

Fish for Livelihoods (F4L) Newsletter

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Fish for Livelihoods:

The United States Agency for International Development (USAID) funds the Fish for Livelihoods (F4L) *Activity*, which aims to increase fish production, labor productivity, food availability, and fish consumption especially for women and children from vulnerable households. It provides opportunities for entrepreneurial activities in small-scale aquaculture (SSA) systems and promotes social behavioral change messages that direct home production and market purchases towards nutritious-conscious household decisions.

Fish for Livelihoods is being implemented in five inland states and regions in Central and Northern Myanmar: Mandalay, Magway, Sagaing, Shan, and Kachin for a period of 5 years (October 2019 – September 2024). The *Activity* primarily targets SSA households with small ponds <0.5 acre (2,000m²) and associated supply chain actors. The *Activity* targets at least 10,000 individuals, mainly pond farmers, and fish supply chain market actors, over the 5 years of the *Activity*.

Activity anticipated results:

Inclusive and sustainable aquaculture growth to improve nutrition and food security, especially for reproductive-age women and children under 5 years of age in central and northern Myanmar.

IR 1: Production. Small-scale aquaculture production increased through improved land and water use and increased access

to information, high-quality inputs, and credit.

IR 2: Increased access to food-safe fish and fish products in the markets. Access of SSA farmers to domestic markets increased and a consistent supply of food-safe fish and fish products was ensured.

IR 3: Improved nutrition, food safety, and WASH. Improved diet diversity and consumption of safe fish products and increased access to WASH packages, especially for women of reproductive age and children under 5 years of age.



Figure 1. Group photo of Training of Trainers (ToT) at Nyaung Shwe, Southern Shan.

A. Capacity building of SSA farmers, fisherfolks, sub-grantees staff, and market actors:

The *Activity* continued building the capacity of participants on a range of topics. The capacity-building initiatives were rolled out

either in-person or virtually. The exchange of information – practical and theoretical – and application of skills remain central to these initiatives. The *Activity* successfully equipped 141 (male=84, female=57) participants with new skills in the current reporting quarter. The proportion of male

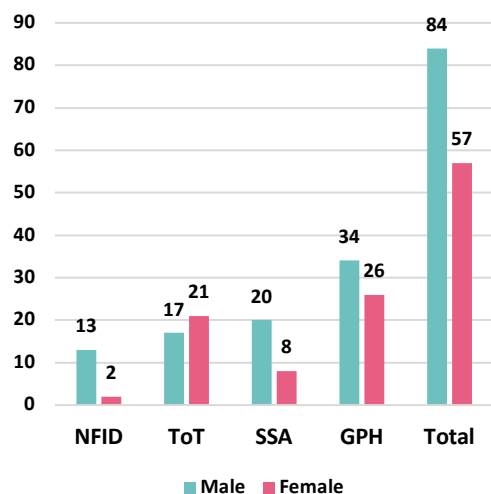


Figure 2. Gender composition of participants by training session.

and female participants for each of the training sessions are shown in Figure 2.

NFID=Nursery and Fish Induced Breeding, **ToT**=Training of Trainers, **SSA**=SSA Module 2 & 3, **GPH**=Good Post Harvest.

1. Nursery and Induced Fish Breeding Training of common carp in Myitkyina Township, Kachin State:

Since late 2019, the *Activity* has been building the capacity of SSA farmers in the Kachin region primarily in their farming business, which ensures higher incomes and productivity. On April 05, 06, and 08, 2022, the *Activity* conducted nursery and induced fish breeding training at the MFF Office and Hatchery located at Myitkyina Township, Kachin. The training session was attended by 15 (male=13, and female=02) participants. These 15 participants comprised of four nursery farmers, five SSA farmers, and six MFF

staff members. Figure 3 shows participants observing a demonstration on induced fish breeding.

The participants acquired new knowledge on carp nursery management that will help improve the quality of fry production and increase survival rates when the learnings are put into practice.

The practical session helps them to gain on-site experience in nursery management practices. For the induced carp breeding training sessions, the farmers managed to learn both theory and practical aspects such as selection of male and female brood fishes, weight sampling of fish, mixing and preparation of hormone, collection of eggs, and feeding of fry with boiled chicken egg yolk. The farmers learned the right method to mix the hormone with distilled water and the right dosage to inject into the fish during the induced breeding training held in the afternoon.



Figure 3. Participants observing a practical demonstration on induced fish breeding in Kachin.

2. Training of Trainer (ToT) on SSA for improved human nutrition in Nyaung Shwe Township, Shan State:

The *Activity* carried out an in-person Training of Trainer (ToT) session in Nyaung Shwe Township from May 13 to May 22, 2022. The ToT session was attended by 20 (male=09, female=11) participants from sub-grantees. A total of 18 (male=08, female=10) persons from

In partnership with

WorldFish also attended and facilitated the ToT sessions.

During the ToT session, WorldFish met with Shwe Inn Thu and Hnalone Hla Inn Maung Mae – two Community Based Organizations (CBOs)/Civil Society Organizations (CSOs) – to discuss collaborations in the future, especially for the reduction of losses during post-harvest. The CBO/CSOs had received assistance from the *Activity* in the form of capacity-building in the recent past. This collaboration will be a step forward toward the localization process of USAID.

The *Activity* successfully trained 20 staff members of sub-grantees who will now act as trainers in their assigned constituencies (Figure 4). These trainers will equip *Activity* participants (farmers, household members of farmers, market system actors, etc.) with improved capacity and knowledge to ensure that farmers in Myanmar have a sustainable supply of affordable nutritious food for their families and they are also able to earn additional income for the household. The *Activity's* new initiative of strengthening the capacity of local entities (CBO/CSOs) in Myanmar is progressing well according to feedback received from the two CBOs with whom the *Activity* team met during the ToT session.



Figure 3. ToT participants visiting a hatchery as part of their training.

3. Shwe Nagar Mobile App and SSA module-2 and 3 training sessions for new farmers in Bhamaw and Momauk Townships, Kachin State:

On June 04 and 05, 2022, the *Activity* organized a two-day capacity-building session on using the Shwe Ngar (Golden Fish) mobile application (App), and SSA module-2 and 3 in Bhamaw and Momauk Townships, Kachin State. Twenty-eight (male=20, female=8) participants attended the session (Figure 5). The capacity building of SSA farmers is critical in this day and age. The farmers who underwent this rigorous capacity-building initiative are now more knowledgeable about aquaculture. The use of a digital application (Shwe Nagar) will allow them to access information at any point in time and keep them updated. The farmers will apply what they have learned, such as better management practices, to their ponds that will result in increased production of fish and income generation.



Figure 2. Participants being trained to use the Shwe Ngar mobile application.

4. Good Post Harvest Training for fresh fish vendors in Salin Township:

The *Activity* organized a three-day training session on good post-harvest practices from May 02 to 04, 2022 in Salin Township, Magway Region. The participants included fresh fish vendors and Community

Facilitators (CFs) from a sub-grant entity. A total of 13 participants (male=2, female=11) attended the session. The key objectives of the session were 1) to empower women and men fish vendors, 2) to maintain the quality of their fish to help them improve their income through better sales, and 3) to enhance their ability to provide food-safe fresh fish to consumers.

As a result of this training session, fresh fish vendors and CFs acquired knowledge on the importance of good post-harvest quality controls (Figure 6). These practices, when adopted, will improve the profitability of their businesses. The *Activity* expects a spillover effect from this capacity-building initiative when the participants share the newly gained knowledge with nearby vendors.



Figure 6. Understanding bacteria through a demonstration during the training.

5. Good post-harvest practices training for fisherfolk in Inle Lake, Southern Shan State:

The major livelihood activities of fisherfolk in the Inle Lake region include fishing, fish processing, and other fisheries-related activities, either for their own consumption or to sell the produce in the local market. The *Activity* organized an in-person training to deliver both theoretical and practical experiences regarding good post-harvest practices on June 08, 09, and 10, 2022. A total of 45 (male=32, female=13) fisherfolk attended the training sessions. The training

methodologies consisted of showing large visual aids printed on vinyl, presentations, group discussions, and practical demonstrations on proper icing of fresh fish and proper washing of hands with soap. The fisherfolk are trained on the importance of food safety practices, post-harvest quality controls, and fish preservation methods. A glimpse of this can be viewed in Figure 7.



Figure 7. Demonstration on proper cleaning and icing of fish.

B. Fish seed stocking in Sagaing and Magway Regions:

Fish seed stocking in Shwebo and Wetlet Townships, Sagaing Region, and in Salin and Pwint Phyu Townships, Magway Region:

In Shwebo, the *Activity* distributed 413,350 fingerlings (298,400 rohu and 114,950 common carp) to 450 farmers from June 02 to June 10, 2022. Similarly, in Wetlet Township, the *Activity* distributed 131,000 Genetically Improved Farmed Tilapia (GIFT) seed to 200 farmers. *Activity* field staff also demonstrated seed acclimatization techniques to the farmers and explained the importance of seed stocking density based on the pond area so

that the fish can grow well in captivity with less competition for food and habitat.

On June 10, 9,700 silver barb fingerlings were distributed to 11 farmers in Salin Township (Figure 8). Likewise, on June 11, 13,800 silver barb fingerlings were distributed to 54 farmers in Pwint Phyu Township. Aside from providing fingerlings, *Activity* field staff also demonstrated fingerling acclimatization techniques so that fish will be less likely to be stressed by water temperature changes.

The availability of fish seed is crucial and a farmer's priority in fish farming. With the assistance of the *Activity*, farmers received enough seed to culture for the upcoming production cycle. As the ponds are stocked with seed according to the right stocking density, and the farmers apply better management practices, the fish will grow faster than the previous production cycle.



Figure 4. A farmer stocking fish seed in Salin Township.

C. Behavior Change Communication (BCC) strategy:

Development of BCC strategy:

From April 04 to 20, 2022, the *Activity* started developing a BCC strategy with the

support of two international experts on nutrition and aquaculture technology. A total of eight key informant interviews (KII) and four focus group discussions (FGD) among target groups – women with children under 5-years-old and small-scale aquaculture farmers – were conducted. The KIIs and FGDs will ensure that the BCC strategy is based on information from a diverse pool of participants and with consideration of the situation in the communities where the *Activity* is working thus, making it realistic and achievable within the project period.

Furthermore, on May 25, 2022, the *Activity* and international experts presented the main barriers and enablers of the SSA farmers and mothers of children under 5-years-old to a total of 24 sub-grantees and WorldFish staff. The key results were; Consumption of diverse foods among mothers; 1) barriers and enablers vary by food group (and sometimes by food within each food group), 2) accessibility and affordability are major challenges, especially in rural areas or regions vulnerable to seasonality. Adoption of Best Management Practices among farmers; 1) the barriers and enablers vary for each farm area (or even each farmer), 2) the major challenges are the lack of water resources, the lack of access and/or the affordability of pellet feed, and fish loss due to predators and theft. The virtual meeting provided an opportunity for the *Activity* team and experts to verify and contextualize the results that can help develop a BCC strategy that ensures a higher adoption of good behaviors that can increase income and improve nutrition among project participants; the main goal of the *Activity*.

D. Monthly progress meeting with *Activity* Partners:

Activity monthly progress meeting:

On April 25, 2022, the *Activity* convened a virtual meeting with sub-grantees. The objective of the meeting was to discuss progress within the past month, planned activities, challenges in implementing the *Activity*, and collaboration among sub-grantees. The sub-grantees and consultants shared with the audience the work they have accomplished and the challenges they have faced during the implementation of the *Activity*. The unstable political situation in most of the *Activity* townships is improving with the notable exception of Khin U and Wetlet Townships and the Sagaing region where some villages have unfortunately been burnt by the military. The monthly meeting is a forum where the WorldFish *Activity* team discusses, collaborates, and makes key decisions that impact the implementation of the *Activity* with sub-grantees. It also provides an opportunity for sub-grantees to share their concerns, and exchange ideas among them and with WorldFish *Activity* teams.

E. Provision of vegetable seed kits:

Provision of vegetable seed kits to the farmers in Salin Township, Magway Region:

Undernutrition and micronutrient deficiencies still exist in poor rural households due to limited nutritional knowledge and inadequate food supply. To promote improved nutrition and availability of diverse food, the *Activity* encourages farmers to practice fish-agri integrated farming systems by optimizing land and water utilization in their homestead

gardens. In May, the *Activity* distributed vegetables (pumpkin, bottle gourd, bitter gourd, watercress, and string beans) seed kits to 58 (male=49, female=9) SSA farmers in Salin Township, Magway Region (Figure 9). Integrated farming is a new concept to the farmers and they are learning how aquatic and agri-food production systems enhance their daily diets with diversified foods without significant investments, and the surplus can be sold for additional income as well. This will also address underlying causes of malnutrition through the consumption of a balanced meal consisting of fish and vegetables grown at the homestead level – a key result the *Activity* strives for.



Figure 5. A farmer in Salin Township, Magway receiving a vegetable seed kit supplied by the *Activity*.

F. Eastern Shan monitoring visit:

Field monitoring visit to Kengtung and Mongphyak Townships, Eastern Shan:

On June 20 and 21, 2022, the WorldFish *Activity* monitoring and evaluation (M&E) team carried out a physical monitoring visit to observe and assess the services being provided to SSA farmers. The M&E team members met with grow-out farmers in

Kengtung and Mongphyak Townships. In aggregate, the team visited nine (male=6, female=3) farmers. Eight out of nine were grow-out farmers and one, from Mongphyak Township, was a feed maker.

The farmers culture fish for personal consumption and to sell in the market, either directly or through an intermediary. Even though the farmers have been culturing fish for many years, they need guidance on how to increase production and knowledge of different fish species. A field monitoring visit provides an important opportunity for the M&E team to meet farmers in the field. Farmers are satisfied with the *Activity's* assistance and are willing to work with the local field teams and partners to gain more knowledge regarding aquaculture.



Figure 6. *Activity* M&E team members collecting data from SSA farmers in Kengtung.

For more information about the *Activity* and to access communication products and material, please visit the link given below:

<https://www.worldfishcenter.org/project/fish-livelihoods>