

ANNEX 1: PDM Version 2

Project Design Matrix

Version 2
Dated June 22, 2017

Project Title: Project for Profitable Irrigated Agriculture in Western Bago Region
 Implementing Agency: Department of Agriculture, Ministry of Agriculture, Livestock and Irrigation
 Target Group: MOALI staff, private sectors and farmers in four irrigation systems in Pyaw district and Thavawaddy district (116,738 personnel / 23,394 House hold).
 Period of Project: March 2016 to February 2021
 Project Site: 6 townships (Pyaw, Paukhaung, Thegon, Paungde, Natlalin, Zigon) in 4 irrigation schemes in Western Bago Region
 Model Site: 20 sites including PROFIA model areas in AMD demo farms and DOA seed farms.

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Remarks
Overall Goal Profitability of agricultural activities in the Project Site is improved	Increase of agricultural profit in the Project Site since baseline year 2015 exceeds that of the whole country by more than 10%.	MOALI Statistics	Policy related to crop selection and trading does not change drastically.	
Project Purpose Profitable irrigated agriculture model with private sector involvement is established	<ul style="list-style-type: none"> At least one of the practices introduced through the Project is adopted in more than 50 % of the model site. Increase of agricultural profit since 2015 among farmers who adopt the practices exceeds that of the control group by more than 10%. 	Baseline survey and endline survey of the Project	Policy related to crop selection and trading does not change drastically. Water supply is not disturbed due to drought or flood	
Outputs 1. Public-Private-Producers (Farmers) Partnership is strengthened	1-1 Paddy rice produced from Certified Seed by farmers in the Model Site is sold at higher price than paddy rice produced from ordinary seeds.	Baseline survey and endline survey of the Project		
2. Profitability of farmers in the Model Site is improved	1-2 At least one variety of multiplication and distribution flow of good quality seeds of non-rice crops is strengthened. 2-1 Increase of agricultural profit since 2015 among farmers in the Model Site exceeds that of the control group by more than 20%.	Baseline survey and endline survey of the Project Baseline survey, endline survey, and farming record of the Project.	Policy and regulations for pulses seed production do not adversely affect the project activities	
3. Guidelines for Participatory Irrigation Management (PIM) in the Project Site is prepared and applied in the Model Site	3-1 Guidelines for participatory irrigation management is prepared. 3-2 Stakeholders meetings of irrigation sector are sustainably organized. 3-3 More than 50 % of farmers in the model site participate in PIM activities	Monitoring sheet Monitoring sheet Baseline survey and endline survey of the Project		

Activities	Inputs		Important Assumption
	The Japanese Side	The Myanmar Side	
<p>1-0-1 Conduct a baseline survey and endline survey to collect data on farm profitability of the target group and the control group.</p> <p>1-0-2 Reconfirm the issues of present farming in the Project Site.</p> <p>1-0-3 Review the suitable balance between land productivity and labor productivity to examine the project activities</p> <p><Output1></p>	<p>(1) Dispatch of Experts^{1d}</p> <p>Team Leader/ Marketing and Distribution</p> <p>Co-leader/ Marketing and Distribution</p> <p>Public Private Partnership</p> <p>Agriculture/ Gender</p> <p>Agricultural Machinery</p> <p>Training Material/ Coordinator/ Agriculture (2)</p> <p>Water Management/ Organization</p> <p>Coordinator/ Agricultural Machinery (2) / GIS</p> <p>Local Consultant (PPP)</p> <p>Local Consultant (B)</p> <p>Local Consultant (C)</p> <p>(2) Provision of equipment</p> <p>3 Seed Cleaners</p> <p>Moisture Meters</p> <p>6 Motorcycles for field inspectors</p> <p>2 Vehicles for the Project</p> <p>1 Adaptor for ridge building</p> <p>2 Pulses thresher / cleaner</p> <p>Harvesting machine for pulses</p> <p>(3) Third country / In country training</p> <p>(4) Local cost shared by Japanese side</p> <p>Project office refurbishment cost</p> <p>Travel allowance for the Project</p> <p>Other running cost</p>	<p>a) Office space in DOA West Bago division</p> <p>b) Office space for irrigation policy advisor in IWUMD in Nay Pyi Taw</p> <p>c) Fuel for field inspectors</p> <p>d) 9 designated staff for the Project assigned by DOA West Bago division throughout the project period (1 in division, 2 in districts, 6 in townships)</p> <p>e) Running cost such as electricity and water</p>	<p>The mechanism to facilitate land consolidation is introduced by the state or the union government of Myanmar.</p> <p>Pre-Conditions</p> <p>10 baskets of Yezin 2, 3 and 5 (Black gram variety) is procured before the dry season cultivation in the 1st year.</p> <p>The AMD model land consolidation is completed before the start of the Project without lasting dispute.</p> <p>The AMD model land consolidation site is not destroyed through rainfall, flood or use of machineries.</p> <p><Issues and countermeasures></p> <p>Farmer's coordination mechanism may be introduced through the project activities.</p>
<p>1-1. <u>Promote the use of Certified Seed for rice</u></p>			
<p>1-1-1 Review the current seed multiplication practice of DOA (seed farm & T/S extension office) and Model Seed Villages in the project site.</p>			
<p>1-1-2 Enhance the capacity of DOA seed farm to improve quality of FS and RS.</p>			
<p>1-1-3 Improve awareness of extension staff, farmers, private companies on the use of CS.</p>			
<p>1-1-4 Encourage rice millers / traders to purchase CS seeds produced by seed growers.</p>			
<p>1-1-5 Involve rice millers for CS distribution and purchase of paddy produced from CS.</p>			
<p>1-1-6 Monitor and introduce measures to improve the network among Public-Private-Producers for rice.</p>			
<p>1.2 <u>Promote the use of Good quality seeds for non-rice crops</u></p>			
<p>1-2-1 Introduce good quality seed of non-rice crops to the model site.</p>			
<p>1-2-2 Conduct trainings for DOA staff, farmers and the private companies on seed multiplication technique and use of good quality seed.</p>			
<p>1-2-3 Enhance the coordination between farmers and private companies in the good quality seed distribution so that crops produced from quality seeds are sold with premium price.</p>			
<p>1-2-4 Monitor and introduce measures to improve the Public-Private-Producers network for non-rice crops.</p>			

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<p><Output2></p> <p>2-1 3-season cropping model and 2-season cropping model with improved profitability are demonstrated in the model sites in the 6 townships</p> <p>2-1-1 Identify the suitable crops for 3-season cropping in each model site-by taking market demand prospect into account.</p> <p>2-1-2 Identify more profitable crops for 2-season cropping in each model site-by taking market demand prospect into account.</p> <p>2-1-3 Promote the cultivation of suitable crops identified in 2-1-1 and 2-1-2.</p> <p>2-1-4 Enhance the capacity of farmers on appropriate use of agricultural inputs and on soil improvement.</p> <p>2-1-5 Introduce appropriate water management practices for rice production in addition to non-rice crops, including furrow irrigation through Water Users Group (WUG).</p> <p>2-1-6 Enhance the capacity of farmers, private companies and AMS staff on appropriate use of agricultural machinery.</p> <p>2-2 The practice introduced in 2-1 is disseminated in cost effective and sustainable way</p> <p>2-2-1 Introduce the farming-record (accounting book) to the target farmers^b and ordinary farmers.^c</p> <p>2-2-2 Analyze the data of 2-2-1 and visualize the effect of the practices introduced in 2-1.</p> <p>2-2-3 Advise the practice in 2-1 by using the information of 2-2-2 through poster, radio, newspaper, advertisement, etc.</p> <p>2-2-4 Create and distribute material such as booklet, poster, DVD etc. to disseminate the practice in 2-1.</p> <p>2-2-5 Promote extension activities, including study tour, field day, farmer field school, farmer to farmer extension, as well as extension activities through knowledge center.</p>	
<p><Output3></p> <p>3-1. Identify the issues on middle- and long-term use of irrigation facilities in the Project Site through monitoring the Project.</p> <p>3-2. Develop a guideline on PIM (Participatory Irrigation Management) in the Project Site.</p> <p>3-3. Assist PIM activities by Water Users Groups / Water Users Association after establishment.</p> <p>3-4. Assist dissemination of the use of guidelines for land consolidation in the Project Site.</p> <p>3-5. Provide advices to solve the issues of irrigation sector in Myanmar through meeting with stakeholders and observation of various irrigation systems in Myanmar.</p>	

Remarks: a/ "PROFIA Model Area": Farm plots irrigated under one designated turnout where target farmers' plots (demo-plots) are located
 b/ "Target Farmers": farmers who directly receive technical support from the Project.
 c/ "Ordinary Farmers": farmers who have farmland in surrounding area of the target farmers' land.
 d/ Experts not mentioned in this PDM version 2 (excluded from PDM version 0) will be dispatched if necessary.

ANNEX 2: List of Project Experts

(1)-1) Dispatch of Experts (Summary)

a) Assignment in the project site

No.	Name	Field	Assignment Duration until the end of May, 2018	Affiliation	Note
1	Kotaro KIKUCHI	Team Leader/ Marketing and Distribution	16.93MM within the duration from 20 March 2016 to 31 May 2018	SCI	
2	Hideaki HIRUTA	Co-leader/ Marketing and Distribution	7.93 MM within the duration from 6 July 2016 to 31 May 2018	SCI	
3	Masakazu KANAMOTO	Public Private Partnership	15.70 MM within the duration from 23 March 2016 to 31 May 2018	OMIC	
4	Kiyoko HITSUDA	Agriculture/ Gender	16.23 MM within the duration from 2 May 2016 to 31 May 2018	SCI ¹	
5	Takao AKUTSU	Agricultural Machinery	10.10 MM within the duration from 2 May 2016 to 31 May 2018	OMIC	
6	Ritsuko HARA	Training Material/ Coordinator/ Agriculture (2)	11.20 MM within the duration from 20 March 2016 to 31 May 2018	SCI	
7	Motoyoshi HIKASA	Water Management/ Organization	4.0 MM within the duration from 23 August 2016 to 31 May 2018	SCI	
8	Mizuki IIDA	Organization (2)	2.8 MM within the duration from 29 May 2017 to 31 May 2018	SCI	
9	Hideo SHIMAZU	PCM Moderator	0.5 MM (28 May 2017 to 11 June 2017)	SCI ²	
10	Taketo EGUCHI	Coordinator/ Agricultural Machinery (2)/ GIS		SCI	SCI own cost
11	Ayumi SHIGA	Farm Economy/ Baseline Analysis		SCI	SCI own cost
12	Toru TAKABAYASHI	Farm Management		SCI	SCI own cost
13	Nobuyuki CHIBA	On-farm water management		SCI	SCI own cost
14	Hiroichi KITADA	Irrigation Policy Advisor / JICA Expert	From 8th, July to present	Ministry of Agriculture, Forestry and Fisheries, Japan	SCI own cost

b) Assignment in Japan

No.	Name	Field	Assignment Duration	Affiliation	Note
1	Kotaro KIKUCHI	Team Leader/ Marketing and Distribution	0.0 MM	SCI	
2	Hideaki HIRUTA	Co-leader/ Marketing and Distribution	0.5 MM, for the preparation of work plan for the first phase	SCI	
3	Ritsuko HARA	Training Material/ Coordinator/ Agriculture (2)	0.5 MM, for the preparation of work plan for the first phase	SCI	
4	Toru Nakagawa / Kazunori TAKASAKI	Water Management (Training in Japan)	3.0 MM from Sept. to Nov. in 2017 (for the first Training in Japan)	SCI	

Note: Please refer to the latest dispatch schedule, which includes plan and actual.

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7	Motoyoshi HIKASA	Water Management/ Organization	4.0 MM within the duration from 23 August 2016 to 31 May 2018	SCI	
8	Mizuki IIDA	Organization (2)	2.8 MM within the duration from 29 May 2017 to 31 May 2018	SCI	
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12	Toru TAKABAYASHI	Farm Management		SCI	SCI own cost
13	Nobuyuki CHIBA	On-farm water management		SCI	SCI own cost
14	Hiromichi KITADA	Irrigation Policy Advisor / JICA Expert	From 8th, July to present	Ministry of Agriculture, Forestry and Fisheries, Japan	

b) Assignment in Japan

No.	Name	Field	Assignment Duration	Affiliation	Note
1	Kotaro KIKUCHI	Team Leader/ Marketing and Distribution	0.0 MM	SCI	
2	Hideaki HIRUTA	Co-leader/ Marketing and Distribution	0.5 MM, for the preparation of work plan for the first phase	SCI	
3	Ritsuko HARA	Training Material/ Coordinator/ Agriculture (2)	0.5 MM, for the preparation of work plan for the first phase	SCI	
4	Toru Nakagawa / Kazunori TAKASAKI	Water Management (Training in Japan)	3.0 MM from Sept. to Nov. in 2017 (for the first Training in Japan)	SCI	

Note: Please refer to the latest dispatch schedule, which includes plan and actual.

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Annex 3: List of C/P Training in Japan

(3) Counterparts' Participation in Training Overseas (Include Third Country Training Program) (研修員受入実績(第三国研修含む))

Name	Period of Participation	Field/Name of the Course	Content	Implementing Institution	Position at that time	Current Position,
1 U Maung Maugn Naing					Assistant Director, IWUMD, MOALI	Assistant Director, IWUMD, MOALI
2 U Ye Hlut Aung					Staff Officer, IWUMD, MOALI	Staff Officer, IWUMD, MOALI
3 U Naing Lin Tun					Staff Officer, IWUMD, MOALI	Staff Officer, IWUMD, MOALI
4 U Zaw Lwin Oo	2017/10/15-2017/11/11	Training on Water Management in Japan	Irrigation Plan/ Designing Irrigation Facility/ Basics of Water Management, Study Tour on Japanese Irrigation, Review workshop, and Workshop on irrigation development plan in Myanmar	Project	Staff Officer, IWUMD, MOALI	Staff Officer, IWUMD, MOALI
5 U Sao Khun Oo					Staff Officer, IWUMD, MOALI	Staff Officer, IWUMD, MOALI
6 U Tay Zar Htun					Staff Officer, IWUMD, MOALI	Staff Officer, IWUMD, MOALI
1 Daw Ei Ei Nyein					Deputy Officer, Deputy Regional Office in Pyaw (Bago Region), DOA, MOALI	Deputy Officer, Deputy Regional Office in Pyaw (Bago Region), DOA, MOALI
2 Daw Thein Thein Win	2018/2/4-2018/1/3	In-Japan Training "Vegetable Production Technology for Livelihood Improvement of Small Scale Farmers"	Comprehensive vegetable production technology and knowledge to farmers' income generation. The training consists of field practice, individual experiments, lectures and observations.	JICA	Assistant Staff Officer, Paukkhaung Township Office, Western Bago, DOA.	Assistant Staff Officer, Paukkhaung Township Office, Western Bago, DOA.

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ANNEX 4: List of Machinery and Equipment

No. (番号)	Purpose of Use (使用目的)	Arrival Date (現地到着時期)	Name of Machinery (機材名)	Product No. (型式)	Maker (メーカー)	Price Tax excluded (購入価格)	Installation Place (設置場所)	Procurement Place (調達先)	Current Condition (現在の稼働状況)	Maintenance System (維持管理体制 (管理台帳整備状況、責任者、管理方法等))
1	To improve paddy seed quality produced in DOA seed farms by optimizing the way of seed grading. DOA が生産するイネ種子の取選後の精選手法の適正化により、種子品質の向上を図る	(1) 2016/12/15 (2) 2016/12/15 (3) 2017/12/05	Paddy Seed Cleaner (種子選別機)	Agrosaw seed grader model DELUX	OSAW AGRO INDUSTRIAL PVT.LTD.	CI F price YGN port : 23,450 USD (FOB price: 19,425 USD)	(1) Paungde Seed Farm DOA (2) Pwe Pyae Seed Farm DOA (3) Paungde Community Learning Center	OSAW AGRO INDUSTRIAL PVT.LTD	Machine (1) and (2) are working at DOA seed farms both for their own produced seeds and seeds produced by seed growers nearby. Machine (3) is working in the Paungde community learning center. (1)と(2)の2台は DOA 種子増殖農場で使用。DOA 種子増殖農場内で収穫した種子以外にも、近隣の種子生産農家の種子精選に使用している。 (3)は DOA・TS 事務所内で生産した種子選別に使用中。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition and give the technical advice if necessary. 各設置場所の長が管理責任者として、利用記録を付けている。また、PROFIA の担当者が随時に訪問して現状の確認と、必要な場合に技術アドバイスをを行っている (ネズミ進入防止など)。
2	To improve the quality of pulses such as Black Gram. Further utilization of the machine for other kind of crops like sesame is expected. Black Gram を中心とした豆類の生産物品質の向上を図る。ゴマ等の他作物への適用も目指す。	(1) 2017/02/28 (2) 2017/02/28	Bean Thresher (豆脱穀機)	S-III	SASAKAWA A Nouki Co., LTD. (笹川農機株式会社)	750,200 JPY (375,100 JPY/unit x 2 units)	(1) DOA Paungde TS office (2) DOA Zigon TS office	SASAKAWA Nouki Co., Ltd (笹川農機株式会社)	Machine (1) is utilized for threshing of Black Gram produced in DOA Paungde TS office. Machine (2) is utilized for threshing of Green Gram produced in DOA Zigon TS office. (1)の機材は DOA Paungde TS office 内の展示農場で生産した BG の脱穀作業に使用した。 (2)は DOA Zigon TS office 内の展示農場で生産した緑豆の脱穀作業にも使った	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition and give the technical advice if necessary. 各設置場所の長が管理責任者として、利用記録を付けている。PROFIA の担当者が随時に訪問して現状の確認と必要な場合の、技術アドバイスをを行っている。
3	To improve the quality of pulses such as Black Gram. Further utilization of the machine for other kind of crops like sesame is expected. Black Gram を中心とした豆類の生産物品質の向上を図る。ゴマ等の他作物への適用も目指す	(1) 2017/02/28 (2) 2017/02/28	Bean Cleaner (豆精選機)	HDS-40 SH	HOKUETSU U Co., LTD. (株式会社ホクエツ)	1,108,600 JPY (554,300 JPY/unit x 2 units)	(1) DOA Paungde TS office (2) DOA Zigon TS office	HOKUETSU Co., LTD (株式会社ホクエツ)	Machine (1) has been modified for cleaning of Black Gram and Sesame. It has been used by SMWG for BG and Sesame. (1)の機材は BG とゴマの精選用に改造。P.ya の種子生産グループ (SMWG) が使用中。 (2)ゴマ用に改造作業予定。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition and give the technical advice if necessary. 各設置場所の長が管理責任者として、利用記録を付けている。PROFIA の担当者が随時に訪問して現状の確認と必要な場合の、技術アドバイスをを行っている。
4	To improve the quality of pulses such as Black Gram. Further utilization of the machine for other kind of crops like sesame is expected. Black Gram を中心とした豆類の生産物品質の向上を図る。ゴマ等の他作物への適用も目指す	(1) 2017/02/28 (2) 2017/02/28	Bean Grader (豆精選機)	YBG-200	YANMAR Co., LTD. (ヤンマー株式会社)	YBG-200: 112,400 JPY (56,200 JPY/unit x 2 units) YBS-200: 519,400 JPY (259,700 JPY/unit x 2 units)	(1) DOA Paungde TS office (2) DOA Zigon TS office ※1 set of YBG-200 & YBS-200 is installed in each location mentioned above.	YANMAR Co., LTD. (ヤンマー株式会社)	Both of machine (1) and (2) worked for grading of Black Gram produced in DOA TS offices. Machine (1) is currently used by U Aung Naing Oo, one of the SMWG members, for grading of Black Gram seeds from his own field. Machine (2) was also used for Green Gram produced in DOA Zigon TS office. (1)(2)ともに各々設置された DOA TS office が生産した BGG の種子選別に使用。 (1)は現在 SMWG のメンバーの U Aung Naing Oo が自身の農場 (Paungde) で生産した B G 種子の精選作業にも使用した。 (2)は DOA Zigon TS office が生産した緑豆の選別にも使用した。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition and give the technical advice if necessary. 各設置場所の長が管理責任者として、利用記録を付けている。PROFIA の担当者が随時に訪問して現状の確認と必要な場合の、技術アドバイスをを行っている。

No. (番号)	Purpose of Use (使用目的)	Arrival Date (現地到着時期)	Name of Machinery (機材名)	Product No. (型式)	Maker (メーカー)	Price Tax excluded (購入価格)	Installation Place (設置場所)	Procurement Place (調達先)	Current Condition (現在の稼働状況)	Maintenance System (維持管理体制) (管理台帳整備状況、責任者、管理方法等)
5	To improve the quality of pulses such as Black Gram. Further utilization of the machine for other kind of crops like Black Gram is expected. 大豆類の生産物品質の向上を図る。ゴマ等の他作物への適用も目指す	(1) 2017/03/01 (2) 2017/03/01	Winrower (唐箕)	BM-2H	SASAKAWA A Nooki Co., Ltd (佐川農機株式会社)	95,000 JPY (47,500 JPY/unit x 2 units)	(1) DOA regional office (2) One of seed grower	SASAKAWA Nooki Co., Ltd (佐川農機株式会社)	Machine (1) is to be modified to make it usable for Sesame, and to be lent out to SMWG members. (The farmers in DO (Than Pa Yar Pin village) did cleaning manually this year) Machine (2) U Aung Naing Oo, one of the SMWG members, is using for cleaning of Black Gram and Sesame which were produce in his own field. (1)はゴマで使用できるようチューニングしてSMWGメンバーに貸している。PROFIAの担当者が随時訪問して現状の確認と必要となる場合の、技術アドバイスをを行っている。 (2)は、SMWGのメンバー (U Aung Naing Oo) が自身の圃場で生産したBとゴマの種子の精選作業に使用中。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition and give the technical advice if necessary. 各設置場所の長が管理責任者として、利用記録を付けている。PROFIAの担当者が随時訪問して現状の確認と必要となる場合の、技術アドバイスをを行っている。
6	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員の内ネ穀をはじめとする穀類の品質検査能力の強化	(1) 2017/03/01 (2) 2017/03/01	Test Paddy Husker (テスト穀摺り機)	THU35 B	SATAKE Corporation (株式会社サタケ)	1,440,000 JPY (720,000 JPY/unit x 2 units)	(1) PHT & GOC Laboratory in Deputy Regional Officer Office (2) PHT & GOC Laboratory in Deputy Regional Officer Office	SATAKE Corporation (株式会社サタケ)	Both of machine (1) and (2) are working in PHT & GOC laboratory. They are operated and maintained by Fostharvest C/Ps. 2台ともPHT & GOCラボでポストハーベストC/Pが維持管理・使用中。 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition. 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。
7	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員の内ネ穀をはじめとする穀類の品質検査能力の強化	2017/03/01	Abrasive type Test Mill (テスト精米機 金剛ロール式)	TM05C	SATAKE Corporation (株式会社サタケ)	1,020,000 JPY (1,020,000 JPY/unit x 1 unit)	PHT & GOC Laboratory in Deputy Regional Officer Office	SATAKE Corporation (株式会社サタケ)	Both of machine (1) and (2) are working in PHT & GOC laboratory. They are operated and maintained by Fostharvest C/Ps. 2台ともPHT & GOCラボでポストハーベストC/Pが維持管理・使用中。 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition. 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。
8	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員の内ネ穀をはじめとする穀類の品質検査能力の強化	2017/03/01	Friction type Test Mill (テスト精米機 摩擦式)	VP-32T	YAMAMOTO Co., Ltd. (株式会社山本製作所)	217,600 JPY (217,600 JPY/unit x 1 unit)	PHT & GOC Laboratory in Deputy Regional Officer Office	YAMAMOTO Co., Ltd. (株式会社山本製作所)	Both of machine (1) and (2) are working in PHT & GOC laboratory. They are operated and maintained by Fostharvest C/Ps. 2台ともPHT & GOCラボでポストハーベストC/Pが維持管理・使用中。 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition. 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。
9	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員の内ネ穀をはじめとする穀類の品質検査能力の強化	(1) 2016/05/20 (2) 2016/05/20 (3) 2016/05/20 (4) 2016/05/20 (5) 2016/05/20	Moisture Meter for rice	Kett Riceler 512	Kett Electric Laboratory (株式会社ケット科学研究所)	200,000 JPY (40,000 JPY/unit x 5 units)	(1)~(5): PHT & GOC Laboratory in Deputy Regional Officer Office	Kett Electric Laboratory (株式会社ケット科学研究所)	Both of machine (1) and (2) are working in PHT & GOC laboratory. They are operated and maintained by Fostharvest C/Ps. 2台ともPHT & GOCラボでポストハーベストC/Pが維持管理・使用中。 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition. 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。
10	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員の内ネ穀をはじめとする穀類の品質検査能力の強化	(1) 2016/05/20 (2) 2016/05/20 (3) 2016/05/20	Moisture Meter for other grain	PM-450 (version 4514)	Kett Electric Laboratory (株式会社ケット科学研究所)	249,000 JPY (83,000 JPY/unit x 3 units)	(1)~(3): PHT & GOC Laboratory in Deputy Regional Officer Office	Kett Electric Laboratory (株式会社ケット科学研究所)	Both of machine (1) and (2) are working in PHT & GOC laboratory. They are operated and maintained by Fostharvest C/Ps. 2台ともPHT & GOCラボでポストハーベストC/Pが維持管理・使用中。 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。	The head of the place to which the machine was installed is in charge of its management. The Project team visit periodically to monitor its condition. 各設置場所の長が管理責任者として管理中。PROFIAの担当者も随時、ラボの現状確認を実施中。

No. (番号)	Purpose of Use (使用目的)	Arrival Date (現地到着時期)	Name of Machinery (機材名)	Product No. (型式)	Maker (メーカー)	Price Tax excluded (購入価格)	Installation Place (設置場所)	Procurement Place (調達先)	Current Condition (現在の稼働状況)	Maintenance System (維持管理体制 (管理台帳整備状況、責任者、管理方法等))
11	To be used during the project implementation period プロジェクト実施期間中に使用	2017/06/30	Project Vehicle (4WD SUV)	PAJERO (WAGO) (4WD SUV)	Mitsubishi Motors Corporation	32,000 USD (32,000 USD/unit x 1 unit)	PROFIA project office in Deputy Regional Officer Office	MM Cars Myanmar Ltd.	In good condition. It is kept in Deputy Regional Officers Office after use. 問題なく機能。使用後は DOA 州事務所にて保管。	The project team periodically checks its condition and sends it to the agent for its maintenance. The project team keeps the vehicle locked in Deputy Regional Officer Office after use. The project team will shoulder the insurance cost for the project implementation period. 定期的な状態チェック・維持管理を行っている。使用後は DOA 州事務所にて施錠のうえ保管。案件実施期間中はプロジェクト側が保険料を負担。
12	To be used during the project implementation period プロジェクト実施期間中に使用	2017/02/25	Project Vehicle (4WD Pick-up)	NP300 NAVARA (4WD D/C-MT 4WD)	Nissan Motor Corporation	26,800 USD (26,800 USD/unit x 1 unit)	PROFIA project office in Deputy Regional Officer Office	United Diamond Motor Co. Ltd.	In good condition. It is kept in Deputy Regional Officers Office after use. 問題なく機能。使用後は DOA 州事務所にて保管。	The project team periodically checks its condition and sends it to the agent for its maintenance. The project team keeps the vehicle locked in Deputy Regional Officer Office after use. The project team will shoulder the insurance cost for the project implementation period. 定期的な状態チェック・維持管理を行っている。使用後は DOA 州事務所にて施錠のうえ保管。案件実施期間中はプロジェクト側が保険料を負担。
13	To provide C/Ps with means of transportation for field inspection and other farming management related activities C/P に対し、圃場検査や営業に係る活動のための交通手段を提供	2016/06/10	Motorbike	HONDA Dream-125	Honda Motor Co., Ltd.	1,108,341 JPY (184,724 JPY/unit x 6 units) *2016年6月 JICA 換算レート (0.09473円) = MMK で換算	(1) DOA Pyaw TS office (2) DOA Paukhaung TS office (3) DOA Thegon TS office (4) DOA Paungde TS office (5) DOA Natthain TS office (6) DOA Zigon TS office	N.C.X. Myanmar CO., Ltd.	Working well in each DOA TS office. 各 DOA TS 事務所にて稼働中。	Township C/Ps check its condition regularly. If they found something wrong with the bike, they would report to the project team. (Nothing problem happened so far) The project team will shoulder insurance cost for the project implementation period. タウンシップ C/P が状態を定期的に点検。異常があればプロジェクトチームに報告(これまでそうした実績は無し)案件実施期間中はプロジェクト側が保険料を負担。

*PHT & GQC: Postharvest Techniques and Grain Quality Control Laboratory

No. (番号)	Purpose of Use (使用目的)	Arrival Date (現地到着時期)	Name of Machinery (機械名)	Product No. (型式)	Price Tax excluded (購入価格)	Installation Place (設置場所)	Current Condition (現在の稼働状況)	Maintenance System (維持管理体制 (管理台帳整備状況、責任者、管理方法等))
1	For office use 事務所にて使用	2016/4/26	Desk Computer	DELL VOSTRO 3536	78,390 JPY** (78,390 JPY/unit x 1 unit)	PROFIA Project Office	Active	The Project checks the condition periodically.
2	For office use 事務所にて使用	2016/4/26	Laptop Computer	DELL INSPECTION 5559	206,457 JPY** (68,819 JPY/unit x 3 unit)	PROFIA Project Office	Active	The Project checks the condition periodically.
3	For office use 事務所にて使用	2016/4/26	Printer	iX-6870 PRINTER	32,472 JPY** (32,472 JPY/unit x 1 unit)	PROFIA Project Office	Active	The Project checks the condition periodically.
4	For office use 事務所にて使用	2016/4/26	Copy Machine	IR 2520 COPIER	361,186 JPY** (361,186 JPY/unit x 1 unit)	PROFIA Project Office	Active	The Project checks the condition periodically.
5	For office use 事務所にて使用	2016/5/20	Generator	DG-12000LNS	160,198 JPY** (160,198 JPY/unit x 1 unit)	PROFIA Project Office	Out of work	The Project checks the condition periodically.
6	For office use 事務所にて使用	2016/5/26	Laptop Computer	Acer i3 E5.473 Gray	95,730 JPY** (47,865 JPY/unit x 2 unit)	PROFIA Project Office	Active	The Project checks the condition periodically.
7	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員のイネ穀をはじめとする穀類の品質検査能力の強化	2016/4/28	Sample Divider (試料均分器)	Small type	246,000 JPY (123,000 JPY/unit x 2 units)	PHT & GOC Laboratory in Deputy Regional Officer Office	Active	The Project checks the condition periodically.
8	For PHT&GOC Laboratory PHT&GOC ラボにて使用	2016/12/17	Generator	DG8800 SH.N	175,820 JPY** (175,820 JPY/unit x 1 unit)	PHT & GOC Laboratory in Deputy Regional Officer Office	Active	The Project checks the condition periodically.
9	For Running commission milling activity by farmers' group 農家による精米業の運営	2016/11/30	Small Rice Mill set 米精機 (精米)	Rice-Mill 3B-10D	131,416 JPY** (131,416 JPY/unit x 1 unit)	Nyaung Zing village, Paungde	Active	The Project checks the condition periodically.
10	For PHT&GOC Laboratory PHT&GOC ラボにて使用	2017/1/3	Desk Computer	Top KPP981A007101	58,029 JPY** (58,029 JPY/unit x 1 unit)	PHT & GOC Laboratory in Deputy Regional Officer Office	Active	The Project checks the condition periodically.
11	To develop farmers awareness on pricing system according to the moisture contents of paddy grain 水分含有率数値に反映した値付けに関する農家の認知喚起	2016/12/1	Portable Moisture Meter (携帯型穀物水分計)	(1) BG23953 (2) BG23927 (3) BG23749 (4) BG23939 (5) BG23998 (6) BG24001	471,678 JPY** (78,613 JPY/unit x 6 unit)	Zigon DOA TS office	Active	The Project checks the condition periodically.
12	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員のイネ穀をはじめとする穀類の品質検査能力の強化	2017/2/20	Dry Heat Sterilizer (乾熱滅菌機)	LDO-030E 2016072608	86,358 JPY** (86,358 JPY/unit x 1 unit)	PHT & GOC Laboratory in Deputy Regional Officer Office	Active	The Project checks the condition periodically.
13	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員のイネ穀をはじめとする穀類の品質検査能力の強化	2017/2/20	Incubator (インキュベータ)	LBI-250M 2018072603	459,424 JPY** (459,424 JPY/unit x 1 unit)	PHT & GOC Laboratory in Deputy Regional Officer Office	Active	The Project checks the condition periodically.
14	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員のイネ穀をはじめとする穀類の品質検査能力の強化	2017/2/20	Water Distilling Apparatus (蒸留水製造装置)	WD3VA 60031-00-0045	167,534 JPY** (167,534 JPY/unit x 1 unit)	PHT & GOC Laboratory in Deputy Regional Officer Office	Active	The Project checks the condition periodically.
15	Capacity Building of DOA staffs for grain quality inspection and control DOA 職員のイネ穀をはじめとする穀類の品質検査能力の強化	2016/10/14	Moisture meter for other grain	BG23762	83,000 JPY (83,000 JPY x 1 unit)	PHT & GOC Laboratory in Deputy Regional Officer Office	Active	The Project checks the condition periodically.
16	To encourage machinery utilization for sesame cultivation ゴマ栽培における機械利用の促進	(1) 2017/9/1 (2) 2018/4/28	Reaper binder (リーパーバインダー)	*Model KM-170F/KM-170FS, KM-173F/KM173FS, KM-178F/KM-178FS, KM-186F/KM-186FS,	(1) 232,332 JPY** (232,332 JPY/unit x 1 unit) (2) 228,171 JPY** (228,171 JPY/unit x 1 unit)	AMD, Pyay,	Active	The Project checks the condition periodically.

** : Converted into JPY applying JICA exchange rate.

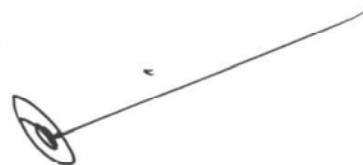
ANNEX 5: Project Cost borne by Japanese Side

Category	Content of expenditure / related activity	Approximate amount (JPY)
Personnel Expenses	Salary for project staffs, local consultants, and lecturer invited	16,000,000
Vehicles related expense	Rental fee of vehicles, fuel cost, salary for driver, maintenance cost for project vehicle	18,000,000
Repairing cost / land rent	Office rehabilitation work, venue rent for W/S and land rent for field trial	440,000
Consumable goods	Office papers, copying and printing of documents, materials for activity concerned with farm management, other consumable goods necessary for machinery modification and management for PHT & GQC Laboratory	4,000,000
Travelling	Accommodation allowance for project staffs, Accommodation and travel allowance for C/Ps, travel allowance for C/Ps and farmers	7,500,000
Communication and transportation	Internet in the project office, mobile credit, and transportation cost of materials for the activity	1,050,000
Material document preparation	Making extension materials and manuals	92,000
Others (1)	Rehabilitation work of PHT & GQC Laboratory	2,000,000
Others (2)	Service fee for grain quality inspection, soil / fertilizer analysis, farm machinery operation.	2,500,000
Total (JPY)		51,582,000

PHT & GQC Laboratory: Postharvest Technique and Grain Quality Control Laboratory

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Annex 6: List of Counterpart Personnel

(2) Assignments of Counterparts (C/P配置実績一覧)

Institution	Name	Position	Division	Area of Speciality	Assigned Period	Name of Expert in Charge	Employment Period in the Institution		Remarks
							From	To	
(1) DOA Officials from Regional (1), District (2)									
1 DOA (Region)	U Myint Lwin	Deputy Regional Officer / Project Manager			April, 2016 to present	Kotaro KIKUCHI / Hideaki HIRUTA	N/A	Present	Officially Assigned by MOALI for the Project
2 Pyaw District	Daw San Hla Myint	District Officer/ Deputy Project Manager			April, 2016 to present	Kotaro KIKUCHI / Hideaki HIRUTA	N/A	Present	Officially Assigned by MOALI for the Project
3 Tharyawaddy District	Daw Tin Mya Lwin	District Officer/ Deputy Project Manager			April, 2016 to present	Kotaro KIKUCHI / Hideaki HIRUTA	N/A	Present	Officially Assigned by MOALI for the Project
(2) DOA Officials from Township (6)									
1 DOA Township Office, Pyaw	U Hla Moe	Assistant Staff Officer	Extension, DOA, Pyaw	Agricultural Extension	April, 2016 to present	Kyoko HITSUDA	1999	Present	Officially Assigned by MOALI for the Project
2 DOA Township Office, Paukkaung	Daw Kyi Kyi Swe	Deputy Staff Officer	Extension, DOA, Paukkaung	Agricultural Extension	April, 2016 to present	Kyoko HITSUDA	1998	Present	Officially Assigned by MOALI for the Project
3 DOA Township Office, Thegon	U Chit Ko	Deputy Staff Officer	Extension, DOA, Thegon	Agricultural Extension	April, 2016 to present	Kyoko HITSUDA	1997	Present	Officially Assigned by MOALI for the Project
4 DOA Township Office, Paungde	U Tun Tun Win	Assistant Staff Officer	Extension, DOA, Paungde	Agricultural Extension	April, 2016 to present	Kyoko HITSUDA	2001	Present	Officially Assigned by MOALI for the Project
5 DOA Township Office, Nattalin	U Thaw Thaw Htet	Deputy Assistant Staff Officer	Extension, DOA, Nattalin	Agricultural Extension	April, 2016 to present	Kyoko HITSUDA	2012	Present	Officially Assigned by MOALI for the Project
6 DOA Township Office, Zigon	U Myo Thet Khaing	Deputy Assistant Staff Officer	Extension, DOA, Zigon	Agricultural Extension	April, 2016 to present	Kyoko HITSUDA	2012	Present	Officially Assigned by MOALI for the Project
7 DOA Township Office, Pyaw	Daw Yi Yi Win	Assistant Staff Officer	Extension, DOA, Pyaw	Agricultural Extension	June, 2017 to present	Kyoko HITSUDA	2007	Present	Officially Assigned by MOALI for the Project
8 DOA Township Office, Paungde	U Tin Maung Lwin	Deputy Assistant Staff Officer	Extension, DOA, Paungde	Agricultural Extension	June, 2017 to present	Kyoko HITSUDA	2014	Present	Officially Assigned by MOALI for the Project
(3) DOA Officials as Post Harvest Group									
1 Deputy Regional Office in Pyaw (Nattalin TS)	U Nay Kyo Htut	Assistant Officer	Extension Division	Agricultural Extension	May, 2016 to Present	Masakazu KANAMOTO	13rd. Oct. 2010	Present	Officially Assigned by MOALI for the Project
2 Deputy Regional Office in Pyaw (Bago Region)	Daw Zar CH Htay	Deputy Officer	Planning Division	Planning	May, 2016 to Present	Masakazu KANAMOTO	1st. Apr. 2009	Present	Officially Assigned by MOALI for the Project
3 Deputy Regional Office in Pyaw (Bago Region)	U Kyaw San	Assistant Officer	Land Utilization Division	Land Utilization	May, 2016 to Present	Masakazu KANAMOTO	7th. Sep. 1993	Present	Officially Assigned by MOALI for the Project
4 Deputy Regional Office in Pyaw (Kog Pin Kayuk TS)	U Than Zaw Oo	Assistant Officer	Plant Protection Division	Plant Protection	May, 2016 to Present	Masakazu KANAMOTO	22nd. Jan. 1996	Present	Officially Assigned by MOALI for the Project
5 Deputy Regional Office in Pyaw (Bago Region)	Daw Ei Ei Nyein	Deputy Officer	Seed Division	Seed Production	May, 2016 to Present	Masakazu KANAMOTO	4th. Nov. 1998	Present	Officially Assigned by MOALI for the Project
6 Deputy Regional Office in Pyaw (Nattalin TS)	Daw Kyu Kyu Win	Assistant Officer	Seed Division	Seed Production	May, 2016 to Present	Masakazu KANAMOTO	6th. Jan. 2003	Present	Officially Assigned by MOALI for the Project
7 Deputy Regional Office in Pyaw (Thegon TS)	Daw Saw Myat Thandar	Assistant Officer	Land Utilization Division	Land Utilization	May, 2016 to Present	Masakazu KANAMOTO	4th. Nov. 1998	Present	Officially Assigned by MOALI for the Project
8 Deputy Regional Office in Pyaw (Shwe Taung TS)	Daw Pyae Phyo Wai	Assistant Officer	Market Information Section/ Nominated Seed Inspector	Market information / Field Supervision	May, 2016 to Present	Masakazu KANAMOTO	1st. Jan. 2003	Present	Officially Assigned by MOALI for the Project
9 Deputy Regional Office in Pyaw	U Ye Min Tun	Assistant Officer	Field Supervisor, Zi Oak Farm	Field Supervision	13rd. Dec. 2017	Masakazu KANAMOTO	18th. Dec. 2002	Present	Officially Assigned by MOALI for the Project
(4) DOA officials as Marketing Counterpart									
1 Deputy Regional Office in Pyaw	U Aung Naing Tun	Assistant Officer	Planning Division	Planning	17th. Sep. 2017	Kotaro KIKUCHI	15th. Nov. 1997	Present	Officially Assigned by MOALI for the Project
2 Deputy Regional Office in Pyaw	U Kyaw Lwin	Upper Clerk	Administrative	Administration	17th. Sep. 2017	Kotaro KIKUCHI	1st. Dec. 1998	Present	Officially Assigned by MOALI for the Project
(5) DOA Administration Officers for Sustainable Use of the "Post-Harvest Technique and Grain Quality Control Laboratory"									
1 Deputy Regional Office in Pyaw	Daw Zar Zar Aye	Deputy Assistant Officer	Planning Division	Planning	13rd. Dec. 2017	Masakazu KANAMOTO	9th. Jul. 2014	Present	Officially Assigned by MOALI for the Project
2 Deputy Regional Office in Pyaw	Daw Nway Nwe Lin	Computer Clerk	Administrative	Administration	13rd. Dec. 2017	Masakazu KANAMOTO	8th. Jan. 2015	Present	Officially Assigned by MOALI for the Project
(6) Collaborative Officials from DOA for Seed related activities									
1 DOA Seed Farm, Paungde	Daw Khin Than Aye	Seed Farm Officer	Seed Division	Seed Production		Takao AKUTSU / Masakazu KANAMOTO	1986	Present	
2 DOA Seed Farm, Paungde	Daw Nilar Hlay Myint Oo	Assistant Staff Officer	Seed Division	Seed Production		Takao AKUTSU / Masakazu KANAMOTO	2001	Present	
3 Community Learning Center, Paungde	U Thein Zaw Myint	Assistant Staff Officer	Extension, DOA, Pyaw	Agricultural Extension		Takao AKUTSU	2010	Present	
4 Seed Farm, Pwv Pyi	U Tin Naino Win	Seed Farm Manager	Seed Division	Seed Production		Takao AKUTSU	1999	Present	
(7) Collaborative Officials from AMD									
1 AMD District Office, Pyaw	U Hla Myaing	Assistant Director	AMD	Agricultural Mechanization		Takao AKUTSU	1996	Present	
2 AMD Township Office, Thegon	U Kyaw Soe Htway	Staff Officer	AMS, Thegon	Agricultural Mechanization		Takao AKUTSU	1995	Present	
3 AMD Township Office, Paungde	U Kyaw Naing Win	Staff Officer	AMS, Paungde	Agricultural Mechanization		Takao AKUTSU	1994	Present	
4 AMD Township Office, Paukkaung	U Myint Kyaw	Staff Officer	AMS, Paukkaung	Agricultural Mechanization		Takao AKUTSU	1996	Present	
5 AMD Township Office, Nattalin	U Maung Maung Lwin	Staff Officer	AMS, Nattalin	Agricultural Mechanization		Takao AKUTSU	1996	Present	
(8) Collaborative Officials who joined Training in Japan from IWUMD for WUA/WUG related activity									
1 IWUMD (ITC)	Dr Maung Maung Naing	Assistant Director	ITC (Bago)	Engineer		Hirohichi KITADA	7. Aug. 1995	Present	Promoted as Deputy Director
2 IWUMD (ITC)	U Ye Htet Aung	Staff Officer	ITC (Bago)	Engineer		Hirohichi KITADA	30. March. 2006	Present	
3 IWUMD (ITC)	U Nnno Lin Tun	Staff Officer	ITC (Bago)	Engineer		Hirohichi KITADA	27. Aug. 2012	Present	
4 IWUMD Construction Circle 2	U Zaw Lwin Oo	Staff Officer	Construction Circle 2	Engineer		Hirohichi KITADA	1. Dec. 2000	Present	
5 IWUMD Maintenance Office, Nattalin	U Sao Khun Oo	Staff Officer	Maintenance (Nattalin)	Engineer		Hirohichi KITADA	10. Sep. 1999	Present	
6 IWUMD Maintenance Office, Shwebo	U Tar Zar Tun	Staff Officer	Maintenance (Shwebo)	Engineer		Hirohichi KITADA	30. Aug. 2010	Present	
(9) Collaborative Officials from IWUMD for WUA/WUG activity in the project site									
1 IWUMD (Maintenance Office, Pyaw)	U Aye Kyu	Staff Officer	Maintenance (Pyaw)	Engineer		Mizuki IIDA			
2 IWUMD (Maintenance Office, Thegon)	U Win Hlay	Staff Officer	Maintenance (Thegon)	Engineer		Mizuki IIDA			Retired
3 IWUMD (Maintenance Office, Paungde)	U Thein Tun Aung	Staff Officer	Maintenance (Paungde)	Engineer		Mizuki IIDA			
4 IWUMD (Maintenance Office, Nattalin)	U Sao Khun Oo	Staff Officer	Maintenance (Nattalin)	Engineer		Mizuki IIDA			
5 IWUMD (Maintenance Office, Paukkaung)	U Htein Lin	Staff Officer	Maintenance (Paukkaung)	Engineer		Mizuki IIDA			
6 IWUMD (Maintenance Office, Patlaung)	U San Oo	Staff Officer	Maintenance (Patlaung)	Engineer		Mizuki IIDA			
7 IWUMD Construction Circle 2	U Kyaw Myo Myat	Staff Officer	Construction Circle 2	Engineer		Mizuki IIDA			
8 IWUMD Construction Circle 2	U Win Oo	Staff Officer	Construction Circle 2	Engineer		Mizuki IIDA			
9 IWUMD Construction Circle 2	U Nay Myo Aung	Staff Officer	Construction Circle 2	Engineer		Mizuki IIDA			
10 IWUMD Construction Circle 2	U Myint Zaw	Staff Officer	Construction Circle 2	Engineer		Mizuki IIDA			
(10) PIM Task Force Meeting Members (Nay Pyi Taw)									
1 IWUMD Head Quarter	U Soe Myint Tun	Deputy Director General	Upper Myanmar	Engineer		Hirohichi KITADA			Retired
2 IWUMD Head Quarter	U Tin Lwin	Director	Procurement	Engineer		Hirohichi KITADA			
3 IWUMD Head Quarter	U Aung Myo Swe	Deputy Director	Planning and Work	Engineer		Hirohichi KITADA			
4 IWUMD Construction Circle 2	U Aung Myo Swe	Deputy Director	Construction Circle (2)	Engineer		Hirohichi KITADA			
5 IWUMD Maintenance Office, Bago West	U Soe Aung	Deputy Director	Maintenance (Bago West)	Engineer		Hirohichi KITADA			Retired
6 IWUMD Head Quarter	Daw Nu Nu Htwe	Deputy Director	Planning and Work	Engineer		Hirohichi KITADA			
7 IWUMD Head Quarter	U Soe Tun Aung	Assistant Director	Planning and Work	Engineer		Hirohichi KITADA			
8 IWUMD Head Quarter	Dr Mu Mu Than	Assistant Director	Planning and Work	Engineer		Hirohichi KITADA			
9 IWUMD ITC	Dr Maung Maung Naing	Assistant Director	ITC (Bago)	Engineer		Hirohichi KITADA			Promoted as Deputy Director
10 IWUMD Head Quarter	U Tun Tun Aung	Assistant Director	Planning and Work	Engineer		Hirohichi KITADA			
11 IWUMD Construction Circle 2	U Tin Maung Wai	Assistant Director	Construction Circle (2)	Engineer		Hirohichi KITADA			
12 IWUMD Maintenance Office, Bago West	U Zaw Oo	Assistant Director	Maintenance (Bago West)	Engineer		Hirohichi KITADA			
13 IWUMD Maintenance Office, Nay Pyi Taw	U Zaw Wann	Assistant Director	Maintenance (Nay Pyi Taw)	Engineer		Hirohichi KITADA			
14 IWUMD Maintenance Office, Tharyawaddy	U Wai Phyo Kyaw	Assistant Director	Maintenance (Tharyawaddy)	Engineer		Hirohichi KITADA			
15 IWUMD Head Quarter	Daw Htar Htar Win	Assistant Director	ITC (Bago)	Engineer		Hirohichi KITADA			
16 IWUMD ITC	U Aung Pyae Phyo	Staff Officer	ITC (Bago)	Engineer		Hirohichi KITADA			
17 IWUMD Head Quarter	U Kaung Myat Aung	Staff Officer	ITC (Bago)	Engineer		Hirohichi KITADA			
18 IWUMD Maintenance Office, Nay Pyi Taw	U Lin Lin Soe	Staff Officer	Maintenance (Nay Pyi Taw)	Engineer		Hirohichi KITADA			
19 IWUMD Construction Circle 2	U Mhmi Zaw	Staff Officer	Construction Circle (2)	Engineer		Hirohichi KITADA			
20 IWUMD Maintenance Office, Nattalin	U Sao Khun Oo	Staff Officer	Maintenance (Nattalin)	Engineer		Hirohichi KITADA			
21 IWUMD Maintenance Office, Paungde	U Thein Tun Aung	Staff Officer	Maintenance (Paungde)	Engineer		Hirohichi KITADA			

ANNEX 7: List of Seminars and Trainings Conducted

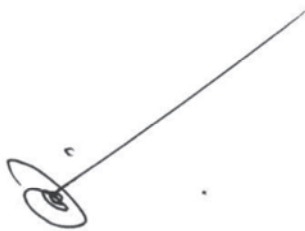
1) Implementation of Seminar and Training.

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No.	Year	Name of the Course	From	To	Content	No. of Participants	Target Participants	Remarks
1	2016	PCMI methodology and Problem analysis (including various contents of Work plan)	2016/09	2016/09	Training	N/A	DOA officials in Regional, District offices	
2	2016	Training of TS-CPs for Feedback Seminar of gender related seed in household rice casual	In Nov. 2016	2017/01	Training	10	MOALI officials who are to be the PCMI trainer in Subur	
3	2017	PCMI To T	2017/05/20	2017/06/1	Training	6	Senior officials of MOALI	
4	2017	Training for Senior officials	2017/05	2017/05	Training	6	Senior officials of MOALI	
5	2017	PCMI	2017/07	2017/09	Training	14	Junior officials MOALI	Training was done by the junior who participated in JCI
6	2016	A series of trainings of Postharvest technique and quality control, including OJT	May, 2016	Present	Training	9	PH-CPs	This training has been carried out periodically throughout the project implementation period so far
7	2016	Seed multiplication Training by JICA seed project	2016/07	2016/12	Training	11	TS-CPs, officials from DOA seed farms, some of PH-CPs	This training was delivered by JICA technical cooperation project on Development of Participatory Multiplication and Distribution System for Quality Rice Seeds
8	2016	Operation and maintenance of Paddy seed cleaner	2016/1/25		Training		Officials of DOA seed farms, Officials from DOA Township Office, and surrounding seed growers	
9	2017	Seed multiplication of Black Gram	2017/1/17		Seminar	16	Model farmers (2016) in Paungke, Natalkin, and Zagon, who received BG seeds from the project, TS-CPs, other DOA officials	The training was done by Leppidan DAR in response to the request from the project
10	2017	Training of Fungicide application	2017/09/17	20, 26th, 2017	Training	N/A	PH-CPs, rice millers / traders around the village (Wanthoboke in TG-13)	
11	2017	Marketing Process, problem analysis on current market structure, for holding Marketing Forum (8 firms in both)	01/10/22, 29 and 2017/10/16, 19, 3		Seminar	13	Marketing CPs, PH-CPs, and Project manager	
12	2017	Seed multiplication, Lumlung, post-harvest and rice milling technique	2017/10/23	2017/10/25	Training	40	The participants (mostly non farmers) of seminar which was held by MRF and Ministry of Industry	The PROFA report gave the seminars in response to the request from DOA
13	2017	Marketing Improvement Forum (Problem analysis of value chain)	2017/11/28		Seminar	40	Agricultural input company, farmer, rice miller, trader (GEC), officials from DOA, AMD, and Ministry of Commerce	
14	2017	Seminar on Grain moisture, Testers, Testability, System	2018/1/18		Seminar	N/A	AGRO-CPs, participants who brought their own moisture tester, etc. some	
15	2017	SMWG Inhouse Meeting	2017/12/15		Seminar Meeting	About 20	SMWG member, PH-CPs	This seminar was delivered by Kati Electric Laboratory in cooperation with DOCA
16	2016	Basic Prehistory and Soil analysis	2016/05/24	2016/05/24	Training	17	TS-CPs	
17	2016	OJT on rice till to determine the growth limitation factor of farmers soil	In Nov. 2016		Training		TS-CPs	
18	2017	Black gram cultivation training by DAR-seed farm in Leppidan	2017/1/17		Training	17 (growers in Natalkin & Paungke 4 each, & those in Zagon 3, CPs 4)	CPs and black gram growers in southern townships	The training was carried out by Leppidan DAR researcher in response to the request from the Project
19	2017	Sesame production	2017/1/30		Seminar	38	Farmers from Puy(16), Pukkhawng(5), and Thegong(17) TS-CPs, other DOA officials, Researcher from Thegong-DAR, Agricultural business company	The seminar was carried out by Mr. Thein Hlay Oo, who used to work for Magway-DAR, in response to the request from the Project
20	2017	Feedback of fertilizer ingredient analysis	In Jan. 2017		Seminar	6	TS-CPs	Increase of awareness on the results of small scale seed multiplication in advance of the extension process
21	2017	Report on small scale seed multiplication and other results in 2016	2017/02/7		Seminar	6 (CPs of all target townships)	CPs in target townships	
22	2017	Handover of Machines for cleaning / grading of BG, and operation training	2017/02/24		Training	N/A	DOA officials in Paungke and Zagon Township office	
23	2017	Soil analysis training using handry soil test kit	2017/02/24		Training	6 (CPs of all target townships)	CPs in target townships	
24	2017	Soil analysis training using handry soil test kit	14th June, 2017	16th June, 2017	Training	58	Model farmer (2016) and Target farmers (2017), and surrounding farmers	
25	2017	Soil analysis training using handry soil test kit	14th June, 2017	16th June, 2017	Seminar	58	Model farmer (2016) and Target farmers (2017), and surrounding farmers	
26	2017	PROFA activities and current sesame promotion	2017/02/25		Seminar	72	Local government officials in Wundwin	
27	2018	Training on operation method and dissemination of sesame binder	2018/2/24	2018/2/25	Training	6	Officials from AMD West Bago	Invited as a guest speaker in a progress meet and local officers meeting
28	2018	Training on operation method and dissemination of sesame binder	2018/4/7	2018/4/7	Training	DO-18, AMD-3	Farmers from Thon Dyer Ph. Village	
29	2017	1st Task Force meeting on PMU guideline	2017/4/4	2017/4/4	Seminar Meeting	21	The members of Task Force Meeting on PMU guideline (after Annex 1)	
30	2017	2nd Task Force meeting on PMU guideline	2017/5/16	2017/5/16	Seminar Meeting	21	The members of Task Force Meeting on PMU guideline (after Annex 2)	
31	2017	3rd Task Force meeting on PMU guideline	2017/9/11	2017/9/11	Seminar Meeting	21	The members of Task Force Meeting on PMU guideline (after Annex 3)	
32	2017	4th Task Force meeting on PMU guideline	2017/10/11	2017/10/11	Seminar Meeting	21	The members of Task Force Meeting on PMU guideline (after Annex 4)	
33	2017	5th Task Force meeting on PMU guideline	2017/12/08	2017/12/08	Seminar Meeting	21	The members of Task Force Meeting on PMU guideline (after Annex 5)	
34	2018	6th Task Force meeting on PMU guideline	2018/02/21	2018/02/21	Seminar Meeting	N/A	The members of Task Force Meeting on PMU guideline, JICA Myanmar, CT B892, Ent, BMD, PROFA	(It was carried out in IPT. The second manager of PROFA gave the presentation about the irrigation water management under WUGAWA which has been implemented in PROFA.

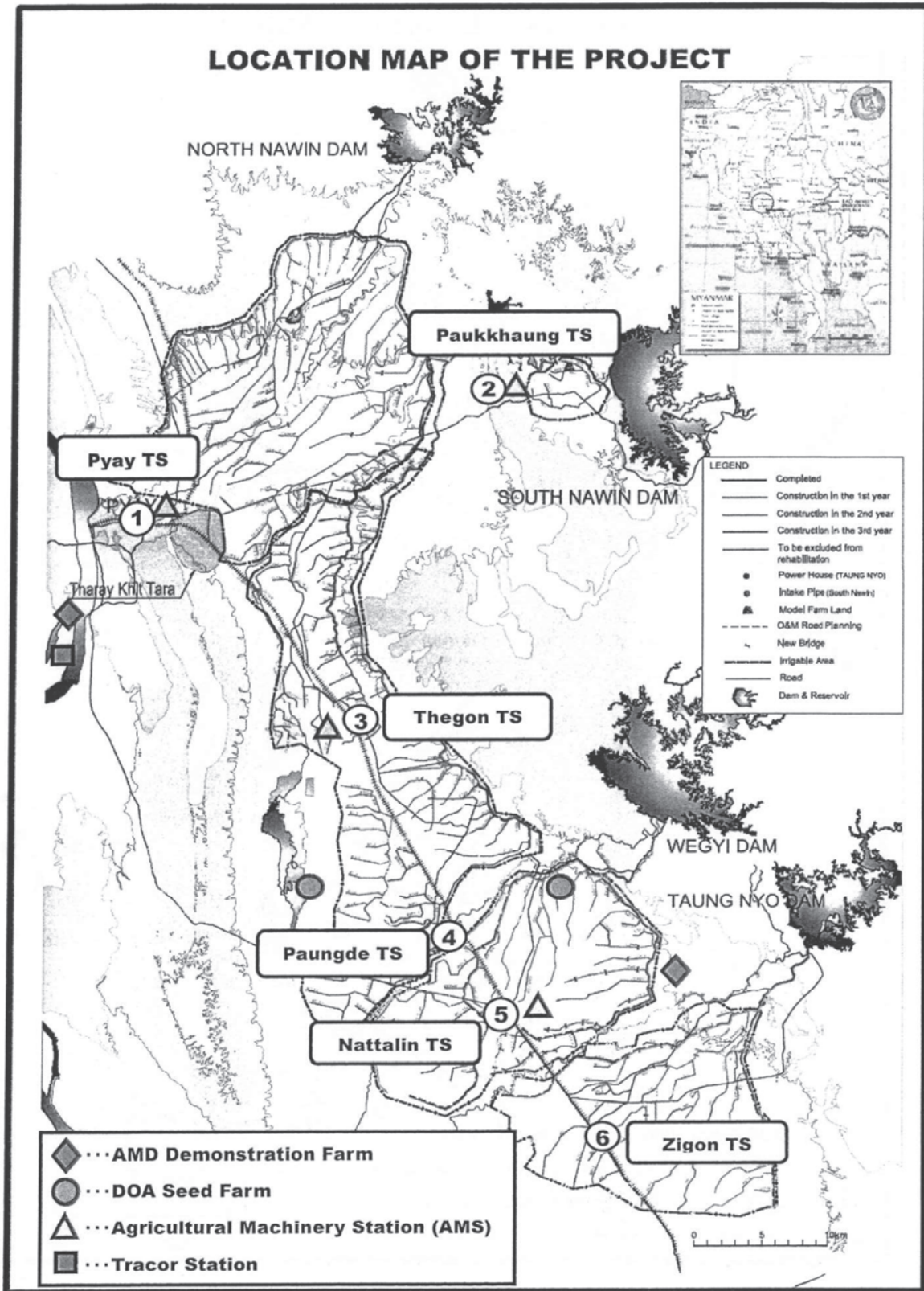
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ANNEX 8: Project Location Map at the Beginning

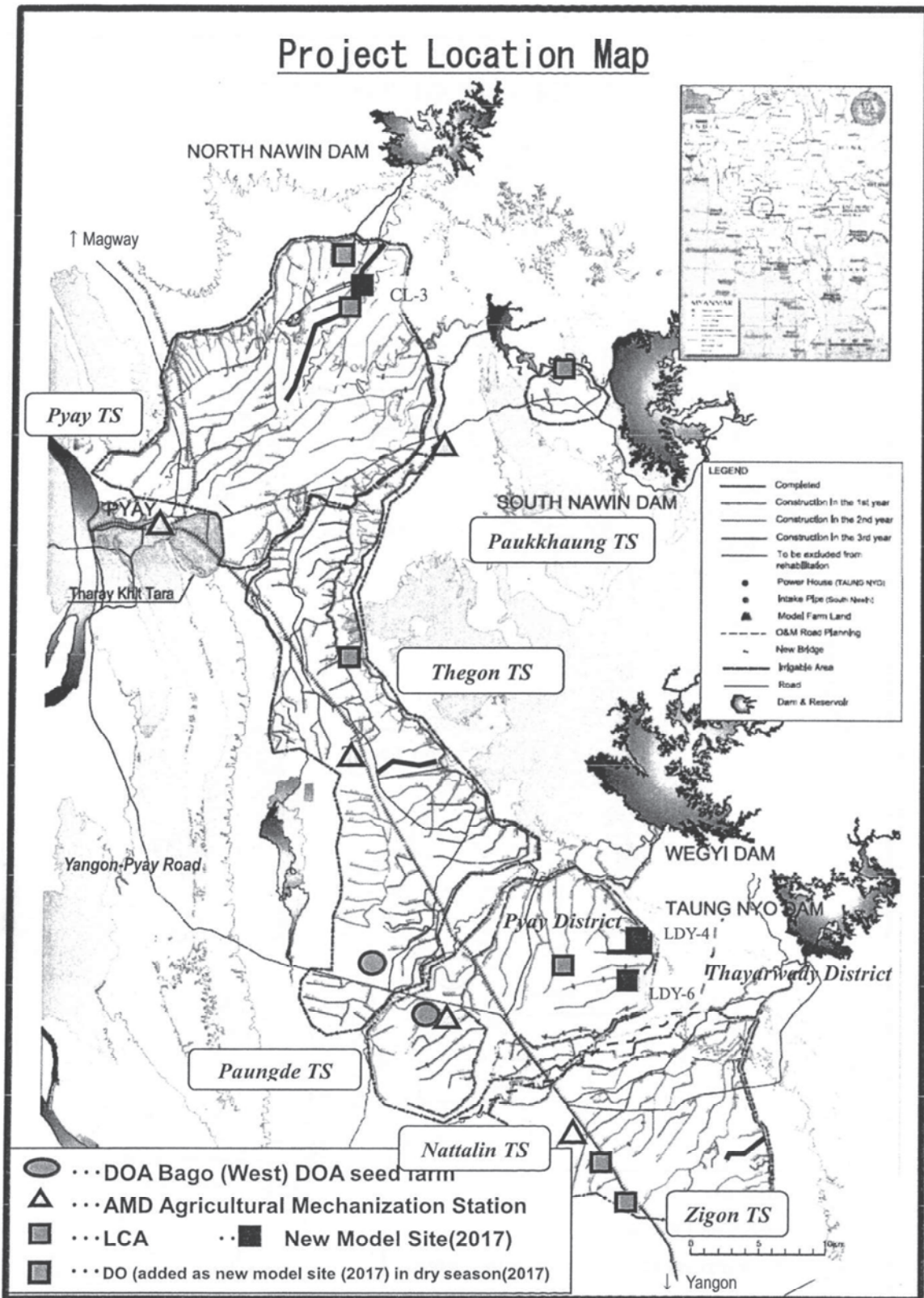


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Annex 8-1



ANNEX 9: Project Location Map as of May 2018



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Annex 9-1



Proposed Project Design MatrixVersion 3
Date: June 28, 2018

Project Title: Project for Profitable Irrigated Agriculture in Western Bago Region (PROFIA)
 Implementing Agency: Department of Agriculture, Ministry of Agriculture, Livestock and Irrigation
 Target Group: MOALI staff, private enterprises and farmers in 5 townships (Pyay, Paukkaung, Thegon, Paungde, Nattalin, Zigon) in Pyay and Thayawaddy districts, Western Bago Region
 Period of Project: March 2016 to February 2021
 Project Site: 6 townships (Pyay, Paukkaung, Thegon, Paungde, Nattalin, Zigon) in 4 irrigation schemes in Western Bago Region
 Target Area: Irrigated areas of selected WUGs/WUAs, and selected Land Consolidation Areas (LCAs) where condition for practicing irrigated agriculture is sufficient, collaborating with DOA seed farm.

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal Profitable irrigated agriculture^a is practiced widely in the irrigated areas of Western Bago Region through strengthening PPP</p>	<ul style="list-style-type: none"> - Paddy (grain) produced by using Certified Seed (CS) is sold at a price higher than that of paddy rice produced from ordinary seeds. - At least 80 groups practice group activities of WUGs/ WUAs/LCGs (i.e., construction of water courses, farm planning and irrigation utilization). 	<ul style="list-style-type: none"> - MOALI in Western Bago Region reports 	<ul style="list-style-type: none"> - Policy related to crop selection and trading does not change drastically. - IWUMD continues to Establish new WUGs/WUAs
<p>Project Purpose Profitable irrigated agriculture model with private sector involvement is established</p>	<ul style="list-style-type: none"> - Agricultural profit^b of the target farmers who adopt the recommended practices^c in the targeted WUGs/LCGs is at least 10% higher than that of the farmer households which were captured by the baseline survey (as of 2015). - At least one of the recommended practices is adopted by more than 50% of farmer households in the target area. - The knowledge on the profitable irrigated agriculture model is synthesized and documented. 	<ul style="list-style-type: none"> - Baseline survey, endline survey, and farming record - Endline survey - Project report 	<ul style="list-style-type: none"> - Policy related to crop selection and trading does not change drastically. - IWUMD continues to Establish new WUGs/WUAs - Irrigation is not disturbed due to drought or flood - Market price of target crop does not fluctuate drastically

^a Profit indicator is based on household agricultural income, which may include income from non-irrigated crops.

^b Not nominal but real profit, adjusted by the inflation rate

^c "Practices" shall be defined based on the "irrigated agricultural model" to be formulated



ANNEX 10

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<p><u>Outputs</u></p>			
<p>1. Food value chain (FVC) of rice is improved through Public Private (and Producers) Partnership (PPP) centering on certified seeds (CS) multiplication, distribution and use</p>	<p>- Monitoring sheet - Endline survey - Monitoring Sheet - Monitoring Sheet - Endline survey</p>	<p>1-1 More than 10,000 baskets of paddy CS^d is produced in 2020 and distributed by SMWG members. 1-2 200 target farmers start using CS after participating in the Project. 1-3 The target farmers' paddy (grain) produced from CS is sold at a price higher than that of paddy rice produced from ordinary seeds. 1-4 An operation and management plan of the Postharvest Techniques and Grain Quality Control (PHT-GQC) laboratory is prepared, authorized, and sustainably practiced. 1-5 Unit yield of the paddy of the target farmers who adopted the recommended practice in the targeted WUGs/LCGs is at least 30 % higher than that of the farmer households which were captured by the baseline survey (as of 2015). 1-6 5 stakeholder forums are held.</p>	<p>-Policy and regulations for rice and pulses seed production do not adversely affect the project activities -Irrigation is not disturbed due to drought or flood -The mechanism to facilitate land consolidation is introduced by the state or the union government of Myanmar.</p>
<p>2. Market-oriented crop diversification in dry season is enhanced</p>	<p>- Endline survey - Monitoring Sheet - Monitoring Sheet - Endline survey</p>	<p>2-1 Types of crops cultivated in irrigated farmland by the target farmers increase from those of 2015. 2-2 500 target farmers (including farmers' family members) learn cultivation skills of non-rice crops. 2-3 At least 3 potential crops are identified and training materials are prepared by the Project. 2-4 Unit yield of the identified crops of the target farmer who adopted the recommended practice in the WUGs/LCGs are 20% higher than that of the farmer households which were captured by the baseline survey (as of 2015).</p>	
<p>3. Guidelines for Participatory Irrigation Management (PIM) for the Project Site is prepared and applied in the target</p>	<p>- Guidelines for PIM - Monitoring Sheet</p>	<p>3-1 Guidelines for participatory irrigation management is prepared. 3-2 Stakeholders meetings of irrigation sector are sustainably</p>	

^d It is equivalent to 20,000 acre (40 growers x 6 acre/grower x 70 baskets/acre)

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ANNEX 10

<p>area</p> <p>Activities</p> <p>0-1 Conduct a baseline survey and an endline survey to collect data on farm profitability of farmer households.</p> <p>0-2 Reconfirm the issues of present farming in the Project Site.</p> <p>0-3 Review the suitable balance between land productivity and labor productivity to examine the project activities</p> <p>0-4 Plan and implement GESF-sensitive interventions (incl. stakeholder forums) for farmer group empowerment in terms of marketing, managerial and production capacity⁶.</p> <p>Activities for Output 1</p> <p>1-1 Promote CS multiplication, distributor. and use through PPP</p> <p>1-1-1 Review the current seed multiplication practice of DOA (seed farm & Township extension office) in the project site.</p> <p>1-1-2 Build capacity of the extension staff, target farmers, private enterprises (rice millers / paddy brokers) on the use of CS.</p> <p>1-1-3 Organize the Seed Multiplication Working Group (SMWG) that takes charge of seed multiplication and distribution as a PPP model.</p> <p>1-1-4 Support SMWG to multiply and distribute CS.</p> <p>1-1-5 Examine and demonstrate proper use of farm machines and post-harvest machines for producing CS.</p> <p>1-1-6 Make recommendations for a sustainable mechanism of seed multiplication, distribution and use after the termination of the Project.</p>	<p>organized.</p> <p>3-3 More than 50% of farmers in the targeted WUGs/WUAs participate in PIM activities</p> <p>3-4 At least 50 WUGs⁷ participate in the activities for Output 3.</p>	<p>- Meeting record</p> <p>- Endline survey</p> <p>- Monitoring sheet</p>	
<p>Inputs</p> <p>[Japanese side]</p> <p>(1) Dispatch of Experts⁸</p> <p>Team Leader/ Marketing and Distribution</p> <p>Co-leader/ Marketing and Distribution</p> <p>Public Private Partnership</p> <p>Agriculture/ Gender</p> <p>Training Material/ Coordinator/Agriculture (2)</p> <p>Water Management/ Organization</p> <p>Coordinator/ Agricultural Machinery (2) / GIS</p> <p>Local Consultant (PPP)</p> <p>Local Consultant (B)</p> <p>Local Consultant (C)</p> <p>(2) Provision of equipment</p> <p>3 Seed Cleaners</p> <p>Moisture Meters</p> <p>6 Motorcycles for field inspectors</p> <p>2 Vehicles for the Project</p> <p>1 Adopter for ridge building</p> <p>2 Pulses thresher / cleaner</p> <p>Harvesting machine for pulses</p> <p>(3) Third country / In country training</p> <p>(4) Local cost shared by Japanese side</p> <p>Project office refurbishment cost:</p> <p>Travel allowance for the Project</p> <p>Other running cost</p>	<p>[The Myanmar side]</p> <p>a) Office space in DOA West Bago division in IWUMD in Nay Pyi Taw</p> <p>b) Office space for irrigation policy advisor in IWUMD in Nay Pyi Taw</p> <p>c) Fuel for field inspectors</p> <p>d) 20 designated staff for the Project assigned by DOA West Bago division throughout the project period (1 in division, 2 in districts, 6 in townships, 11 staff for post-harvest)</p> <p>e) Running cost such as electricity and water</p>		<p>Pre-Condition</p> <p>10 baskets of Yezin 2, 3 and 5 (black gram varieties) is procured before the dry season cultivation in the 1st year.</p> <p>The AMD model land consolidation is completed before the start of the Project without lasting dispute.</p> <p>The AMD model land consolidation site is not destroyed through rainfall, flood or use of machineries.</p>

⁶ A turnout group is regarded as a WUG.

⁷ Gender Equality and Social Inclusion

⁸ The interventions are to be planned and implemented not as stand-alone activities but as cross-cutting actions for all three Outputs.

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ANNEX 10

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<p>1.2 Build capacity of the DOA staff on quality control of seeds and grains.</p> <p>1-2-1 Conduct trainings for the DOA staff on technique associated with quality control.</p> <p>1-2-2 Promote the utilization of the PHT-GQC^b laboratory under the management of DOAⁱ.</p> <p>1-2-3 Prepare an operation and management plan of the PHT-GQC laboratory.</p> <p>1-2-4 Monitor and give feedback to the PPP stakeholders involved in Activity 1.3 to improve the network among stakeholders.</p>	<p>1.3 Improve the FVC in which quality paddy produced from CS generates higher profit for farmers.</p> <p>1-3-1 Identify important stakeholders in the rice value chain</p> <p>1-3-2 Encourage private enterprises (rice millers/ brokers) to make a price according to the quality of paddy</p>	<p>Activities for Output 2</p> <p>2-1 Identify alternative crops with high suitability and marketability.</p> <p>2-2 Prepare manuals on cost-benefit analysis, cultivation techniques and post-harvest techniques.</p> <p>2-3 Support the target farmer groups to make a cropping plan by taking market demand prospect into account.</p> <p>2-4 Promote coordination among DOA, IWUMD, and General Administration Department (GAD) for supporting the target farmers to cultivate the crops selected in 2-3 with necessary irrigation water distribution.</p> <p>2-5 Introduce appropriate on-farm water management practices through Water Users Groups (WUGs).</p> <p>2-6 Build capacity of the extension staff for delivering extension services listed in 2-7 using training materials developed by the Project and/or DOA.</p>
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^j Experts not mentioned in this PDM version 2 (excluded from PDM version 0) will be dispatched if necessary.

^h PHT-GQC laboratory: Postharvest Techniques and Grain Quality Control laboratory

ⁱ Items handled by the PHT-GQC laboratory includes not only paddy but also other grains

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ANNEX 10

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<p>2-7 Enhance the capacity of farmers on appropriate farming practices including use of agricultural inputs, soil improvement, etc. as well as marketing and managerial skills through trainings and demonstrations.</p> <p>2-8 Examine and demonstrate agricultural machinery use for field management and post-harvest.</p>		
<p><u>Activities for Output 3</u></p> <p>3-1. Identify the issues on middle- and long-term use of irrigation facilities in the Project Site through monitoring the Project.</p> <p>3-2. Develop a guideline on PIM (Participatory Irrigation Management) in the Project Site.</p> <p>3-3. Assist dissemination of the use of guidelines for land consolidation in the Project Site.</p> <p>3-4. Assist PIM activities by Water Users Groups / Water Users Associations after establishment.</p> <p>3-5. Provide advice to solve the issues of irrigation sector in Myanmar through meeting with stakeholders and observation of various irrigation systems in Myanmar.</p>		

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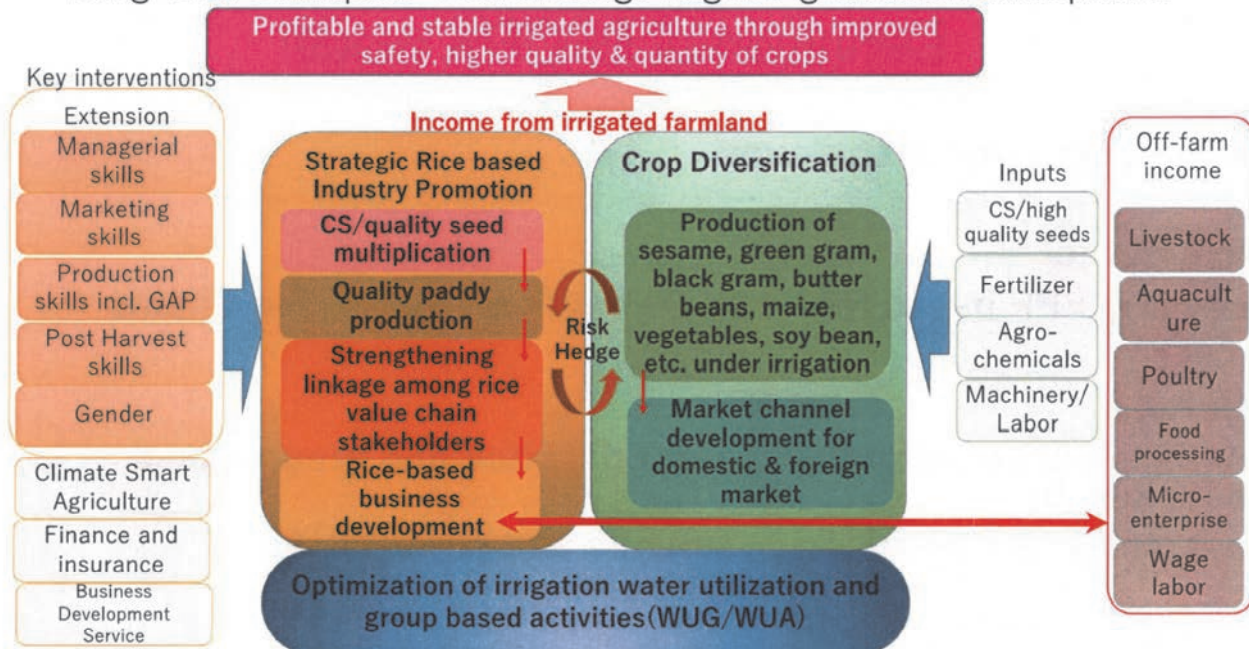
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General Concept of PROFIA MODEL

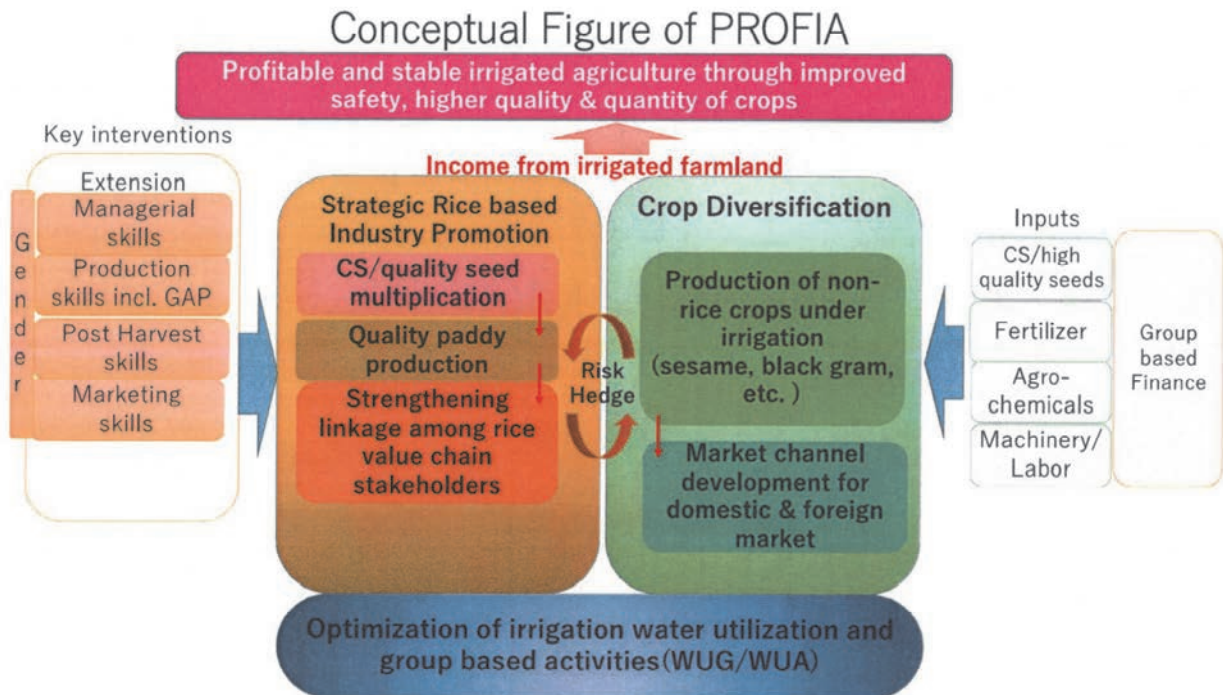
June, 2018

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Long-term Concept of Western Bago Region Agricultural Development



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3

Definition of PROFIA model

Approaches and techniques

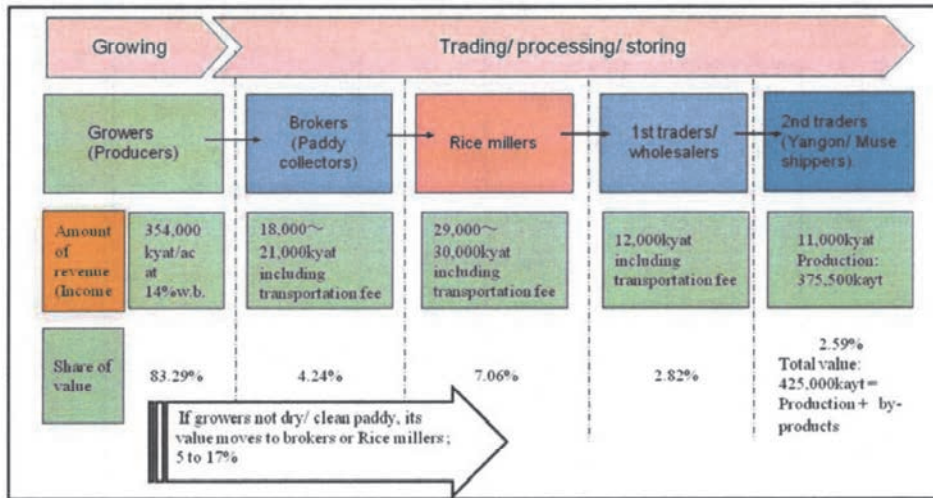
in order to
develop PPP based Rice and Diversified crops Value Chains

through
optimization of irrigation water utilization and group based activities by
establishment of irrigation scheme and WUG/WUA

4

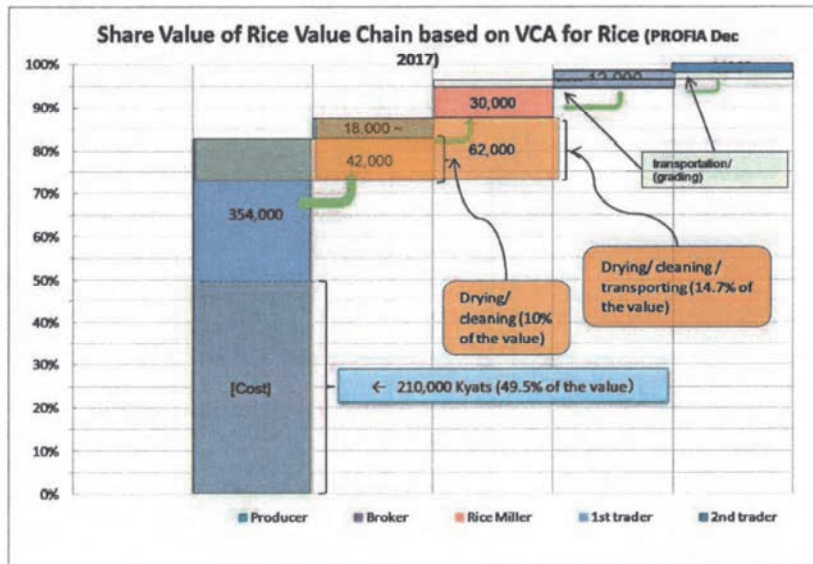
Value Chain Analysis of Rice

Value chain analysis (VCA) of Rice in PROFIA (December 2017)



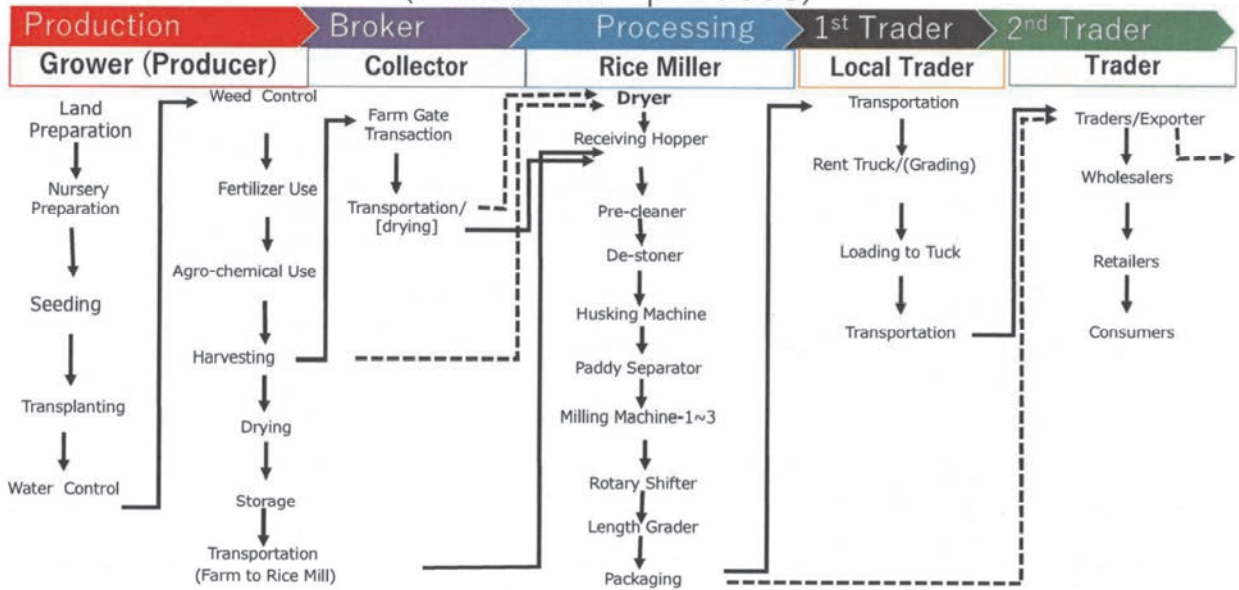
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Value Chain Analysis of Rice



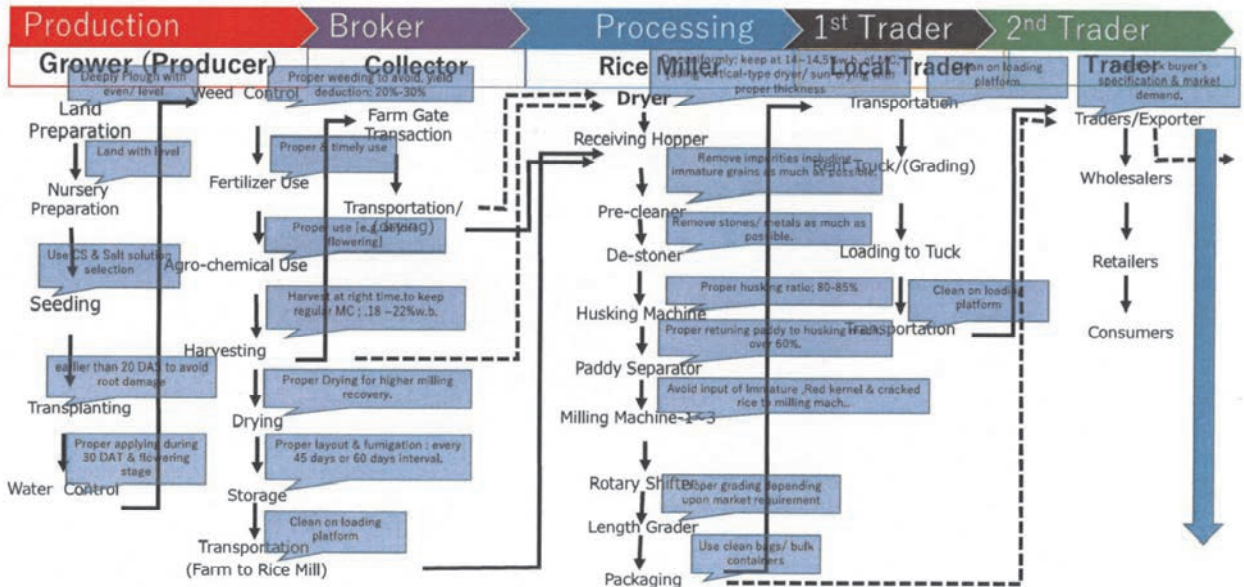
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Rice Supply Chain in Myanmar (Production process)



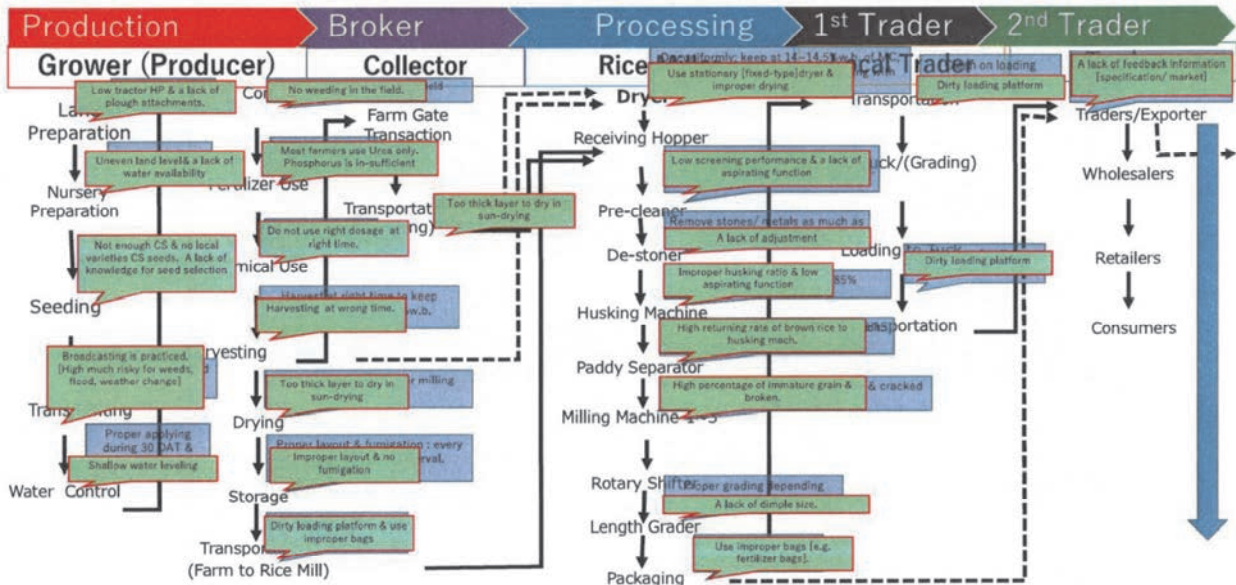
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Rice Value Chain in Myanmar (Add Value)



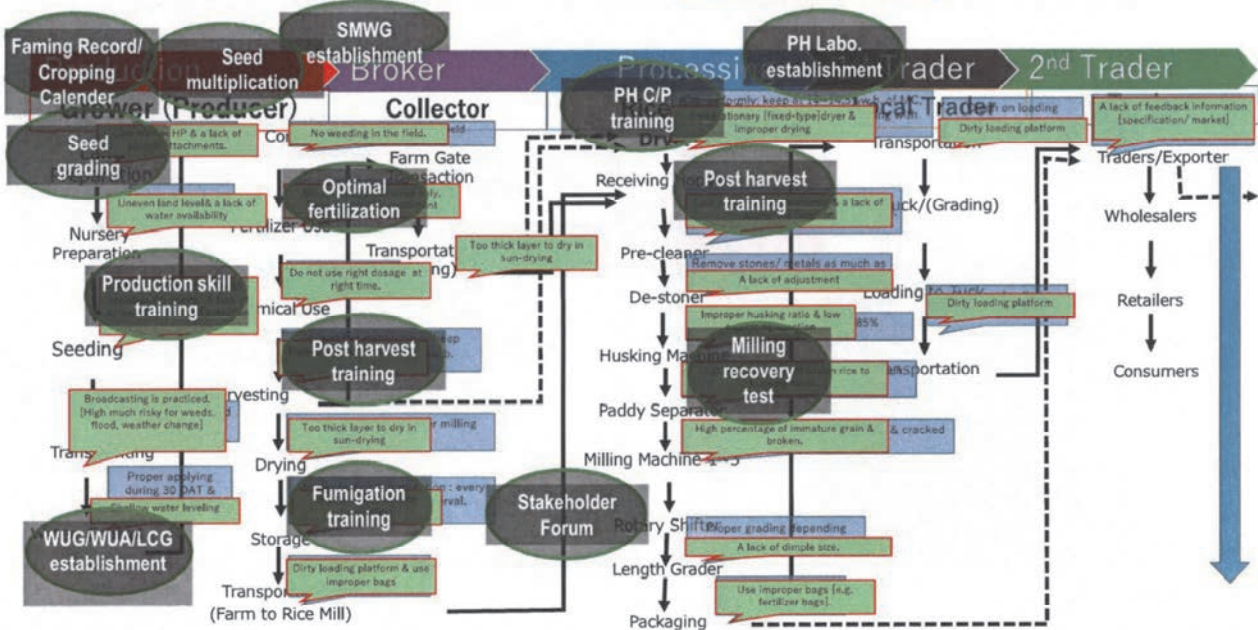
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Rice Value Chain in Myanmar (Lose Value)



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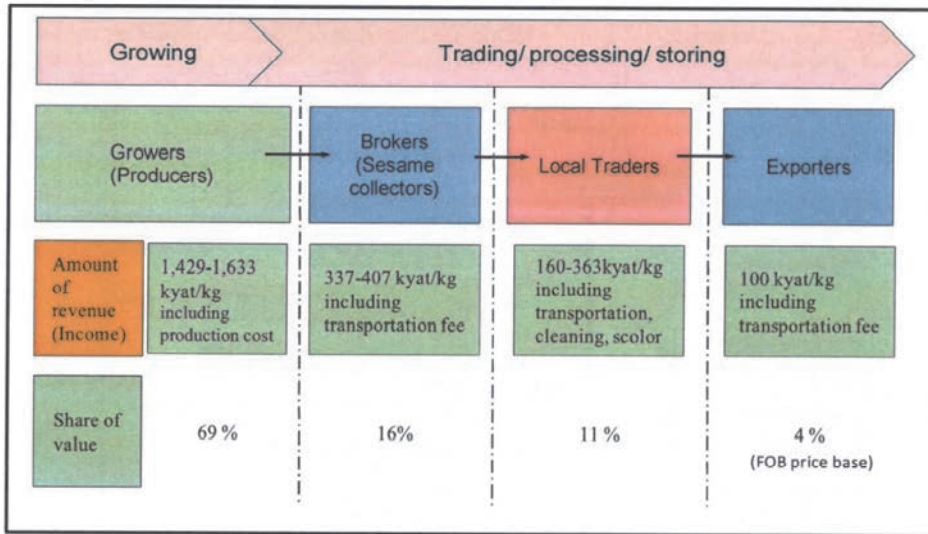
PROFIA intervention for Rice Value Chain development



10

Value Chain Analysis of Summer Sesame

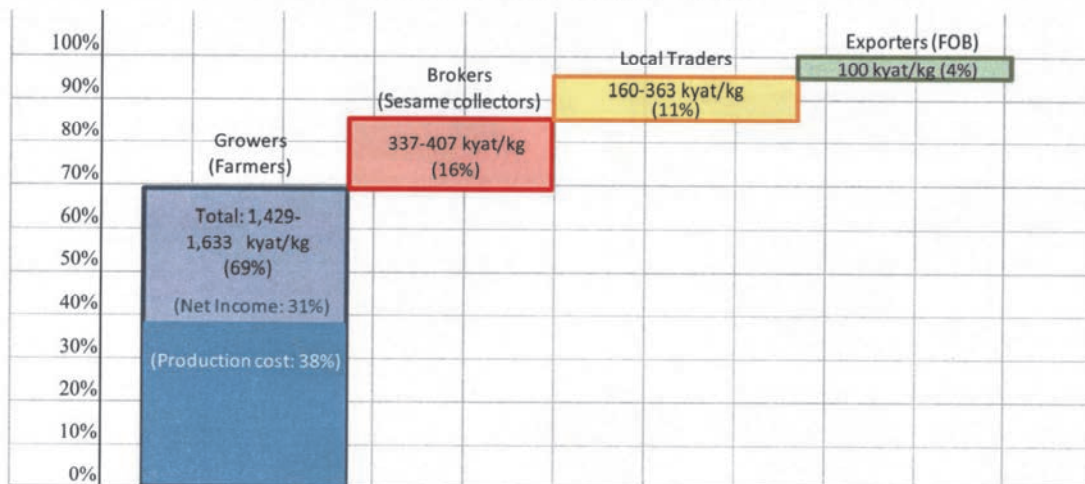
Value chain analysis (VCA) of Summer Sesame in PROFIA (May 2018)



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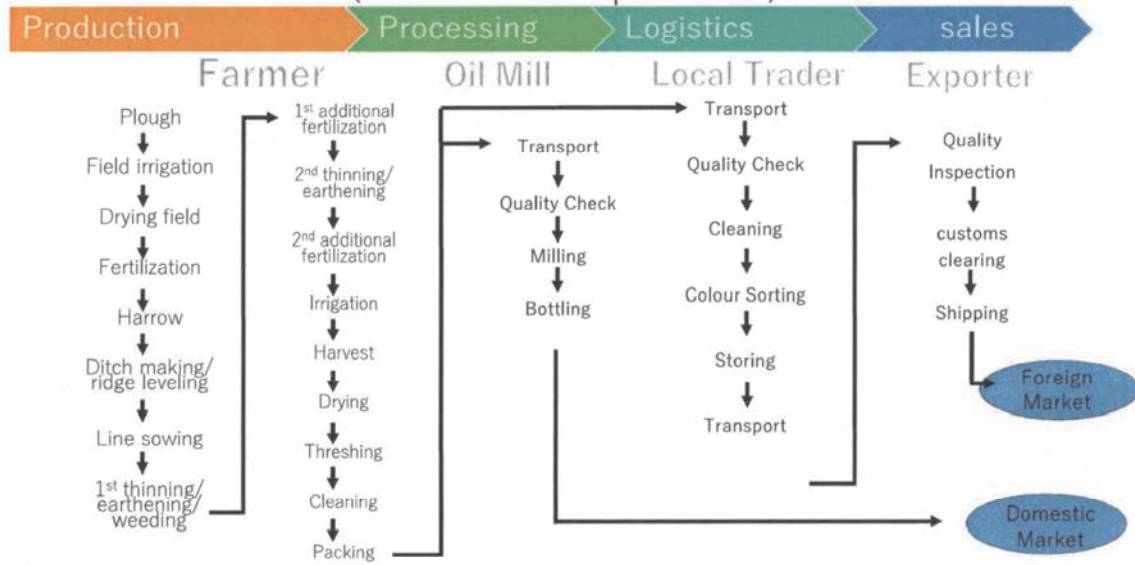
Value Chain Analysis of Summer Sesame

Shares of value of Summer Sesame Value Chain



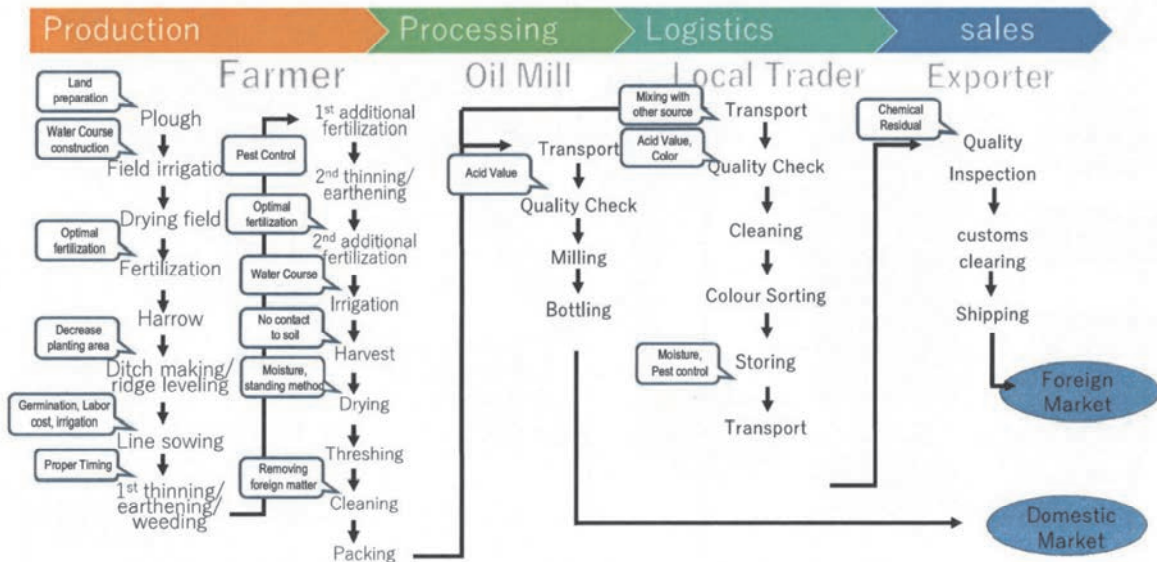
12

Summer Sesame Supply Chain in Myanmar (Value chain process)



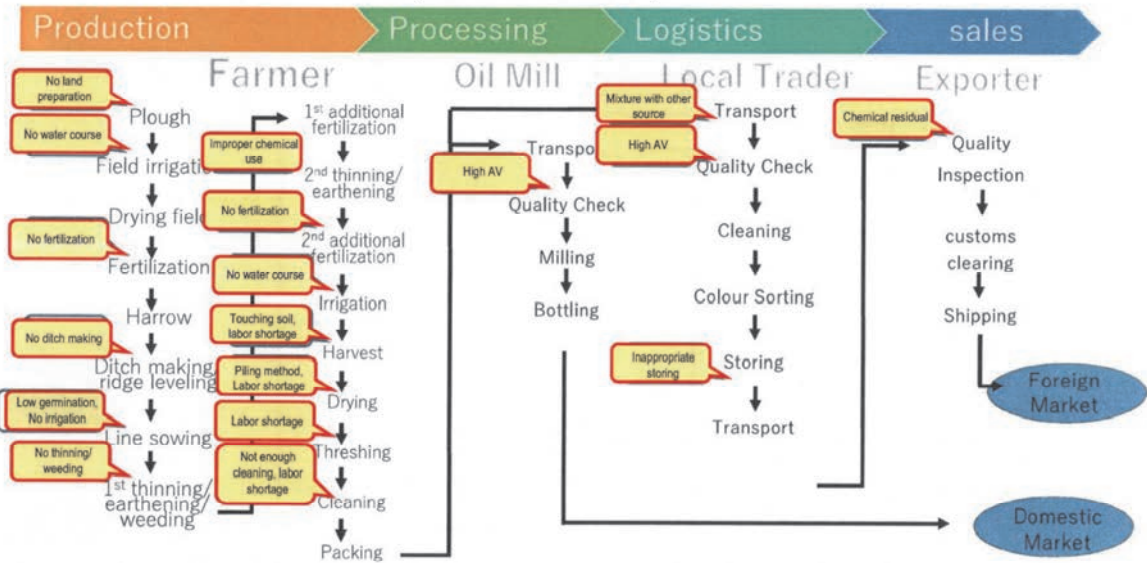
13

Sesame Supply-chain in Myanmar (Add Value)



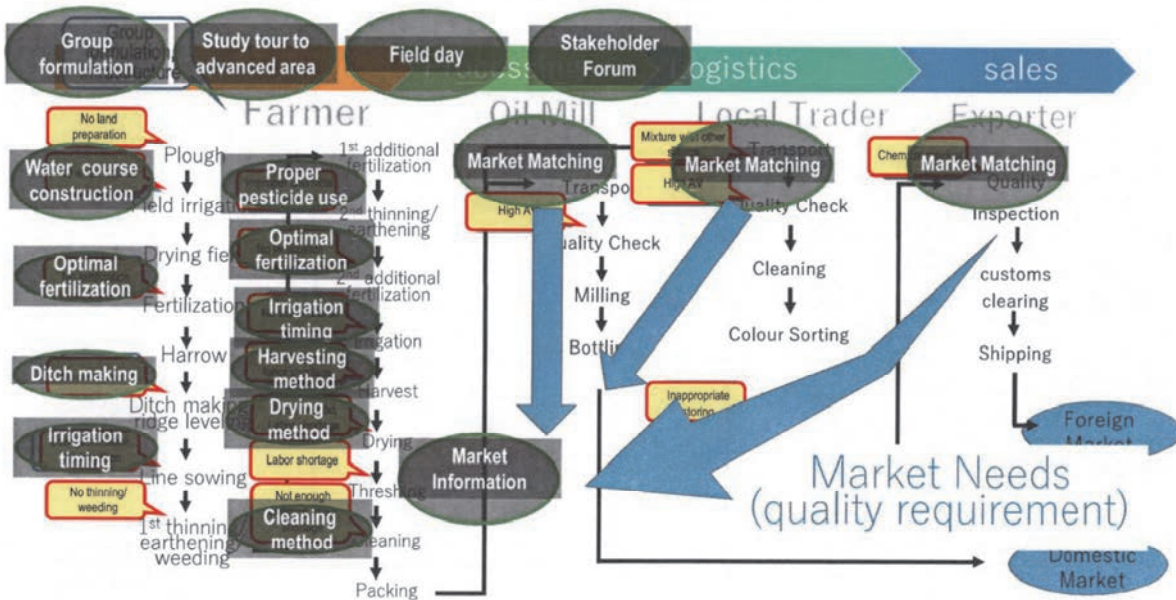
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Sesame Value Chain in Myanmar (Lose Value)



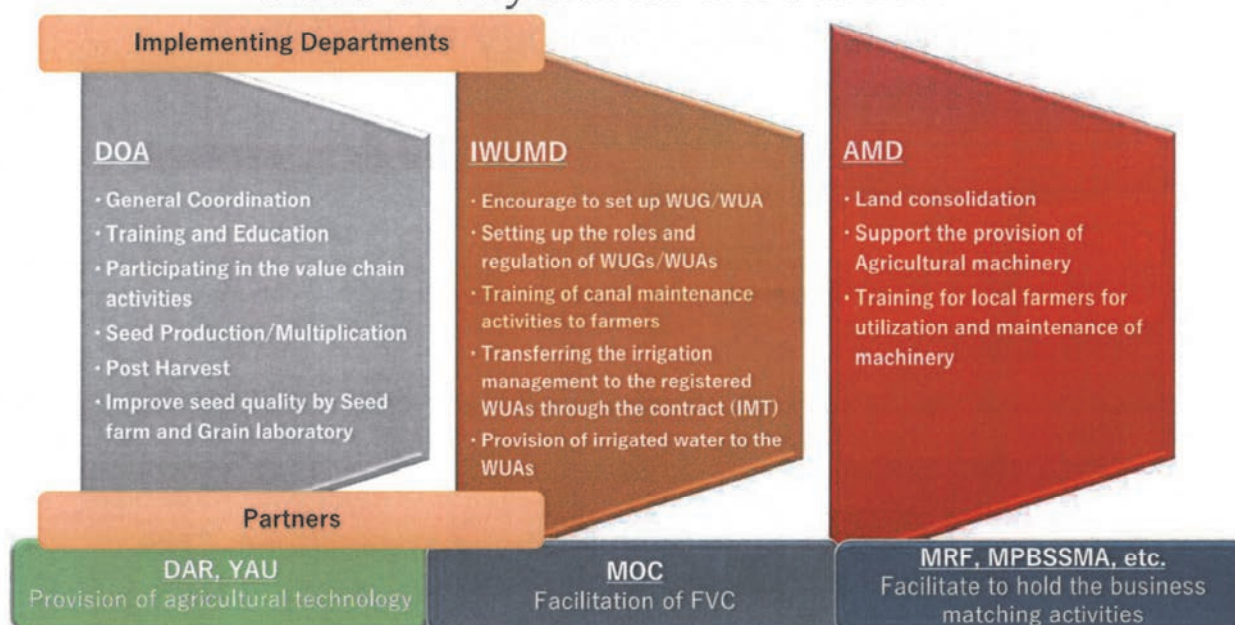
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PROFIA intervention for Sesame Value Chain development



16

Role of Myanmar Institution



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Target Group

- **Stakeholder along food value chain:** Producer, Processor, Trader, Distributer, Consumer
- **Direct Beneficially of the Project : Producer (farmers) in the designated WUGs/WUAs/LCGs**
- **Indirect Beneficially (private sector) :** Broker, Rice miller, Processor, and Distributer, Producer outside of designated WUGs/WUAs/LCGs
- **Partner (private sector):** MRF, MPBSSMA, etc.
- **Partner (public sector):** staff of DAR and Yezin Agricultural University

18

Extension Methodology of PROFIA

Extension Methods:

- **Group-based training (WUGs/WUAs/LCGs) focusing on farmer to farmer knowledge exchange**
 - Study tour
 - Demonstration farm
 - Field day
- Other conventional extension activities through community learning centers by DOA

Extension tools: ICT tools (mobile phone applications, SNS, etc.), booklet, poster, leaflet, sign board

19

Contents of Extension program by PROFIA

- **Farming techniques**
 - Land preparation
 - Fertilizer application
 - Agrochemicals
 - Germination test
 - Crop/Variety selection
 - Appropriate use of agricultural instruments
- **Seed Multiplication**
- **Farming record**
- **Crop calendar**
- **Post Harvest**
 - Drying
 - Storing
 - Fumigation
- **Participatory Irrigation Management**

20

Proposed Project Design Matrix

Version 3
Date: June 28, 2018

Project Title: Project for Profitable Irrigated Agriculture in Western Bago Region (PROFIA)
 Implementing Agency: Department of Agriculture, Ministry of Agriculture, Livestock and Irrigation
 Target Group: MOALI staff, private enterprises and farmers in 6 townships (Pyay, Paukhaung, Thegon, Paungde, Nattalin, Zigon) in Pyay and Thayawaddy districts, Western Bago Region
 Period of Project: March 2016 to February 2021
 Project Site: 6 townships (Pyay, Paukhaung, Thegon, Paungde, Nattalin, Zigon) in 4 irrigation schemes in Western Bago Region
 Target Area: Irrigated areas of selected WUGs/WUAs, and selected Land Consolidation Areas (LCAs) where condition for practicing irrigated agriculture is sufficient, collaborating with DOA seed farm.

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal Profitable irrigated agriculture^a is practiced widely in the irrigated areas of Western Bago Region through strengthening PPP</p> <p>Project Purpose Profitable irrigated agriculture model with private sector involvement is established</p>	<ul style="list-style-type: none"> - Paddy (grain) produced by using Certified Seed (CS) is sold at a price higher than that of paddy rice produced from ordinary seeds. - At least 80 groups practice group activities of WUGs/ WUAs/LCGs (i.e., construction of water courses, farm planning and irrigation utilization). - Agricultural profit^b of the target farmers who adopt the recommended practices^c in the targeted WUGs/LCGs is at least 10% higher than that of the farmer households which were captured by the baseline survey (as of 2015). - At least one of the recommended practices is adopted by more than 50% of farmer households in the target area. - The knowledge on the profitable irrigated agriculture model is synthesized and documented. 	<ul style="list-style-type: none"> - MOALI in Western Bago Region reports - Baseline survey, endline survey, and farming record - Endline survey - Project report 	<ul style="list-style-type: none"> -Policy related to crop selection and trading does not change drastically. - IWUMD continues to Establish new WUGs/WUAs -Policy related to crop selection and trading does not change drastically. - IWUMD continues to Establish new WUGs/WUAs -Irrigation is not disturbed due to drought or flood -Market price of target crop does not fluctuate drastically

^a Profit indicator is based on household agricultural income, which may include income from non-irrigated crops.

^b Not nominal but real profit, adjusted by the inflation rate

^c "Practices" shall be defined based on the "irrigated agricultural model" to be formulated

ANNEX 3

Outputs				
1. Food value chain (FVC) of rice is improved through Public Private (and Producers) Partnership (PPP) centering on certified seeds (CS) multiplication, distribution and use	<p>1-1 More than 10,000 baskets of paddy CS^d is produced in 2020 and distributed by SIAWG members.</p> <p>1-2 200 target farmers start using CS after participating in the Project.</p> <p>1-3 The target farmers' paddy (grain) produced from CS is sold at a price higher than that of paddy rice produced from ordinary seeds.</p> <p>1-4 An operation and management plan of the Postharvest Techniques and Grain Quality Control (PHT-GQC) laboratory is prepared, authorized, and sustainably practiced.</p> <p>1-5 Unit yield of the paddy of the target farmers who adopted the recommended practice in the targeted WUGs/LCGs is at least 30 % higher than that of the farmer households which were captured by the baseline survey (as of 2015).</p> <p>1-6 5 stakeholder forums are held.</p>	<p>2-1 Types of crops cultivated in irrigated farmland by the target farmers increase from those of 2015.</p> <p>2-2 500 target farmers (including farmers' family members) learn cultivation skills of non-rice crops.</p> <p>2-3 At least 3 potential crops are identified and training materials are prepared by the Project.</p> <p>2-4 Unit yield of the identified crops of the target farmer who adopted the recommended practice in the WUGs/LCGs are 20% higher than that of the farmer households which were captured by the baseline survey (as of 2015).</p>	<p>3-1 Guidelines for participatory irrigation management is prepared.</p> <p>3-2 Stakeholders meetings of irrigation sector are sustainably</p>	<p>- Policy and regulations for rice and pulses seed production do not adversely affect the project activities</p> <p>-Irrigation is not disturbed due to drought or flood</p> <p>-The mechanism to facilitate land consolidation is introduced by the state or the union government of Myanmar.</p>
2. Market-oriented crop diversification in dry season is enhanced				<p>- Monitoring sheet</p> <p>- Endline survey</p> <p>- Monitoring Sheet</p> <p>- Monitoring Sheet</p> <p>- Endline survey</p> <p>-Monitoring Sheet</p> <p>-Endline survey</p> <p>-Monitoring Sheet</p> <p>-Endline survey</p>
3. Guidelines for Participatory Irrigation Management (PIM) for the Project Site is prepared and applied in the target				<p>- Guidelines for PIM</p> <p>- Monitoring Sheet</p>

^d It is equivalent to 20,000 acre (40 growers x 6 acre/grower x 70 baskets/acre)

ANNEX 3

<p>area</p>	<p>organized. 3-3 More than 50% of farmers in the targeted WUGs/WUAs participate in PIM activities 3-4 At least 50 WUGs^e participate in the activities for Output 3.</p>	<p>- Meeting record - Endline survey - Monitoring sheet</p>	<p>Activities</p> <p>0-1 Conduct a baseline survey and an endline survey to collect data on farm profitability of farmer households. 0-2 Reconfirm the issues of present farming in the Project Site. 0-3 Review the suitable balance between land productivity and labor productivity to examine the project activities 0-4 Plan and implement GESI^f-sensitive interventions (incl. stakeholder forums) for farmer group empowerment in terms of marketing, managerial and production capacity^g.</p> <p>Activities for Output 1</p> <p>1-1 Promote CS multiplication, distribution and use through PPP 1-1-1 Review the current seed multiplication practice of DOA (seed farm & Township extension office) in the project site. 1-1-2 Build capacity of the extension staff, target farmers, private enterprises (rice millers / paddy brokers) on the use of CS. 1-1-3 Organize the Seed Multiplication Working Group (SMWG) that takes charge of seed multiplication and distribution as a PPP model. 1-1-4 Support SMWG to multiply and distribute CS. 1-1-5 Examine and demonstrate proper use of farm machines and post-harvest machines for producing CS. 1-1-6 Make recommendations for a sustainable mechanism of seed multiplication, distribution and use after the termination of the Project.</p> <p>Inputs</p> <p>[Japanese side] (1) Dispatch of Experts¹ Team Leader/ Marketing and Distribution Co-leader/ Marketing and Distribution Public Private Partnership Agriculture/ Gender Agricultural Machinery Training Material/ Coordinator/Agriculture (2) Water Management/ Organization Coordinator/ Agricultural Machinery (2) / GIS Local Consultant (PPP) Local Consultant (B) Local Consultant (C) (2) Provision of equipment 3 Seed Cleaners Moisture Meters 6 Motorcycles for field inspectors 2 Vehicles for the Project 1 Adopter for ridge building 2 Pulses thresher / cleaner Harvesting machine for pulses (3) Third country / In country training (4) Local cost shared by Japanese side Project office refurbishment cost Travel allowance for the Project Other running cost</p> <p>[The Myanmar side] a) Office space in DOA West Bago division in IWUMD in Nay Pyi Taw b) Office space for irrigation policy advisor in IWUMD in Nay Pyi Taw c) Fuel for field inspectors d) 20 designated staff for the Project assigned by DOA West Bago division throughout the project period (1 in division, 2 in districts, 6 in townships, 11 staff for post-harvest) e) Running cost such as electricity and water</p> <p>Pre-Condition 10 baskets of Yezin 2, 3 and 5 (black gram varieties) is procured before the dry season cultivation in the 1st year. The AMD model land consolidation is completed before the start of the Project without lasting dispute. The AMD model land consolidation site is not destroyed through rainfall, flood or use of machineries.</p>
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^e A turnout group is regarded as a WUG.

^f Gender Equality and Social Inclusion

^g The interventions are to be planned and implemented not as stand-alone activities but as cross-cutting actions for all three Outputs.

ANNEX 3

<p>1.2 Build capacity of the DOA staff on quality control of seeds and grains. 1-2-1 Conduct trainings for the DOA staff on technique associated with quality control. 1-2-2 Promote the utilization of the PHT-GQC^h laboratory under the management of DOAⁱ. 1-2-3 Prepare an operation and management plan of the PHT-GQC laboratory. 1-2-4 Monitor and give feedback to the PPP stakeholders involved in Activity 1.3 to improve the network among stakeholders.</p> <p>1.3 Improve the FVC in which quality paddy produced from CS generates higher profit for farmers. 1-3-1 Identify important stakeholders in the rice value chain 1-3-2 Encourage private enterprises (rice millers/ brokers) to make a price according to the quality of paddy</p> <p>Activities for Output 2 2-1 Identify alternative crops with high suitability and marketability. 2-2 Prepare manuals on cost-benefit analysis, cultivation techniques and post-harvest techniques. 2-3 Support the target farmer groups to make a cropping plan by taking market demand prospect into account. 2-4 Promote coordination among DOA, IWUMD, and General Administration Department (GAD) for supporting the target farmers to cultivate the crops selected in 2-3 with necessary irrigation water distribution. 2-5 Introduce appropriate on-farm water management practices through Water Users Groups (WUGs). 2-6 Build capacity of the extension staff for delivering extension services listed in 2-7 using training materials developed by the Project and/or DOA.</p>		
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^j Experts not mentioned in this PDM version 2 (excluded from PDM version 0) will be dispatched if necessary.

^h PHT-GQC laboratory; Postharvest Techniques and Grain Quality Control laboratory

ⁱ Items handled by the PHT-GQC laboratory includes not only paddy but also other grains

ANNEX 3

<p>2-7 Enhance the capacity of farmers on appropriate farming practices including use of agricultural inputs, soil improvement, etc. as well as marketing and managerial skills through trainings and demonstrations.</p> <p>2-8 Examine and demonstrate agricultural machinery use for field management and post-harvest.</p> <p><u>Activities for Output 3</u></p> <p>3-1. Identify the issues on middle- and long-term use of irrigation facilities in the Project Site through monitoring the Project.</p> <p>3-2. Develop a guideline on PIM (Participatory Irrigation Management) in the Project Site.</p> <p>3-3. Assist dissemination of the use of guidelines for land consolidation in the Project Site.</p> <p>3-4. Assist PIM activities by Water Users Groups / Water Users Associations after establishment.</p> <p>3-5. Provide advice to solve the issues of irrigation sector in Myanmar through meeting with stakeholders and observation of various irrigation systems in Myanmar.</p>			
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