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[FISH FOR LIVELIHOODS]

Quarterly Report

First Quarter (October 01 to December 31, 2021)

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List of Acronyms

AOR	Agreement Officer Representative
APs	Aquaculture Promoters
BMPs	Better Management Practices
CBOs	Community Based-Organizations
CoP	Chief of Party
COVID-19	Coronavirus disease of 2019
DO	Dissolved Oxygen
DOC	Development Outreach Communication
EMMP	Environmental Mitigation Monitoring Plan
EoW	End of Week
F2F	Farmer to Farmer Activity
F4L	Fish for Livelihoods
FY	Fiscal Year
HQ	WorldFish Headquarter
IDPs	Internally displaced Persons
IEC	Information Education and Communication
IECT	Information Education Communication and Training
IP	Implementing Partner
IR	Intermediate Result
IR	Intermediate Result
IWMI	International Water Management Institute
KMSS	Karuna Mission Social Solidarity
M&E	Monitoring & Evaluation
MEL	Monitoring Evaluation & Learning
MFF	Myanmar Fisheries Federation
MMK	Myanmar Kyats
MSA	Market System Approaches
N/A	Not Applicable
PCA	Participatory Community Appraisal
PDF	People Defense Force
PIO	Public International Organization
PMP	Performance Management Plan
Q1	First Quarter of FY 2022 (Oct-Dec, 2021)
QGIS	Quantum Geographic Image Processing
QPR	Quarterly Progress Report
SAC	State Administration Council
SGA	Sub-Grant Agreements
SSA	Small-scale Aquaculture
SUN CSA	Scaling Up Nutrition Civil Society Alliance
SWAT	Soil & Water Assessment Tool
USAID	United States Agency for International Development
USD	United States Dollar

USG
WASH

United States Government
Water Sanitation and Hygiene

Executive Summary

The Fish for Livelihoods (F4L) *Activity* entered into its third year of implementation in this quarter. In the reporting quarter, September to December 2021, the *Activity* made strides to continue supporting small-scale aquaculture (SSA) farmers, their household (HH) members, fish value chain, and market actors across the five States and Regions in Myanmar. Nevertheless, it was extremely difficult to operate in the field with the COVID-19 restrictions, the inundation of ponds in some Townships, and the political instability in the country in the aftermath of the coup in February 2021. Despite these challenges, the *Activity* teams delivered and continued support to SSA farmers with the selection of new farmers in most Townships.

The F4L *Activity* identified and selected 503 (Male=288, Female=215) SA farmers in 10 Townships. Among these SSA farmers, the *Activity* delivered training to 300 SSA farmers (56 percent of whom were women) on a range of topics including, the SSA module, nutrition and WASH, and key messages on the COVID-19 pandemic. The *Activity* supported two hatcheries in Southern Shan State that produced around 260,000 fingerlings in the reported quarter. In nine Townships, the *Activity* installed feed mills that produced over 13,000 Viss (~22,000kg) of sinking pellet feed. In terms of accessing micro-credit through a revolving fund and group-based loans, 155 SSA farmers accessed credit worth US\$ 2,850 (5,014,950 MMK)¹. Moreover, the *Activity* reached 93 (Male=41, Female=53) participants through the launch of an awareness campaign on the Global Handwashing Day 2021. For the Internally Displaced Persons (IDPs) in the Maina camp, Kachin, the *Activity* built awareness on nutrition with a range of activities through in-person sessions which were attended by 115 (Male=63, Female=62) IDP camp members.

On the capacity-building side, F4L delivered training sessions to 60 (Male=31, Female=29) staff from the WorldFish and partner organizations. The topics of these training sessions include a refresher session on Monitoring and Evaluation (M&E), United States Government (USG) and USAID rules and regulations, and human nutrition which was attended by 47, 11, and 2 participants respectively. The *Activity* delivered several training sessions, in-person and virtual, to SSA farmers on a range of topics; SSA module, Participatory Community Appraisal (PCA), carp nursery management, and awareness on human nutrition and WASH. Five hundred and sixteen (Male=232, Female=284) participants with 55 percent women participated in these training sessions across the Regions and States in Myanmar. Most of these training sessions were held in Shwebo Township of Southern Shan State. The *Activity* identified and selected 300 SSA farmers from this Township.

In the reporting quarter, USAID awarded a new grant agreement (cost-Type agreement with Public International Organization (PIO)) for Fish for Livelihoods which is effective from September 15, 2021, and will last until September 14, 2024. The total estimated amount of the award is US\$ 8 million, with an obligated amount of US\$ 2.5 million for “FY 2022”. This new award is different from the previous award which funded the *Activity* for the first two years. For the period September 15 to December 31, 2021, the planned expenditure was US\$ 653,559 while the actual spend was US\$ 720,122, an overspent of 10% due to obligations under the Sub-Grant Agreements (SGAs). Additionally, SGA renewals were signed with partners; BRAC, IWMI, MFF Kachin, MFF Southern Shan, and KMSS Eastern Shan worth US\$ 611,771. One of the key partners, PACT SGA signing is in progress and will be completed in the coming reporting period.

The *Activity* identified and selected 215 SSA farmers in the reporting period constituting 43 percent of the total identified farmers. The capacity-building initiatives rolled out in the reporting period were attended by 55 percent female participants including SSA farmers, staff members, and family members of the SSA farmers. Fifty percent of the participants attending the nutrition awareness sessions were women from the IDP camps in Kachin Region. For the Global Hand Washing Day, the *Activity* ran an awareness camping in

¹ The conversion rate is 1 USD = 1760 MMK. It is the average of official WorldFish exchange rate for the month of January 2022.

several Townships which directly engaged 57 percent of women participants. The numbers above depict how the women, IDPs, and other marginalized groups in the community are mobilized and involved in the implementation of activities in the field. The inclusion of gender and diverse groups in the activities has been a key criterion to implement interventions in the field.

For the Monitoring Evaluation and Learning (MEL) component, the MEL Team undertook the USAID's Data Quality Assessment (DQA) exercise in the first week of November 2021. The DQA was conducted virtually, key personnel from USAID Burma and WorldFish Myanmar offices participated. In addition to this, the updated and revised *Activity* Monitoring Evaluation and Learning (AMEL) plan version 4 was submitted to USAID with updated targets, indicators, and data management. The MEL Team updated the *Activity* "Data Tools Package" with the inclusion of two new data collection templates. The team organized a refresher session on F4L MEL systems, processes, and mechanisms to ensure smooth collection, analysis, and reporting of the data with new reporting mechanisms and requirements from USAID. For the communications, the *Activity* commemorated Global Hand Washing Day and many awareness sessions on Nutrition and WASH in the community. All Information Education and Communication (IEC) material and communications products are revised and updated based on the newly approved "Branding and Marking Plan" guidelines.

The reporting quarter was mired with several challenges posed by COVID-19, climate change, and the Coup. The curve of the COVID-19 delta variant that hit Myanmar in 2021 flattened in the reporting quarter. However, the restrictions to travel non-entry into the villages remain a challenge for the field team. The latter had to rely on the data and information of locally-based Aquaculture Promoters (APs) to interact with SSA farmers and to implement activities in the field. As a consequence of climate change, Myanmar was hit with flash floods in the late monsoon which swamped many ponds in several Townships. The loss of production is yet to be estimated and will be calculated at the time of harvest. In addition to these, another major challenge was insecurity and reduced staff safety during the aftermath of the military coup. The country outlook in terms of banking operations remains complex and the transactions were being delayed due to the difficulties between public and private banking systems. In addition to that, to withdraw money from the bank broker fees were often demanded. Despite all these challenges, WorldFish and partners remain agile and flexible and make sure that they remain on the ground to support SSA farmers and their families in these very challenging times.

I Program Overview/Summary

Full Name of the Activity:	Fish for Livelihoods (F4L)
Activity Start Date and End Date:	September 15, 2021 to September 14, 2024
Name of Prime Implementing Partner:	WorldFish Myanmar
Contract/Agreement Number:	Agreement No. 72048221IO00001
Name of Subcontractors/ Sub awardees:	International Water Management Institute (IWMI) PACT Institute, Inc. BRAC- Myanmar Karuna Mission Social Solidarity (KMSS)- Kengtung Karuna Mission Social Solidarity (KMSS)- Pekhoh Myanmar Fisheries Federation, Myitkyina, Kachin State Myanmar Fisheries Federation – Taungyi, Shan State
Geographic Coverage:	Central Dry Zone: <i>Mandalay, Magway, and Sagaing</i> North: <i>Shan and Kachin</i>
Reporting Period:	September 15 to December 31, 2021

I.1 Program Description/Introduction

In October 2019, USAID awarded the Small-scale Aquaculture Investments for Livelihoods in Myanmar (short form: Fish for Livelihoods) *Activity* for 2019-2024. The *Activity* will focus on improving the human nutrition status in Central and Northern Myanmar by promoting an inclusive and sustainable aquaculture growth that focuses on small-scale farmers. WorldFish is leading this *Activity* with implementing partners including IWMI, BRAC, PACT, KMSS, and MFF. This *Activity* aims to provide a means of ensuring the improved availability of diverse, safe, affordable nutrient-rich foods, especially for women and young children from poor and vulnerable households.

I.1.1 Goals and Objectives

The development objective (goal) of the *Activity* along with three-dimensional objectives are as follows; “Inclusive and sustainable small-scale aquaculture growth to enhance integrated agriculture nutrition pathways by means of improved production and market systems approaches to increase the availability of fish, income and dietary diversity, dietary and agriculture practice behavior change, reduce poverty of beneficiary populations, especially women and children, in central and northern Myanmar.”

1. Increase small-scale aquaculture production through strategic activities including improved land and water use, increased access to high-quality inputs (feed, seed, and equipment), capacity development and research into production, and access to credit.
2. Further develop and utilize market-based system approaches (MSA) to increase access to food, safe fish and fish products.
3. Enhanced nutrition and WASH practices delivered via social behavior change communication (SBCC) activities.

1.1.2 Targets

The *Activity's* three components are increased SSA production, leveraging market actors, and nutrition and WASH interventions. This will target the small-holder farmers who own small ponds in the select region who would be the direct beneficiaries of the Activity. The *Activity* aims to reach at least 10,000 SSA farmers during the life of the *Activity*. These farmers will be provided with SSA interventions in fish stocking management, best management practices (BMPs), efficient use of inputs, access to credit, and improved market access. Increased production will in turn protect the livelihoods and income of these farmers and households (HHs).

1.1.3 Implementation Approach

The *Activity* aims at providing a means of ensuring the improved availability of diverse, safe, affordable nutrient-rich foods, especially for women and young children from poor and vulnerable households. This will be achieved by ensuring that poor households have an increased ability to purchase accessible nutritious foods due to improved incomes from entrepreneurial activities including improved small-scale aquaculture in the intervention areas and the strengthening of aquaculture market systems with attention to expanding opportunities for women and youth.

1.1.4 Geographical Focus

The intervention will focus on five inland states and regions in Central and Northern Myanmar:

- Central Dry Zone: Mandalay, Magway and Sagaing
- North: Shan and Kachin

These areas present more challenges to aquaculture development and livelihood opportunities. The growth in aquaculture can play an important role to change this scenario by increasing production and income opportunities. Figure 1 shows the broader context of the select regions of *Activity* intervention in Myanmar. It further highlights the Townships where the *Activity* intervened and has worked since the implementation started.

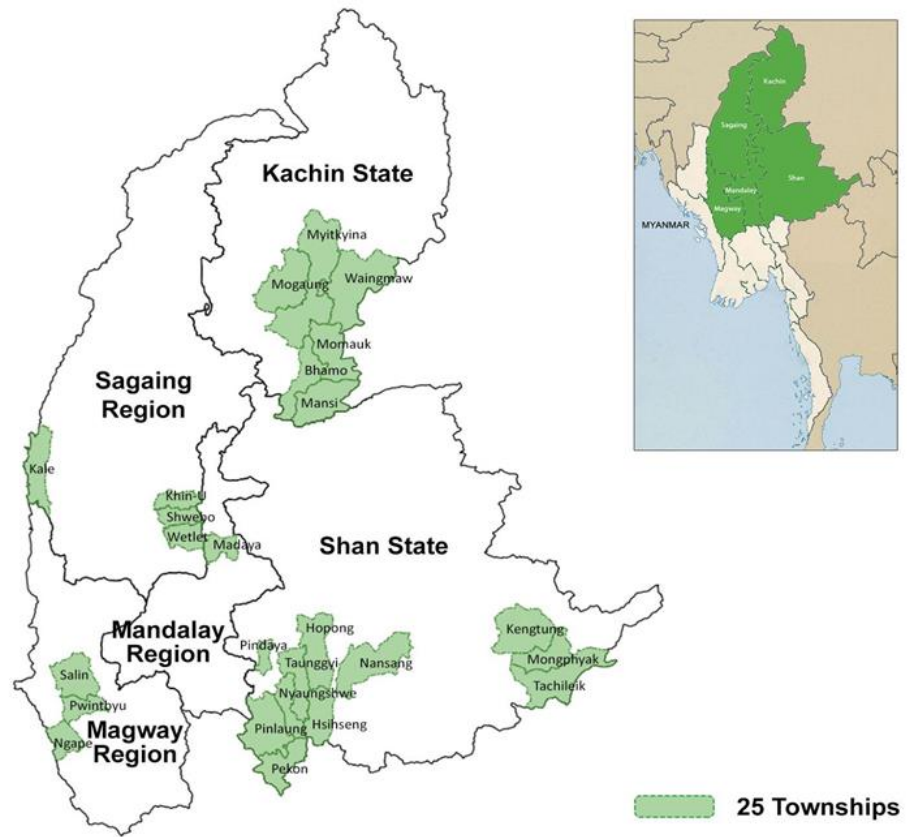


Figure 1: Map of the Activity's implementation Townships

2 Summary of Key Results to Date

Indicators	Baseline 2020	Annual Target	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Annual Performance Achieved to the End of Reporting Period (%)	On Target Y/N
EG.3-2: Number of individuals participating in USG food security programs [IM-level]	-	2,500	503				20.1%	Y
Custom 1.4: Number of -fry and fingerlings produced by the hatcheries and nurseries supported	-	200,000,000	33,710				0.02%	N

Note: The Results Performance Column depicts the level of achievement expressed as a percentage of Actual versus Planned.

3 Activity Implementation Progress

3.1 Progress Narrative

During reporting period Fish for Livelihoods *Activity* delivered training and extension services on small-scale aquaculture (SSA) and improved human nutrition to 516 farmers, of whom 55 percent were women, direct family households. Extension services were provided under SGAs with five Implementing Partner (IP) organizations namely; BRAC Myanmar, PACT, MFF Southern Shan, MFF Kachin, and KMSS to farmers HHs respectively in Sagaing, Mandalay, Southern Shan, Magway, Kachin, and Eastern Shan.

In this reporting period, community orientation and selection of 300 new fish farmers and 12 new Aquaculture Promoters (APs) were selected by BRAC in Nansam, Wetlet, and Shwe Bo townships in October 2021. Participatory Community Appraisal (PCA) and farmer group formation for new fish farmers was conducted in December 2021, 150 farmers in Shwe Bo Township and 100 farmers in Nansam Township participated. A farmers exchange workshop was conducted in Nansam Township in December 2021. BRAC staff conducted monthly meetings with Aquaculture Promoters. The Shwe Ngar phone application registration and knowledge sharing session was also delivered to the aquaculture promoters and growers in all BRAC target areas.

Despite the challenges posed by COVID-19 and significant political insecurity, PACT staff managed to continue their part of the *Activity* implementation as planned during the reporting period. Due to implementation constraints such as travel restrictions, staff security risks, and coordination concerns/issues with Township and village officials, activities were primarily conducted online, with fewer activities completed in the field. The new farmers' selection and data collection on existing Y1 and Y2 activities were conducted. Community orientations for the selection and formation of farmer groups were enacted with the assistance of APs and existing farmers. MFF Southern Shan team conducted a PCA exercise in Pindaya Township during the reporting period and selected 35 grow-out farmers, one nursery farmer, one demonstration farmer, and two APs in the targeted nine villages for the Y3 *Activity* implementation.

PCA and SSA new farmers selection were conducted in the Kachin *Activity* area by MFF Kachin staff at Myitkyina, Waing Maw, Moe Kaung, Bamaw, and Momouk Townships during the reporting period. Through this exercise, the MFF Kachin team selected 100 new grow-out farmers and six APs were selected. The Nutrition Awareness Training was also conducted in Wai Maw Township, and 32 Internally Displaced Persons (IDPs) attended. For post-harvest activities, the F4L team conducted a short survey using the online Kobo software application last October 2021 in Myitkyina and Bhamo Townships. The aim is to measure the change of fish handling practices among fresh fish vendors after receiving training on good post-harvest practices and fish display racks from the *Activity*. Community facilitators observed and asked a few questions to the fresh fish vendors while working at the local market, it was found that 60% (6 of 10 surveyed) of the vendors practice good personal hygiene, good fish handling, and cleanliness in their work areas.

In the Eastern Shan, Keng Taung, Tarlay, and Mong Pyat *Activity* area KMSS conducted a pond survey through mobile phone inspection with the farmers as the staff could not perform their work plan owing to the two compounding crises of extreme limitations and lockdown due to the COVID-19 epidemic and the present political instability. Staff collected the data from 220 farmers' ponds which are located in 5 village tracts, Kat Taung, Kat Htaik, Kat Hpa, Loi Long, and Mong Zin of Keng Taung Township.

The International Water Management Institute (IWMI), activities are mostly on track, although the water monitoring work has been delayed due to difficulties in locating enough water quality measuring equipment suppliers. This has now been resolved. The following journal submission was made in the reporting period reflecting work done in Year-2 and submitted for review on December 15 2021.

“Hydrologic Characterization of the Upper Ayeyarwady River Basin and the Impact of Climate Change” Authors - Pabitra Gurung, Shashwat Dhungana, Aung Kyaw, Luna Bharati (Journal of Water and Climate Change)

The consortium of three organizations (MDF Asia Myanmar, Fresh Studio, and Sympathy Hands) conducted a capacity assessment survey to 10 pilot CBOs (Community Based Organizations) in the Shan and Kachin area. The consortium prepared and submitted the capacity-building plan to WorldFish for endorsement. The capacity-building process in the field will be started in the forthcoming quarter. As part of the Scaling Up Nutrition Civil Society Alliance (SUN CSA) network activities, F4L team 1) hosted a virtual meeting to share the nutrition-sensitive approaches of F4L Activity among 9 organizations and 2) presented at the virtual SUN CSA general assembly which was attended by over 60 participants from various organizations in the country. By joining the above activities, the F4L team disseminated information to a wider audience that enhanced the visibility of the Activity.

3.2 Implementation Status

3.2.1 IR 1. Small-scale aquaculture production increased by improved land and water use and increased access to information, high-quality inputs, and credit.

The Participatory Community Appraisal (PCA) exercises were conducted in the *Activity* targeted area of Shan, Sagaing, and Kachin areas. In Mandalay, Sagaing and Southern Shan BRAC implementing partner targeted 5 townships in Mandalay and Sagaing area and 1 township in Southern Shan area with a total of 41 villages. 300 farmers were selected as target farmers for Y3 in this reporting period through the PCA process.

In the Magway area, *Activity* targeted 4 townships with 17 villages. A total of 204 grow-out farmers were selected as potential farmers for Y3 *Activity* implementation. *Activity's* implementing partner PACT targeted 250 farmers for Y3 implementation. KMSS in the Eastern Shan area targeted 1 new township with 14 villages. A total of 66 new grow-out farmers were selected for the Y3 *Activity* implementation. In the Pindaya Township of the Southern Shan area, MFF conducted PCA and targeted 37 farmers for the Y3 SSA activity implementation. All targeted farmers were selected in this reporting period. MFF Kachin selected 100 farmers for Y3 implementation in 5 townships through the PCA process. The Y2 farmers from target townships of *Activity* will be supported by assistance in the Y3 with extension services, technical support, and 50 % seeds and feed inputs. Table-1 below illustrates township-wise data of the selected SSA farmers.

IWMI analysis of water availability and climate risks, as well as water quality monitoring results, will contribute key knowledge for improved land and water use management. It is envisaged that understanding seasonal water variability and water quality and its interaction with current and future climate scenarios will be generated by IWMI this year. This will support scaling strategies the *Activity* will develop in 2023. Increased production through the scaling out of successful SSA work will include water quality aspects. This will include a range of chemical parameters including DO change within 24-hour periods and across seasons, and what this means in terms of fish stocking and management. Such information will be available for the *Activity* to incorporate in training and other capacity activities that can increase fish yields.

Table 1: Farmer and Pond selection process completed Townships and number of farmers selected in Q1

Region	Township	No. of Village (Y2+Y3)	Y3 farmers	Pond Acre (Y3)	Remark
Eastern Shan	Kengtung	13	66	12.16	
Southern Shan	Namsang	10	100	14.18	An acre of 73 farmers only. Ongoing activity.
Southern Shan	Pindaya	12	37	6.10	
Sagaing	Wetlet	9	50	6.30	
Sagaing	Shwebo	33	150	65.21	
Kachin	Bhamo	10	21	6.90	

Region	Township	No. of Village (Y2+Y3)	Y3 farmers	Pond Acre (Y3)	Remark
Kachin	Momauk	6	9	2.10	
Kachin	Mogaung	4	9	1.70	
Kachin	Myitkyina	14	11	5.70	
Kachin	Waingmaw	19	50	28.30	
		130	503	148.70	



Figure 2: Farmers harvesting a pond in Salin Township

Seed production from nurseries

The *Activity* supported nursery farmers produced fingerlings which were sold to aquaculture farmers in the *Activity* area. 2,350 fingerlings from nursery farms in Salin and 560 fingerlings from Pwintphyu nursery farmers were marketed. In the Kachin area, *Activity* supported nursery farmers of Wai Maw Township, produced 30,800 fingerlings (Rohu, Silver Barb/Common Carp) in this reporting period.

Seed Production of Hatchery:

In Southern Shan State, *Activity* provided technical and in-kind support for the renovation of 2 hatcheries in Y1 and Y2. In this reporting period, a total of 257,241 fingerlings were produced. Table-2 below provides the breakdown of the production for both hatcheries.

Table 2: Fingerling production from Activity supported Hatcheries in Q1

Township	Name of Hatchery Owner	No. of fingerlings produce	Fish Species
Nyaung Shwe	U Hla Kyaw	193,046	Common-carp/Grass-carp/Silver barb/Silver-carp/Rohu
Nyaung Shwe	Nan Win Htwe	64,195	Common-carp/Grass-carp/Silver barb/Silver-carp/Rohu
	Total	257,241	

Extension services and SSA training

During the reporting period, despite several restrictions due to COVID-19 and the political instability, WorldFish and Implementing Partner (IP) staff provided regular field visits to the villages and monitored aquaculture progress. In addition, they conducted regular fish sampling together with the grow-out farmers. Moreover, during Q1 a total of 300 farmers (168 women) received training in the SSA module, Nutrition, WASH, and COVID-19 key messages provided by WorldFish and IP staff in the targeted areas.

Pellet Feed Production and distribution

In the nine townships of the *Activity* targeted area, a total of 13,286 Viss of sinking pellet feed were produced by *Activity* supported feed millers. And the produce was sold to SSA farmers in the area. A total of 278 farmers accessed the produced sinking pellet feed at an affordable price. (Farmers produce sinking pellet feed price 1200 MMK to 1350 MMK per Viss with 20 to 28 percent protein. Commercial floating pellet feed, De Heus product floating pellet feed, 1850 MMK per Viss for 26 percent protein.) Table-3 below shows the production data and the farmers who have accessed pellet feed for their ponds. The figure-3 shows a farmer is drying pellet feed in Salin Township.



Figure 3: A feed mill farmer is drying pellet feed in Salin Township

Table 3: Activity supported feed millers and their production in Q1

Sr	Township	Name of Feed Miller	Pellet Feed Produced in Q1 (Viss)	No. of Farmers Accessed Pellet Feed
1	Taunggyi	U Aung Khaing	30	1
2	Nyaung Shwe	Ma Ye Ye Lwin	3535	135
3	Tarlay	U Sai Noon	2458	47
4		U Ning Htun	1433	55
5	Myitkyina	U Hpauyu Tu Myat	2820	13
6	Waimaw	Daw San Ji Mai	1710	12
7	Bhamaw	U Myo Nyunt Aung	781	2
8	Salin	U Than Htay	382	5
9	Ngape	U Kyaw Hlaing Oo	43	4
10	Pwintphyu	Daw Aye Nan Mon	94	4
	Total		13,286	278

Pond harvesting status in Q1

The Y2 SSA farmers of Madaya, Khin U, Wetlet, Shwebo, Waingmaw, and Myitkyina Townships harvested their ponds in the reporting period. Some farmers made total harvest and some partial. A total of 12,583.25 Viss of fish was harvested from 37.57 acres of ponds. Table-4 below is showing the details of the ponds harvested in the reporting quarter. N.B. The harvesting data is a mix of total and partial harvests. On total harvest the yield is expected to be ~1,800kg/ha.

Table 4: Harvested pond and its production in Q1

Sr.	Townships	No. of harvested Ponds	No. of Acre	Harvested fish weight (Viss)	Remark
1	Madaya	13	3.50	3215.00	Total harvest
2	Khin U	35	18.70	7003.00	Total harvest
3	Wetlet	22	6.67	147.75	1 st -time partial harvest
4	Shwebo	24	5.27	787.50	5 farmers total harvest, 19 farmers

Sr.	Townships	No. of harvested Ponds	No. of Acre	Harvested fish weight (Viss)	Remark
					1 st -time partial harvest
5	Waingmaw	5	1.83	881.00	Total harvest
6	Myitkyina	4	1.60	549.00	Total harvest
	Total	103	37.57	12,583.25	

Revolving Farmer Group Funds Magway area

In Year 1 and Year 2, 31 SSA fund groups operated revolving funds for use by their member farmers under their group's own rules and led by farmer group committees. Five fund groups were located in Ngape Township, 18 fund groups in Salin Township, and 8 fund groups in Pwintbyu Township. The total number of members across the 31 groups was 494 farmers (Male=401, Female=93). Member farmers borrowed money from their respective group funds, typically for investment in their fish farming business.

During Q1 of Y3, 155 farmers from 24 groups borrowed a total of US\$ 2,850 (5,014,950 MMK) from group funds in the Magway *Activity* implementation area. Of the 155 farmers, 71 had already accessed money from the fund more than once; the remaining 84 farmers had never borrowed money from the fund before. The revolving fund cycle and associated interest rates are varied for different groups. The cycles vary from one to six months while interest rates range from 1-5%. Farmers used funds from the groups for inputs to their farms such as feed and labor costs. Table-5 below depicts the farmers who accessed the credit from the mentioned townships.

Table 5: Farmer Fund Status by Township in Magway area

Township	Farmer Fund Groups	No of Farmers Accessing Funds	Amount (MMK)
Salin	14	82	2,986,200
Pwintbyu	8	67	1838750
Ngape	2	6	190,000
Total	24	155	5,014,950

Monthly Aquaculture Promoter (AP) Meetings

Effective coordination and communication in the challenging times of COVID-19 and unstable political situations are critical more than ever, The *Activity* ensures that the staff members should plan an in-person meetup where possible to discuss the progress, exchange ideas, and share their experiences. For this, the *Activity* organized many Monthly meetings with APs in *Activity* targeted areas. In some areas due to differing operating conditions, the field teams could not execute in-person meetings, however, regular communications with AP were facilitated by the field staff for the field activity implementation. The figure-4 gives us a glimpse of a meeting where the APs gathered and discussed the *Activity* and its implementation.



Figure 4: Monthly APs Meeting in the Ngape Township

3.2.2 IR 2. Increased access to food-safe fish and fish products in the markets

To encourage applying good food safety practices among fresh fish vendors, the F4L team conducted a virtual meeting with a total of 10 women fresh fish vendors who previously received fish display racks in Bhamo and Myitkyina, Kachin State. The attendees reported several changes in their practice of handling fish due to the

training that they received from the *Activity*. The activity reinforced the message that applying good fish handling and hygiene practices can increase income and provide safe fish among local consumers. In the coming months, further assessment will be conducted to determine the economic and health benefits of the activity among market actors.

The *Activity* encouraged a group-based approach to fish production, input sourcing, and product marketing and emphasizes the best management practice (BMP) standard as the preferred quality approach in every step of the production chain to ensure that products are safe, pure, and effective. The 10 parameters of the BMPs were closely tracked by the *Activity* to monitor the practices of the farmers on their pond record books, sanitation, and cleanliness.

In this reporting period, 43 ponds from Ngape were monitored and checked against the BMP checklist. Out of these 43 ponds:

- 84% of ponds adopted 6 parameters (out of 10 parameters);
- 12% of ponds adopted 7 parameters (out of 10 parameters); and
- 5% of ponds adopted 8 parameters (out of 10 parameters).

The *Activity* has recommended that participating ponds follow at least 3 parameters to qualify as BMP ponds. All 43 grow-out ponds from Ngape followed at least 6 parameters and so all were BMP ponds.

3.2.3 IR 3. Improved nutrition, food safety, and Water, Sanitation, and Hygiene practices

For this quarter, a series of activities were conducted in F4L Activity areas to reinforce the messages on consuming diverse foods to achieve good nutrition and applying good handwashing and sanitation practices to reduce water-borne illnesses. Below Table-6 below

Table 6: Number of people reached through communications campaigns

No.	Activities	No. of people reached		Total
		Male	Female	
1	Global handwashing campaign “Our Future is at Hand – Let’s Move Forward Together” in Magway, Sagaing, Kachin, and Eastern Shan	41	52	93
2	Nutrition awareness-raising activity at Maina IDP Camp, Kachin State	22	10	32
	Total	63	62	115

In addition to the above activities, the F4L team continues to be involved in the SUN CSA network in Myanmar. The team hosted a sharing session that highlighted nutrition-sensitive fish agri-food system approaches of F4L Activity among 9 organizations working in the sector. Furthermore, during the SUN CSA general assembly, the F4L M&E coordinator presented the findings of the Barrier Analysis study that was conducted in May 2021. Through these events, the F4L team was able to meet organizations that are working in different areas that may have the interest to collaborate to support communities in Myanmar.

3.3 Implementation challenges

Fish for Livelihoods activities were impacted by the Covid-19 restrictions and political changes of Myanmar. Face to Face meetings was not possible to organize since February 01 2021 the state of emergency began. This also affected both field staff and the targeted farmers’ safety and well-being. The limitations on the group size for meetings, training, and workshops made it difficult to organize the proper implementation of the activity in the field during the reporting period. Moreover, checking devices of the staff and farmers on the way whenever they

cross the checkpoints made them reluctant to go from one township to another and also village to village. Arm conflict between Myanmar's military and people defense forces and seize fire groups made displacement of villagers from some target areas of the *Activity* in Phekhon Township, Southern Shan State. The weak internet and mobile phone coverage and poor connectivity made difficult communication to the target villages. The restrictions and limitations on cash availability from the banks also made slow improvement of the activity in the field, as it the farmers and staff difficult to withdraw the money even from the cashpoint services.

During reporting period Fish for Livelihoods had experienced that the State Administration Council (SAC) forcibly collected the fish (without paying any charges) from the *Activity's* farmers in Khin-U, Madaya, and Shwebo Townships. Moreover, Fish was stolen from a demo farmer's pond in Thae Kaw village, Madaya Township, so that farmers want to harvest early. There was also an early water shortage in Wetlet Township therefore some ponds will be harvested early as well.

COVID-19 cases were reported in project townships in the Magway area during the reporting period and precautionary measures had been taken. Community mass meetings were allowed for 100-person gatherings, however, village-level workshops could not be conducted due to people's worries of disease transmission. Village authorities did not accept unvaccinated participants and staff. Project training and workshops, therefore, were completed by online phone conference calls.

Although 100-person gatherings were permitted, in-person community meetings fall under investigation, and village leaders did not dare to permit any training or workshops. Military base security was prominent in the townships and on the way to the villages, staff had to undergo inspection of their bikes and mobile phones. For township-to-township travel, staff needed to have recommended permission from ward authorities.

Two men were not authorized to ride a motorcycle together and risk being fired upon by security forces. Bombs had exploded in the project area and youth leaders were detained as a result of the incident. Curfew orders had remained in the effect of 8 p.m. to 4 a.m. across the *Activity* townships. Within the townships, there had live firing between PDF and government military troops, so that staff traveling to villages was dangerous.

The death of a person and the seizure of a PDF (People Defense Forces) member have been reported in the project area. For the staff, guest registration must be renewed every two weeks. The military demolished squatters' dwellings in Ngape, some of whom were chosen as potential farmers for Year 3. In some areas, military soldiers stood sentry on the way to the fields where fishponds are situated. Fish ponds monitoring posed a considerable risk to the staff and the farmers.

In the Sagaing area, Wetlet, Khin U, and Shwebo Townships' *Activity* areas, PDF and Government Military planted land mines. So that farmers are afraid to go out of the village and difficult to monitor the fish ponds which are not situated in the village.

Benefits to the farmers from aquaculture were being reduced by natural disasters and human factors. Flood and theft have both caused significant damage to ponds throughout the *Activity's* township. In 2021, 169 ponds were flooded, with around 32 ponds losing all of their fish. The remaining 137 ponds were continuing working on the *Activity*, but with fewer fish. Two ponds have also had all of their fish stolen.

Money transactions were being delayed due to the stalemate at Myanmar Central Bank. In addition to that to withdraw the money from the bank, the percentage costs were affected.

Some of the farmers use Chinese cloned mobile phones, as they are relatively cheap. However, the phones cannot be used to access digital platforms developed by the *Activity* as the units have no Google support. And some of the farmers had problems reading the Myanmar font on their mobile phones.

Sourcing reliable water quality measurement equipment has been difficult. This has taken a significant amount of time partly due to the specifications needed and the economic and regulatory conditions in Myanmar. This has been mainly resolved now but has resulted in a delay in expanding the water quality monitoring. The ongoing Covid-19 concerns and political unrest. Covid-19 was especially high in Shan State in the September-December period. The situation is being closely monitored by our Project Coordinator who resides in Shan State and has extensive information networks.

However, the management and implementation of Fish for Livelihoods was flexible, creative, and opportunistic and made far greater use of digital platforms and virtual media applications to disseminate key learning messages to the Aquaculture Promoters (AP) who base in the village and directly to the farmers who access to use the digital platform and virtual media applications, and they turned to disseminate to other farmers in the village.

3.4 Performance Management Plan (PMP) Update

Data Tools Package:

The activity has been collecting data from the field since the implementation started back in April 2020. Due to the COVID-19 restrictions in 2020 and the insecure environment after the coup d'état in 2021, most of the data was collected using virtual means. However, the WorldFish MEL Team designed and developed a range of data collection tools in close consultation with the program and field teams. These templates now are included together in a package we call “Data Tools Package”. This package was revised and updated based on the formal and informal learnings and suggestions from the field teams. All tools were updated and included in the package. Two new templates; non-participants (indirect beneficiary) data collection, and fish sample are added to the package. The package has been shared with the WorldFish F4L field team and all sub-grantees. All the templates are now being used to collect, analyze, and report data with the agreed timelines.

Refresher Training Session on F4L MEL system, processes, and mechanisms:

On December 08, 2021, the WorldFish MEL team along with the Training Lead organized a one-day refresher session on the activity MEL system, processes, and mechanisms. The purpose of this refresher session was to inform attendees about the proposed changes made in the “data tools package” templates, the inclusion of two new formats, the internal reporting mechanism, and its timeline, and refreshing knowledge about the key MEL terminologies. In aggregate, 47 (Male=25, Female=22) participants attended the refresher session with active participation and feedback. The participants suggested and commented on some of the tools based on their experience and learning in the field. Their suggestions, ideas, and comments are reviewed and addressed after the session. The revised and updated “Data Tools Package” was shared with them. Moreover, the activity MEL plan’s theory of change, indicators, and data management practices are refreshed. The reporting mechanism, to be followed and adopted between the World Fish and sub-grantees, is discussed and agreed upon during this refresher session one of the key results.

Weekly Reporting on End of Week (EoW) notes to USAID:

The MEL and Communications departments Lead, Monitoring Evaluation, and Communications Specialist ensure the supply of EoW notes to the USAID Burma office. During the reporting period, EoW notes were shared continuously with the USAID Burma office to keep them fully informed on activity implementation status. It helps inform USAID and senior management on how the implementation takes place and what are some of the key challenges field teams are encountering while supporting farmers and communities at the grass-root level.

4 Crosscutting Issues

4.1 Gender Equality, Youth and Female Empowerment

The inclusion of gendered lens and perspectives in the activity implementation and participation of youth and female empowerment has been the hallmark since the implementation started on the ground. With the same spirit, the F4L activity continues to empower women and youth, as it did in Years 1 and 2, by providing them with the same

opportunities as male SSA farmers to participate in training and workshops, as well as by assigning them to share their newly gained knowledge and fish farming skills with other SSA farmers. With a strong gender focus, the activity has been striving to encourage women and youth to participate in SSA and the establishment of inclusive market systems. Existing gender norms and challenges make it difficult for the activity team to identify farmers who are women especially young women as they require more tailored support at greater levels.

However, the team has been able to overcome this gender norm and challenge and successfully identified and recruited 215 (46 percent) women farmers (out of the total of 503 farmers) who have been prepared to become confident and successful aquaculture farmers. Prevailing challenges include access to land, ownership issues, and distance to where these ponds are located, in addition to the lack of technical and business management skills which affect their confidence and willingness to lead. However, emerging anecdotal evidence suggests that 19% of farmers who are women are feeling improved confidence, leadership skills, and experience while reporting an increase in income which is being utilized for health and nutrition purposes for their household members, especially children. This will be further investigated in upcoming quarters as the team will strive to identify strategies to include more young people in this project.

Although most of the growers selected were men, F4L has aimed to ensure that female grower is included in the activity. It has been important to ensure that selection of men, who are often heads of the household, are included in the discussion to promote women's participation. The activity is supporting the fish farmers' family members, especially the women counterparts about the kitchen gardening/ vegetable cultivation and nutrition.

The F4L activity third component; nutrition and WASH, revolves around the interventions that directly benefit youth, women, and children. It is paramount to mention that as a strategy vegetable seeds, kits, and WASH materials & equipment is directly handed over to the female participants or family member of a male participant.

4.2 Environmental/Climate Change Compliance

In the first year of implementation, an international and a national consultant were hired to develop an Environmental Mitigation Monitoring Plan (EMMP) for the F4L activity. The developed EMMP plan was overarching even addressing a range of environmental issues that do not fall under the ambit of aquaculture. The WorldFish F4L activity team reviewed the developed EMMP. The main objective of this review and exercise was to come up with a trimmed document that only highlights issues related to aquaculture programming in Myanmar. The revised and updated EMMP document is ready and will be implemented in the field when the situation allows working physically on the ground. This document will help track, monitor, and compliance with environmental aspects in the geographical areas where F4L operates and intend to operate in the future.

WorldFish and F4L activity partners (sub-grantees) believe that environmentally and climate-friendly aquaculture is the cornerstone for healthy fish and fish products. As a result, F4L makes it easier for SSA farmers to implement Better Management Practices (BMPs) to ensure safe farm-to-plate fish production by encouraging them to use BMPs for effective land use and natural resource management. The BMPs are well researched, developed, and shared with the SSA farmers. These BMPs range from pond preparation, pre-stocking, production cycle, harvesting, and post-harvest up to a certain extent.

The F4L activity operates across five regions/states in Myanmar. These regions and states have distinct climates and varied environmental issues as well. Each of the regions and states facing different challenges and is trying to overcome them as best as it can be. In the succeeding para, we will briefly discuss the environmental dynamics of some of the townships situated in these regions and states. Southern Shan is usually cool as it is 3,000 feet above sea level. However, the area where the fish ponds are located is a bit warm as it is a low-lying area. The inflow of water into the fish ponds is from groundwater sources and streams. The weather is getting hotter every year. In recent years it has been convenient, but in the coming years, it may become difficult for fisheries activities during the summer. Taunggyi and Nanhsam Townships, Southern Shan have a humid subtropical climate. There is a winter dry season in (December–March) and a summer wet season in (April–November). Temperatures are mostly warm throughout the year; the winter months of (December–February) are milder but the nights might be quite

cool. Madaya Township, Mandalay Region, and Khin U, Wetlet, and Shwe Bo townships, Sagaing Region is in the dry zone. These different environmental factors are always considered for activity planning and implementation in the mentioned townships.

4.3 Monitoring Evaluation and Learning (MEL)

Monitoring Evaluation and Learning (MEL) is the critical component to monitor, assess, and measure the performance of the activity implementation. In the current quarter, the WorldFish MEL team extensively supported the sub-grantees MEL and Monitoring & Evaluation (M&E) units. After the revised modality of activity implementation, the MEL system, processes, and mechanisms needed a complete overhaul. Building upon the first two years of learning, the MEL team carried out a comprehensive exercise to update and revise activity data collection tools. MEL system, data collection processes, and reporting mechanism are refined and communicated to all sub-partners. In addition to that, the MEL team updated the *Activity* MEL plan, led the preparation of the F4L second-year annual report, and performed Data Quality Assessment (DQA) exercise with USAID.

4.4 Local Capacity Development

On December 8th 2021, the Monitoring and Evaluation (M&E) team, and IECT Coordinator conducted one-day virtual training on *M&E and training data tools package* to the IPs (MFF, BRAC Myanmar, KMSS, and PACT Myanmar) staff via MS Teams, and a total of 47 (22 women) staff attended.

On December 2021 13th, the Finance and Operations Manager had conducted the refresh session on "the USG and USAID Rules and Regulations" to the focal person from IPs (MFF, BRAC Myanmar, PACT Myanmar, and KMSS) staff and shared information on the laws, regulations, and mandatory requirements for Fish for Livelihoods. A total of 11 (7 women) staff joined the session.

Table 7: Number of WorldFish staff and Implementation Partner (IP) staff received training sessions

Training topic	# of men trained	# of women trained	Total # Trainee
Monitoring and Evaluation (M&E) and training data tools package training	25	22	47
the USG and USAID Rules and Regulations sharing session	4	7	11
Nutrition awareness-raising activity at IDP camp	2	0	2
Total	31	29	60



Figure 5: PCA in the Pindaya township

Participatory Community Appraisal (PCA) workshop

From November to December 2021, one day of face-to-face meeting on Participatory Community Appraisal (PCA) was conducted by the IPs (MFF, Southern Shan State, and BRAC Myanmar, Sagaing Region) to the selected new villages to explore key findings on PCA tools. A total of 183 (106 women) people from Pindaya and Shwebo Townships participated actively. Figure-5 is shows a PCA gathering in Pindaya Township. On October 6th 2021, the Fish for Livelihoods Field Coordinator in Magway conducted one-day virtual training on *Carp nursery management* to one SSA farmer (men) from Salin Township. The training course on how to prepare nursery pond for stocking,

promoting both nursing in nursery pond and nursing fish in cloth net hapa before release into the grow-out pond was delivered.



Figure 6: Delivering key messages on SSA, Nutrition, WASH and COVID-19 at Shwebo Township

Refresher training on Small-Scale Aquaculture Technology, Nutrition, and WASH key messages

BRAC Myanmar staff, supported by the Fish for Livelihood Field Coordinator in Sagaing Region, have continued to deliver training services on sustainable small-scale aquaculture. In December 2021, one day of *SSA and Nutrition Pamphlet* refresher training with key messages on pre-stocking management pond preparation and stocking management, post stocking and harvesting managing, nutrition, and WASH practices was conducted to year-1 farmers in several batches in Shwebo Township. A total of 300 (168 women) participants attended the training. The figure-5 shows participants receiving training on Nutrition and WASH whereas Table-8 below illustrates the data of SSA farmer, their families, and community members received training session.

Table 8: Number of men and women participants who received training

Training topic	# of men trained	# of women trained	Total # Trained
Carp nursery management training	1	0	1
Participatory Community Appraisal (PCA)	77	106	183
SSA, Nutrition, WASH and COVID-19 key messages training	132	168	300
Total	210	274	484

4.5 Communications and Outreach

In the reporting quarter, the communications and outreach teams worked collaboratively to refine and update Information Education and Communication (IEC) materials, communications products, and key communications tools based on the newly approved “Branding and Marking Plan”. There is a whole range of communication products developed in the first two years of the activity. These products and IEC material are now refined and updated for dissemination to SSA farmers, their families, and communities. All of these products are being sent to the USAID Burma Development Outreach Communication (DOC) Team and Agreement Officer Representative (AOR) for their approval.

In addition to the above, International Water Management Institute IWMI’s component will generate at least one peer-reviewed journal article, at least one standalone brief, and possibly a blog/opinion piece linked to Myanmar’s food-nutrition-water-climate policies and strategies. However, the scope for direct communication of results and dialog on policy and planning options with government agencies is not possible due to USAID’s strict requirement forbidding formal communication with any government entity.

4.6 Grants and Finance

The new grant agreement (Cost-Type Agreements with Public International Organizations-PIOs), Agreement No. 72048221IO00001, Fish for Livelihoods Activity (F4L) has been fully effective since 15th September 2021 and

will last until 14th September 2024, i.e., for three (3) years, with the total estimated amount of USD 8,000,000, under which the first obligated amount is USD 2,500,000.

For the period from 15 September to 31 December 2021, the estimated expenditure (planned expenditure) is USD 653,559, while the actual spent is around USD 720,122 – exceeding the estimate around 10%, mainly under Contractual/Sub-Grants. As of 31 December 2021, the total reimbursement of USD 354,559 has been received.

Note: The reimbursement for November 2021 has been received in January 2022. It will be included in the next quarter report (January- March 2022)

Please kindly refer to Annex C: Progress Expenditures and Funds Status, for more details.

4.7 Science, Technology, and Innovation Impacts

The WorldFish Headquarter (HQ) communication department and IECT coordinator helped the program team to brand all information, education, communication, and training materials to comply with the branding and marking guideline of Fish for Livelihoods, which has been approved by the USAID in year-3. In December 2021, the following list of extension and training materials, awareness-raising materials, and incorporating informative messages on COVID 19 and its precautions in all products were submitted to the USAID for approval. The printing and distribution process of these extension and training materials for all key Fish for Livelihoods participants in year-3 (2021-2022) will proceed in the next quarter (January to March 2022). The rest of the major communication products developed are accessible in the Annex “Fish for Livelihoods IEC documentation list”.

- Fish for Livelihood factsheet
- Nutrition and COVID-19 pamphlet
- Small-Scale Aquaculture (SSA) and COVID-19 pamphlet
- Why fish pamphlet
- BMP for vegetable production systems
- Traditional Fish processing recipe
- Guide on dried fish processing
- Recipe card fish pumpkin ball
- Small Indigenous Species (SIS) partial harvest guide
- Small Indigenous Species (SIS) question and answer sheet
- Poster_Important factors for a healthy and happy family
- Poster_Toilet and sanitation
- Poster_1000 days
- Poster_Myanmar Mola comic story
- Poster_Ceramic water filter
- Small-Scale Aquaculture (SSA) farmer guidebook
- Good post-harvest practices for fresh fish trading guidebook
- Good fish processing practices guidebook

Mobile phone application – Shwe Ngar (Golden Fish)

Fish for Livelihoods through its implementing partners (IPs) MFF, BRAC Myanmar, KMSS and PACT Myanmar continues to encourage project participants to register and to use the Shwe Ngar mobile phone application (app) to access information on sustainable small-scale aquaculture and improved human nutrition. Moreover, the app helps SSA farmers to make record-keeping on feeding, and calculate the rate of feeding and recipes with local affordable raw materials for their ponds.

In October 2021, the Fish for Livelihoods Chief of Party (CoP) and the Component Leads had a meeting on the Shwe Ngar app review and a way forward with the focal person (developer) from Single Spark. Challenges and feedback on the app used from the field were discussed. Activation of a yearly license fee for Shwe Ngar

application was completed on 17 November 2021 and Single Spark will provide the use of Shwe Ngar app training to WorldFish Staff and IPs staff in early February 2022.

With the great efforts of the Fish for Livelihoods team and IECT Coordinator, six (06) Shwe Ngar app video clips introduction on how to download, register and use the app effectively were created. The USAID has approved to use of these video clips as promoting of using the app, and wisely distribute through its IPs among the field where the activity is implementing. Until December 31 2021 there were a total of 969 members registered as users of the Shwe Ngar mobile phone app which includes 440 farmers. Moreover, the FCs and IPs staff were able to conduct monitoring visits on the Shwe Ngar app registration and use of the app to the participants in Wetlet, Khin-U, and Shwebo Townships during the first quarter (Oct-Dec 2021) of the report.

Mobile phone application – Htwet Toe

Fish for Livelihoods through its implementing partners (IPs) MFF, BRAC Myanmar, KMSS, and PACT Myanmar continues to encourage Activity participants to register and to use the Htwet Toe mobile phone application (app) to access information on sustainable small-scale aquaculture and improve human nutrition.

In October 2021, the Fish for Livelihoods CoP and the Component Leads had a meeting with Village Link and discussed on challenges of using the digital platform in Myanmar especially during the COVID-19 crisis and political issue. The year-2 (2020-21) service contract was ended on 30th September 2021 and a service contract for year-3 (2021-22) will be signed in January 2022. Moreover, the training on using Htwet Toe app to WorldFish staff and IPs staff will be provided in early February 2022. To 30th September 2021 Village Link had 2,318 farmers registered as Htwet Toe mobile phone app users.

GPS locations of Fish for Livelihoods SSA farmers

With the support of the Fish for Livelihoods field team and IPs (MFF, BRAC Myanmar, PACT Myanmar, and KMSS) staff, collection of GPS location data for year-1 (2019-20) 1,167 ponds, and year-2 (2020-21) 1,485 ponds was completed in September 2021. The IECT Coordinator and IECT Assistant had checked the Fish for Livelihoods Quantum GIS (QGIS – open-access platform) pond location data for five State and Region and provided feedback to the townships which still has a query and blank data. Due to the political issues and COVID-19 crisis, someplace of the project area could not able to be visited and collected the data. For year-3 (2021-22) GPS location data, it is still in progress on data collection.

The SWAT model that integrates climate change analysis with water availability will provide an important tool informing decisions on scaling pond adoption. It can also contribute to a Decision Support Tool to better target pond scaling, which IWMI and WF will consider for Year 4 of this project. The water monitoring component also offers insights based on a comparison between how pond owners track and understand water quality on the one hand and the results provided by the monitoring protocol, using measurement devices. This component encompasses a participatory local knowledge dimension that can help us understand where local knowledge systems do and do not align with more rigorous monitoring, and potentially which are the key knowledge gaps that can impact pond management and yield performance.

5 Management and Administrative Issues

During the reporting period, the Sub Grant Agreements (SGA) were signed with sub-grantees; BRAC, IWMI, MFF Kachin, MFF Southern Shan, and KMSS Eastern Shan. PACT's SGA signing is in progress and will be completed in the coming reporting period. The contracted IPs' SGA status for Y3 are as follows;

Table 9: Details of the SGAs signed with sub-grantees

No.	Organization	Contract no.	Budget \$	Period
1.	BRAC	PLA 12687	252,654	1 Oct, 2021 to 30 Sept, 2022
2.	IWMI	PLA 12706	200,223	1 Oct, 2021 to 30 Sept, 2022
3.	MFF Kachin	PLA 12710	52,342	1 Oct, 2021 to 30 Sept, 2022
4.	MFF Southern Shan	PLA 37840	37,840	1 Oct, 2021 to 30 Sept, 2022
5.	KMSS Kengtong	PLA 12709	68,712	1 Oct, 2021 to 30 Sept, 2022

WorldFish Management and Administration updates:

- For the pilot Community-Based Organizations (CBOs) capacity building activity to implement in the Fish for Livelihoods area, the consent was provided by the Embassy on November 08 2021 to make a contract with the consortium of three organizations (MDF Asia Myanmar Limited, Fresh Studio, and Sympathy Hands). Fish for Livelihoods made a contract with a consortium, and the activities are ongoing.
- Pegu Partners were hired in 2021 (Year 2) to carry out a one-year credit analysis survey. This work is ongoing.
- Under the contract PLA 12300 with Single Spark BV, the Fish for Livelihoods *Activity* extended the period of license (1 Oct 2021 to 30 Sept 2022) for Shwe Ngar application, which is under the supervision of Single Spark BV, necessary technical inputs, and to be smooth running of the app in the Google Play Store with the latest requirements.
- The *Activity* also extended the contract (PLA 12769) of Htwet Toe app, Village Link Co.Ltd. for the period of Jan to Sept 2022. The extended contract budget amount is USD 9,420.
- All Fish for Livelihoods, WorldFish staff contracts were extended one year. Mandalay office rental process and relocation to the new office had been completed. According to the banking system restrictions, National staff salary payments were paid in MMK.
- Mr. Visidh Koum Finance and Operations Manager F4L resigned from WorldFish. His finance tasks on F4L are being divided between Ms. May Thu Oo, Ms. Ohm Mar Nyunt, and the HQ finance team.
- The year three work plan has been assessed and commented on by USAID – it is expected to be fully endorsed soon.
- A year-2 progress report has been finalized and the Embassy has requested three minor clarifications which have been addressed.
- A waiver for vegetable seed purchase was requested on November 21 2021 and it is expected that approval will be received week during the final week of January 2022.
- USAID has asked WorldFish if we will be needing more funds in the current operational year i.e., before September 30, 2022. The Embassy has been informed that we will analyze this and reply in Q2 for possible USD 0.5 million) fund increase for Q3 and Q4. It was noted that Years 3 and 4 will have the most spending (USD3 million each year) and that there will be an impact study in Year-4 to determine the possibility of an F4L phase two. Year-5 will use the balance of the USD12M fund (USD2M).

Sub-Grantees Management and Administration updates:

- The Activity leadership at IWMI changed from Dr. Luna Bharati who left the IWMI in October 2021 to Mr. Sanjiv de Silva who had worked on water and broader food systems issues in Myanmar since 2017, including close collaboration with WorldFish Myanmar. Sanjiv is also the IWMI Country Director for Myanmar although based in Sri Lanka.
- In BRAC, one staff from Madaya Township and one staff from Wetlet Township had been transferred to the ShweBo Township to implement the Fish for Livelihoods activities in the Year-3.
- PACT has opened two Township-based offices in Salin Township and Myo Thit Township. A program Assistant for administrative and finance support was hired in this reporting period.
- At the end of December 2021, Mr. Aung Kyaw, the project manager of the KMSS organization for F4L Activity, has announced his resignation from the project. Mr. Augustine Zar Ni Tun took over as the new manager and will oversee all activities of F4L in the field.
- MFF-Kachin recruited one community facilitator, Daw Aye Aye Myint for the Bhamo Township, and one of the CFs U Aung Naw was promoted to the team leader position.

6 Lesson Learned

Please provide a few examples of highlights of project learning. These can either be successes or failures, but show how adaptive learning is used in the program to improve implementation.

Lessons Learned from the Previous Two Years of Implementation:

Given that we have only just finished Quarter 1 in Year 3, it would be useful to share lessons from Year 2 regarding the need for adapting to the major dual challenges of Covid-19 and political instability, both of which entail safety issues. These challenges will remain in Year 3, and hence the relevance of these lessons moving forward. The implementing challenges during Year 2 applied mainly to pond water quality monitoring since COVID-19 resulted in several lockdowns and serious concerns over infection risk, while the political unrest caused by the February 2021 coup meant risks of violence. The activity managed these risks by overlaying the location of ponds listed in

the WorldFish database with comparatively safe areas in Shan State. This allowed the activity to avoid major delays in establishing a network of monitored ponds in the Hsihseng Township, Southern Shan. Once the geographical option was identified, the team was able to modify the activities while maintaining the essence of the research.

Adapting the field implementation with the evolving situation:

According to the current political situation and COVID-19 pandemic, the postponement of in-person training events, workshops, and meetings or switching to virtual mode is inevitable. So, the *Activity* staff is trying to meet with Aquaculture Promoters (APs) regularly and assess whether field-level events and workshops will be held or not. As water availability became scarce fish were harvested early. We supply fingerlings as early as possible providing water is available. On the other hand, vegetable seed is also provided and distributed seasonally not only for improved household nutrition but also as an alternative income for the beneficiaries.

Market Facilitation and Fostering Business Partnerships:

Efforts to build trust and encourage business partnerships among different farmers are producing positive results. For example, nursery farmers have forged relationships with grow-out farmers through the facilitation of the *Activity* and it has helped strengthen the supply chain, expand their markets, and ultimately increase incomes while filling local demand. At the same time, grow-out farmers have been able to save money on transportation without having to go far to purchase seed, which enabled them to offer reasonable prices for fish harvested. This is emerging as a promising market development model that can be a huge success if taken to scale.

Linkages with the Market Actors:

It continues to be of critical importance to invest in the facilitation of market linkages to increase farmers' income because participating farmers prefer to sell their fish locally where they can secure a better price than from retailers. The *Activity's* provision of fish seed subsidy to farmers has had an unintended impact on the nursery farmers' ability to sell their fingerlings, which will be monitored closely to better understand the long-term impact for future management decisions.

Reducing Fish Mortality:

In the second year of *Activity* implementation, many fingerlings died due to the flawed catching practices in the cold season in Nursery Ponds. Lack of skills on how to catch fish in hatcheries leads to more deaths and injuries. It has been recognized that it is highly risk to catch fingerlings in the cold season. From now on fingerlings can't be caught in the cold season. The best practice is to catch them with care when the fingerlings are in the nursery ponds.

7 Planned Activities for Next Quarter Including Upcoming Events

- Small Scale Aquaculture (SSA) and basic nutrition module training to the selected new farmers in the targeted villages will be conducted in all *Activity* areas. The training sessions will include refresher training for the Y2 farmers. Along with the training sessions, demo and nursery farmer selection will be conducted.
- Under the Farmer to Farmer (F2F) collaborative activity with Fish for Livelihoods, 8 types of technical training (1. Business Planning, 2. Record Keeping & micro-credit accessibility & crop insurance, 3. Risk Management in farm production & market instability & climate change, 4. Vegetable gardening and Silvoaquaculture, 5. Fruits & Vegetable Nursery & nutrient exchange in integrated farming, 6. Water quality management & use of pro-biotics in fish ponds, 7. Clustered farm production for improved marketing, 8. Community Fish Farming) will be conducted in Q2. F2F will find US Volunteers and Local Volunteers to provide TOT training to the implementing partners and Fish for Livelihoods' Field

Coordinator, after receiving the training they will provide a series of training sessions for the farmers in the targeted areas.

- The pilot activity of CBO capacity building training for the selected 10 CBOs in the Shan and Kachin area will be started in the coming reporting period.
- The water quality monitoring protocol will be implemented from January 2022 and will continue for quarters 2, 3, and 4. This will include;
 - Continuing monitoring in ponds covered in Year 2, and expanding to other ponds using the pond owner list available from WorldFish. This will involve high-resolution automated data-loggers to measure changes occurring in ponds with high precision (diurnal changes etc.), and continuous measurement of water level, temperature, electrical conductivity, and Dissolved Oxygen.
 - Regular in-field monitoring by the Project Coordinator to collect data from the data loggers and collect the observations and responses of pond owners/operators for prevailing agro-ecological conditions.
 - Dialog with the pond owners/operators commenting in January based on collected data will help the project gauge farmers' awareness of key risks and best management practices of small-scale aquaculture. The results of the water quality measurements will be directly linked to iteratively improving capacity-building activities on pond management, in conjunction with WorldFish and other project partners.
 - This aspect of citizen-based science, where pond owners/operators are trained to use 10 simple water quality monitoring, is expected to reveal the scalability of such an approach to enable greater end-user empowerment and contribution of grounded data to inform policy and planning decisions. Questionnaires will be developed and applied to obtain primary data on agrochemical use by farmers in the pond monitoring areas. Telephone surveys will be used if field surveys are deemed unsafe.
- Evaluation and selection of households applying the best-integrated fish Agri-food system in F4L Activity areas. Tangible prizes will be awarded to the winners and they will be featured in the F4L newsletter to be disseminated in the areas so others can learn and replicate from the winners' approach.
- Training on Good Post harvest practices for good business among fresh fish vendors and fish processors in Activity areas. After training, selected participants identify their needs that can facilitate in changing good fish handling behaviors improving their income.

Annex A: Progress Summary

PMP Indicator progress - USAID Standard Indicators and Project Custom Indicators

Indicator	Data Source	Baseline data		FY 2022		Quarterly Status – FY 2022				Annual Performance Achieved to Date (in %)	Comment(s)	
		Year	Value	Annual Cumulative Planned target	Annual Cumulative Actual	Q1	Q2	Q3	Q4			
GOAL: Inclusive and sustainable aquaculture growth to improve nutrition and food security especially for reproductive-age women and children under five in central and northern Burma.												
EG.3-2: Number of individuals participating in USG food security programs [IM-level]	Firm records, activity records, training participant lists, or through census or sampling of participating firms/farms/families/individuals	-	0	2500	503	503					20.1%	The farmer selection process is ongoing.
Intermediate Result (IR): IR 1 Small-scale aquaculture production increased by improved land and water use, and increased access to information, high quality inputs and to credit. and to credit.												
EG. 3-10, -11, -12: Yield (i.e. production/unit area) of targeted agricultural commodities among program participants with USG assistance	Farmer; Sample survey (Survey questionnaire), farmers' record books, and production database		3288 kg/ha	10% increase from the baseline	N/A	N/A						
Intermediate Result (IR) I : Small-scale aquaculture production increased by improved land and water use, and increased access to information, high quality inputs and to credit. and to credit.												
Sub-IR 1.1 : An enabling environment is created to increase the engagement of farmers in commercial aquaculture production (water and land use and market knowledge)												

Indicator	Data Source	Baseline data		FY 2022		Quarterly Status – FY 2022				Annual Performance Achieved to Date (in %)	Comment(s)
		Year	Value	Annual Cumulative Planned target	Annual Cumulative Actual	Q1	Q2	Q3	Q4		
Custom 1.1: Percentage of farmers shifted from subsistence to commercial aquaculture practices	Reports; surveys; farmers' record books and production database	-	0	600	N/A	N/A	-	-	-		
Sub-IR 1.2 : Efficiency of aquaculture production increase											
E.G. 3.2-24: Number of individuals in the agriculture sector	Farmers; private sector; Market	-	0	1200	N/A	N/A	-	-	-		
Sub-IR 1.3 : Increased access to credit and financial instruments											
EG. 4.2-7: Number of individuals participating in USG-assisted group-based savings, micro-finance or lending programs [IM-level]	Farmers; private sector; Market analysis – Monitoring Evaluation and Learning (MEL) team, BMP Checklist	2021	13%	600	N/A	N/A	-	-	-		
Sub-IR 1.4 : Increased access to fish seed through engaging and strengthening linkages between private and public sector											
Custom 1.4: Number of fries and fingerlings produced by the hatcheries and nurseries supported	Hatchery and nursery record books	-	0	200 million	33710	33710	-	-	-		
Sub-IR 1.5 : Increased availability and access to quality affordable feed using agricultural co-products by farmers											
Custom 1.5 Number of people accessing quality feed through the newly established feed mills	Feed maker record books	-	0	600	N/A	N/A	-	-	-		
Custom 1.6 Number of non-participants (indirect beneficiaries) engaged and assisted by the Activity	Farmers Database (non-participants), Monitoring Tools, IP monitoring records	-	0	5000	N/A	N/A	-	-	-		
Sub-IR 1.6 : Enhanced capacity and role of MFF and its associations in supporting SSA in improved management practices											

Indicator	Data Source	Baseline data		FY 2022		Quarterly Status – FY 2022				Annual Performance Achieved to Date (in %)	Comment(s)
		Year	Value	Annual Cumulative Planned target	Annual Cumulative Actual	Q1	Q2	Q3	Q4		
CBLD-9: Percent of USG-assisted organizations with improved performance [IM-level]	MFF report (associations reports on activities), and CBOs record.	-	0	2	N/A	N/A	-	-	-		
Intermediate Result (IR) 2 : Access of SSA to domestic markets increased and consistent supply of food safe fish and fish products ensured											
EG.3.2-26: Value of annual sales of producers and firms receiving USG assistance [IM-level]	Project beneficiaries/farmers; Automated Directives System (ADS) implementation statistics, MEL record, Sales Databases	To be collected	million	3 million	N/A	N/A					
Sub-IR 2.1 : Clustered production using BAPs to improve direct marketability of product increased											
Custom 2.1: Number of farmers groups selling fish and fish products using BMPs (Better Management Practices)	This indicator will be collected directly all the group producers and firms using BMPs. (Partner record); MEL data collection, BMP Checklist, Production Database	-	0	5	N/A	N/A	-	-	-		
Sub-IR 2.2 : Food safety practices adopted /integrated into fish processing and fresh fish trading											

Indicator	Data Source	Baseline data		FY 2022		Quarterly Status – FY 2022				Annual Performance Achieved to Date (in %)	Comment(s)
		Year	Value	Annual Cumulative Planned target	Annual Cumulative Actual	Q1	Q2	Q3	Q4		
Custom 2.2: Number of fish processors and fish vendors improved their processing practices	Data will be collected directly from and processors and fresh fish vendors that have adopted food safety measures and practices. This activity is connected with the sub-IR 3.2. Market Analysis; MEL data collection; BMP Checklist	-	0	8	N/A	N/A	-	-	-		
Intermediate Result (IR) 3 : Improved dietary diversity and consumption of safe food, and increased access to WASH package, especially in Women of reproductive age and children under five											
GNDR 2: Percentage of female participants in USG-assisted programs designed to increase access to productive economic resources [IM-level]	Depends on the data source of the indicator(s) used to quantify the GNDR-2 indicator	-	0	35%	N/A	N/A	-	-	-		
Intermediate Result (IR) 3 : Improved dietary diversity and consumption of safe food, and increased access to WASH package, especially in Women of reproductive age and children under five											
Sub-IR 3.1 : Increased awareness on nutrition and WASH practices											

Indicator	Data Source	Baseline data		FY 2022		Quarterly Status – FY 2022				Annual Performance Achieved to Date (in %)	Comment(s)
		Year	Value	Annual Cumulative Planned target	Annual Cumulative Actual	Q1	Q2	Q3	Q4		
HL.8.2-2: Number of people gaining access to a basic sanitation service as a result of USG assistance [IM-level]	Implementing partners through direct count of participant households and estimates of the number of people living in those households in the zone of influence, participant-based surveys, Project Participant Database	-	0	800	N/A	N/A	-	-	-		
HL.8.2-5: Percent of households with soap and water at a handwashing station on-premises [IM-level]	Multiple Indicator Cluster Surveys (MICS) (Round 4 and later) conducted by UNICEF (http://mics.unicef.org/tools) - - Demographics and Health Surveys (DHS) Macro (http://www.measure.dhs.com/countries/) - Household surveys, which may be conducted by USAID, contractors, grantees, or a third-party evaluator during USG-funded interventions	2021	80%	100%	N/A	N/A	-	-	-		
Sub-IR 3.2 : Improved access to diverse, safe and nutritious food											

Indicator	Data Source	Baseline data		FY 2022		Quarterly Status – FY 2022				Annual Performance Achieved to Date (in %)	Comment(s)
		Year	Value	Annual Cumulative Planned target	Annual Cumulative Actual	Q1	Q2	Q3	Q4		
Sub-IR 3.3 : Improved diet diversity and food safety for young children and women of reproductive-age through SBCCs and nutrition education											
EG.3.3-10: Percent of female participants of USG nutrition-sensitive agriculture activities consuming a diet of minimum diversity [IM-level]	Participant-based survey reports. Data collection through routine reporting systems	2021	59%	80%	N/A	N/A	-	-	-		

Annex B: List of Activity Staff Members

Name of Staff	Title	Duty Station	Status	Remarks
Michael J. Akester	Chief of Party	Yangon	Active	Left Myanmar and temporarily relocated to home country, United Kingdom, during Covid –19 second wave in 2021
Khaing Kyaw Htoo	Deputy Chief of Party	Mandalay	Active	
Koum Visidh	Finance & Operation Manager	Yangon	Active	Left Myanmar and temporarily relocated to home country, Cambodia, during Covid –19-second wave in 2021
Quennie Rizaldo	Human Nutrition Specialist	Yangon	Active	Left Myanmar and relocated to Thailand during Covid –19-second wave in 2021
Syed Aman Ali	Monitoring, Evaluation, and Communication Specialist	Yangon	Active	Left Myanmar and relocated to home country, Pakistan, during Covid –19-second wave in 2021
Thandar Soe	Project Accountant	Yangon	Active	
Than Than Swe	Project Support Officer	Yangon	Active	
Lae Lae Kyaw	Finance Officer	Yangon	Active	
Than Than Win	Cleaner	Yangon	Active	
Nang Tin May Win	Information, Education, Communication and Training Coordinator	Mandalay	Active	
Kay Khaing Soe	Administrative Assistant	Mandalay	Active	
Nay Zar Tun	Finance Officer	Mandalay	Active	
NweNwe Kyu	Cleaner	Mandalay	Active	
Kyaw Win Khaing	Field Coordinator	Mandalay	Active	
Aye Nyein Zaw	Information, Education, Communication and Training Assistant	Mandalay	Active	
Aung Myo Lwin	Field Coordinator	Sagaing	Active	
Sai Noot	Field Coordinator	Eastern Shan	Active	Keng Tung

Name of Staff	Title	Duty Station	Status	Remarks
Yu Maung	Field Coordinator	Kachin	Active	Myitkyina
Kyaw Moe Oo	Field Coordinator	Southern Shan	Active	Nyaung Shwe
Su Su Mon	Field and Data Associate	Southern Shan	Active	Nyaung Shwe
Ei Ei Phyoe	Monitoring & Evaluation Coordinator	Mandalay	Active	
Naw Christine Pan Wai	Monitoring & Evaluation Coordinator	Yangon	Active	

Annex C: Progress Expenditures and Funds Status (amount is in USD)

Item	Budget Category	Budget	Expenditures (from previous period)	Expenditures (This reporting Period)	Total Cumulative Expenditures	Balance	% spent as end of December 2021
		From 15 Sep. 2021 to 14 Sep. 2024	From xxx to xxx	From 15 Sep. to 31 Dec. 2021	From 15 Sep. to 31 Dec. 2021		
		A	b	c	d = b + c		
I	Personnel (Salaries and benefits)	2,674,413	-	230,519	230,519	2,443,894	8.6%
II	Travel and Transportations	205,250	-	398	398	204,852	0.2%
III	Supplies	264,405	-	14,124	14,124	250,281	5.3%
IV	Contractual/Sub-grants	2,660,000	-	245,547	245,547	2,414,453	9.2%
V	Others	840,000	-	107,480	107,480	732,520	12.8%
	Total Direct Costs	6,644,068	-	598,068	598,068	6,046,000	9.0%
VI	Total Indirect Costs	1,355,932	-	122,055	122,055	1,233,877	9.0%
	GRAND TOTAL	8,000,000	-	720,122	720,122	7,279,878	9.0%

Obligated Amount	Cumulative Disbursement as of 31 December 2021	Expenditure from 1 November to 31 December 2021	Balance end of December 2021	% Spent as end of December 2021
a	b	c	d = a - b - c	e = ((b + c) / a) * 100
2,500,000	354,559	365,563	1,779,878	28.80%

Note: All figures are rounded.

Annex D – Selected Photographs of the Activity Implementation



Farmer identification and selection.
Place: Kyauk Sa Khan Village, Momouk Township
Photo credit – Aung Phyo Zin (MFF Staff)



Pond survey and selection
Place: Ward-4
Photo credit – Nan Wai Min Kyi



A Facilitator explaining workshop proceedings
Place- BRAC office, Nam Sang
Photo credit - Aung Khin Moe (CF, BRAC)



Field visit at Demo pond
Place- Ward 4, Nam Sang
Photo credit – Htay Su Hlaing (ATC, BRAC)



Hand Washing
Place: At the staff house, Tarlay Town
Photo credit – Sayar Aung Kyaw (PM)



Hand Washing
Place: At KMSS office, Keng Tong Town
Photo credit – Sai Noot (FC)



Revolving fund disbursement and Group discussing with fisherfolks
Place _ Inn Pyar village, Inle Lake
Photo credit – Kyaw Moe Oo, FC



Revolving fund disbursement
Place _ Hae Lone village, Inle Lake
Photo credit – Kyaw Moe Oo, FC



Place _ Thae Kaw village, Madaya Township
Photo credit – Kyaw Win Khaing (FC)



Place _ Thae Kaw village, Madaya Township
Photo credit – Kyaw Win Khaing (FC)



Place – Ywar Thar Kone village, Salin Township
Photo credit - Aung Myo Lwin

