 conducted an OJT for rice quality control on the 20th of July to enhance understanding of commercial grade of rice quality (Photo 1 and 2). There were 20 participants from various stakeholders such as the members of CAAKUB, MRC, MALFF Bobonaro, UN-WFP, and NLC Maliana office. Overall, the participants enhanced their understanding for commercial grade rice with four fundamental standards of broken rice, damaged rice, foreign materials such as stones, and adequate moisture content. This standard was tailor-made by the short-term expert in 2022 based on the survey result (Table 7).

The evaluation of chalky rice was, however, omitted in this OJT because Timor-Leste has consistently high average temperatures and challenging environmental conditions to control it. The OJT enhanced understanding of commercial grade rice and managing the approval process to improve the Maliana’s rice by the MRC members.






Photo 1. Rice quality control OJT at MALFF



Photo 2. Separate rice sample into the categories

Table 7. Rice quality standards proposed by the short-term expert on Oct. 2022.

	Broken rice rate	Damaged rice rate	Moisture content	Contamination of stones	Yellow colored rice	Whiteness
Commercial Grade A	35% or less	2% or less	12 - 14%	No stones		Does not contain red rice
Commercial Grade B	45% or less	4% or less	12 - 14%	No stones		Does not contain red rice
Commercial Grade Red or Black	45% or less 45%	(Measurement not possible) 4%	12 - 14%	No stones		Certain amount of red or black rice
Home consumption	45% or more	4% or more	12 - 14%	Some stone contamination is acceptable.		
Needs special attention		4% or more	14% or more		Certain amount of yellow colored rice	

* Red dotted line referred to the distinction between the commercial grade of rice (above) and the home consumption grade of rice (below).

(7). The result of the amount of paddy obtained by CAAKUB FA.

Although CAAKUB struggled to obtain paddies from the member farmers due to competitive market price among other buyers this year, CAAKUB continued to coordinate with member farmers to obtain 42,394 kg of paddies by the end of September (paddy unit price of white variety 0.40 USD kg⁻¹, and red and black variety 0.70 USD kg⁻¹) (Table 8).

CAAKUB also has operated a program called, the Membership Program, in 2023, and 87 out of 100 member farmers successfully completed the repayment of borrowed fertilizer by the end of September (Table 8). The program distributed a total of 9,150 kg of fertilizer to those members, which is equivalent to 30,180 kg of paddy when considering market prices for NPK and Urea fertilizer. The program had collected 23,316 kg of paddy and 436.00 USD in cash from the members so far (80% completion of the repayment).

CAAKUB obtained 65,710 kg of paddies by the end of September.

Table 8. 2023 CAAKUB FA obtained paddy amount at the end of September.

Membership program applicants (farmer)	100	
Amount of fertilizer distributed (kg)	9,150	
Fertilizer converted to paddy amount (kg)	30,180	
83 members completed repayment by paddy (kg)	23,316	
Total amount of paddies collected so far (kg)		23,316
4 members paid by cash (USD)	436.00	
Cash converted to paddy amount (kg)	1,090	
Subtotal for repayment inc. cash converted paddy (kg)	24,406	
Remaining amount (kg)		5,774

Collection rate (%)	80.8
Paddy purchased at 0.40 USD kg ⁻¹ regular basis (kg)	42,394
Total paddy amount obtained (kg) by the end of Sep.	65,710

5). Conduct direct OJT to Farmers' Association (s) in order to strengthen financial administration and organizational management.

(1). Assists the financial administration of CAAKUB FA through OJT.

In 2023, the accountants of CAAKUB received OJT monthly basis by Output 3 Expert to manage its bookkeeping records. The CAAKUB FA has submitted a monthly report to Agro-commerce, MALFF Bobonaro without delay of submission deadline till today. The summary of the financial information for 2023 is provided on Table 9.

Table 9. 2023 CAAKUB FA's monthly financial report in 2023.

Month	Revenue	Cost of goods sold	Expenses	Total Expenses	Other income	Net income (Loss)
US Dollar						
Jan	35,829.60	30.00	443.75	473.75	0.00	35,355.85
Feb	3,668.00	0.00	993.50	993.50	0.00	2,674.50
Mar	952.50	0.00	664.70	664.70	0.00	287.80
Apr	231.00	0.00	972.00	972.00	0.00	-741.00
May	240.00	0.00	744.75	744.75	0.00	-504.75
Jun	1,206.25	13,498.17	1,535.75	15,033.92	0.00	-13,827.67
Jul	840.00	2,823.53	1,541.52	4,365.05	0.00	-3,525.05
Aug	8.35 [†]	0.00	1,218.33	1,218.33	0.00	-1,209.98
Sep	709.10	1,002.56	1,346.33	2,348.89	0.00	-1,639.79
Total	43,684.80	17,354.26	9,460.63	26,814.89	0.00	16,869.91

[†]August revenue is "Cash sales of rice" subtracted by "Credit sales of rice (short-term asset)". Thus, the cash revenue is small in August, but revenue will appear on other income status to fulfill short-term asset on later month.

6). Conduct cooking OJT to rice processing business persons in order to develop rice-processed goods.

After conducting the cooking OJT in FY 2021, CAAKUB FA continued to provide a rice powder to the local women's group called the "Rice Amor". According to the women's group, the OJT materials and equipment, which were provided by the Project, were already worn out and replaced by themselves. The group had been a major supplier to provide a steamed rice bun and coffee for any local occasions, such as governmental conferences and ceremonies.

7). Create markets to increase the consumption of domestic rice through the viewpoints of quality, variety and producing area.

(1). Enhance the market access by collaborating with JIVAM Farmer Group (FG) and CAAKUB FA.

The CAAKUB received an order from JIVAM FG for 2,200 kg of milled rice. The objective was to deliver this rice to four different retail establishments, such as SEARA Supermarket, Lita Store,

GRACIA Supermarket, and Pantai Laut Restaurant. CAAKUB successfully managed all these orders to the respective destinations before the end of September. The successful completion of the order signifies that their logistics and services are finely tuned to a practical level, which is crucial for maintaining positive business relationships and ensuring customer satisfaction (Table 10).

Table 10. CAAKUB FA shipped domestic rice to various retailers including restaurants.

Milled rice	SEARA supermarket	Lita Store	GRACIA supermarket	Pantai Laut Restaurant	Total amount
	(Bag)				(Bag)
White Rice (1.0 kg Bag ⁻¹)	100	--	--	--	100
White Rice (10.0 kg Bag ⁻¹)	50	25	10	--	85
White Rice (25.0 kg Bag ⁻¹)	--	--	10	10	20
Red Rice (5.0 kg Bag ⁻¹)	50	--	10	--	60
Red Rice (10.0 kg Bag ⁻¹)	--	10	10	--	20
Black Rice (5.0 kg Bag ⁻¹)	50	--	--	--	50
Total Bag	250	35	40	10	335
	(kg)				(kg)
Total amount of rice (milled)	1,100	350	500	250	2,200

(2). Support conducting the quality inspection and approval processes by the MRC with cooperation of the Agro-commerce, MALFF Bobonaro.

We provided technical assistance to the MALFF Agro-commerce officers to conduct rice quality inspections along with an MRC member. In accordance with the Manual of Rice Quality Standards suggested by JICA short-term expert in Oct. 2022, a commercial rice is categorized into two grades: Grade A with a 35% or less broken rate, and Grade B with a 45% or less broken rate (referred as Table 7).

CAAKUB submitted two different samples of milled rice before shipping the commercial grade rice to retailers.

After conducting inspections by Agro-commerce officers and MRC members, the sample of Nakroma variety exhibited superior quality with only a 28% broken rate and less than 1% of contamination. On the other hand, the Cihera variety sample had a large proportion of broken grains at 47.9% initially. Thus, the Agro-commerce officer rejected this sample and advised the CAAKUB to reduce the broken rate by applying an additional mesh sieve process. After applying the sieve process, the resubmission of Cihera variety sample passed Grade A with 18.8% broken rate. The Agro-commerce officer then approved both samples as the commercial grade of rice to distribute to SEARA supermarket on 22nd August.

The MALFF Bobonaro held its inaugural ceremony of the handover of MRC-approved commercial rice to SEARA Supermarket on the 22nd of August (Photo 3, 4, 5, and 6).



Photo 3. The MRC president handed over the proof of approval letter with quality inspection result to the manager of SEARA.



Photo 4. Secretary of municipality president office handed MRC approved rice to the manager of SEARA.



Photo 5. The MRC logo on the 1.0 kg rice pack.



Photo 6. The MRC approved rice displayed and sold at SEARA Supermarket, Dili store.

(4). Output 4

1) Enhance the understanding of the stakeholders on their role and responsibility through Farmers' Dialogue process.

In 2023, the Food Basket (Cesta Basica) Program⁷ was dismissed, and the supply chain of domestic rice was shifted to the competition between the private sector in regular market and the food security for NLC. The Project followed NLC's announcement for procured companies, which do supplying domestic rice or paddy in 2023. The paddy and rice purchasing status by private companies were listed on Table 11 and Table 12, respectively. There were 24 recipient companies who contracted with NLC, but the 7 companies cancelled the contract at the end of September. Four private companies, who contracted with NLC, successfully completed the contract to supply milled rice to NLC Tibar warehouse at the end of July.

⁷ CESTA BASICA Program (Food Basket Program): The Government of Timor-Leste launched CESTA BASICA Program (Food Basket Program) on October 27th, 2020. (<http://timor-leste.gov.tl/?p=26037&n=1&lang=en>)

Table 11. The paddy suppliers, who contracted with NLC, and the progress status at the end of September were listed.

Name	Area purchased	Contract amount (ton)	Obtained amount (ton)	Remark
Doben Unip.	Maliana, Cailaco, Ermera, Liquica	100.0	100.0	NLC Maliana warehouse
Espimar	Maliana, Suai, Vemasse	57.0	57.0	
Marojkafela	Maliana, Cailaco, Ermera (Sare)	100.0	100.0	NLC Maliana warehouse
Robulaco	Maliana, Atabae	67.0	52.0	37.0t delivered to NLC Maliana
Safjonal	Maliana, Vemasse, Suai	67.0	67.0	
Acalumnara	Vemasse, Suai	100.0	15.0	
Vemasse CU IHC	Buluto IS area	57.0	57.0	NLC Baucau warehouse
Leuda Asrai	Cailaco, Ermera, Hatolia	100.0	100.0	NLC Maliana warehouse
Grupo Lalenlk Diru-Kede	Suai, Ainaro	57.0	18.0	
Almonbora Bicaicy	Suai	48.0	48.0	
Kalbar	Suai	67.0	67.0	
FM	Suai (Zumalai)	57.0	32.0	
Myln	Suai	57.0	3.0	
Tofranditar	Suai	57.0	57.0	
Vertude de Lorosae	Suai	96.0	96.0	
Excepcional Viesala	Suai	60.0	No response	
Fomerno	No response	No response	No response	Status unknown
Formoz Amor	Maliana, Suai	100.0	No response	Cancelled
K2K Correia83	Vemasse, Laleia, Suai,	48.0	40.0	Cancelled
Mamisa	Maliana, Suai	50.0	20.0	Cancelled
Sae-Loi	Vemasse	57.0	6.1	Cancelled
Siluk245	Maliana, Baucau	No response	No response	Cancelled
Wata Aba	No response	No response	No response	Cancelled
Zenimichel Brosis	No response	76.0	No response	Cancelled
	Total	1,147.0	869.0	

Table 12. The milled rice suppliers, who contracted with NLC, was listed.

Name	Area purchased	Contract milled	Obtained milled rice (ton)	Convert to paddy at	Paddy obtained from the Project site
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		rice (ton)		60% milling rate (ton)	(Maliana 1 IS) (ton)
Malilika Unip. Lda	Maliana, Suai	160.0	160.0	266.7	200.0
Malidasi Unip. Lda	Maliana, Suai (Zumalai)	120.0	120.0	200.0	185.0
Kamijain.Lda	Maliana, Suai (Zumalai)	160.0	160.0	266.7	180.0
Celber Unip. Lda	Maliana, Suai, Ermera (Sare)	120.0	120.0	200.0	180.0
	Total	560.0	560.0	933.3	745.0

The contracted private companies purchased paddy from the farmers from the Project sites (Maliana 1 IS and Buluto IS) approximately 171 tons and 91 tons, respectively. The NLC received 447 tons of milled rice, which are equivalent to 745 tons of paddies, from the Maliana 1 IS. Therefore, the total amount of paddy obtained from the farmers in Maliana 1 IS was 916 tons.

2) Assist to elaborate the purchasing and distribution plan for domestic rice.

Socialization workshop was conducted at the Project sites of Maliana 1 IS and Buluto IS on January 27th and February 16th, 2023, respectively.

3) Assist to introduce the appropriate payment system among NLC, Private bank and Farmers.

According to 4 private companies who supplied milled rice at the NLC Tibar warehouse, the NLC procurement department processed all required documents within the same week.

The Ministry of Finance processed the payment process by the bank-to-bank transfer within two weeks after receiving a payment request form from the NLC procurement department.

All 4 private companies received the payment at the beginning of August.

4) Assist to formulate the Standard Operating Procedure (SOP) of purchasing paddy and strengthen ability of NLC officers to carry out the SOP through OJT.

The SOP for purchasing and distributing paddy was updated by NLC write updating SOP version 3 (refer to ANNEX 2 List of Products).

Remarks:

- ✓ In June 2022, the Project updated SOP version 2 to accommodate changes in the NLC purchase system, which towards to involve a business transaction with either private companies or farmer's groups delivering paddies and milled rice, based on the written contract term, to the designated NLC warehouses.
- ✓ SOP version 1, created by NLC, was a standard document designated to facilitate direct purchasing of paddy from farmer's groups, either at the farmgate or at the NLC warehouses through delivery.
- ✓ SOP version 3 combines the abovementioned two versions for purchasing procedures.
- ✓ SOP version 3 includes the rice distribution system. NLC has four distribution systems to fulfil the NLC's mission statements. The four distribution systems are as follows:

- i. Civil protection for emergency responses, e.g. civil servant supplemental aid.
- ii. Ministry of Social Solidarity for humanitarian aid, e.g. relief aid for disable / vulnerable people.
- iii. Market intervention to overcome and compensate for a conflict of rice supply shortage and price inflation, including school feeding program aid and private sector intervention.
- iv. Special requests granted by the Council of Ministers to implement domestic product distribution.

5) Support planning of appropriate rice purchasing/ distribution system in Malina and Buluto.

With the change back of the purchase system in 2023 without Food Basket Program (Cesta Basica), the Project teamed up with Output 3 to collect information comprehensively from Timor-Leste government, private sectors and farmers. The diagram (Fig. 10) was previously created by Output 4 in 2022 and shared with NLC and relative stakeholders.

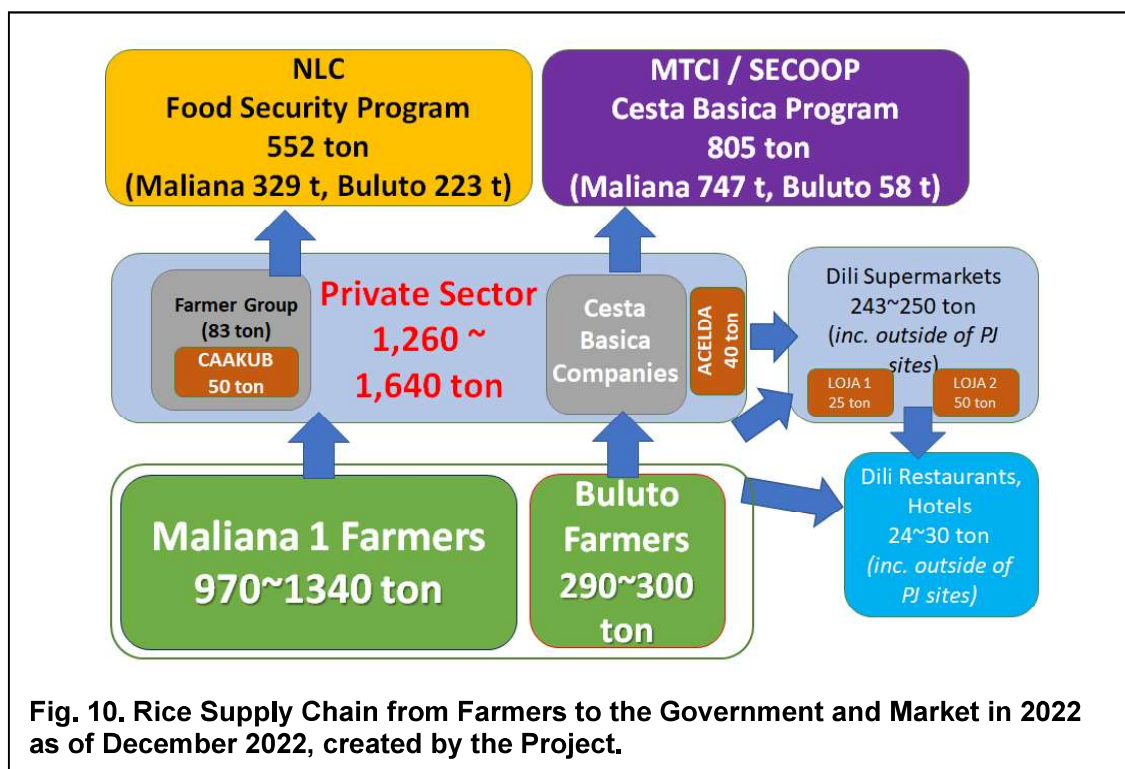
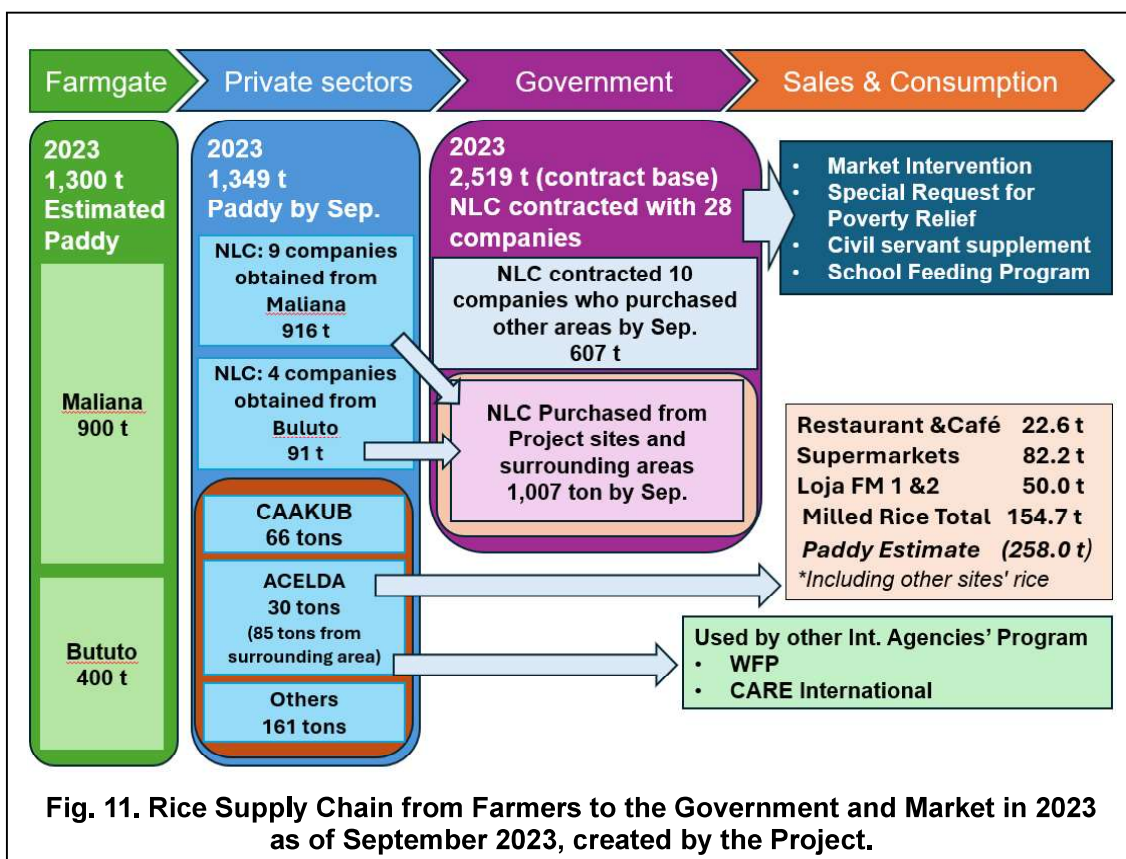


Fig. 10. Rice Supply Chain from Farmers to the Government and Market in 2022 as of December 2022, created by the Project.

New diagram (Fig. 11) was created by the Project in 2023, and the information shared with NLC's Chief of Staff and Executive Director for considering the rice purchasing / distribution plan and execution for 2024. For the result of rice purchasing by NLC in 2023, there were 1,802 tons of paddy purchased from the farmers in rice cultivation areas nationwide, and 1,007 tons⁸ of paddy were purchased from the Project site of Maliana 1 IS and Buluto IS and surrounding areas.

⁸ NLC contracted with four private companies to complete 560 tons of milled rice delivered to the NLC Tibar warehouse in the end of July. 447 tons of milled rice were obtained from Maliana 1 IS, which converted to 745 tons of paddy at 60% milling rate.



NLC implemented domestic rice distribution by Market Intervention in 2023.

In 2023, NLC conducted a market intervention, which was approved by the Coordinating Minister of Economic Affairs (CMEA), to implement this relief strategy in 14 targeted municipalities with 28 subdistricts. The recipient municipalities received the stocked domestic rice from NLC with an amount of 294 tons (Table 13).

Each subdistrict received 300 bags (35 kg bag⁻¹) of rice, which are equivalent to 10.5 tons of milled rice.

Table 13. The lists of municipalities and subdistricts received domestic rice from NLC by implementing market intervention.

Name of Municipality	Target subdistrict	Amount of domestic rice (ton)
Bobonaro	Lololtoe, Bobonaro	21.0
Manufahi	Turiscail, Alas, Fatumea	31.5
Covalima	Fohorem, Fatululik	21.0
Baucau	Quelical, Bagia	21.0
Viqueque	Viqueque, Ossu	21.0
Lautem	Luro, Tutuala	21.0
Raeoa	Nitibe, Oessilu, Passabe	31.5
Ermera	Atsabe, Letefoho	21.0
Liquica	Bazartete, Maubara	21.0

Ainaro	Maubisse, Hatubuilico	21.0
Aileu	Remexio, Lequidoe	21.0
Manatuto	Laclubar, Soibada	21.0
Atauro	Atauro	10.5
Dili	Metinaro	10.5
	Total	294.0

6) Support implementation of purchasing operation of rice in Maliana and Buluto.

No activity at this time due to contracted private companies ensured their purchasing operation.

7) Support distribution operation of rice, in collaboration with Ministry of Education and Ministry of Social Solidarity based on the plan prepared in Activity 4-2 & 4-5.

Conduct the 1st inaugural round table meeting at Bobonaro and Baucau municipality on Aug. 24 and Sep.29, respectively. Detailed discussion is on No. 10 and No. 11 of Output 4 in ANNEX 2 List of Products.

Remarks:

- ✓ The focal points of discussion are centered by the primary objective to improve students' nutrition intake under allocated budget. This meeting will seek to refine strategies for optimal program execution, ensuring nutritional benefits to students and positive economic impact for domestic product suppliers by recommended usage of ingredients for domestic produce at 75% locally.
- ✓ Optimizing collaboration among stakeholders—NLC, the Department of Education, the Management Team, and the President of either Bobonaro or Baucau Municipal Authority Office—for the successful execution of the 2023 School Feeding Program (Photo 1). These partnerships offer the opportunity to procure affordable local products directly from these communities. The Department of Education would appreciate it if NLC could offer a negotiable and affordable price for distributing domestic rice to the School Feeding Program. The discussion serves to align strategies, harness local resources, and improve the effectiveness of the School Feeding Program.
- ✓ While NLC stands as a key governmental supplier for domestic rice with an affordable price, the partnership between NLC and MALFF is pivotal in this endeavor, seeking to increase domestic rice quantity to fulfill demands. The NLC will respond to the requested amount of rice. The price negotiation part will require further discussion internally and externally with our organization and the pertained ministry.
- ✓ On behalf of Municipality President of Baucau and Bobonaro, we shall write a proposal to bring the issues and solutions to the Ministry of State Administration, the Ministry of Education, and the CMEA. We shall wait for a response and approval by the high-level decision (Photo 2).



Photo 1. 1st inaugural round table meeting at Municipality of Bobonaro on Aug. 24.



Photo 2. 1st inaugural round table meeting at Municipality of Baucau on Sep. 29.

8) Rehabilitate rice stockpiling warehouses in Dili and Maliana.

No activity at this period. Rehabilitation of warehouse in Bebora (Dili) and Maliana was completed, and the inspection for defect warranty was completed on March 17th, 2021, and April 28th, 2021, respectively.

9) Warehouse management is carried out based on 5S by NLC in collaboration with other Development Partners and private companies.

5S/KAIZEN training and warehouse stocktaking was conducted on Jan. 26th and Feb.1st. at NLC Maliana and Tibar warehouse including the staffs from Bebora (Dili) warehouse, respectively.

Mandatory submission of monthly warehouse stocktaking report with 5S/KAIZEN check sheet is implemented.

OJT for rice quality control was conducted at Dili, Maliana, and Baucau area on 13th, 20th, and 27th of July, respectively. While the total number of participants was 51, the number of participants from NLC was 30 from various locations (Table 14).

Table 14. Rice quality control OJT conducted on 3 different dates with number of participants of NLC staff.

Location	OJT Date	Participant (NLC)	Participant (other)	Participant (Total)
NLC Tibar	13 th July	5	--	5
NLC Bebora (Dili)	13 th July	5	--	5
NLC Oecussi	13 th July	5	--	5
NLC Maliana (Bobonaro)	20 th July	5	15	20
NLC Baucau	27 th July	5	6	11
NLC Natarbora (Manatuto)	27 th July	5	--	5
<i>Total Participants</i>		<i>30</i>	<i>21</i>	<i>51</i>

Remark:

- ✓ This OJT enhances the knowledge and experience with proper usage of tools to improve rice quality (Photo 3 and 4). NLC encourages staff to continue applying learnt techniques in their workplaces, which will have a significant impact on maintaining rice quality in warehouses.
- ✓ Participation from NLC Oecussi staff highlighted the quality of Membramo variety of rice in the area. The participants from Oecussi exhibited the ambition to obtain their own analysis tools with their budget to improve Membramo variety of domestic rice.
- ✓ Dissemination of rice quality control knowledge to wide variety of stakeholders in Maliana. In Bobonaro municipality, participation not only from NLC Maliana but also from MALFF Bobonaro, a small to medium size enterprise, farmers association, and Maliana rice commission were actively engaged in discussion regarding rice quality improvement and information sharing among stakeholders.
- ✓ Expanding knowledge through OJT for rice quality control to NLC Baucau and Natarbora. The warehouse staff from Baucau and Natarbora warehouse emphasized fulfilling a gap in their previous training from the outsourced private company, which had never given quality control training for rice. This OJT highlighted valuable insights into the functions of analysis tools and understanding the rice quality.



Photo 3: Rice quality control OJT in Dili.



Photo 4: Categorizing rice sample.

5. Output 5

5-1 Workshops on the project activities are held for stakeholders in five modern irrigation schemes to share a Collaborative Approach under the initiative of MALFF.

In April 2023, the Workshop on Participatory Irrigation Management (PIM) was held to share the Project activities and lessons learned and conduct practical drills by inviting MALFF Municipal Directors and Irrigation Officers of Municipality of Lautem, Viqueque, Coba Lima, Manufavi, and Oecusse (referred to as Activity Output 2).

In July 2023, the On-the-Job Training on rice quality control was conducted in Dili, Maliana, and Baucau. The participants were NLC warehouse staff from Oecusse, Tibar, Bebora (Dili), Maliana, Natarbora, and Baucau, Extension Officers from Maliana and Baucau, and private sectors who are doing business-related paddy and rice (referred to as Activity Output 3 and Output 4).

6. Output 6

6-1 Necessary options for formulating domestic rice promotion policies are prepared and shared by the stakeholders.

1) Establishment of the Rice Task Force

The new H. E. Minister of Ministry of the Agriculture, Livestock, Fisheries, and Forestry as well as Secretary of States for Fisheries, Secretary of States for Livestock and Secretary of States for Forestry were appointed at the inception of the 9th Constitutional Government on July 1st, 2023.

The new Director General for Agriculture and the new Director General for Cooperation and Institutional Development were appointed on September 1st, and accordingly, some National Directors were also appointed on the same day.

In this politically fluid situation, Mr. Rangel, Senior Professional, MALFF tried to coordinate related departments and ministries for the establishment of Rice Taskforce, but it was difficult to improve the situation so far.

2) Discussion of the progress of the establishment of Rice Taskforce and rice policy of MALFF.

The Project exchanged ideas with Terminal Evaluation Team on the progress of the establishment of Rice Taskforce and rice policy of MALFF during their staying in Timor-Leste.

2. Achievements of the Project

**2-1. Outputs and indicators
(Target values and actual values achieved at completion)**

Before the Joint Terminal Evaluation from 4th September to 20th September in 2023, the Project had been compiled and submitted many data including the results of inputs, management and operation, activities, achievement status of each Output and the Project purpose and etc. to JICA Headquarter (HQ) and JICA Timor-Leste office, and those data probably referred to the Terminal Evaluation survey by this mission.

According to the Terminal Evaluation, following evaluation results of each Output were presented by the members of Terminal Evaluation Mission at the 13th JCC meeting on September 20th, 2023 and its contents were agreed upon by the participants (Table 15).

PDM version 4 (amended RD on March 24th, 2023) describes the following Outputs and corresponding PDM indicators. For the Terminal Evaluation, the progress/achievements are basically assessed in light of the extent to which the Project expects to achieve the Objectively Verifiable Indicators (Indicator) of the PDM (Ver. 4.0) by the end of the cooperation period. The prospect of achieving each indicator, based on the information/data collected, is as in Table 15. (referred to as the Terminal Evaluation Report).

Table 15. Assessment of the status/prospect for Output

Indicator	Current Status	Result
Output 1: System of rice farming is improved.		
1-1 Yield at demonstration plots achieves 6 ton/ha at the rainy season in 2023.	• In 2023 rainy season, the average yield of 10 demonstration plots is 6.2t/ha; 6.4t/ha in Buluto (5 model farmers) and 5.9t/ha in Maliana 1 (5 model farmers).	Achieved
1-2 Average yield of participated farmers on FFS in Buluto and Maliana I site increases to 4.5ton/ha at the rainy season in 2023 from 2.5	• In 2023 rainy season, the average yield of lead farmers is 5.1t/ha in Buluto (101 lead farmers) and 4.8 t/ha in Maliana 1 (100 lead farmers).	Achieved

t/ha and 2.9t/ha in 2019 respectively.		
1-3 Cultivation area in Buluto increases to 600 ha at the rainy season in 2023 from 426ha in 2019.	<ul style="list-style-type: none"> In 2023 rainy season, the cultivated area was 619ha in Buluto (209ha in Laleia in Manatuto municipality, and 410ha in Vemase in Baucau municipality) 	Achieved
Output 2: System of irrigation water management among farmers is improved.		
2-1 More than 50 % of beneficially farmers pay water fees in 2023 from 0% in May 2019.	<ul style="list-style-type: none"> In 2023 rainy season, the collection rate of water fees is 71.3% in Buluto (403/565 farmers) and 28.0% in Maliana 1(374/1,335 farmers). 	Partially Achieved
2-2 Main canal and sub-canal of irrigation schemes are cleaned and maintained by farmers in Buluto and Maliana I.	<ul style="list-style-type: none"> Canal cleaning activities were implemented for 12 days in Buluto by total 918 farmers and 3 days in Maliana 1 by total 204 farmers before the rainy starts. 	Achieved
Output 3: System of domestic rice distribution/ sales is improved.		
3-1 A total of more than 500 tons of paddy is sold by farmers in Buluto and Maliana I to private sectors such as CAAKUB and ACELDA per year.	<ul style="list-style-type: none"> At the end of July 2023, total 255t of paddy were sold to private sector (CAAKUB 64t, ACELDA 30t, and others 161t) 	Not Achieved
3-2 Marketing channel for domestic rice is expanded to private sectors such as restaurants, hotels, and farmers' market.	<ul style="list-style-type: none"> CAAKUB, ACELDA and other traders sold rice to at least 24 companies in 2023, including hotel, restaurant, café, supermarket, and Loja (farmers' market). 	Achieved
Output 4: System of domestic rice purchasing / distribution system by the government is improved.		
4-1 Plan of government purchase and distribution of domestic rice is prepared annually.	<ul style="list-style-type: none"> Since 2020, NLC has revealed planned amount every year; in 2023, NLC plans to purchase 3,600t of paddy from throughout the country. 	Achieved
4-2 Appropriate system of payment from NLC to farmers and private companies is introduced so that the timing of payment meets farmers' needs.	<ul style="list-style-type: none"> NLC implements payment in accordance with "SOP for purchasing rice from NLC" prepared in the Project so that the timing of payment can meet farmers' needs. 	Achieved

4-3 More than 1,000 tons of paddy is purchased by NLC in Buluto and Maliana, and its surrounding area per year.	• In 2023, NLC plans to purchase 3,600t of paddy from the whole country. As of August, NLC has purchased 1,002t of paddy (40t from Buluto and 962t from Maliana 1).	Achieved
4-4 Stocktaking of NLC warehouse is conducted and reported quarterly to the project.	• Quarterly inventory data from January to March from NLC warehouses was reported for the 5 warehouses (Tibar, Maliana, Baucau, Natrabora, Dili)	Achieved
Output 5: The lessons learned from the Project are shared with stakeholders in other municipalities under the initiative of MAF.		
5-1 Workshops on the project activities are held for stakeholders in five modern irrigation schemes to share Collaborative Approach under the initiative of MAF.	• W/S to local stakeholders of the five modern irrigation facilities (Larisula, Caraulun, Oebaba, Bebuy and Tono) were conducted in October 2019 through July 2023.	Achieved
Output 6: Necessary options for formulating domestic rice promotion policies are prepared and shared by the stakeholders.		
6-1 A roadmap of the policy for increase of domestic rice production, is discussed by Taskforce.	• Taskforce to discuss the roadmap has not been established yet while many efforts were made.	Not Achieved

The Project, on the other hand of the Terminal Evaluation, has investigated the degree of achievements based on the results of our activities, interview with stakeholders, direct observation and the status of achievements of the Objectively Verifiable Indicators (OVI) in each Output are explained in detail as below.

1). Output 1

(1). Objectively Verifiable Indicators 1-1: Yield at demonstration plots achieves 6 ton/ha at the rainy season in 2023

Self-evaluation on the degree of achievement of OVI 1-1: **Almost Achieved.**

Results of the yield survey of Model Farmer (MF)'s sites are shown in Table 16 and Fig. 12. Rice yields in Buluto IS and Maliana 1 IS in the 2023 rainy season were 6.4 and 5.9 t ha⁻¹, respectively. Those data show almost achieved the indicator 1-1.

It was highly noteworthy that rice yields from 2020 rainy season to 2023 rainy season in both Buluto IS and Maliana 1 IS achieved nearly 6.0 t ha⁻¹ sustainably (Fig. 12), and this tendency showed our introduced techniques were appropriated and sustained in local ecological and socio-economic conditions.

Table 16. Results of the yield survey on Model Farmer (MF)'s sites

Season	Buluto IS (t ha ⁻¹)	Maliana 1 IS (t ha ⁻¹)
2019 rainy season* ¹	2.5 (average of all farmers)	2.9 (average of all farmers)
2020 rainy season	6.9 (2 sites)	4.8 (2 sites)
2020 dry season	4.7 (1 site)	5.2 (1 site)
2021 rainy season	5.3 (4 sites)	5.8 (4 sites)
2021 dry season	7.1 (2 sites)	5.2 (4 sites)
2022 rainy season	7.2 (6 sites)	6.0 (5 sites)
2022 dry season	6.2 (3 sites)	5.4 (3 sites)
2023 rainy season	6.4 (5 sites)	5.9 (5 sites)

*1: Survey results of 4th Farmers Dialog (FD) as a baseline

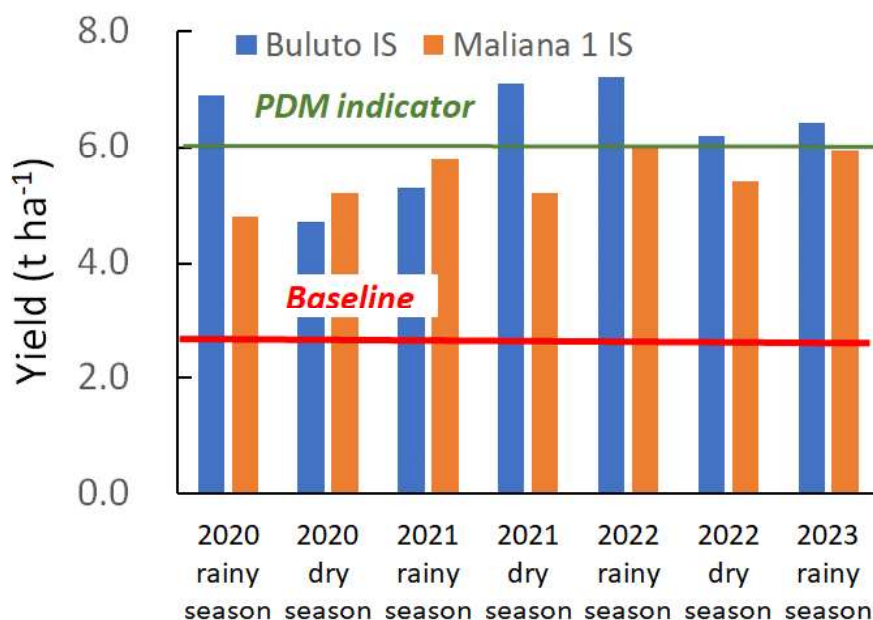


Fig. 12. Results of the yield survey on Model Farmer (MF)'s sites

The DSR was introduced in 2022 collaboration with the University of Tokyo. The results of the yield survey of MF's sites from 2022 to 2023 in the rainy season in Maliana 1 IS were shown in Table 17. The yield in the 2023 rainy season achieved 5.9 t ha⁻¹, and became the highest in 3 seasons.

If we compared the rice yields of the DSR method and TPR in the 2023 rainy season at the Demonstration Field, it was found that yields were approximately the same (Table 16, Fig. 12 and Table 17), and this shows the DSR method was also appropriated techniques with low cost and high labor efficiency in local conditions.

This DSR method was highly appreciated by MALFF HQs, MALFF Municipalities and local farmers. Thus, the Project was revised and compiled Rice FFS technical instruction manual as rice cultivation extension module and submitted to Department of Agriculture and Extension, MALFF

for revision of the 2nd PAD manual and Training of Trainers (ToT) training material as mentioned above Activity (6) in detail.

Table 17. Result of the yield survey DSR method on Model Farmer (MF) 's sites

Demonstration field	Buluto IS (t ha ⁻¹)	Maliana 1 IS (t ha ⁻¹)
2021 rainy season average of 20 farmers as baseline*1	N/A	2.7
2022 rainy season DSR	N/A	5.6 (1 site)
2022 dry season DSR	N/A	4.1 (2 sites)
2023 rainy season DSR	N/A	5.9 (1 site)

*1: results from interview survey



Demonstration field at Raebou Orok in Maliana 1 IS (7.5 t ha⁻¹)



DSR Demo field at Kulo Anan in Maliana 1 IS (5.8 t ha⁻¹)



Demonstration field at OT 12 in Buluto (5.7 t ha⁻¹)



Demonstration field at OT 5 in Buluto (6.4 t ha⁻¹)

(2). Objectively Verifiable Indicators 1-2: Average yield of participated farmers on FFS in Buluto and Maliana site increases to 4.5 ton/ha at the rainy season in 2023 from 2.5 t/ha and 2.9 t/ha in 2019 respectively.

Self-evaluation on the degree of achievement of OVI 1-2: **Achieved.**

Results of the yield survey on Lead Farmer (LF) 's sites are shown in Table 18 and Fig. 13. In the 2023 rainy season, average yield on LF's sites in Buluto and Maliana 1 IS are 5.1 and 4.8 t ha⁻¹, respectively. This amount achieved the OVI 1-2.

It was revealed that the yield from 2020 to 2023 indicated high yield and stable, and almost achieved target of 4.5 t ha⁻¹ in sustainably.

Table 18. Results of the yield survey on Lead Farmer (LF)'s sites

Season	Buluto IS (t ha ⁻¹)	Maliana 1 IS (t ha ⁻¹)
2019 rainy season* ¹	2.5 (Average of all farmers)	2.9 (Average of all farmers)
2020 rainy season	4.5 (31 LF)	4.1 (39 LF)
2020 dry season	4.7 (19 LF)	4.3 (9 LF)
2021 rainy season	4.5 (74 LF)	5.6 (79 LF)
2021 dry season	4.2 (23 LF)	4.2 (60 LF)
2022 rainy season	5.5 (109 LF)	5.4 (104 LF)
2022 dry season	4.8 (53 LF)	4.3 (73 LF)
2023 rainy season	5.1 (101 LF)	4.8 (100 LF)

*1: Survey results of 4th Farmers Dialog (FD) as a baseline

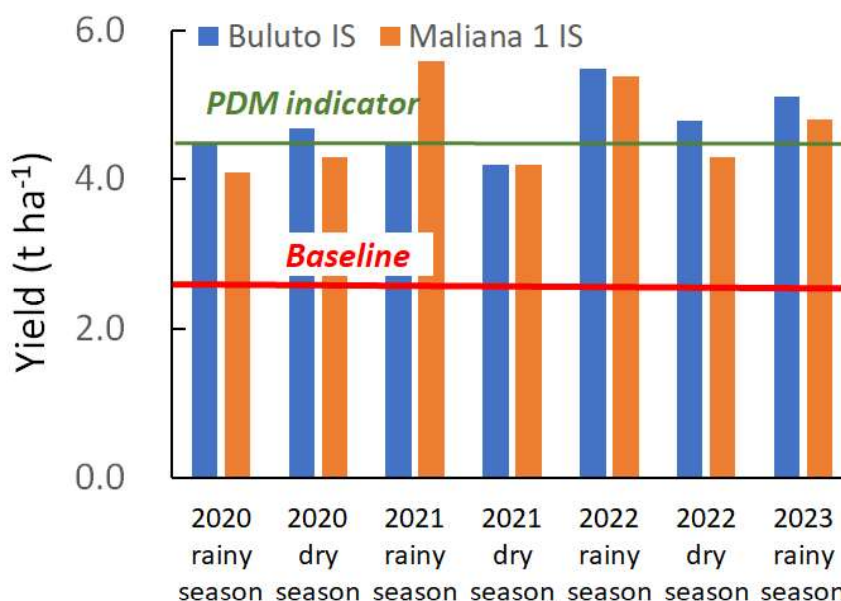


Fig. 13. Results of the yield survey on Lead Farmer (LF)'s sites

The results of the yield survey of DSR method of LF's sites are shown in Table 19. Collaborative research between the Project and the University of Tokyo was started in the 2022 rainy season in Maliana1 IS. The average yield of DSR in Buluto and Maliana1 IS in the rainy season of 2023 was 4.5 and 4.7 t ha⁻¹, respectively.

Rice yields on the method of Line Transplanted and Directed Seeded in Maliana 1 from 2022 to 2023 are shown in Fig. 14. Rice yields of both methods were quite higher than the yield of the baseline amount.

Table 19. Result of the yield survey of DSR method on Lead Farmer (LF)'s sites

Season	Buluto IS (t ha ⁻¹)	Maliana 1 IS (t ha ⁻¹)
2021 rainy season average of 20 sample farmers as base line*1	N/A	2.7
2022 rainy season DSR	N/A	4.7 (16 LFs)
2022 dry season DSR	4.4 (1 LFs)	3.3 (20 LFs)
2023 rainy season DSR	4.5 (4 LFs)	4.7 (25 LFs)

*1: results from interview survey

New Findings:
 The Project conducted FFS including **Direct-Seeded Rice (DSR) method with user-oriented drum seeder** as below under local conditions. DSR method also achieved **high yield coupled with high economical efficiency and effectiveness.**

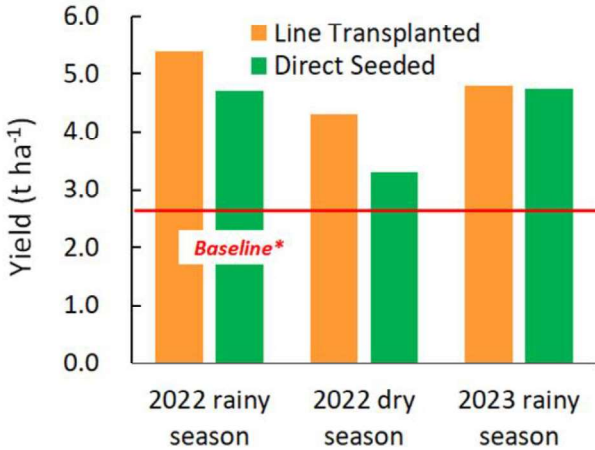


Fig. 14. Rice yields on the method of Line Transplanted and Directed Seeded in Maliana 1 from 2022 to 2023.
 * Results of direct interview in 2021



**Maliana1 Direct seeding LF 6.1 t ha⁻¹
in rainy season 2023**



**Maliana1 Direct seeding LF 5.6 t ha⁻¹
in rainy season 2023**

(3). Objectively Verifiable Indicators 1-3: Cultivation area in Buluto increases to 600 ha at the rainy season in 2023 from 426ha in 2019.

Self-evaluation on the degree of achievement of OVI 1-3: **Achieved.**

Due to our survey using the Global Positioning System (GPS) and satellite image on google map in September, 2023, the cultivation area in Buluto IS was estimated at 619 ha in 2023 (Table 20). From our direct observations in 2022 and 2023, some parts of the middle stream of the main canal of the Buluto IS are expanding as paddy fields. We also observed that expansion of the paddy fields during the dry season was promoted in 2023.

Table 20. Area cultivated in Buluto IS

Year	Cultivation Area (ha)
2019	426* ¹
2020	N/A
2021	629* ²
2022	N/A
2023	619*³

*1: Estimated 4th FD

*2: Calculated the activities of Creation of a Farmers Register List (FRL) mainly supported Output 2 team

*3: Surveyed by GPS and satellite images

Note: The cultivation area/farmers number/ratio in dry cropping season in 2023 is under investigation at the submission date of the Project Completion Report (14th November, 2023).

In order to reveal land use ratio for paddy cooperated with the degree of irrigation water amount and management, the Project calculated the land use ratio using the data of cultivated area to total potential cultivation area at the preparation in the Terminal Evaluation⁹.

According to this analysis, average on land use ratio for paddy in Buluto IS showed at 77.6% (Fig. 15). The land use ratio at the middle stream showed in approximately 95%, on the other hand, upper stream and lower stream of the ratio showed at 81.4% and 68.1%, respectively. These data indicated that water scarcity at the lower stream probably led to a lower land use ratio. We continue to have recommendations for the importance of rotation irrigation for before and after the Project completion in December, 2023.

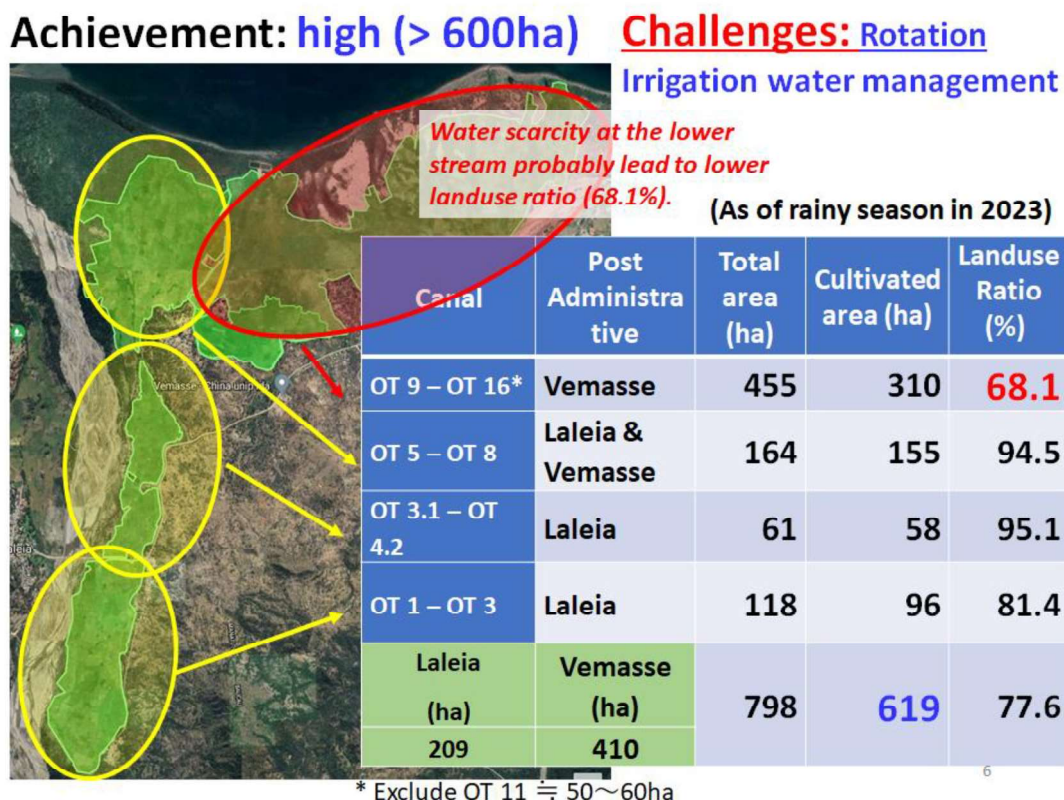


Fig. 15. Land use ratio in Buluto IS

Upper stream: OT 1 to OT3

Middle stream: OT 3.1 to OT 4.2 and OT 5 to OT 8

Lower stream: OT 9 to OT 16

2). Output 2

(1). Objectively Verifiable Indicators 2-1: More than 50 % of beneficially farmers pay water fees in 2023 from 0% in May 2019.

Self-evaluation on the degree of achievement of OVI 2-1: **Partially Achieved.**

⁹ The Terminal Evaluation Team was organized and dispatched by JICA from 4th to 20th September 2023 for the purpose of conducting the Terminal Evaluation. They also participated in the 13th JCC Meeting on 20th September to present the results of the Terminal Evaluation.

The water fee collection of 2023 started in March and WUA extended the original collection period for two (2) weeks since some farmers still needed to make arrangements to pay.

The result of the water fee collection in 2023 in Buluto IS is shown in Table 21. The collection rate in 2022 and 2023 was achieved at 62.4% and 71.3%, respectively. This amount is much higher than the indicator level.

Table 21. Results of water fees collection in Buluto.

Year	Total amount of fee collected		Paid farmers	Total number of farmers*1	Collection Rate of farmers number (%)*2
	As paddy (kg)	As cash (US\$)			
2021	2,770	55	277	652	42.5
2022	5,364	0	407	652	62.4
2023	5,418	0	403	565	71.3

*1, *2: Total number of farmers and collection rate are provisional values.

In Maliana1 IS, water fee collection in US\$ cash resumed in 2022 after being suspended for several years. Table 22 shows the results of the 2023 collection, which began in March and WUA extended the original collection period for one (1) month, ending in July. The rate is 28.0%, and this amount is far from the Indicator level. The challenges of WFC in Maliana 1 were also discussed in Chief of Canal (CC) meeting and General Assembly Meeting, and countermeasures are shown in Fig. 16.

Table 22. Results of water fees collection in Maliana 1.

Year	Total amount of fee collected (US\$)	Paid farmers	Total number of farmers*1	Collection rate of farmers number (%)*2
2022	2,302	547	1,327	41.2
2023	1622.5	374	1,335	28.0

*1, *2: Total number of farmers and collection rate are provisional values

Challenges: Well O&M of irrigation facilities by WUA

The WUA is expected

- to continuously hold socialization workshop for **water fees collection** every year,
- to be improved **transparency** by managing water fees and financial record.
- to regain trust from farmers with WUA **accountability**.

Local Authority/Chief of villages are expected

- to be involved in the WUA activities and use their **authority and responsibility** to good influence farmers to pay water fees in their communities.



Fig. 16. Challenges of WUA activity especially for water fee collection

Challenges and difficulties in Maliana 1 water fee collection are included as follows;

- Good rainfall in 2023 (That is why farmers didn't depend on irrigation)
- Confused demarcation of role between MALFF, WUA and farmers
- Lack of penalty for non-payers
- Lack of trust in the former WUA
- Low performance of Chief of Canal and
- Lack of transport for the WUA to collect, etc.

Recommendations from the Project to WUA are included as follows;

- Continuous explanation to farmers
- Support some incentives to CCs who collect money
- Transparency in WUA accounting
- Expanding water fees collection to other users besides farmers (e.g., car wash) and
- Further cooperation with local authorities, such as chief of village

(2). Objectively Verifiable Indicators 2-2: Main canal and sub-canals of irrigation schemes are cleaned and maintained by farmers in Buluto and Maliana1

Self-evaluation on the degree of achievement of OVI 2-2: **Achieved**.

Both Buluto IS and Maliana1 IS implemented canal cleaning activities before the rainy season rice cultivation in 2022. The last activity was conducted in November-December 2022. The results of the activity in both ISs are shown in Table 23. The next canal cleaning activities are expected in November and December 2023.

In Maliana1 IS, the sand traps at the headwork need to be excavated manually before the main canal can be cleaned, due to the rehabilitation activity conducted from June to September 2023.

Table 23. Farmers’ attendance condition in Buluto and Maliana1 IS in 2022

Name of scheme	Target facility	Activity period	Actual working days	Number of farmers attended	
				Total	Daily average
Buluto	Main canal	Nov.14 - Dec.6	12 days	918	77
Maliana1	Main canal	Nov.16 - Nov.18	3 days	204	68

In addition to the above activities, the MALFF Municipality office is responsible for the daily operation and maintenance (O&M) of irrigation facilities (headworks and main canals) through MIOs and GKs. WUA members and farmers are responsible for cleaning, sediment removal, weeding, and minor repairs. GKs' O&M activities are based on the Irrigation Management Manual, which includes timely operation of headworks gates, daily inspection of irrigation facilities, and lubricating oil application to the gates. Thus, those activities were conducted regularly in both irrigation and reported to GKRM.



Before
Reed grew in Sand trap Feb 2021 in Buluto



After
Sand trap maintained clean Feb 2023, Same location from upper stream

3). Output 3

(1) Objectively Verifiable Indicators 3-1: A total of more than 500 tons of paddy is sold by farmers in Buluto and Maliana I to private sectors such as CAAKUB and ACELDA per year.

Self-evaluation on the degree of achievement of OVI 3-1: **Not achieved.**

The results of paddy amount (ton) sold by farmers from the project sites in 2023 until the end of September are shown in Table 24. Based on the Project team’s survey, CAAKUB obtained 65.7

tons of paddies through member and non-member farmers in Maliana 1 IS. ACELDA obtained 30.0 tons of paddies from the Buluto IS. For an indicator of other, there were several companies emerged in the Project sites purchasing paddies.

Table 7: Amount of paddy (ton) sold by farmers to CAAKUB, ACELDA, and other private companies from the Project sites in 2022 and 2023.

	2017	2018	2019	2020	2021	2022	2023 [‡]
CAAKUB	39.6	87.7	93.4	59.3	91.9	46.1	65.7
ACELDA	46.9	253.7	122.5	287.8	163.1	64.3	30.0
Other	--	--	105.0 [†]	468.9 [†]	55.8 [†]	805.0 [§]	160.8
Total	86.5	341.4	320.9	816.0	310.8	915.4	256.5

[‡]2023 data is based on the record collected until the end of September.
[†]The amount of other from 2019 to 2021 was based on previous output 3 expert's Work Completion Report. For 2020 and 2021. The amounts were obtained by *Loja Dos Agricultures* for supplying rice to the UNDP's emergency relief program and MTCl/SECOOP's food basket program (Sesta Basica) for COVID19 relief program.
[§]For 2022, the amount of other was based on the report from private companies who won the bidding process for Sesta Basica and obtained amount of milled rice from the project sites of Maliana 1 IS and Buluto IS exclusively.
 · The red line and highlighted circle indicate that the verifiable indicator of target area had been changed from whole country to the project sites of Maliana 1 IS and Buluto IS exclusively after 12th JCC conducted on December, 2021.

Although ACELDA obtained an additional 80 ton of paddies from the surrounding areas of Project site (Buluto IS), the farmers in the Project site expected a high unit price to sell which was influenced by CESTA BASICA in 2022. According to ACELDA's assessment, the quality of paddy in Buluto IS was somewhat below an average this year, likely due to occasional rain incidents during post-harvest processes, which led to delay in tasks like threshing and drying the paddies.

(2) Objectively Verifiable Indicators 3-2: Marketing channel for domestic rice is expanded to private sectors such as restaurants, hotels, and farmers' market.

Self-evaluation on the degree of achievement of OVI 3-2: **Achieved.**

The private sectors sold domestic rice to various marketing channels in 2023 (Table 25). The dealers of domestic rice such as supermarkets (including Farmer's Markets), continued to be expanded their channels after the Coronavirus Disease 2019 (COVID-19) incident in 2020. While offering domestic rice at restaurants and cafés has increased since 2021, the hotel struggled to offer domestic rice due to a lack of cost effectiveness and supply shortage to cover the large number of guests. The farmer's markets consistently sold domestic rice since the opening of the stores; however, the general consumers tend to purchase the red and black varieties of rice more than the white variety (Table 26).

Table 25. Change of marketing channel for domestic rice in the last five years.

	2018	2019	2020	2021	2022	2023
Hotel	2	6	--	0	0	0
Restaurant	13	5	--	7	10	8
Cafe	--	2	--	1	1	1
Supermarket (including FM's)	3	5	5	10	16	15
Total Channel	18	18	5	18	27	24

Table 26. Change of the domestic rice sold at FMs in the last four years.

Variety	Loja 1 Timor-Plaza				Loja 2 Fatu-hada			
	2020	2021	2022	2023*	2020	2021	2022	2023*
White Rice (Kg)	10,124.0	3,777.5	1,652.0	2,251.0	25,609.0	6,939.0	7,192.0	3,407.0
White Rice (Membramo*2) (Kg)	580.0	1,520.0	680.0	0.0	410.0	4,650.0	2,039.0	230.0
Red Rice (Kg)	9,174.0	9,852.5	7,851.5	5,940.5	3,916.0	9,890.0	17,943.5	10,767.0
Black Rice (Kg)	4,055.0	7,418.9	4,459.5	2,840.5	1,412.5	9,132.0	7,028.0	2,178.0
Total Amount Sold per Year (Kg)	23,933.0	22,568.9	14,643.0	11,032.0	31,347.5	30,611.0	34,202.5	16,582.0

*2023 data is based on the records from January to July only.

4). Output 4

(1). Objectively Verifiable Indicators 4-1: Plan of government purchase and distribution of domestic rice is prepared annually.

Self-evaluation on the degree of achievement of OVI 4-1: **Achieved**

NLC announced a plan to obtain domestically produced paddy an amount of 3,600 tons in 2023 (Table 27).

A contracted amount of either paddy or milled rice through private companies in 2023 was 1,586 tons of paddies and 560 tons of milled rice (Table 28), which was converted to 933 tons of paddy at 60% milling rate. Therefore, the total amount of paddy contracted by the NLC was 2,519 tons (Table 27).

Table 27. The plan of government purchase and distribution and actual result from 2019 to 2023.

Year	Location of Purchase	Plan (ton) (A)	Result (ton) (B)	Ton (B) - (A)
2019	Maliana	Unknown	342	-
	Buluto	Unknown	0	-
	Total	Unknown	342	-
2020	Maliana	650	36	▲614
	Buluto	350	6	▲344
	Total	1,000	42	▲958
2021	Maliana	680	466	▲214
	Buluto	250	0	▲250
	Total	930	466	▲464
2022 ¹⁾	Maliana	300 (milled rice base)	329 (paddy)	
	Buluto	175 (milled rice base)	223 (paddy)	
	Total	475 (milled rice base)	552 (paddy)	
	whole country	1,500 (milled rice base)	1,500 (milled rice)	±0

2023	Maliana	N/A	N/A	
	Buluto	N/A	N/A	
	whole country	3,600	2,519 [§]	▲ 1,081

§560 tons of milled rice (Table 12 and Table 28) were converted to 933 tons of paddy at 60% milling rate. The total amount of paddies would be 2,519 tons, which combined with the contract-based amount of 1,586 tons of paddies and 933 tons of converted paddies from milled rice (Table 28).

Table 28. The government purchasing plan prepared by NLC for domestic rice and imported rice in 2023[†].

Product	Budget (USD)	Quantity (tons)	# of companies
Domestic Paddy	824,874	1,586.30	24
Domestic Rice (milled)	700,000	560	4
Imported Rice	2,950,500	4,215	4
Total	4,475,374	6,361.30	32

[†]The presentation material with data was shared by the NLC Executive Director on September 5th, 2023.

(2). Objectively Verifiable Indicators 4-2: Appropriate system of payment from NLC to farmers and private companies is introduced so that the timing of payment meets farmers' needs.

Self-evaluation on the degree of achievement of OVI 4-2: **Achieved**

The NLC Tibar warehouse received 560 tons of milled rice from the four contracted private companies by the end of July as a purchasing plan. When the NLC Tibar warehouse received milled rice, the document processes by the NLC were completed within 3 days, and the payment request sent out to the Ministry of Finance. All four companies received payment through the bank-to-bank transfer by the first week of August, which took 8 working days on average.

According to direct interviews with these four private companies, there were approximately 447 tons out of 560 tons of milled rice that was obtained from the farmers from Maliana 1 IS (79.8%).

The NLC Maliana warehouse received 330 tons of paddy from four contracted private companies by 13th September. Two companies undergo additional 37 tons of paddy supplying to the NLC Maliana warehouse. Although the NLC procurement department completed processing all required documents, the payment processes were still undergoing at the Ministry of Finance.

(3). Objectively Verifiable Indicators 4-3: More than 1,000 tons of paddy is purchased by NLC in Buluto and Maliana per year.

Self-evaluation on the degree of achievement of OVI 4-3: **Achieved**

NLC contracted with 28 private companies in 2023, and 11 companies obtained paddies from Maliana 1 IS and Buluto IS little more than 1,007 tons by the end of September (Table 29).

Vemasse Credit Union IHC from Buluto IS completed obtaining 57 tons of paddies from the member farmers to achieve a contracted amount by early September. However, the cooperative will need to arrange transportation to deliver paddies to NLC warehouse of Baucau.

Table 29. The NLC obtained paddies from the project sites of Buluto IS, Maliana 1 IS, and surrounding areas.

	2019	2020	2021	2022	2023 [†]
Maliana 1 (ton)	342	36	466	329	916 [§]
Buluto (ton)	0	6	0	223	91
Total (ton)	342	42	466	552 (paddy base)	1,007

[†]NLC paddy purchasing data in 2023 was based on the survey result until the end of September. The termination of contract will be on early December, and there are two more months remaining.

[§]560 tons of milled rice (Table 12 and Table 28) were converted to 933 tons of paddy at 60% milling rate, and 745 tons out of 933 tons of paddies were directly purchased from the farmers in Maliana 1 IS (Table 11 and Table 12, A detailed explanation of 2023 dataset for Maliana 1 and Buluto is in the I. Activity: Sub-Activity, 1). Enhance the understanding of the stakeholders on their role and responsibility through Farmers' Dialogue process.)

(4). Objectively Verifiable Indicators 4-4: Stocktaking of NLC warehouse is conducted and reported quarterly to the Project.

Self-evaluation on the degree of achievement of OVI 4-4: **Achieved**

NLC shared Q1, Q2, and Q3 warehouse stocktaking reports with Project (Output 4) as shown in Table 30.

Table 30. The result of quarterly stocktaking report from Q3 (Jul., Aug., and Sep.) by NLC in 2023.

Warehouse	Tibar	Maliana	Baucau	Natarbora /Manatuto	Bebora/Dili (Imported Rice)	Maubesi
Number of warehouse	3	1	2	1	3	1
Capacity (ton)	27,000	500	6,000	5,000	15,000	5,000
Milled rice gained (ton)	1,132	263	428	0	1,376	-
Milled rice released (ton)	176	263	0	0	1,376	-
Remaining milled rice (ton)	956	0	428	0	0	-
Paddy (ton)	253	786	0	163	0	-
Paddy released (ton)	0	466	0	0	0	-
Remaining Paddy (ton)	253	320	0	163	0	-

5). Output 5

(1). Objectively Verifiable Indicators 5-1: Workshops on the project activities are held for stakeholders in five modern irrigation schemes to share a Collaborative Approach under the initiative of MALFF.

Self-evaluation on the degree of achievement of OVI 5-1: **Achieved.**

Workshops to stakeholders of the five modern irrigation facilities (Larisula, Caraulun, Oebaba, Bebui, and Tono) have been conducted from October 2019 through July 2023 while taking various opportunities implemented by other Outputs.

Above-mentioned activities, OJT for PIM and rice quality control were conducted in cooperation with Output 2, Output 3, Output 4 and the Administration Team of the Project, and accelerated the

understanding of the achievements and considered further operation and management of those activities among the stakeholders.

6). Output 6

(1). Objectively Verifiable Indicators 6-1: A roadmap of the policy for increase of domestic rice production, such as tariff rate quota system, is discussed by Taskforce.

Self-evaluation on the degree of achievement of OVI 6-1: **Not Achieved.**

Taskforce has not been established yet while many efforts have been made. The tariff quota suggested by the OVI in Output 6 has high difficulties because of political issues for officials in MALFF and CMEA.

2-2 Project Purpose and indicators (Target values and actual values achieved at completion)

The Project Purpose is “Farmers households’ income from rice production in the project sites is increased through the improvement of rice value-chain (Production, Harvesting, Post-harvest and Processing, Distribution, and Sales/Consumption) achieved by collaborative approach”.

Objectively Verifiable Indicator of the Project Purpose is “More than USD 600,000 of income is generated by sales of rice by farmers in Buluto and Maliana I per year (equivalent to 1,500 tons of paddy sales at USD 0.40/kg)”.

According to the Terminal Evaluation, following evaluation results of the Project Purpose were presented by the members of Terminal Evaluation Mission at the 13th JCC meeting on September 20th, 2023 and its contents were agreed upon by the participants (Table 31). The prospect of achieving Project Purpose indicator, based on the information/data collected, is as in the Table 31.

Table 31. Assessment of the status/prospect for the Project Purpose

Indicator	Current Status	Result
Project Purpose: Farmers households’ income from rice production in the project sites is increased through the improvement of rice value-chain (Production, Harvesting, Post-harvest and Processing, Distribution, and Sales/Consumption) achieved by collaborative approach.		
More than USD 600,000 of income is generated by sales of rice by farmers in Buluto and Maliana I per year. (equivalent to 1,500 tons of paddy sales at USD 0.40/kg).	<ul style="list-style-type: none"> In 2022, total 1,467.4t of paddy purchase amount was made where farmers sold 552t to NLC and 915.4t to private sector, out of which 805t was actually sold through private companies to the government (MTCI and SECOOP) for CESTA BASICA program. In 2023 by the end of July, 1,257.2t of paddy purchase amount was made: 255.1t to private sector and 1,002t to NCL. The quantity may increase until December*1. 	Almost Achieved

	<ul style="list-style-type: none"> • The purchase amount was surveyed by the Project. • The purchasing price of NLC at fields remains the same, USD 0.40/kg 	
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Note *1: data are showed as of the end of July.

Self-evaluation on the degree of achievement of OVI of the Project Purpose: **Almost Achieved.**

Based on quantitative analyses from the Project survey results in 2022, amount of paddy sold by farmers to CAAKUB, ACELDA and other private sectors are 46.1, 64.3 and 805.0 tons, respectively. A total of 915.4 tons of paddy was sold by farmers on project sites in 2022 (Table 24). On the other hand, those amount until the end of September, 2023 are 65.7, 30.0, 160.8 and 160.8.1 tons, respectively (Table 24). A total of 256.5 tons of paddy was sold by farmers on project sites in 2023.

The total amount of purchased by NLC in Food Security Program from farmers in 2022 was 552 tons (Fig. 10 and Table 27) in Buluto and Maliana. On the other hand, those of MTCL and SECOOP in CESTA BASICA Program in 2022 were 747 and 58 tons in the same area (Fig. 10). The total amount of purchased by governmental organizations in project sites was shown at 1,357 tons in 2022. On the other hand, the amount of purchased by NLC from Project sites until the end of September, 2023 was 1,007 tons (Fig. 11 and Table 29). NLC contracted with 28 private companies in 2023, and 11 companies obtained paddies from Maliana 1 IS and Buluto IS little more than 1,007 tons by the end of September (Table 29).

The results of paddy purchased by the private sector and by the Government from farmers in 2022 and 2023 were 1,467 and 1,263.5 tons, respectively (Table 32). The amount in 2023 are tentative data until the end of September, thus the amount will probably increase by the end of December 2023.

Those data indicated that the Project purpose is almost achieved.

Table 32. The results of paddy purchased in Buluto and Maliana I IS in 2022 and 2023

Year	2022	2023 (Until September)
	Unit: tons	
Private Sector		
CAAKUB	46.1	65.7
<i>Buluto</i>		
<i>Maliana I</i>		
ACELDA	64.3	30.0
<i>Buluto</i>		
<i>Maliana I</i>		
Other	805.0*	160.8
<i>Buluto</i>	58.0	72.1
<i>Maliana I</i>	747.0	88.7
Sub-Total	915.4	256.5
Government		
NLC (Food Security)	552.0	1,002.1
<i>Buluto</i>	223.0	91.0
<i>Maliana I</i>	329.0	916.0
Sub-total	552.0	1,007.0
Total	1,467.4	1,263.5

*: In 2022, 805.0 tons was sold to 20 private companies for CESTA BASICA (Food Basket Program launched in October 2020 and implemented by MTCI and SECOOP). In 2023, CESTA BASICA was not implemented.

3. History of PDM Modification

Narrative Summary of PDM of Ver. 0.0, Ver. 1.0, Ver. 2.0, Ver. 3.0 and Ver. 4.0 are shown in Table. 1.

In this paragraph, “3. History of PDM Modification”, any sentences are referred from the Joint Terminal Evaluation Report conducted the Terminal Evaluation Team from 4th September to 20th September, 2023.

The project started in September 2016 with a five-year schedule. During the first three years, the Project placed emphasis on farmers' behavioral changes through farmer dialogue and awareness-raising to comply with the cultivation calendar. However, it became clear that, with the Nakroma variety currently recommended by the government, even if the cultivation calendar was adhered to, it would be difficult to expand double cropping due to the limited irrigation period. (PDM Ver.1.0 in amended R/D dated February 22, 2018)

The Mid-term review was conducted in March 2019, the recommendations of which included planning appropriate policies by the government such as tariffs or border measures on imported rice. Other possible measures to achieve the Project Purpose could include: 1) Diversification of paddy sales destinations from farmers; 2) Improving farmers' motivation by promoting the market/distribution of domestic rice, 3) Improving cultivation techniques and increasing rice production to meet farmers' motivation. Since November 2019, Project has focused on stimulating farmers' motivation to produce rice by securing a market where they can sell the paddy they produce, while at the same time introducing cultivation techniques to increase yields (PDM Ver. 2.0 in amended R/D dated July 11, 2019).

In May 2020, however, it was estimated difficult for the Project to achieve its purpose within the remaining one year and four months. Also in 2020, project activities were severely restricted due to the delay in the starting of rainy season and the declaration of a national state of emergency by the government due to the spread of COVID-19. Therefore, JICA, MAF, and NLC discussed extending the project implementation period and supplementing project activities, and it was decided to extend the project period by two years and three months beyond the original completion period (PDM Ver. 3.0 in amended R/D dated November 4, 2020).

JICA Consultation mission was dispatched in November-December 2022 to discuss and agree on the priority activities for the remaining year towards the end of the project in December 2023 as well as what the C/P need to work on after the project ends for sustainability of project benefits. The PDM including indicators was revised accordingly (PDM Ver. 4.0 in amended R/D dated March 24, 2023).

4. Others

4-1 Results of Environmental and Social Considerations (if applicable)

[Global Issue and Mitigation for Climate Change]

Considering mitigation in the agricultural sector, greenhouse gas (GHG) emissions, especially for CH₄ (Methane gas) from submerged wet paddy fields, is a very important and challenging issue in

the world. The Project will focus on technique of countermeasure for mitigation such as alternative wet and dry (AWD) in vegetative and reproductive growth stage of rice plant^{10, 11}.

The Project also considered mitigation for carbon sequestration by amendment of crop residues such as rice straw and roots into soils except avoiding strong reductant conditions in paddy soils. Rice husk is one of the bi-products in the process of milling. Bio-char made from rice husk was also applied and mixed with soil of nursery bed as soil amendment materials and as a contribution to carbon sequestration.

4-2 Results of Considerations on Gender/Peace Building/Poverty Reduction (if applicable)

1). Output 1

Gender is still imbalanced as we saw obvious low participation of women in FFS workshops (Table 4), but the number is increasing up to more than 10% in dry season 2022 and in rainy season 2023 due to the promotion and socialization by the Project. Youth participation is also limited (average participants' ages are so far 44 years old against the national average of 21 years old) so issues need to be attended.

III. Results of Joint Review

1. Results of Review based on DAC Evaluation Criteria

In this Chapter "III. Results of Joint Review", any sentences, words, figures and tables are referred from the Joint Terminal Evaluation Report conducted the Terminal Evaluation Team from 4th September to 20th September, 2023.

JICA's Terminal Evaluation aims to evaluate project's implementation status from the perspectives of achieving the project purpose, project efficiency, the prospect for sustainability and to summarize actions to be taken toward the end of the project together with the recipient country.

The Terminal Evaluation was conducted mainly by the Japanese team in consultation with all the C/P and key stakeholders of Timorese Side from 3 September 2023 to 21 September 2023, and summarized the evaluation results in the joint terminal evaluation report. The report is to be submitted to the Joint Coordinating Committee (JCC) meeting scheduled on 20 September 2023 for approval.

This chapter overviews the Project from the viewpoint of Six (6) Evaluation Criteria¹² (**Relevance, Coherence, Effectiveness, Efficiency, Impact, Sustainability**). Regarding a judgement of the

¹⁰ Potential mitigation of life cycle greenhouse gas emissions from rice cultivation by alternate wetting and drying (AWD) (https://www.jircas.go.jp/en/publication/research_results/2020_a02), Research Highlight 2020, Japan International Research Center for Agricultural Sciences (JIRCAS) (*in English*)

¹¹ -Ditto- (<https://www.jircas.go.jp/ja/program/proc/blog/20220712>) (*in Japanese*)

¹² The Terminal Evaluation is conducted based on JICA Project Evaluation Handbook (ver2.0, March 2021), which follows the Principles for Evaluation of Development Assistance 1991 prepared by Organization for Economic Co-operation and Development - Development Assistance Committee (OECD-DAC). As such, the following Six Evaluation Criteria (Relevance, Coherence, Effectiveness, Efficiency, Impact, Sustainability) are applied as the perspective of evaluation

Relevance: The extent to which the purpose and design of the intervention respond to beneficiaries' needs, policies and priorities and remain responsive as circumstances change.

Coherence: Compatibility of the intervention with other interventions by partner/development agency, recipient country, relevant sector and organization.

respective evaluation criteria, the following four scales of **high**, **relatively high**, **relatively low** and **low** are used in the terminal evaluation.

The evaluation results based on the Six Evaluation Criteria are summarized as Table 33.

Table 33. Summary of the evaluation results

Criteria	Evaluation	Significant Points
Relevance	high	The Project continues to be consistent with the government policy and the needs of domestic rice production in the country.
Coherence	high	The Project consistent with Japan's ODA policy for Timor-Leste. There are some synergistic effects with other intervention.
Effectiveness	high	The Project is achieving most of the PDM indicators.
Efficiency	relatively low	The project exceeded budget and cooperation period than initially planned. This is largely due to the adverse effects of the pandemic COVID-19.
Impact	relatively high	The Indicator for the Overall Goal can be achieved by the Timor-Leste side 3 years after the Project if Timor-Leste continues to take the initiative in continuing the activities after the Project.
Sustainability	relatively low	The continued reality of financial constraints and its uncertainty are widely indicated during the evaluation mission. Based on policy and institutional/organizational and human resource/financial aspect, Timor-Leste is expected accelerate or continue policy development, budgeting and staffing.

Results of each 6 evaluation criteria are shown as follows in detail.

1). Relevance

The relevance of the project is rated "**high**" with changed environment from "relatively low" at the time of Mid-term Review in 2019.

(1). Consistency with the national development policy

Effectiveness:	The extent to which the purpose and output of the intervention have been achieved or likely to be achieved, including different outcomes of respective groups.
Impact:	Degree of significant positive or negative, intended or unintended, higher-order effects caused or expected by the intervention.
Efficiency:	The extent to which the intervention is implemented that produce outputs from inputs in an economical and timely manner.
Sustainability:	The degree to which the net benefit of the intervention persists or is likely to persist from the perspectives of policy/institutional, organizational/human resources, financial, and technical aspects.

The Project continues to be consistent with the national development plan and the agricultural sector policy of Timor-Leste, which remain the same since the Project started.

- (i) The national development plan of Timor-Leste is the “Strategic Development Plan (SDP) 2011-2030”, the goal of which is to become an upper middle-income country by 2030 by transitioning away from its economic dependence on oil production. The SDP describes sectoral and issue-specific targets with numerical goals for the short-term (2011-2015), medium-term (2016-2020), and long-term (2021-2030). The agricultural sector is prioritized as one of key sectors for economic development and the achievement of food self-sufficiency by 2020 is included as a goal.
- (ii) The “MAF Strategic Plan 2014-2020” is the agricultural sector development plan, where the Timorese government sets a specific goal to increase rice harvested area up to 50,000ha as well as to increase the ratio of domestic rice up to 70% in the rice market of the country by 2023. The Plan has not been revised since and is still effective at the time of terminal evaluation.
- (iii) The parliamentary election was held on May 21, 2023, and the new cabinet was inaugurated on June 21. At present, there is no strategic plan which has been released as an official document specified on domestic rice development.

(2). Response to the needs of target societies

In terms of food security, rice is one of the country's staple foods and is a major crop for the people. The government is aiming to strengthen the production, sales, distribution, and supply of domestic rice. As such, the Project responds to the needs of the target societies.

- (i) Minister of MALFF recently indicated that the main role of the MALFF within five years is to reduce dependency on imported food products by increasing local food production. Regarding irrigation, the minister also mentioned that several irrigation schemes build by the government in Viqueque, Uatulari, Baucau, Lautem, Laivai, Maliana and other municipalities have limited irrigation storage and the irrigation systems are typically less efficient, thus MALFF would work on developing additional reservoirs and dams to increase the local products¹³.
- (ii) In 2024 state budget, agriculture was announced as one of the four priorities by the Prime Minister, who also mentioned that the government would guarantee food security and support modern farmers, support agricultural cooperatives, and invest in research and development to increase agricultural productivity and competitiveness¹⁴.
- (iii) According to KONSSANTIL (National Council for Food Security, Sovereignty and Nutrition in Timor-Leste), 20% of the population suffered from food insecurity in the country¹⁵. The rice production in the last decades was decreased compared to recent few years, where the domestic rice production now continues to increase and MALFF acknowledges the production quantity reaches 143,000t in 2022. Domestic production is still limited, however, to meet the domestic consumption and the country imports rice from abroad. The following two tables show production quantity, harvested area and yield of domestic rice in Timor-Leste from two data sources MALFF and FAO.

¹³ <https://en.tatoli.tl/2023/07/05/malff-seeks-to-reduce-imported-foods-by-increasing-local-food-production/05/>

¹⁴ <https://en.tatoli.tl/2023/09/12/education-health-agriculture-and-infrastructure-become-priorities-in-2024-state-budget/14/>

¹⁵ <https://en.tatoli.tl/2023/01/12/konssantil-20-of-the-timorese-population-suffering-from-food-insecurity/15/>

Production Amount, Harvested Area and Yield of domestic rice and Yield*1

Year	Production Quantity (ton)	Area Harvested (ha)	Yield (t/ha)
2011	98,297	35,561	2.76
2012	119,166	35,589	3.35
2013	85,334	26,373	3.24
2014	88,824	28,482	3.12
2015	60,361	18,281	3.30
2016	35,361	10,745	3.34
2017	36,982	11,861	3.12
2018	57,418	18,047	3.37
2019	79,703	22,328	3.57
2020	82,352	21,866	3.80
2021	120,135	29,154	4.10
2022	143,055	34,662	4.10

Source) National Directorate of Agriculture and Horticulture

*1: The framework of the above table in the Terminal Evaluation report was revised by the Project.

Production Amount, Harvested Area and Yield of Domestic Rice in Timor-Leste*2

Year	Production Quantity (ton)	Area Harvested (ha)	Yield (t/ha)
2011	98,297	35,561	2.76
2012	119,166	41,884	2.85
2013	87,332	27,998	3.12
2014	88,824	28,482	3.12
2015	71,541	23,017	3.11
2016	60,000	19,251	3.12
2017	62,115	22,959	2.71
2018	57,000	22,912	2.49
2019	47,822	22,328	2.14
2020	49,983	18,912	2.64
2021	45,455	26,792	1.70
2022	N/A	N/A	N/A

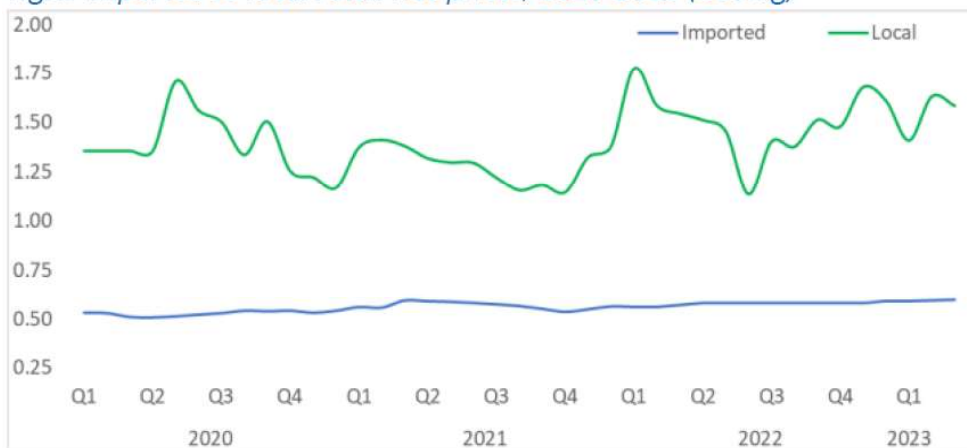
Source) FAOSTAT <https://www.fao.org/faostat/en/#data/QCL>

*2: The framework of the above table in the Terminal Evaluation report was revised by the Project.

- (iv) From the viewpoint of food security, the price of imported rice impact on availability and affordability of the staple food. Over the past years, the imported rice is less than half in price of domestic rice. In September 2023, however, WFP reports that the imported retail rice prices

marked US\$0.66/kg in July 2023, a 16% increase from July 2022¹⁶. Currently, 90% of imported rice are from India, 9% from Vietnam, and 1% from Thailand 1%. The report lists up 6 reasons the price is on the increase such as 1) introduction of limitations to Indian rice exports, 2) globally strong demand for rice, 3) floods in China and Pakistan, 4) reduced production in Indonesia due to reduced rainfall, and so on.

Fig. 1: Imported vs local retail rice prices, 2020-2023 (US\$/kg)



Source) Timor-Leste Q1 2023 Market Monitor Report Food Security Analysis

Quantity of imported rice*3

Year	Imported amount (ton)	Year	Imported amount (ton)
2011	62,114	2017	143,344
2012	100,653	2018	135,847
2013	139,671	2019	81,049
2014	222,274	2020	77,570
2015	300,000	2021	109,993
2016	115,786	2022	114,305

Source) UN Comtrade <https://comtradeplus.un.org/>

*3: The framework of the above table in the Terminal Evaluation report was revised by the Project.

(3). Response to the needs of beneficiaries

After the Mid-term Review in 2019, there has been a big change of the needs and interest of beneficiaries, which are farmers as the Project title and the Project Purpose clearly specify. Now the Project meets the needs of beneficiaries.

The Mid-term Review of the Project in 2019 pointed out that one of the main reasons for decreasing production and harvested area of domestic rice is due to farmers not being motivated to grow rice for sale because the cheap imported rice was on the market and domestic rice could not compete in price. Accordingly, farmers find better income sources than rice sales. In this viewpoint, the Mid-term Review writes that while the project largely meets the development need of the Timorese

¹⁶ <https://www.wfp.org/publications?f%5B0%5D=country%3A2096>

government, it does not directly meet the needs of farmers who have neither interest in increasing rice production nor in selling their rice in the current market situations. This is a part of the reason why the relevance was rated “relatively low” in the Mid-term review.

Such attitude of farmers, however, has remarkably changed since 2019. During the terminal evaluation, farmers in Buluto and Maliana I expressed their willingness to grow more rice mainly due to the following two reasons.

- (i) Awareness of national food security has been increased due to the impact of COVID-19 and recent world situation. The government of Timor-Leste introduced CESTA BASICA in 2020, which has motivated farmers to produce more rice as they can expect companies to come and buy local rice after harvesting. In response to enormous impacts on economy by COVID-19, the government of Timor-Leste launched CESTA BASICA (Food Basket Program) on October 27th, 2020¹⁷ to support families in meeting their basic needs and addressing hunger in the country, as well as to give support to farmers, producers, and local traders through the circulation of financial resources to increase national production.¹⁸ For the CESTA BASICA program implemented by MTCI and SECOOP, in 2022, twenty companies purchased 58t from Buluto and 747t from Maliana I, totaling 805t of rice from the Project sites.
- (ii) The Project has provided technological support on rice production, irrigation management and rice sales as one package in a timely manner in order for farmers to realize production and sales increase. The increase of productivity is acknowledged by farmers when the Project help farmers convert from conventional rice cultivation to modern rice cultivation in the irrigation scheme. In the Project, MALFF’s Good Agriculture Practice (GAP, it is called as “Pratika Agrikultur Diak (PAD)” in Tetun language) manual is used for technical guidance for 1) nursery preparation, 2) basal fertilization, 3) line transplanting, 4) weeding, 5) top dressing fertilization, 6) pest & disease control, 7) community seed production, and 8) timely harvesting. All these processes are following the already established rice technical package of the GAP. In addition to timely supports on the operation and maintenance of irrigation facilities in the Project, farmers named fertilizer, weeding, timely harvesting, and direct seedling among others as particularly effective.

(4). Appropriateness of the approach

The approach of the Project to achieve its purpose has changed during its implementation. After the Mid-term Review, in particular, the Project has expanded its scope to achieve its purpose, including the preparation of policy options necessary for domestic rice promotion. It may require further discussion to evaluate the appropriateness of this scope expanded at the time of Mid-term review. The Project aims at increasing farmers’ income not only by promoting rice production but also by expanding domestic rice market.

- (i) Initially, the project activities mainly focused on training and awareness-raising of farmers and stakeholders for each output: training on rice cultivation techniques for targeted farmers, training on the operation and maintenance of irrigation facilities for WUA members, training on distribution and sales of domestic rice, and 5S training on rice warehouse management for government officers. These activities were selected out of action area proposed in the Master Planning Survey conducted in 2015, based on the situation of rice production and distribution of domestic rice. The Project narrowed down the scope as pilot activity in considering implementation capacity of the government. The identified area of activity (production technique, irrigation management, and public procurement support) well capture the fundamental issue in relation to domestic rice promotion, that is, low productivity due to production technique and limited water supply combined with flooding importation of cheap imported rice significantly reduce farmer’s motivation in rice farming and all these factors reinforcing each other as a vicious cycle. This situation still persists, which implies the appropriateness of the approach selected in the project.

¹⁷ <http://timor-leste.gov.tl/?p=26037&n=1&lang=en>

¹⁸ <https://estatal.gov.tl/wp-content/uploads/2021/12/Medida-da-Cesta-Basica-Relatorio-do-Secretariado-Tecnico.pdf>

- (ii) This initial approach was found not so effective as the understanding of actual situation of farmers progressed, where they were hardly motivated to produce rice because the country is highly dependent on cheap imported rice and farmers have little opportunities to sell rice even though they produce it. Then, the Project adopt “Farmers Dialogue” approach to motivate farmers while collecting information on farmers' activities, promoting farming techniques, disseminating market information, and monitoring farmers' activities.
- (iii) The Mid-term review in 2019 assess the status of project implementation and found out that public procurement system, which was foundation of project activity to secure domestic rice market, was not properly implemented at that time. The mission report suggests that the government needs to consider taking measures not only on production but also on border control and market creation (e.g., School Feeding Program, farmers market, subsidy to compensate productivity difference) to fill the price gap between domestic and imported rice. Although the domestic rice promotion is stipulated in the national and sectoral plan, the government actually hasn't implemented such measures to realize the promotion in the current situations. Due to this reason in part, the Mid-term review rated relevance of the Project “relatively low”.
- (iv) Accordingly, the revised PDM was proposed by the Mid-term Review with the addition of Output 5 “The Government promotes domestic rice by planning appropriate policies and disseminating lessons learned from the Project.” From November 2019 onwards, the Project focuses on activating domestic rice market where farmers can sell their paddy, thus providing incentive for farmers to improve cultivation techniques and can produce and sell more rice.
- (v) Also in response to the recommendation of Mid-term review, from the 2020 rainy season, instead of conducting its own “Farmers Dialogue”, the Project has used the technical package in the PAD manual (with a target yield of 5t), and has implemented FFS through MAF extension workers.

(5). Appropriateness of target regions

The target region is appropriate considering the importance of Baucau, Bobonaro and Manatuto municipalities in domestic rice production. According to the statistics of MALFF, the three municipalities take up 52.5% of the rice production of the country in 2022.

Data Record of Rice Production 2022

Municipality	Area Harvested (ha)	Average Yield (t/ha)	Production (t)	Ratio (%)
Aileu	381.76	3.7	1,412.51	1.0
Ainaro	189.00	3.9	737.10	0.5
Baucau	10,066.75	4.2	42,280.35	29.6
Bobobaro	5,490.11	4.9	21,960.44	15.4
Covalima	2,531.56	4.5	11,311.02	7.9
Dili	21.25	3.0	82.88	0.1
Ermera	705.52	3.7	2,610.42	1.8
Lautem	1,012.38	3.8	3,847.04	2.7
Liquica	242.71	3.7	898.03	0.6
Manatuto	2,745.60	3.9	10,707.84	7.5
Manufahi	764.15	4.2	3,209.43	2.2
RAEOA	5,056.70	4.2	21,013.05	14.7
Viqueque	5,472.50	4.2	22,984.50	16.1
TOTAL	34,881.99	4.1	143,054.61	100.0

National Directorate of Agriculture and Horticulture

Buluto irrigation scheme (Baucau Municipality and Manatuto Municipality) was rehabilitated through Grant Aid from Japan in 2013 through 2017. It was quite acceptable to select the Buluto IS as the target area for the Project in the east of the country as an incentive for local farmers to produce and increase rice productivity as well as rice production in the country. Maliana 1 irrigation system (Bobonaro Municipality) is another irrigation scheme rehabilitated under Japan's Grant Aid in 2007 through 2009. The condition of irrigation facilities after the rehabilitation has been full and an incentive for the farmers to increase the productivity including crops diversification for dry season cultivation.

(6). Expected ripple effects to other regions and groups

The ripple effects of the introduced techniques can be reasonably expected to other region and groups. For the improvement of the farming techniques, the Project follows the already established rice technical package of MAF's GAP manual and the extension method of FFS so that it can be replicable across the country. When applying the techniques in demonstration plot, the Project tries to minimize financial and material inputs from the viewpoint of sustainability for farmers to continue to apply the techniques on their own. In accordance with PAD, the Project only provided some minimal agricultural material/equipment as listed in the table below. In conducting FFS workshop to Lead Farmers (farmers who participate in FFS workshop), the Project hasn't provided lunch, allowance, nor conference package except fuel for transportation and communication cost for extension workers which were requested by MAF HQ for smooth implementation. Farmers have well adopted the techniques, recognizing them as effective. Farmers are positive to continue to apply PAD in their fields if equipment and fertilizer are supported by the government in a timely manner.

Inputs by the Project to conduct FFS workshop

Material	Source	Remarks
Seed	By MALFF as free input. Though whenever subsidy delays the project also procures and supports distribution.	Nakroma variety
Fertilizer	NPK/Urea supplied from Agro dealer by JICA NASA organic fertilizer by MAF	100kg NPK and 50kg Urea for 0.5ha, Few farmers
Line markers	Made by local workshop provided by JICA	25cm, 30cm 4-5 lines
Rotary weeder	Made by local welding workshop by JICA	Metal with 15cm (for 25cm interrow) and 18cm (for 30cm interrow) width
Hand tractor	By JICA	1 piece to Maliana 1
Drum Seeder	Made by local workshop provided by JICA	30 units of drum seeder
Fuel	By MALFF as subsidy and JICA	Transportation for extension workers and for tractor
Pesticide	By MALFF as subsidy and JICA	Regent, BASSA, Besidor for FFS participant (model farmers and lead farmers)

Source) 11th Monitoring Sheet of the Project

(7). Application of the Lessoned Learned from similar past projects

In the detailed planning survey report of this Project, there are some recommendations which were extracted from the lessons during the previously implemented similar projects in Timor-Leste (Irrigation and Rice Cultivation Project in Manatuto Phase-II). One key lesson is to carefully select technologies feasible in the target area, taking into consideration the current technical level and

socio-economic situation. The project has well followed this guidance and selected technologies from existing good agriculture practice prepared by Timor government. Those set of technologies are simple but have effectively improved yield level of the target farmers.

The other recommendation is to make most use of system of traditional irrigation management. The Project has formulated WUA in a way that its activities include Kabwee as a key player in WUA (e.g., water fee collection, cleaning of canal).

2). Coherence

The coherence of the Project continues to be rated “high”.

(1). Priority in Japan’s development cooperation policy

The project is consistent with Japan’s ODA policy for Timor-Leste. The Development Cooperation Policy for Timor-Leste (May 2017) by the Ministry of Foreign Affairs of Japan gives a priority on “assisting the process for establishing the foundation of sustainable development of the country” and “promoting industrial diversification to break away from an economy dependent on oil and natural gas”. Accordingly, the Rolling Plan for Timor-Leste (April 2021) writes that the county is dependent on oil and natural gas, so it is necessary to diversify its industries by strengthening the infrastructure of agriculture, fisheries, tourism, etc., and building institutional capacity. The Project is included in the prioritized area of industrial diversification.

JICA GA (Global Agenda) of Agriculture and Rural Development has five clusters, one of which is “Strengthening Food Value Chains (FVCs) in Southeast Asia” According to GA, to improve agricultural income, farmers need to produce and supply agricultural products that meet market needs and increase agricultural profits. Also, to connect diversifying and increasing market needs for agricultural products, it is necessary to build FVCs while adding value at each stage of agricultural products, from production to processing, distribution, and consumption. As such, the Project is aligned with the GA.

To date, JICA has provided support on the domestic rice production in Timor-Leste as early as from 2001 as the table below. The table covers main supports on the domestic rice production. The Project is the continuation and development of these preceding cooperation which also includes Buluto and Maliana 1 irrigation scheme.

Cyclone Seroja caused significant damage in Timor-Leste on April 5, 2021. At present, the Program for Urgent Rehabilitation of Flood Damaged Infrastructure is ongoing around the headworks of both Buluto and Maliana 1 irrigation scheme. The Cyclone also damaged Laclo IS, the headwork and main canal of which have not been functioning since. Along the main road, there are many abandoned fields where there has been no planting for the past two years.

No	Project Name	Period	Scheme	Target
1	The Project for the Rehabilitation of Laclo Irrigation Scheme	2001-2003	Urgent Grant Aid	Laclo IS
2	Irrigation and Rice Cultivation Project in Manatuto - Phase 1	January 2005 - March 2010	Technical Cooperation	Laclo IS
3	The Project for Rehabilitation and Improvement of Maliana 1 Irrigation Scheme	August 2007 - February 2009	Grant Aid	Maliana 1 IS
4	Advisors for Agriculture field (5 dispatches)	May 2008 - October 2018	Advisor	Whole Country
5	Irrigation and Rice Cultivation Project in Manatuto - Phase 2	November 2010 - November 2015	Technical Cooperation	Laclo IS

6	Project for Agriculture Master Plan and Irrigation Development Plan	September 2013 - May 2015	Technical Cooperation	Whole Country
7	The Project for the Rehabilitation and Improvement of the Buluto Irrigation Scheme	December 2013 - January 2017	Grant Aid	Buluto IS
8	The Program for Urgent Rehabilitation of Flood Damaged Infrastructure	February 2023 - August 2024	Urgent Grant Aid	Buluto IS Maliana 1 IS

Source) Evaluation Team

(2). Consistency with international agenda such as SDGs

The Project is aligned with SDG (Sustainable development Goal 1 (Eradicate Poverty) and SDG 2 (Zero Hunger) among others. For SDG 1, it is essential to reduce poverty in rural areas by promoting agriculture and related industries. SDG 2 sets the goal of eradicating hunger by 2030 while the number of chronically hungry people in the world has been increasing since 2014. The Project aims at increasing farmers' household income through domestic rice production in Timor-Leste, thus contribute to poverty eradication and zero hunger.

(3). Synergistic effects with other intervention

(i) AI-Com and TOMAK

The Project has been sharing project activities and achievements of Output 1 with AI-Com and TOMAK programs. Both programs are funded by Australia, aiming at technology development and development support, respectively. The Project regularly exchange technology and opinions with the programs, including discussions regarding the revision of PAD. Their target crops are not limited to rice, but include maize, beans, and potatoes while the Project is focused on rice and rice value chain.

AI-Com (Agricultural Innovations for Communities for intensified and sustainable farming systems in Timor-Leste) is a research program between MALFF, UNTL (National University of Timor Lorasa'e), World Vision Timor-Leste and UWA (University of Western Australia). The program is funded by ACIAR (Australian Center for International Agricultural Research) and aims to improve agricultural productivity and profitability in pilot communities. AI-Com has four objectives: (1) community based natural resource management, (2) intensive irrigated cropping system, (3) intensify crop management options for rainfed crops, (4) design and evaluate methods to increase sandalwood production with communities. Activities of the objective (2) includes the application of Urea and rice hull biochar in Vemasse to increase rice yield.

TOMAK (To'os ba Moris Di'ak or Farming for Prosperity) is a 10-year agriculture livelihoods program in Timor-Leste, funded by the Australian Government, operating in Baucau, Bobonaro and Viqueque municipalities. Following the Phase I (2016-2022), TOMAK Phase 2 (2022-2026) has three outcomes: (1) improved and sustainable government policies, programs and services, (2) more resilient agriculture-based livelihoods and improved economic empowerment, (3) improved household food security and dietary diversity. The program includes extension activity for promotion of red rice and new rice varieties.

(ii) FAO

The Project is also sharing information with FAO in Timor-Leste, activities of which includes strengthening coordination role for KONSSANTIL, support to first national agriculture census, improving farming livelihood and diversity of household diets, support to smallholder fishing and aquaculture, and development of cash crop economy. The first Timor-Leste agriculture census was conducted in 2019, but it has not been available as yet. FAO also promote small-scale irrigation, but relevant information was not obtained during the terminal evaluation mission.

(iii) WFP

The Project has been considering possible collaboration with WFP but hasn't realized it so far. WFP helped launch the School Feeding Programme in Timor-Leste in 2005. In 2011, the MoEYS (the Ministry of Education, Youth, and Sports) took over the responsibility for the programme, turning it into the National School Feeding Programme (NSFP). In December 2022, the tripartite MoU was signed between WFP, MoEYS, and MSA (the Ministry of State Administration) to work together in boosting the health and nutrition of school children by introducing fortified rice as a part of the School Feeding Program, targeting 79,000 children in over 400 schools in Baucau, Bobonaro and other municipalities. The Project considered supplying domestic rice for school lunches in Dili through "Loja Dos Agricultores" in collaboration with WFP as an activity of Output 3. In October 2022 and July 2023, WFP also participated in the seminar on proposed rice quality standard which had been prepared by a short-term expert.

3). Effectiveness

The effectiveness of the Project is "high" as the Project is achieving most of the PDM indicators.

1). Prospect of attaining the Project Purpose

The Project Purpose is "Farmers households' income from rice production in the project sites is increased through the improvement of rice value-chain (Production, Harvesting, Post-harvest and Processing, Distribution, and Sales/Consumption) achieved by collaborative approach". The Project has collected data on sales and income of model farmers, lead farmers and some conventional farmers. The data proved that the income of model farmers and lead farmers have increased compared with conventional farmers. It is difficult, however, to collect the data on all farmers' income of the Project sites.

The indicator for the Project Purpose is "More than USD 600,000 of income is generated by sales of rice by farmers in Buluto and Maliana I per year. (equivalent to 1,500 tons of paddy sales at USD 0.40/kg). Regarding the target of 1,500t, the survey conducted by the Project reveals that 1,257.2t of paddy purchase was realized in Buluto and Maliana I in 2023 (January through July) as in the table below. Thus, the Project has almost achieved the indicator for Project Purpose. Also, the table below indicates that the paddy purchase of the project sites is on the increase in general from 2017 through 2023.

For collecting data on paddy purchase as in the table below, the Project carried out (1) survey on purchasing record of companies contracted by NLC, (2) survey on purchasing record of CAAKUB and ACELDA, (3) interview with farmers on rice which were sold to private sector other than CAAKUB, ACELDA or companies contracted by NLC. That way, the Project carefully excluded the duplication (double counting) of purchases and sales among NLC, CAAKUB, ACELDA or private sector. It is also noted that the total amount of 1,257.2t could be underestimated because not all farmers necessary remember how much rice they sold to whom.

Results of paddy purchase in Buluto and Maliana I from 2017 to 2023*4 (unit: ton)

	2017	2018	2019	2020	2021	2022	2023 (Until July)
CAAKUB	39.6	87.7	93.4	59.3	91.9	46.1	64.3
<i>Buluto</i>	0	0.0	0	0.0	0		
<i>Maliana I</i>	39.6	87.7	93.4	59.3	91.9		
ACELDA	46.9	253.7	113.5	105.7	137.9	64.3	30.0
<i>Buluto</i>	46.9	53.7					
<i>Maliana I</i>	0	200.0					
Other						805.0*	160.8
<i>Buluto</i>	No data					58	72.1
<i>Maliana I</i>						747	88.7

Private Sector Total	86.5	341.4	206.9	165.9	229.8	915.4	255.1
NLC (Food Security)	0	0	342	42	466	552 (Paddy)	1,002.1
<i>Buluto</i>			0	6	0	223	40.1
<i>Maliana I</i>			342	36	466	329	962.0
Total	-	-	-	-	-	1,467.4	1,257.2

Source) Survey conducted by the Project.

*: In 2022, 805.0t was sold to 20 private companies for CESTA BASICA (Food Basket Program launched in October 2020 and implemented by MTCI and SECOOP). In 2023, CESTA BASICA was not implemented.

*4: The framework of the above table was revised by the Project.

2). Major effects of the Project towards achieving PDM indicators

The Project has already achieved 10 out of 13 Indicators for Output. Except for Output 6, the Project is causing its intended effects at the Project Purpose as well as at each Output level. The appropriateness of including the preparation of policy options as Output 6 at the time of Mid-term review may require further discussion. There are many significant effects of Project realized towards achieving its PDM indicators as follows:

(Output 1) Rice farming techniques

- Persons in charge from the Municipal Service of Agriculture emphasis the importance of integrated activities from production to harvesting and sales. In the Project, extension officers have collaborated with irrigation and agro-commerce in order to increase yields. Prior to the Project, there was no such collaboration at municipalities.
- Techniques in PAD have been gladly accepted by Farmers who also express their willingness to produce more rice under the current situation. Weeding, fertilizing and cropping calendar are mentioned particularly effective while line transplanting and timely harvesting is a challenge because of its heavy labor. Farmers acknowledge that following the instruction of PAD realizes a high yield. For field leveling, farmers used hand tractors with leveling attachments the government or development donors provided first, then they level the paddy manually part by part.
- Regarding PAD, extension officers and farmers in Maliana I have learned a new technique of direct seeding through the Project. Line transplanting and broadcasting are already practiced in Maliana I, but the direct seeding with drum seeders is a new technique. Farmers in Maliana I have applied the new technique because of its lower labor costs.
- Output1 activities achieved a high yield over 6 t/ha by combining basic simple techniques easily adopted by farmers, which is applicable to cover key production stage from tillage land preparation up to post-harvest processing, based on local technical standards. By providing two technical options incorporating instruction of not only transplanting but also direct seeding, this techniques package could be applicably transferred to other regions to other rice farming area.

(Output 2) Irrigation water management

- WUA was regenerated in both irrigation schemes and keep conducting activities abiding by the bylaw developed through the Project. These are the first WUA established in Timor-Leste and expected by the government to be a good practice to be replicated in other irrigation schemes.
- Irrigation Management Manual has been used by the Gatekeepers who are contracted officers of the municipality.

- Division of responsibility for O&M of irrigation facilities are understood among stakeholders. Municipality is responsible for O&M of irrigation facilities (headworks and main canals) and gatekeepers do the work on daily basis. WUA structure and member farmers are responsible for cleaning (sediment removal and weeding) as well as minor repairs. MALFF is responsible for large-scale maintenance or rehabilitation works of irrigation facilities.
- WUA cooperate with the authorities (subdistrict administrator and village chief) for collecting water fee. At Buluto IS, Kabwee (water manager per canal since the time of traditional irrigation) are responsible for the collection and help realize its high collection rate.
- For the maintenance operation and management maintenance of irrigation facilities, the project led the initiative of farmers and WUA by directly involving WUA's members and farmers through information orientations to farmers and annual representative meeting. For this reason, activities were narrowed down to essential requirement, and participatory decision-making process was introduced. This strategy led successful improvement of irrigation management in the target irrigation scheme.

(Output 3) Sales of rice to private Sector

- CAAKUB, a farmer association, has been strengthened in Maliana 1 by the Project providing fertilizer, pesticides, and threshing machine and working on harvesting and post-harvest processing for rice quality control.
- Farmer Information Card was created in Maliana 1, which contain a lot of information such as field, varieties grown, and seeds, etc. The card is used by Municipality MALFF and CAAKUB for information to know when and how much to buy paddy as well as to evaluate the moisture content of the paddy.
- Maliana Rice Commission (MRC) was established in December 2022 by engaging all stakeholders to ensure the quality and promote the sales of Maliana rice which is very popular in Dili. MRC has been testing the moisture content of the paddy supported by the Project providing a moisture meter. In August 2023, MRC released its first product bearing the logo.
- Domestic rice is selling stably at the “Loja (farmers market store)” in Dili, which opened through the support of the Project in 2019 under the name of “Loja Dos CAAKUB Agricultores” where MALFF Agro-commerce assigned staff until June 2023. Recently, Loja has changed its name to “Loja Hakbiit Agricultores” and became a private enterprise by acquiring a new commercial license from MTI. At Loja, red rice and black rice are especially popular among consumers.

(Output 4) Purchasing of rice by the Government

- NLC and its warehouses have been benefited from training conducted in the Project based on “the Rice Quality Control Manual”, “SOP for purchasing rice from NLC”, and “5S-Kaizen Training for NLC.” There are six NLC warehouses in the country, out of which Tibar, Maliana, Bebora/Dili were observed clean, sorted and set-in-order during the mission.
- NLC conducted Socialization Workshops (briefings for farmers) in January and February 2023 to explain purchasing procedures in Maliana and Buluto. The Project supported the workshops (e.g., reserving subdistrict government conference room, supplement the explanation of purchasing procedures, and assist farmer groups and private parties in preparing necessary documents.)
- There were some complains from local farmers about rice purchasing process by NLC, saying that payment is not done on time or delayed for long time. This is due to a government rule that the payment is to be processed through bank transfer. Farmers prefer selling rice to private companies that pay in cash to purchasing by NLC.
- The SOPs and distribution plans introduced by the Project led farmers to have more options for selling domestic rice, and the program has achieved a certain level of success in terms of stable food supply. It also led to an increase in the number of private companies participating in the purchase of domestic rice.

(Output 5) Information sharing with other irrigation scheme

- Meetings and seminars have been organized to share project activities related to dry and rainy season cultivation, operation and maintenance of irrigation facilities, and rice quality guidelines with the five modern irrigation scheme: Larisula, Caraulun, Oebaba, Bebui and Tono.

(Output 6) Option of rice promoting policy

- MAF Minister of the former government mentioned that the task force should be set up as soon as possible at the meeting with the CMEA Minister and advisors with the coordination of MAF person-in-charge in June 2022.

3). Response to the recommendations of Mid-term Review (March 2019) and Consultation Mission (December 2022)

All the recommendations made to the Project have been effectively responded except for the one to promote policy dialogue with Taskforce. Despite many efforts being made as activities of Output 6, the task force has not been realized yet. One recommendation made to the Timorese government was about the implementation of policies such as purchasing domestic rice for school feeding programs or introducing quotas on imported rice. CESTA BASICA implemented by the government in 2020 through 2022 to address the economy affected by COVID-19 had a significant impact on nurturing domestic rice production.

At the Consultation mission, two categories of recommendations were made: “before the project completion” and “after the project completion”. As for the recommendation on before the project completion, the Project has implemented most of these recommendations effectively. There are some recommendations which still need to be addressed such as securing budget for the continuation of activities and establishing task force on rice policy. These recommendations, together with those on “after the project completion”, have been consolidated into the recommendation at the terminal evaluation.

4). Promoting Factor

(Of planning/design of the Project)

None.

(Of implementation of the Project)

(1) Support for promotion of domestic rice provided by the former government administration

Back in 2018, the former Prime Minister expressed positive and strong support for domestic rice promotion since his taking office. The former Minister of MAF attended the launching ceremony of nursery transplanting organized both in the Buluto and Maliana I irrigation schemes in December 2018. The former First Lady also provided positive support for domestic rice promotion; she purchased rice from CAAKUB and attended a signing ceremony for CAAKUB’s making a contract with hotels and restaurants. Such support greatly contributed to encouraging farmers in the project sites.

(2) Positive support for CAAKUB and Loja provided by MAF

For several years, CAAKUB had not been functioning as a farmer association, and it was reorganized in 2016 with a great support from MAF. CAAKUB started to purchase paddy from farmers in Maliana I and this has contributed to increase in rice sold among farmers in Maliana I and income by rice selling.

Loja (farmers market store) opened in Dili at Timor Plaza and Fatu-hada in 2019 through the support of MAF and the Project. MAF Agro-commerce assigned staff until June 2023 when Loja became a private enterprise by acquiring a new commercial license from MTI. MALFF Agro-commerce continue to support Loja, subsidizing the rent of the stores.

(3) Positive support for promotion of domestic rice provided by the ACELDA Company

While ACELDA was originally involved with exporting business of candlenuts oil, it started a domestic rice sales business in 2014 to promote domestic materials, although the local rice business is not yet profitable for them. ACELDA's engagement in purchasing paddy from farmers in Buluto has greatly contributed to increase in rice sales in the project.

(4) Increased awareness of national food security due to COVID-19 and recent world situation

In response to the pandemic COVID-19, the Government of Timor-Leste declared a State of Emergency on 28 March 2020, which enforced travel restriction on the people and caused disruption of rice value chain. In addition, on 25 March 2020, Vietnam which accounted for approximately 80% of the rice imported to Timor-Leste that time, temporarily banned rice export to ensure its domestic supplies during COVID-19. These circumstances increased people's concern and awareness about the food security. In October 2020, CESTA BASICA program was introduced in Timor-Leste and overall demand on domestic rice increased and farmers' motivation in rice farming significantly improved. Furthermore, concerns about food security are increasing in many countries due to recent world situation such as Russia's invasion into Ukraine and the related rise in global food prices.

5). Hindering Factor

(Of planning/design of the Project)

(1) Trend of a prominent position of imported rice in the rice market of Timor-Leste

Timor-Leste is importing considerable amount of rice from abroad to fill the gap between domestic production and consumption. Since domestic rice is more expensive, almost double in price, than imported rice, people generally tend to buy cheap imported rice. The Project has been implemented under such circumstances where domestic rice is not in high demand among general consumers compared to cheaper imported rice.

(2) Insufficient long-term strategy and clear policy measures to promote domestic rice in Timor-Leste

Although the government has a policy to be self-sufficient in 2020, it cannot be achieved without a well-designed long-term strategy and clear policy measures. The insufficient long-term strategy, policy measures, as well as budget supports to realize the target have discouraged the Project to increase the production amount of rice. One of fundamental issue to formulate rice policy is a lack of basic statistics regarding rice production and consumption. Recent direction toward membership acquisition for WTO/ASEAN might become a promoting factor for rice policy including domestic support, border control for food security and domestic rice promotion. However, Timor-Leste government need to be well prepared for the negotiation.

(Of implementation of the Project)

(1) Low motivation for rice cultivation among farmers in early stage of the Project

Farmers in the project sites were not so motivated to cultivate rice as farmers had little access to the rice market for sale, because of which the Project had to change its initial approach. In the

course of the project implantation, however, such attitude of farmers has greatly changed after COVID-19 as already described above.

4). Efficiency

The efficiency of the Project is rated “**relatively low**” due to the exceeded budget and cooperation period than initially planned at the time of detailed planning survey in 2016. This is, however, in part due to the adverse effects of the pandemic COVID-19, which affected not only the Project but also across the entire society. Another reason is that the approach of the Project to achieve its purpose changed during its implementation as explained in “3.1.4 Appropriateness of the approach”

1). Inputs to the Project from Japanese side

Inputs from the Japanese side are good in terms of sharing knowledge to local farmers through Project technical staff allocated for the purpose to improve rice production as well O&M of irrigation facilities in Timor-Leste. There have been a few changes on project approach and project scope in the course of its implementation, which may have affected the efficiency of the Project. The dispatch of long-term experts in charge of Output 2 (Participatory Irrigation Management) and Output 4 (Rice Purchasing and Distribution) has been delayed after the Mid-term Review. As for the Output 6, which was newly added at the time of Mid-term review, long-term expert has not been dispatched during the cooperation period and third country training was not conducted as planned due to COVID-19 situation. The Project contracted National Staff and field staff to implement activities who are also translator as well as interpreter between English and Tetum language.

2). Inputs to the Project from Timor-Leste side

Inputs such as assignment of officers, fields, coordination among stakeholders are good in general for Timor-Leste side. MALFF officers and municipality staffs including extension officers have actively involved in the Project activities.

3). Impact of COVID-19 on project efficiency

During the pandemic COVID-19, people become aware that strengthening food security is important through actions on securing food for those who are vulnerable and on increasing domestic agricultural production and productivity in the country, which led to the implementation of CESTA BASICA program.

In response to the COVID-19 pandemic and the subsequent suspension of dispatch of long-term expert, the Project have created on Google Drive a dedicated data platform to manage and utilize various reports and materials prepared in the Project. For Output 1, the FFS progress sheet (log sheet), rice growth monitoring sheet, yield survey sheet, and photos are uploaded onto the platform, and are shared among experts, counterparts, project staff and field staff on PCs, tablets, and mobile phones, thus also sharing analysis and insights. In Output 2, the database has been used to create a list of WUA association members, land registers, water depth of irrigation canals monitoring, progress data of water fee collection activities, etc., to improve the accuracy and efficiency of activities. Regarding Output 3 and Output 4, in cooperation with Bobonaro MALFF, a comprehensive database of farmers on general cultivation types and post-harvest processing was established and managed to improve traceability for Mariana Rice Committee and CAAKUB.

5). Impact

Impact of the Project is rated “**relatively high**” as the Indicator for the Overall Goal can be achieved by the Timor-Leste side 3 years after the Project if Timor-Leste continues to take the initiative in continuing the activities after the Project.

1). Prospect toward achieving the Overall Goal

The Overall Goal is “The improved rice value chains are sustained in Buluto and Maliana I with the initiative of the Government of Timor-Leste.” In terms of PDM Indicators below, it is possible that the indicator for the Overall Goal will be achieved by the Timor-Leste side 3 years after the project termination in December 2023 if the current activities continue. Situation analysis is described under the Sustainability of the next section.

- (1) The production in Buluto and Maliana I is maintained or increased compared to the end of the project.
- (2) The Buluto and Maliana I irrigation facilities are maintained by the WUA (with the support of MAF).
- (3) The amount of domestic rice sold in Buluto and Maliana I is maintained or increased compared to XX (to be determined at the Terminal Evaluation of the project).

2). Important Assumption toward Overall Goal

Following important assumption of the latest PDM still applies in order for Timor-Leste side to attain the Overall Goal three years after the Project completion, which are:

- (1) massive natural disasters (such as drought and flood) do not occur.
- (2) Budget for purchasing domestic rice is prepared and its disbursement is conducted by NLC to meet its target amount of domestic rice purchase.”
- (3) Agricultural inputs as government subsidies such as seeds, fertilizer and machines are supplied properly in quality, quantity and timing.

Serious natural disaster not destroying the irrigation scheme is an important condition toward achieving the Overall Goal. At present, the grant aid “Program for Urgent Rehabilitation of Flood Damaged Infrastructure” is ongoing around the headworks of both Buluto and Maliana I irrigation scheme which were seriously damaged by the Cyclone Seroja in April 2021. This grant aid make it possible for the Overall Goal to be achieved in spite of the event of natural disaster.

The Cyclone also caused tremendous damage on Laclo irrigation scheme which had been supported by JICA technical cooperation “Irrigation and Rice Cultivation Project in Manatuto - Phase 1 and 2”. Now, the Laclo irrigation facilities have not been functioning at all, and there are many abandoned fields are observed where there has been no planting for the past two years.

3). Other impacts

There have been several impacts of the Project observed in in areas other than the Project sites or activities of relevant organizations as follows:

- (1) Second cropping is common in Buluto IS during the dry season. Farmers from Cai Rui IS participated in FFS in 2022 dry season conducted in Bluto, then applied the learned farming techniques in their own paddy fields together with extension workers. Cai Rui sub-district is located in the upstream of Vemassee sub-district.
- (2) The Project has started direct seeding with drum seeder in Maliana 1 IS. In 2022, the Project received inquiries from TOMAK regarding the drum seeder. The Project crafted it at a workshop and provided it with a manual in the Tetun language. Now the drum seeder is used for direct seedling at Viqueque municipality. Recently, TOMAK placed another order for drum seeders.
- (3) The Project has provided technical support to the Waidaba Association, a seed cooperative in Venilale sub-district of Baucau Municipality, and has worked on producing high-quality seeds. The Project has monitored the production status and purchased seeds from the seed cooperative for use in project activities.

- (4) Rotary weeders have been used in Buluto IS by the Project. Having seen the equipment, World Vision placed an order for about 100 units of rotary weeder in 2021.
- (5) Officers of regional logistic center in Oecussi Municipality with their own budget participated in the on-the-job training (OJT) session on rice quality control, which was conducted by the Project in Dili on July 13, 2023. As for the OJT session on rice quality control conducted in Baucau on July 27, 2023, the participants were not limited to MALFF and warehouse officers but also included ACELDA, Vemasse Credit Union, and WFP.
- (6) Starting with the 2021 rainy season, the Project has conducted joint research with the University of Tokyo Graduate School of Agricultural and Life Sciences (Professor Kato's laboratory) on transplanting, direct seeding techniques, surveys of direct seeding farmers, production costs, etc. In Maliana region, approximately 70% of farmers are practicing broadcasting. Together with the same laboratory, the Project prepared an FFS technical guidance for Wet-Seeded rice, and based on it, the Project implemented the row direct seeding cultivation in both rainy and dry season. Students from the same laboratory also visited the Project three times in 2022 and 2023, and conducted agronomic survey to assess impact of fertilizer, water management and herbicide on direct seeding under water limited environment. As many farmers are practicing direct seeding, MAF is now considering including the technique into PAD.
- (7) There are no negative impacts observed or reported during the evaluation mission of the Project on environment, societies,

6). Sustainability

Overall sustainability of the Project is rated as “**relatively low**” where the continued reality of financial constraints and its uncertainty are widely indicated during the evaluation mission. From the organizational and human resources aspect as well as from technical aspect, the prospect of sustainability is more than “relatively Low”.

(1). Policy and Institutional Aspect

The Timorese Government has made it clear to give priority to the domestic rice promotion under SDP and MAF Strategic Plan. CESTA BASICA in 2020 through 2022 to support families in needs as well as farmers and local traders with the circulation of financial resource under COVID-19 actually stimulated domestic rice production and sales. The Prime Minister announced that in 2024 state budget the agriculture is a priority, guaranteeing food security, supporting modern farmers as well as agricultural cooperatives, and investing in R&D to increase agricultural productivity and competitiveness. Minister of MALFF recently indicated that the main role of MALFF within five years is to reduce dependency on imported food products by increasing local food production. As such, the political support for the domestic rice promotion can be expected in Timor-Leste even after the Project termination, and this support will be strengthened if a long-term strategy on domestic rice with policy measures are discussed, agreed and introduced among relevant ministries in the government.

(2). Organizational and Human Resources Aspect

The central and local authorities including municipalities, sub-districts and villages of Buluto IS and Maliana 1 IS have actively involved in project activities. Officers of central and local governments have taken major roles in promoting activities with farmers, WUA members, traders and private companies in their own duties. Also, the importance of integrated activities from production to harvesting and sales is emphasized by officers of Municipal Service of Agriculture during the evaluation mission, which notifies that the purpose of the Project of improving rice value-chain (Production, Harvesting, Post-harvest and Processing, Distribution, and Sales/Consumption) is well understood by the Timorese authorities. In the Project, extension officers have collaborated with irrigation and agro-commerce in order to increase rice yields. Prior to the Project, there was no such collaboration at municipalities. Organizational and individual capacities have been

developed while implementing project activities as well as with trainings and tangible outputs (manual, SOP, newsletter etc.) prepared by the Project.

(3). Financial Aspect

The Project has always taken into consideration the sustainability of project benefits in implementing its activities. For example, when conducting FFS workshop, the Project tries to minimize financial and material inputs for farmers to apply the techniques on their own and for central/local government to take over the support provided by the Project (i.e., fuel for transportation of extension worker, fertilizer, some equipment such as rotary weeder and drum seeder). Farmers are positive to continue to apply PAD in their fields if equipment and fertilizer are supported by the government in a timely manner.

The costs necessary for implementing activities are already calculated by the Project and this can be used as a good reference for the Timorese C/P to consider preparing budget to take over the activities. Followings are some examples of cost calculated:

- (1) Output 1: Costs (input materials and equipment) of implementing techniques recommended in PAD for row transplanting as well as direct seeding, each 1 ha, were calculated and shared with the Extension Department.
- (2) Output 2: Actual amount supported for fuel costs for irrigation staff and gatekeepers
- (3) Output 3: Expenses spent on activities related to the Mariana Rice Committee (including rice quality control training)

Based on the achievement of the Project, municipal governments have prepared 2024 budget to continue and develop some activities; for example, Bobonaro Municipal Service of Agriculture has included budget for expanding the use of drum seeders to other subdistricts as well as budget for promoting Maliana Rice Commission regarding rice quality control. Depending on the country's fiscal situation and developmental priorities, however, the amounts approved by the Ministry of Finance are usually limited to cover only the administrative and operational costs. As such, Municipal Service of Agriculture usually rely on the MALFF for agricultural inputs such as seeds and fertilizers.

MALFF needs to support a total of nine modern irrigation facilities including Buluto IS and Maliana I IS. The government aims to increase domestic rice production and has plans for inputs such as rice seed, fuel, and fertilizer, but MALFF admits there are budget constraints and that their supports are limited at present while hoping to secure the budget to meet the demands of farmers. During the evaluation mission, however, DG of Agriculture and ND of Irrigation shared information that the following activities are ongoing or planned:

- (1). Ongoing Government Project on rehabilitation of Irrigation Facilities in Galata, Baucau Municipality and Laivai, Lautem Municipality.
- (2). Budget approved by National Development Agency (ADN) for other 3 big irrigation schemes: Seical in Baucau; Irabere in border between Lautem and Viqueque; Maliana II in Bobonaro Municipality.
- (3). Budget allocated for rehabilitation of Oebaba Irrigation scheme in Covalima Municipality.

(4). Technical Aspect

Technical capacities of all the target beneficiaries including central/local government officials (MALFF, NLC, Municipal Service of Agriculture), farmers and WUA at Buluto and Maliana I, and CAAKUB have been improved during the Project. From the viewpoint of technical aspect, sustainability can be expected at each of the rice value-chain (Production, Harvesting, Post-harvest and Processing, Distribution, and Sales/ Consumption)

As with the improvement of the farming techniques, the Project follows the already established rice technical package of MALFF's GAP manual and the extension method of FFS so that it can be replicable by MALFF. Farmers have well adopted the techniques, recognizing them as effective,

and they are positive to continue to apply PAD in their fields if equipment and fertilizer are supported by the government in a timely manner.

Regarding the irrigation water management, WUA is conducting activities based on the Annual Work Plan. Water fees have been collected based on the WUA regulation. In Maliana I, the collected fee was utilized appropriately for repair. Daily operation (gate operation) and maintenance of main irrigation facilities are conducted by gatekeeper while supervised by municipal irrigation officers, in accordance with Irrigation Management Manual. Irrigation officer of Buluto IS reports to MALFF in the form of quarterly reports. Irrigation officer of Maliana I is preparing a semi-annual report for submission to MALFF.

Regarding the sales to private sector, CAAKUB continue to take the initiative to purchase paddy from the member farmers. With Farmer Information Card, CAAKUB understand farmers' cropping conditions so that CAAKUB and Bobonaro Municipal Service of Agriculture can provide the services in a timely manner. CAAKUB manages equipment provided by the Projects properly such as powder machine and moisture meter. CAAKUB is also a member of Maliana Rice Commission newly established in December 2022 for the quality control of Maliana rice which is very popular in Dili.

As for the purchasing by the government, NLC is expected to continue to purchase rice from farmers based on the Purchase Plan. NLC is following the SOP prepared in the Project to ensure the purchase and payment procedures efficiently. The 5S/KAIZEN check sheet is being used at the three project warehouses: Mariana, Dili, and Tibar, where warehouse management tasks (cleaning, organizing, etc.) are filled out once a month and sent to NLC. NLC's warehouse are kept clean, sorted and set-in-order utilizing 5S-KAIZEN. The results of quarterly stocktaking of warehouses are tabulated in PC and reported to NLC.

2. Key Factors Affecting Implementation and Outcomes

2-1. Quantitative Data

The Project has been tried to take any quantitative data in order to explain to the stakeholders for further understanding, communications and discussions with figures and tables. Those data are probably useful for monitoring and evaluation of the activities and degree of achievements.

In addition to the above, in this paragraph, "2. Key Factors Affecting implementation and Outcomes", any sentences and tables are referred from the Joint Terminal Evaluation Report conducted the Terminal Evaluation Team from 4th September to 20th September, 2023.

2-2. Monitoring

The overall project implementation is monitored according to PDM. In order to monitor the project progress and discuss relevant issues among stakeholders, JCC was held as the table below. The 13th JCC will be the occasion where the results of Terminal Evaluation will be discussed. Besides the JCC meeting, a technical meeting was held once. Meanwhile, eleven monitoring sheets were created to date every six months.

Records of JCC meetings and technical meeting

JCC	Date	Venue	attendants
1 st	2016/10/28	MAF Conference Room	26 persons
2 nd	2017/4/10	MAF Conference Room	43 persons
3 rd	2017/11/17	MAF Conference Room	44 persons
4 th	2018/5/30	MAF Conference Room	46 persons
5 th	2018/11/22	MAF Conference Room	48 persons
6 th	2019/3/27	MAF Conference Room	49 persons
7 th	2019/8/12	MAF Conference Room	47 persons
8 th	2020/3/16	MAF Conference Room	32 persons

9 th	2020/9/24	Timor Plaza, Orchid Room (On-Line)	26 persons in Timor-Leste + 10 persons in Japan
10 th	2021/4/23	(On-Line)	34 persons in Timor-Leste + 6 persons in Japan
11 th	2021/12/10	MAF Conference Room	44 persons
12 th	2022/12/6	Timor Plaza, Maubara Room	44 persons
13 th	2023/9/20	Timor Plaza, Suai Room	49 persons

In addition to the above, 1st Technical Meeting was held on 2021/6/29 at MAF Conference Room with 22 participants, and 2nd Technical Meeting was conducted by sharing documents and gathering comments from counterparts in August 2021.

Records of the preparation of the Monitoring Sheet.

Number	Term
1 st	2017 Sep - 2017 Apr
2 nd	2017 May - 2017 Dec
3 rd	2018 Jan - 2018 Jun
4 th	2018 Jul - 2018 Nov
5 th	2018 Dec - 2019 Aug
6 th	2019 Aug - 2020 Feb
7 th	2020 Mar - 2020 Aug
8 th	2020 Sep - 2021 Feb
9 th	2021 Mar - 2021 Oct
10 th	2021 Nov - 2022 May
11 th	2022 Jun - 2023 Feb

2-3. Communications

The project, which aims to strengthen rice value chains, involves various stakeholders and has paid attention to promote discussions and information sharing for cooperation among those involved, between the central and local governments, discussions and joint work among each output team, preparation of various reports and feedback to the parties concerned.

A weekly meeting is held every Monday morning, where Project experts and staff review the previous week's activities and present the week's activity plan (all staff prepare reports of the previous week). Long-term experts meet once a week to discuss security/safety, health management, operational management of the Project, accounting/procurement, labor management, and other issues for improvement.

A monthly report of the Project has been prepared and distributed, which was agreed in the R/D signed on July 11, 2019, among the representative of JICA Timor-Leste Office, the Director General of MAF Agriculture, and the President of the Administration of Council of NLC. This is a measure taken to promote understanding of project activities among JICA and C/P organizations including local government. The monthly reports have been prepared in both English and Tetun.

Project Monitoring Sheets are prepared jointly by experts and C/P, and submitted to JICA about once every six months. The Monitoring Sheet is also prepared in both English and Tetum, and submitted JICA. More questions being asked by local government officials these days at the JCC is likely to be a result of such efforts on promoting the communication.

2-4. Promoting Factor (referred to p. 66 – 67, 4). Promoting Factor, 3). Effectiveness)

- (1). Support for promotion of domestic rice provided by the former government administration
- (2). Positive support for CAAKUB and Loja provided by MAF

- (3). Positive support for promotion of domestic rice provided by the ACELDA Company
- (4). Increased awareness of national food security due to COVID-19 and recent world situation

2-5. Hindering Factor (referred to p. 67 - 68, 5). Hindering Factor, 3). Effectiveness)

- (1). Trend of a prominent position of imported rice in the rice market of Timor-Leste
- (2). Insufficient long-term strategy and clear policy measures to promote domestic rice in Timor-Leste
- (3). Low motivation for rice cultivation among farmers in early stage of the Project

2-6. Others

Other important issues and overcomes are referred to follows;

- ✓ (4). **Appropriateness of the approach**, p. 58 - 59, 1). Relevance, 1. Results of Review based on DAC Evaluation Criteria, and
- ✓ 1). **Prospect of attaining the Project Purpose**, p. 63 – 64, 3). Effectiveness, 1. Results of Review based on DAC Evaluation Criteria

3. Evaluation on the results of the Project Risk Management

3-1. Inputs

The important issues and overcomes are referred to follows;

- ✓ 1). **Inputs to the Project from Japanese side**, p.68, 4). Efficiency
- ✓ 2). **Inputs to the Project from Timor-Leste side**, p. 68, 4). Efficiency
- ✓ 3). **Impact of COVID-19 on project efficiency**, p. 68, 4). Efficiency

4. Lessons Learnt

1). Implementing with domestic rice purchase by Government and support activities of overall rice value chain in parallel.

In this project, production technology, irrigation management, and sales promotion activities were conducted as a single package to improve the overall rice value chain. The timely introduction of the package in line with the period of expanded government purchases of rice enhanced complementary of each activity and has led a significant impact on farmer’s motivation and overall rice value chain.

2). Promoting Domestic rice through improved quality management

While there is a general preference for domestically produced rice in Timor-Leste, there are also disincentives: first, the price difference is nearly double with that of imported rice. Second, quality management was not properly conducted after harvest and distribution. The project has been experimenting with an approach of setting quality standards for rice, applying this standard with labeling that indicates domestic rice with quality assurance to expand marketing channel. While this direction seems appropriate, it is an approach that requires continuous efforts and expansion of the scale of activities, and strategic efforts on the part of the government are needed in the future.

3). Managing and maintaining foundation irrigation facilities by government

The establishment of implementation structure that clarifies the role and responsibilities of central ministries, local governments, and WUA is essential for proper irrigation management. The project significantly improved O&M of irrigation scheme by WUA and municipal irrigation department, however it still suffered from natural calamity which damage irrigation system and hinder daily operation of the irrigation. Timely budget allocation and service provision based on the defined responsibilities is critical under such situation.

4). Fostering Government Leadership in promoting food security policies

Since Food security is a national responsibility, it is impossible for individual private companies and farmers to achieve food security. It is essential for the government to set appropriate target to balance private market channel and public purchase of domestic rice, together with stable importation for ensuring food security. The project provided number of achievement and lessons to promote domestic rice through mainly bottom-up approach. This learning become effective furthermore to be integrated with higher level food security policy.

5). Sharing information continuously since Project Formation

Project members should understand the background and objectives of a project. This information will promote activities during the project and to maintain and improve the results after the project is completed.

IV. For the Achievement of Overall Goals after the Project Completion

1. Prospects to achieve Overall Goal

In this Chapter “IV. For the Achievement of Overall Goals after the Project Completion”, any sentences, words, figures and tables are referred from the Joint Terminal Evaluation Report conducted the Terminal Evaluation from 4th September to 20th September, 2023.

The Overall Goal is “**The improved rice value chains are sustained in Buluto and Maliana I with the initiative of the Government of Timor-Leste**”.

Assessment of the status/prospect for Overall Goal

Indicator	Current Status	Prospect
Overall Goal: The improved rice value chains are sustained in Buluto and Maliana I with the initiative of the Government of Timor-Leste.		
1. The production in Buluto and Maliana I is maintained or increased compared to the end of the project.	<ul style="list-style-type: none">• With the current government policy and surrounding environments, the production in Buluto and Maliana is expected to be maintained or increased.• MAF conducts an annual national survey of rice production (cultivated area, yield, production amount) by municipality. This will be used as a means of verifying the indicator.	Possibly will be achieved
2. The Buluto and Maliana I irrigation facilities are maintained	<ul style="list-style-type: none">• At present, works of “the Program for Urgent Rehabilitation of Flood Damaged Infrastructure” are underway at both irrigation schemes. Once the repairs are completed, these two irrigation facilities will be able to fully function. There are	

by the WUA (with the support of MAF).	high expectations to the rehabilitations not only from MALFF but also from local administration, and continued monitoring by WUA and support by local and central government are expected.	
3. The amount of domestic rice sold in Buluto and Maliana I is maintained or increased compared to XX (to be determined at the Terminal Evaluation of the project).	<ul style="list-style-type: none"> • "XX (quantity)" needs to be determined in this terminal evaluation (the reason it was not determined at the time of the Advisory Mission in 2022 was because the impact of CESTA BASICA seemed too significant.) • Survey on the amount of rice sold in Blututo and Maliana 1 required considerable efforts of the Project to gather and compile information from many stakeholders. The Timor-Leste government needs to consider the way to collect relevant data. 	

2. Plan of Operation and Implementation Structure of the Timor-Leste side to achieve Overall Goal

Not available (N/A).

But the Plan of Operation (PO) and Implementation Structure of the Timor-Leste side to achieve Overall Goal including Objectively Verifiable Indicators (OVI) and Means of Verification of the OVI are under discussion at present between related parties such as JICA on the Japanese side and the MALFF and NLC on the Timorese side.

3. Recommendations for the Timor-Leste side

Based on the findings of the Joint Terminal Evaluation, the Terminal Evaluation Team made the following recommendations to be implemented after the Project completion with a view to ensuring the Project's sustainability and achieving the Overall Goal.

Overall Recommendation

[Points of attention]

The Project have shown significant impact to improve domestic rice production and sales at two target sites. However, this positive outcome can be sustained and expanded under the condition that central government will set appropriate policy to maintain/expand domestic rice market through public and private channel, and government provides timely support on operation and maintenance of irrigation scheme which constantly suffered from natural calamity.

To MALFF, NLC and other responsible agencies

- MALFF in collaboration with the other responsible agencies to continue the essential activities to sustain the outcomes achieved by the Project.

Output 1

To MALFF

- Maintain Farmers Field School (hereinafter referred to as "FFS") activities

1. ensure timely provision of farm inputs required to implement PAD technology
2. operational cost in the Project area(e.g. cost of agriculture extension personnel expenses)

Output 2

To Water Users Association (hereinafter referred to as “WUA”)

- Review water fee collection status and collection method regularly, update water fee collection method as necessary.
- Review the result of irrigation O&M status including the result of rotational irrigation regularly, update Irrigation Management Manual (IMM) as necessary.

To MALFF and the other responsible agencies

- Clarify the role and responsibility in irrigation O&M among all stakeholders including national government, provincial/municipal government, and WUA. This process could include enactment of irrigation law.
- Secure resources for irrigation O&M, especially maintenance and rehabilitation of main canal and headworks

Output 3

To MALFF

- Discuss among stakeholder and provide recommendation about possible options to enhance competitiveness of CAAKUB as farmer association based on the experience through the Project.
- Discuss among stakeholder and provide recommendation about possible options to promote application of rice quality standard.
- Assess provided options and consider possible applicability

Output 4

To NLC

- Discuss among stakeholder and provide recommendation about possible options to reduce workload to follow all the requirement in procure process from farmer group.
- Maintain public rice purchase from farmer group by NLC to improve farmers access to market following purchase plan and SOP.
- Review rice purchase procedure regularly and update as required, especially rice purchase from farmer groups.

Output 5

To MALFF and other responsible agencies

[After the Project completion]

- Counterparts in Timor-Leste are expected to explore the possibilities to share and apply the good practices of the Project to other areas through their regular activities and mandate based on the Implementation and Action Plan.

Output 6

To MALFF and other responsible agencies

[After the Project completion]

- It is recommended that either of the following 1 or 2 would be accelerated to discuss among the relevant Ministries regarding the policy and direction of the domestic rice promotion.
 1. the procedures for establishing the Rice Task Force
 2. Incorporation of Rice Task Force's activities into the existing framework (e.g. KONSSANTIL: National Council on Food Security, Sovereignty and Nutrition in Timor-Leste)
- The Rice Task Force or incorporated framework are expected to formulate a policy and future directions of domestic rice production (including to what extent self-sufficiency of domestic rice is to be pursued, despite tremendous effort and investment required such as Irrigation facilities, marketing infrastructure, policy measures to control cheap imported rice flooding into domestic market).

4. Monitoring Plan from the end of the Project to Ex-post Evaluation

(If the Project will be continuously monitored by JICA after the completion of the Project, mention the plan of post-monitoring here.)

Not Available (N/A).

But the Monitoring Plan from the end of the Project to Ex-Evaluation of the Timor-Leste side to achieve Overall Goal are under discussion at present between related parties such as JICA on the Japanese side and the MALFF and NLC on the Timorese side.

END

[ANNEXES]

ANNEX 1: Results of the Project

(List of Dispatched Experts, List of Counterparts, List of Trainings, etc.)

ANNEX 2: List of Products (Report, Manuals, Handbooks, etc.) Produced by the Project

ANNEX 3: PDM (All versions of PDM)

ANNEX 4: R/D, M/M, Minutes of JCC (copy) (*)

ANNEX 5: Monitoring Sheet (copy) (*)

(Remarks: ANNEX 4 and 5 are internal reference only.)

ANNEX 1-1: Dispatch of Experts

As of September 2023

Name	Field	Arrival date – Departure date								
		2016	2017	2018	2019	2020	2021	2022	2023(plan)	
Long-Term										
1	Mr. NIWA Noriaki	Chief Advisor	2016/9/12			2019/9/10				
2	Mr. HIRONAKA Shinji	Agricultural Distribution and Sales	2016/9/12			2019/11/10				
3	Mr. HAMAGUCHI Toshinori	Project Coordinator	2016/9/12		2018/9/11					
4	Mr. ODASHIMA Nariyoshi	Rice Cultivation Techniques		2017/1/9		2019/9/10				
5	Ms. NAGAI Naoko	Project Coordinator / Training and Extension			2018/8/31					Present
6	Mr. OSUGA Kimio	Chief Advisor				2019/9/25		2021/9/10		
7	Mr. OKUYAMA Hitoshi	Agricultural Distribution and Sales				2019/9/25			2022/1/31	
8	Mr. IINO Tokutaro	Cultivation Techniques / Community Development				2019/10/1				Present
9	Mr. TOKUNAGA Seiro	Rice Purchasing and Distribution					2020/3/8			2023/3/7

10	Mr. TAIRA Kazufumi	Participatory Irrigation Management						2021/5/19		2023/5/18
11	Mr. KAMIDOHZONO Akira	Chief Advisor						2021/9/3		Present
12	Mr. MIYAZOE Mikio	Agricultural Distribution and Sales							2022/5/7	Present

	Name	Field	Arrival date – Departure date							
			2016	2017	2018	2019	2020	2021	2022	
Short-Term										
1	Mr. ODASHIMA Nariyoshi	Rice Cultivation Techniques	10/3-10/28				11/3-11/15			
2	Ms. MISHIMA Azusa	Rice Farming Survey	10/10-11/6	2/20-3/12 3/24-4/5 10/6-10/25 11/24-12/7						
3	Ms. HONDA Yoshiko	Survey on Rice Distribution and Sales	10/10-11/6							
4	Mr. NEGISHI Masaya	Irrigation Management	12/5-12/23			6/9-6/29 11/24-12/14	2/18-3/11			
5	Mr. ANDO Takamasa	Organization of WUA		3/17-5/3						
6	Ms. KAKUTA Ieko	Operational Guidance			2/10-2/21	2/16-3/7				

7	Mr. HOMMA Toru	Private Sector Development			5/15-5/27				
8	Mr. NAGAOKA Hirokazu	Rice Stockpile Management (5S/KAIZEN)			10/12-11/2	2/1-2/24	1/14-3/13		
9	Ms. SHIBA Ayari	Rice Processing Product Development				1/25-3/24			
10	Mr. HAGITA Satoshi	Rice Processing Product Development				2/9-2/17			
11	Mr. OSUGA Kimio	Advisory mission				8/19-8/27			
12	Mr. KANAMOTO Masakazu	Advisory mission					1/15-1/28		
13	Mr. HATSUKADE Tsumio	Rice Processing Product Development					2/15-3/20	11/15-12/13	
14	Mr. SAKAKI Michihiko	Strengthening the organization of the Water Users' Association (WUA)						4/20-7/21	
15	Mr. NISHINO Shunichiro	Rice Quality Control						8/3-10/21	9/16-10/23
16	Mr. SAKAKI Michihiko	Rice Policy						10/21-12/13	1/27-2/22
17	Mr. OKUWA Kunita	Irrigation Water Management						11/6-12/13	1/27-3/18

18	Mr. OKUWA Kunita	Small-scale Irrigation Canal System Improvement							7/6-9/1
19	Mr. FUKUDA Yasushi	Facility Repair by Farmers Participation							8/15-9/16

ANNEX 1-2: Training

As of September 2023

Name		Period of Training	Field / Name of the Course	Implementing Institution
Training in Japan				
1	Fernando Egidio Amaral	2018/10/21 ~ 2018/10/26	Establishment and Management of Farmers' Market	JA Okinawa, etc
2	Malianatalice Ximenes	2018/10/21 ~ 2018/10/26	Establishment and Management of Farmers' Market	JA Okinawa, etc
3	Manuel Maria dos Sentos	2018/10/21 ~ 2018/10/26	Establishment and Management of Farmers' Market	JA Okinawa, etc
4	Aniceto dos Reis	2020/01/19 ~ 2020/02/15	Strengthening Safety Management System of Agricultural Products	JICA

JICA Online Training				
1	Sergio Miguel Luis Freitas	2021/05/17 ~ 2021/05/28	Participatory Irrigation Management System for Paddies	JICA
2	Nelio Boavida Lay	2021/05/17 ~ 2021/05/28	Participatory Irrigation Management System for Paddies	JICA
3	Malianatalice Ximenes	2021/08/24 ~ 2021/09/22	Promotion of Food Value Chain for Community-Based Agri-Business	JICA
4	Albino Ribeiro	2021/08/24 ~ 2021/09/22	Promotion of Food Value Chain for Community-Based Agri-Business	JICA
5	Henrique J. A. Gonçalves	2021/09/13 ~ 2021/10/29	Establishment and Development of Farmers' Organizations	JICA
6	Rui Amaral Pereira	2022/01/11 ~ 2022/01/31	Integrated Agriculture and Rural Development through the Participation of Local Farmers	JICA
7	Abel Ximenes	2022/01/17 ~ 2022/01/28	Strengthening Safety Management System of	JICA

			Agricultural Products	
8	Lilina Amena Lopes	2022/02/14 ~ 2022/02/25	Pembangunan Pedesaan (Rural Development)	JICA
9	Laurentino Ximenes	2022/02/14 ~ 2022/02/25	Pembangunan Pedesaan (Rural Development)	JICA
10	Malianatalice Ximenes	2022/02/14 ~ 2022/02/25	Pembangunan Pedesaan (Rural Development)	JICA
11	Jacinto Doutel Ximenes	2022/02/14 ~ 2022/02/25	Pembangunan Pedesaan (Rural Development)	JICA
12	Abel Soares de Carvalho	2022/02/14 ~ 2022/02/25	Pembangunan Pedesaan (Rural Development)	JICA
13	Alberto Quintão de Oliveira	2022/02/14 ~ 2022/02/25	Pembangunan Pedesaan (Rural Development)	JICA
14	Lucio da Costa	2022/02/14 ~ 2022/02/25	Pembangunan Pedesaan (Rural Development)	JICA
15	Celestino Rangel	2022/02/14 ~ 2022/02/25	Pembangunan Pedesaan (Rural Development)	JICA

ANNEX 1-3: Seminar and Training

As of September 2023 (after the Mid-term Review of 2019 until September 2023)

No	Year	Name of the Course	Date		No. of Participants	Target Participants	Remarks	Output
			From	To				
1	2019	Training and resetting for cash register in the Farmers Market	24 Oct.	26 Oct.	11	Manager and staffs of the Farmers Market		3
2	2020 *rainy season	Farmers Field School (FFS) for Rice Cultivation	20 Nov. 2019	26 Mar. 2020	316	FFS participating farmers and MAF Extension Officers	4 sites, 16 workshops	1
3	2020	Food Value Chain Training	24 Jan.	24 Jan.	23	NLC staffs, MAF staff, and Project National Staffs		4
4	2020	5S/KAIZEN Training	27 Feb.	28 Feb.	40	NLC staffs and Project National Staffs		4
5	2020 *dry season	Farmers Field School (FFS) for Rice Cultivation	30 May. 2020	22 Oct. 2020	312	FFS participating farmers and MAF Extension Officers	3 sites, 15 workshops	1
6	2021 *rainy season	Farmers Field School (FFS) for Rice Cultivation	7 Jan. 2021	3 Jun. 2021	485	FFS participating farmers and MAF Extension Officers	8 sites, 27 workshops	1
7	2021 *dry season	Farmers Field School (FFS) for Rice Cultivation	21 Jun. 2021	28 Sep. 2021	337	FFS participating farmers and MAF Extension Officers	6 sites, 23 workshops	1
8	2021	Training on software of cash register in the Farmers Market	Jul.	Aug.	5	Manager and staffs of the Farmers Market	2 times per week for 2 months	3
9	2021	Rice quality analysis training	17 Aug.	19 Aug.	6	MAF Agro-commerce staffs		3
10	2021	Rice quality analysis training	25 Aug.	26 Aug.	14	NLC Dili staffs		4
11	2021	Rice quality analysis training	14 Sep.	16 Sep.	10	NLC Maliana staffs, CAAKUB, ACELDA		4
12	2021	Extra-Training on software of cash register in the Farmers Market	Sep.	Dec.	5	Manager and staffs of the Farmers Market	1 time per week for 4 months	3
13	2021	Workshop for Water Users' Association (WUA) Regeneration	15 Nov.	19 Nov.	14	WRC members and GateKeepers	Buluto site	2

		Committee (WRC) by Task Group						
14	2021	Workshop for Water Users' Association (WUA) Regeneration Committee (WRC) by Task Group	30 Nov.	3 Dec.	13	WRC members and GateKeepers	Maliana site	2
15	2022 *rainy season	Farmers Field School (FFS) for Rice Cultivation	28 Dec. 2021	23 May. 2022	1,059	FFS participating farmers and MAF Extension Officers	12 sites, 71 workshops	1
16	2022	Basic training for WUA and Kabu-wee	19 Jan.	12 Jan.	16	WUA members and Kabu-wee	Buluto site	2
17	2022	OJT for Treasury of WUA	15 Feb.	15 Feb.	2	WUA members	Buluto site	2
18	2022	Workshop for Kabu-wee	26 May.	26 May.	9	Kabu-wee	Buluto site	2
19	2022 *dry season	Farmers Field School (FFS) for Rice Cultivation	31 May. 2022	23 Nov. 2022	723	FFS participating farmers and MAF Extension Officers	8 sites, 45 workshops	1
20	2022	OJT for WUA	3 Aug.	4 Aug.	5	WUA members	Maliana site	2
21	2022	OJT for Treasury of WUA	12 Oct.	12 Oct.	5	WUA members	Buluto site	2
22	2022	Seminar on draft of proposed rice quality standard	14 Oct.	14 Oct.	app. 20	MAF staffs, NLC staffs, Bobonaro Municipality, local authority, CAAKUB, and rice related stakeholders in Maliana		4
23	2022	OJT for budget utilization plan setting	19 Oct.	19 Oct.	4	WUA members	Buluto site	2
24	2022	OJT for Treasury of WUA	20 Oct.	20 Oct.	2	WUA members	Maliana site	2
25	2022	Seminar on draft of proposed rice quality standard	21 Oct.	21 Oct.	app. 20	MAF staffs, NLC staffs, WFP, University, and rice related stakeholders in Dili		4
26	2022	First information seminar on the Maliana Rice Commission (MRC)	21 Dec.	21 Dec.	app. 20	MAF Bobonaro, Bobonaro Municipality, local farmers, rice millers, brokers, and other stakeholders in Maliana		3
27	2022	OJT for budget utilization plan setting	8 Nov.	8 Nov.	2	WUA members	Maliana site	2
28	2023 *rainy season	Farmers Field School (FFS) for Rice Cultivation	27 Dec. 2022	25 May. 2023	1,029	FFS participating farmers and MAF Extension Officers	11 sites, 64 workshops	1
29	2023	Oath taking ceremony for the members of the Maliana Rice Commission (MRC)	30 Jan.	30 Jan.	app. 30	MAF Bobonaro, Bobonaro Municipality, local farmers, rice millers, brokers, and other stakeholders in Maliana		3

30	2023	Joint-OJT for GK in Buluto	27 Feb.	2 Mar.	8	WUA members and GateKeepers	inviting Maliana's Irrigation Officer and GateKeepers to Buluto	2
31	2023	Workshop for Participatory Irrigation Management (PIM)	25 Apr.	27 Apr.	12	MAF National irrigation Department, MAF Municipal Directors, Municipal Irrigation Officers	inviting 5 Municipalities (Lauten, Viqueque, Manufahi, Covalima, Oequisse)	2
32	2023	Progress report of Maliana Rice Commission (MRC)	6 Jul.	6 Jul.	app. 35	MAF Bobonaro, Bobonaro Municipality, local farmers, rice millers, brokers, and other stakeholders in Maliana		3
33	2023	OJT for rice quality control	13 Jul.	13 Jul.	15	NLC Dili staffs, NLC Tibar staffs and NLC Oecuse staffs		4
34	2023	OJT for rice quality control	20 Jul.	20 Jul.	18	NLC Maliana staffs, MAF Extension, MAF Agro-commerce, Maliana Rice Commission, WFP, and rice related stakeholders in Maliana		4
35	2023	OJT for rice quality control	27 Jul.	27 Jul.	11	NLC Natarbora staffs and NLC Baucau staffs		4
36	2023 *dry season	Farmers Field School (FFS) for Rice Cultivation	13 Jun. 2023	Sep 7. 2023	207	FFS participating farmers and MAF Extension Officers	3 sites, 12 workshops	1
			The data cover until 4 th workshop in the end of September 2023, while FFS will continue until 6 th workshop in the end of October 2023.					
37	2023	Information sharing session of Maliana Rice Commission (MRC)	1 Sep	1 Sep	App. 20	MAF Bobonaro, Bobonaro Municipality, local farmers, and other stakeholders in Maliana		3

ANNEX 1-4: Provision of Equipment

As of September 2023

No	Name of Machinery	Product Number	Maker	Arrival Date	Price (USD)	Unit	Targeted Recipient	Condition
1	Land Cruiser	Prado	Toyota	2017/1/30	65,000	1	MALFF National	Good
2	Land Cruiser	Prado	Toyota	2017/3/2	65,000	2	MALFF National	Good
3	Land Cruiser	Prado	Toyota	2017/10/13	65,000	1	MALFF National	Good
4	Motor-bike	Verza	Honda	2017/4/3	1,625	9	MALFF Bobonaro	Good
5	Moter-bike	Mio M3	Yamaha	2017/4/3	1,425	1	MALFF Bobonaro	Good
6	Moter-bike	Verza	Honda	2017/5/2	1,625	4	MALFF Baucau	Good
7	Moter-bike	Verza	Honda	2017/5/2	1,625	4	MALFF Manatuto	Good
8	Moter-bike	Mio M3	Yamaha	2017/5/2	1,425	1	MALFF Baucau	Good
9	Moter-bike	Mio M3	Yamaha	2017/5/2	1,425	1	MALFF Manatuto	Good
10	Threshing Machine	TPA-1000MG	Agrindo	2018/3/7	1,675	4	Farmers Association in Laleia (MALFF Manatuto)	Broken
11	Threshing Machine	TPA-1000MG	Agrindo	2018/3/7	1,675	4	Farmers Association in Laleia (MALFF Baucau)	Broken
12	Powder Machine	GRD 1500	Maksindo	2019/3/18	1,800	1	CAAKUB (MAF, Agro-commerce Department)	Not Repairable
13	Vehicle	Gran Max	Daihatsu	2019/3/26	17,000	1	Farmers Market (MALFF, Agro-commerce Department)	Good
14	Powder Machine	GRD 1500	Maksindo	2020/1/8	1,800	1	CAAKUB (MAF, Agro-commerce Department)	Good
15	Moter-bike	MX King 150	Yamaha	2022/2/21	1,875	1	MALFF Baucau (Irrigation)	Good

							Department)	
16	Moter-bike	MX King 150	Yamaha	2022/2/21	1,875	1	MALFF Manatuto (Irrigation Department)	Good
17	Moter-bike	MX King 150	Yamaha	2022/2/21	1,875	1	MALFF Bobonaro (Irrigation Department)	Good
18	Moter-bike	X Ride	Yamaha	2022/2/21	1,535	2	MALFF Bobonaro (Irrigation Department)	Good
19	Laptop	14-dq2078wm	HP	2022/2/22	1,330	2	MALFF Bobonaro (Agro-commerce Department)	Good
20	Laser Printer	MFP 135a	HP	2022/2/22	235	1	MALFF Bobonaro (Agro-commerce Department)	Good

ANNEX 1-5: Budget for the Operation Cost

As of September 2023

Content	JFY2016	JFY2017	JFY2018	JFY 2019	JFY 2020	JFY 2021	JFY 2022	JFY 2023*	Total
	Sep.2016- Mar.2017	Apr 2017- Mar.2018	Apr.2018- Dec.2018	Apr. 2019- Mar.2020	Apr. 2020- Mar. 2021	Apr. 2021- Mar. 2022	Apr. 2022- Mar. 2023	Apr. 2023- Sep. 2023	
Total (\$) (1)+(2)	-	-	-	605,414	604,291	663,531	496,552	195,322	2,565,111
JICA Rate (annual average)	-	-	-	109.13	105.76	111.92	134.79	139.66	
Total (Yen)	13,556,847	49,502,355	35,290,010	66,069,057	63,906,894	74,263,531	66,928,028	27,278,010	298,445,520
(1) Procured / Paid by JICA TL Office (\$)				93,268	48,000	30,000	-	-	171,268
- NLC Warehouse Rehabilitation Consultant	-	-	-	73,268	-	-	-	-	73,268
- Project Vehicle (Truck)	-	-	-	-	28,000	-	-	-	28,000
- Social Security for Project Staff, Flights for Short-term Experts, etc (rough amount)	-	-	-	20,000	20,000	30,000	-	-	70,000
(2) Procured / Paid by Project (\$)				512,147	556,291	633,531	496,552	195,322	2,393,843
- Administration & Management ¹⁾	-	-	-	378,968	319,627	416,329	414,059	175,610	1,704,594
- Farmers Dialogue	-	-	-	706	-	-	-	-	706
- Output 1	-	-	-	46,605	59,524	105,816	51,693	10,587	274,226
- Output 2	-	-	-	3,702	283	18,592	14,962	4,830	42,369
- Output 3	-	-	-	1,682	138,993	79,462	6,717	3,208	230,061
- Farmers Market ²⁾	-	-	-	69,579	34,380	7,535	-	-	111,494
- Output 4	-	-	-	2,307	3,485	5,797	5,228	1,086	17,903
- Output 5	-	-	-	8,597	-	-	3,894	-	12,490
- Output 6	-	-	-	-	-	-	-	-	-

1) Project Staffs' Salary, Trip Allowance, Gasoline, Security Service, Tele-Communication, JCC Meeting, etc.

2) Farmer's Market in Timor-Plaza and Time Square (Hatuhada, Dili)

ANNEX 1-6: Allocation of Counterpart Personnel

As of September 2023

No.	Institution	Name	Position	Assigned Period	Name of Expert in Charge	Involvement in project
JCC Member						
1	MALFF	Ms. Ervina Soares Pinto	Director General for Cooperation and Institutional Development	2023/9-Present	Mr. Kamidohzono	Co-Chairperson
2	NLC	Mr. Gervasio Cardoso de Jesus da Silva	President of the Administration Council	-Present	Mr. Kamidohzono	Co-Chairperson
3	MALFF	Mr. Martinho Laurentino Soares	Director General for Agriculture	2023/9-Present	Mr. Kamidohzono	Project Director
4	MALFF	Mr. Faustino Tiborgio Guterres Da Silva	Director of Policy, Planning, and Monitoring	2016/9-Present	Mr. Kamidohzono	Co-Project Manager
5	NLC	Mr. Jacinto Pajo	Executive Director	2016/9-Present	Mr. Kamidohzono	Co-Project Manager
6	MALFF	Mr. Lucio Romeu Ribeiro	National Director of Agriculture and Horticulture	2021/1-Present	Mr. Iino	Project Sub-manager (Output 1)
7	MALFF	Mr. Januario Marcal de Araujo	National Director of Agriculture and Extension	2023/9-Present	Mr. Iino	Project Sub-manager (Output 1)
8	MALFF	Mr. Jacinto Vicente Filipe Gama	National Director of Irrigation and Management of Water Utilization	2023/9-Present	(Mr. Taira), Mr. Iino	Project Sub-manager (Output 2)
9	MALFF	Mr. Carlos Antumes Amaral	National Director of Agro-Commerce	2023/9-Present	Mr. Miyazoe	Project Sub-manager (Output 3)
10	NLC	Mr. Jose Fernando H.S.dos Santos	National Director of Procurement, Warehouses and Stocks	-Present	(Mr. Tokunaga), Mr. Miyazoe	Project Sub-manager (Output 4)
12	MALFF	Mr. Gil Rangel Da Cruz	Senior Professional	2022/12-Present	(Mr. Tokunaga), Mr. Kamidohzono	Project Sub-manager (Output 6)
13	Bobonaro Municipality	Mr. Ernesto de Oliveirs Barreto	President	-Present	All project experts	JCC member
14	Baucau Municipality	Mr. Olivio Bou Lesa Freitas	President	-Present	All project experts	JCC member
15	Manatuto Municipality	Mr. Bernado Lopes	President	-Present	All project experts	JCC member

Non-JCC Member

16	Bobonaro	Mr. Alberto Gomes Lopes	Director of MALFF Bobonaro	-Present	All project experts	Counterpart
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	Municipality					
17	Baucau Municipality	Mr. Moises Lobato Pereira	Director of MALFF Baucau	-Present	All project experts	Counterpart
18	Manatuto Municipality	Mr. Thomas Francisco Piedade Ximenes	Director of MALFF Manatuto	2016/9-Present	All project experts	Counterpart
19	Bobonaro Municipality	Mr. Tomas Laca-loe	Sub-district Administrator in Maliana, Bobonaro	-Present	All project experts	Counterpart
20	Baucau Municipality	Mr. Pedro da Costa Freitas	Sub-district Administrator in Vemasse, Baucau	-Present	All project experts	Counterpart
21	Manatuto Municipality	Mr. Cosme Ximenes	Sub-district Administrator in Laleia, Manatuto	-Present	All project experts	Counterpart
22	MALFF	Mr. Francis F. Gama	Staff of Department of Agriculture and Extension	2018/2-Present	Mr. lino	Counterpart (Output 1)
23	Bobonaro Municipality	Mr. Joaquim Serguira	Chief Department of Extension Department	-Present	Mr. lino	Counterpart (Output 1)
24	Bobonaro Municipality	Mr. Kazamiro Lopes	Coordinator of Extension	-Present	Mr. lino	Counterpart (Output 1)
25	Bobonaro Municipality	Mr. Domingos do Cermo	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
26	Bobonaro Municipality	Mr. Francisco Caf	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
27	Bobonaro Municipality	Mr. Alcino Leto Mau	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
28	Bobonaro Municipality	Mr. Janvario dos Santos	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
29	Bobonaro Municipality	Mr. Jeronimo Pedro	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
30	Bobonaro Municipality	Mr. Edgar Jose Santos Ramos	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
31	Baucau Municipality	Mr. Bonifasio da Costa Freitas	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
32	Baucau Municipality	Mr. Nazario da L. Freitas	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
33	Baucau Municipality	Mr. Americo S. da Costa	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
34	Manatuto Municipality	Mr. Joao Domingos da Costa	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)
35	Manatuto	Mr. Antonio de Sousa Correia	Extension Officer	-Present	Mr. lino	Counterpart (Output 1)

	Municipality					
36	Bobonaro Municipality	Mr. Celestino Henriques	Irrigation Officer	-Present	Mr. Iino	Counterpart (Output 2)
37	Baucau Municipality	Mr. Martinho Ximenes	Irrigation Officer	-Present	Mr. Iino	Counterpart (Output 2)
38	Manatuto Municipality	Mr. F. Antonio de Carvalho	Irrigation Officer	-Present	Mr. Iino	Counterpart (Output 2)
39	Bobonaro Municipality	Mr. Rui Lasi	Staff of Department of Agro-commerce	-Present	Mr. Miyazoe	Counterpart (Output 3)
40	Bobonaro Municipality	Mr. Joel Afonso	Staff of Department of Agro-commerce	-Present	Mr. Miyazoe	Counterpart (Output 3)
41	NLC	Mr. Vasco Cabecas de Araujo	Chief of Staff	-Present	Mr. Miyazoe	Counterpart (Output 4)

ANNEX 1-7:

As of September 2023, (Currency: USD)

1) Facility provided by the Timor-Leste

No	Items	JFY2016 (From Sep.2016)	JFY 2017	JFY 2018	JFY 2019	JFY 2020	JFY 2021	JFY 2022	JFY 2023 (Till Sep2023)	Total
1	Electricity for the Project Office in MALFF	240	840	840	840	840	840	840	420	5,700
2	Electricity for the Project Office in Maliana	-	360	360	360	360	360	360	180	2,340
3	Electricity for the Project Office in Bluto	0	0	0	0	0	0	0	0	0
Total		240	1,200	1,200	1,200	1,200	1,200	1,200	350	8,040

Note) \$40/month for electricity for the Temporary Project Office in Jurisdiction Dept. and behind the Minister's Office.

\$70/month for electricity for the current Project Office in the MAF. \$30/month for electricity for the Project Office in Maliana.

Electricity for the Project Office in Bluto is paid by the Japanese side.

2) Local Operation Cost Covered by the Timor-Leste: Project Activities

Content	Cost (\$)
Paddy Seed (Nakroma)	Exact cost unknown
Fertilizer (organic)	Exact cost unknown
Pesticide	Exact cost unknown
Fuel for Tractor	Exact cost unknown
Tractor	Exact cost unknown
Combine Harvester	Exact cost unknown
Threshing Machine	Exact cost unknown
Milling Machine	Exact cost unknown
Grease for Irrigation Facilities (MAF Baucau)	Exact cost unknown
Inauguration Ceremony for NLC Warehouse Rehabilitation	Exact cost unknown

Project Completion Report_Plan of Operation (PO) (PDM Version 4.0)

(As of 14th November, 2023)

Project Title : Project for Increasing Farmers Households' Income through Strengthening Domestic Rice Production in Timor-Leste

Inputs	Year	1st Year 2016 Sep-2017 Sep				2nd Year 2017 Oct-2018 Sep				3rd Year 2018 Oct-2019 Sep				4th Year 2019 Oct-2020 Sep				5th Year 2020 Oct-2021 Sep				6th Year 2021 Oct-2022 Sep				7th Year 2022 Oct-2023 Sep				8th Ye ar	Monitoring	
		I II III IV I II III IV I II III IV I II III IV I II III IV I II III IV I II III IV I																Remarks	Issues	Solutions												
Output 1: System of rice farming is improved.																																
1-1. Enhance the understanding of the stakeholders on their role and responsibility through Farmers Dialogue (FD) process	Plan																	JICA	WT	- Completed												
	Actual	[Blue bars indicating completion]																														
1-2. Identify core set of cultivation techniques that should be introduced in order to increase production in the target area.	Plan																	JICA	WT	- Completed												
	Actual	[Blue bars indicating completion]																														
1-3. Facilitate/conduct socialization activities for increasing a yield and market-oriented farming through FD process, workshop and follow up meeting among farmers and stakeholders.	Plan																	JICA	WT	- Completed												
	Actual	[Blue bars indicating completion]																														
1-4. Facilitate coordination of water distribution and multi cropping with proper tractor utilization under collaboration among farmers and stakeholders in order to promote effective utilization of rice field.	Plan																	JICA	WT	- Completed												
	Actual	[Blue bars indicating completion]																														
1-5. Introduce core set of cultivation techniques identified in activity 1-2 based on each farmer's social and field circumstance in order to increase productivity.	Plan																	JICA	WT	- Completed												
	Actual	[Blue bars indicating completion]																														
1-6. Revise core set of techniques identified in Activity 1-2 according to concerns and problems raised by farmers during the project.	Plan																	JICA	WT	- Completed												
	Actual	[Blue bars indicating completion]																														
1-7. Support farmers to design plan of rice-centered farming based on their circumstances in order to promote sustainable rice-centered farming through activities 1 to 6.	Plan																	JICA	WT	- Completed												
	Actual	[Blue bars indicating completion]																														

Project Completion Report_Plan of Operation (PO) (PDM Version 4.0)

(As of 14th November, 2023)

Project Title : Project for Increasing Farmers Households' Income through Strengthening Domestic Rice Production in Timor-Leste

Inputs	Year	1st Year 2016 Sep-2017 Sep				2nd Year 2017 Oct-2018 Sep				3rd Year 2018 Oct-2019 Sep				4th Year 2019 Oct-2020 Sep				5th Year 2020 Oct-2021 Sep				6th Year 2021 Oct-2022 Sep				7th Year 2022 Oct-2023 Sep				8th Year	Remarks	Monitoring	
																						Issues	Solutions										
		I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV			I	II	III	IV	I	II	III		IV	I
Duration / Phasing	Plan	[Gantt chart showing planned duration from 2016 to 2023]																															
	Actual	[Gantt chart showing actual progress from 2016 to 2023]																															
Monitoring Plan	Year	1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year				8th Year	Remarks	Achievements	Solution
		I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I			
Monitoring																																	
Joint Coordinating Committee	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		
Set-up the Detailed Plan of Operation	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		
Submission of Monitoring Sheet	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		
Monitoring Mission from Japan	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		
Joint Monitoring	Plan																																
	Actual	[Gantt chart showing actual progress]																												Conducted Joint terminal Evaluation in September 2023.	- Completed		
Reports/Documents																																	
Inception Report	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		
Monthly Report	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		
Project Completion Report	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		
Public Relations																																	
Establishment and Operation of Web Site and FaceBook	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		
Materials for public relations related to project activities	Plan																																
	Actual	[Gantt chart showing actual progress]																													- Completed		