

Fish for Livelihoods Newsletter

Issue 6, January - March

Fish for Livelihoods:

The United States Agency for International Development (USAID) funded Fish for Livelihoods project 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 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 five years (October 2019 – September 2024). The project primarily targets small-scale aquaculture households (with small ponds <1 acre) and associated value chain actors. The project targets at least 10,000 individuals, mainly pond farmers and fish value chain market actors over 5 years of the project.

Project Anticipated Results:

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

IR 1: Production. Small-scale aquaculture production increased through improved and 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 Small-scale Aquaculture (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 five.



Figure 1. A woman showing Common carp harvested after 08 months from Tarlay townships, Shan, Myanmar.

Partial Harvesting of Fish:

The partial harvesting was carried out in two villages in Taunggyi and Madaya townships of the fish that was stocked in Year-1 (Oct 2019 – Sep 2020). In Inn Kone village, Madaya, Rohu species were harvested. The weight of the fish ranges from 500 to 650 grams and the price was noted as 2200 MMK per Viss. Similarly, in Naung Boke village, Taunggyi, grass carp species were harvested. The partial harvesting is a positive sign that the fish that were stocked amid the COVID-19 pandemic yielded from production. Initial harvesting is encouraging and a healthy sign towards increased production in the ponds where the activity stocked fish in the year-1. This production and subsequent income would be amongst one of the key achievements envisaged in the activity objectives.



Figure 2. Farmers harvesting fish at Taunggyi.

Designing for Behavior Change Training:

USAID's Fish for Livelihoods activity held an online capacity building training for community facilitators, team leaders, WorldFish M&E team, IEC and Training Coordinator, and Field Coordinators from 11th to 15th January. The training was facilitated by Dr. Saw Eden, Nutrition Advisor, Save the Children. The training; 1) built the capacity of the participants in

analyzing components of the Designing for Behavior Change (DBC) framework, 2) developed the skills of participants to assess data from Barrier Analysis or Doer/ Non-Doer study to identify bridges of activities, and 3) applied DBC framework in the participants' programs and developed strategies based on formative research results. The training served as an introduction to the forthcoming barrier analysis study that the Fish for Livelihoods project team and partners will conduct in 2021. Moreover, the training helped in identifying the behaviors and the priority group to study that will lead to a higher likelihood of adopting positive nutrition and WASH behaviors improving health and nutrition among project participants.

Brood-stock categorization in a hatchery for the trial:

In a newly established Tilapia Hatchery at Kyone Ywar village, Madaya Township, Mandalay, 2,250 broodstock were segregated based on the sex amongst male and female. In aggregate, 2,250 (male = 1,143, female = 1,107) broodstock was selected. They were separated as male within 10 hapas and female within 10 hapas. At the time of segregation, the fish weight was 100 g and the feeding rate was 2.5%. In the future, the application of 10 g Vitamin C in 1 kg of feed (mixing procedure, dilute first 10g Vit-C in 200 ml water for 1 kg feed and then evenly spread over the feed through a sprayer) will be applied which will help reduce cold stress and develop mature eggs. This segregation will help to prevent; 1) Early mating between male and female, 2) Stock the male and female with a proper ratio in hapas and, 3) Collect fertilized eggs from the hapas instead of losing them if they bred in an open pond.

Promotion of Genetically Improved Farmed Tilapia (GIFT) :

A contract between WorldFish and a private hatchery in Kyone Ywar village, Madaya Township, Mandalay was signed on February 02, 2021, to establish a Genetically Improved Farm Tilapia (GIFT) hatchery. The owner of the hatchery was very keen to establish the Tilapia hatchery in the area because there is a huge demand around Mandalay city. Currently, there is no private hatchery in the area and the fish culture farmers always rely on the Department of Fisheries (DoF) hatchery which is more than 20 miles away from the Kyone Ywar village. The establishment of a private hatchery in Madaya township will immediately benefit project participants from seven (07) villages, and other farmers from 20 villages in the peripheries. The access to quality fish seeds produced from the hatchery will save the cost and time of the farmers and, ultimately results in improved tilapia production in Madaya township and else in Myanmar.

Hygiene kits provision to Orphanage school, Bamaw Township, Kachin:

“Fish for Livelihoods” field team along with an Implementing Partner’s (IP) staff visited an orphanage school on January 22, 2021, in Bamaw Township, Kachin. The activity provided 93 (Male=55, Female=38) hygiene kits to orphanage students. Each of the hygiene kits contains three types of soap, toothpaste, toothbrush, towel, slipper, and sanitation pads for the girls. In addition to this, Information Education and Communication (IEC) materials on good hygiene practices were handed over to the students to promote the importance of handwashing with soap in critical times and using toilets when defecating. This will have positive health implications on their routine hygiene practices and, it will lead to

positive behavior change and eventually towards healthy adult life.

Training of Trainer (ToT) on Small Scale Aquaculture (SSA) and Nutrition:

Fish for Livelihoods field team and an agriculture consultant delivered refresher ToT on Small Scale Aquaculture, nutrition, pond-dike cropping to IPs staff in Nyaung Shwe Town, Southern Shan state in January 28-29, 2021. A total of 16 (Male=6, Female=10) field staff from Implementing Partners; KMSS, BRAC, MFF, and Inlay Lake Committee attended the session in person. One of the representatives of WorldFish can be seen delivering session in the figure-3.

The capacity of the staff has been improved as a result of ToT delivered in year 1, and now with this refresher ToT, they got an opportunity to further their knowledge and skills on SSA, WASH, nutrition, and dike cropping. This will help to boost their confidence when they would deliver training sessions to the farmers and meet them at the field.



Figure 3. A Field Team Member delivering a ToT session.

SSA and Nutrition Key Messages training to the farmers (In-person training in the village):

Training sessions on small-scale aquaculture SSA, WASH, nutrition, and dike cropping were conducted from January 19 to 23, 2021 in Tar Lay and Mong Hpyat townships. A total of 104 (male=85 and female=19) from San Pya Kachin, Par Tun, Phoe Tar, Wan San, and Ma An Khan villages attended these sessions. It is assumed that farmers gained knowledge on SSA, nutrition, WASH, and dike cropping systems through these capacity-building training. They are going to apply these newly learned techniques to their ponds, pond dykes, and eating habits. Eventually, farmers will be benefited through increased fish and vegetable production, income, and consumption of nutritious diets.



Figure 4. A Field team member delivering SSA training sessions to the Farmers.

Theory of Change (ToC) and Monitoring & Evaluation (M&E) workshop with IPs:

A virtual workshop on Theory of Change (ToC) and M&E was organized on Wednesday, February 24, 2021. This workshop aims to refresh key Implementing

Partner (IP) staff members' knowledge on the Fish for Livelihoods ToC, M&E tools, activity MEL plan, indicators, and reporting mechanisms. The workshop was attended by 39 (24 Male, 15 Female) participants including the Fish for Livelihoods WorldFish team members. The M&E workshop refreshed activity and IP senior staff knowledge on activity's ToC, goals, objectives, and indicators. The internal reporting flow and reporting mechanism by and between WorldFish and IPs were discussed and roles and responsibilities to either end were communicated clearly to all. The workshop helped WorldFish and IPs to become more familiar and productive with reporting, data management, and M&E.

Htwet Toe (mobile application) training session for WorldFish and IP team:

On February 4, 2021, a training session, arranged by the Htwet Toe training team, delivered to WorldFish and IP staff. There were 41 participants (Men=21, Women=20) and the trainer was Ko Aung Kyaw Zin Myo from Village Link (also known as Htwet Toe). The training was held in two separate shifts, morning and evening, to accommodate field staff to adjust their schedule. The field staff inculcated the same knowledge, acquired from this training session to the farmers and would brief them on how to install and use the Htwet Toe mobile App, how to access and enhance their knowledge on SSA, and WASH, and how they can make a call to a call center representative from Htwet Toe to ask questions and inquire about SSA, WASH, and other "Fish for Livelihoods" interventions. The aquaculture technical team from WorldFish always helps with these questions and provides the answer weekly to Htwet Toe representative.

International Day of Women and Girls in Science (February 11, 2021):

WorldFish Myanmar office has participated in the global campaign launched by the WorldFish to celebrate the 'International day of Women and Girls in Science.' Two emerging and young female scientists, one associated partially with the Fish for Livelihoods activity was highlighted through the blog on social media as part of the global campaign. The blog highlighted the research of young scientists that has been conducted so far in Myanmar within the fisheries sector. It was published on the WorldFish global website. It reflects the WorldFish Myanmar country office's commitment to the inclusion of young female scientists in our research and development works. One of the blogs can be accessed at;

<https://blog.worldfishcenter.org/2021/03/emerging-scientist-yee-mon-aung/>



Figure 5. Farmers harvesting fish.

Fish seed distribution to Year-2 farmers in Ho Pong township, Southern Shan:

In the third week of February, one of the IPs, the Myanmar fisheries Federation (MFF) distributed fish seed in Ho Pong township. A total of 19,000 fish seeds

(12,000 common carp and 7,000 grass carp) was bought from a private hatchery which was also supported by the Fish for Livelihood activity in Nyaung Shwe. The fish seed was distributed to the 21 new project participants - grow-out farmers. The newly identified SSA farmers, participants, received quality fish seed with the support of the project and it stocked in the grow-out ponds. The seeds are of good quality with large size, the farmer could harvest the fish and likely to get more profit in a shorter cycle compared to the last year.



Figure 6. A farmer weighing fish captured from his pond.

Fish feed production in Taunggyi, Southern Shan:

On February 23, 2021, a total of 100 Viss (approximately 160 Kilos) fish feed were produced using locally available ingredients at an activity-supported feed mill in Taunggyi. Fish feed was sold at an affordable price to four (04) project farmers in Nam Sang. The feed production business is a new business for the feed miller and is generating more income for the owner. The owner earned 110,000 Kyats (MMK) from selling the feed. There are many small-scale fish farmers in Taunggyi and nearby townships who cannot afford to buy the commercial feed. There is a good potential to produce affordable quality feed and distribute it to the farmer in the area. Quality feed applied in activity-supported ponds will eventually

result in increased production and income for the farmers.

Small Indigenous Fish Species (SIS) partial harvesting practical on-farm training:



Figure 7. SIS Partial Harvesting in fishpond supported by the USAID intervention.

SIS partial harvesting practical training to five (05) staff of IP, KMSS was conducted on March 04, 2021. It took place at Wan Latt village, Kart Tai Tract, Kengtung Township. The trainer followed the SIS partial harvesting guideline pamphlet which was distributed to all farmers and the staff. The technique of harvesting SIS is very convenient because the farmers need not go down to the pond water and harvest the fish. It is very useful and less laborious work for women and can be done without support from other family members once a gill net is installed on homestead ponds. Field Coordinators trained IP staff on how to catch SIS and demonstrated several times as a part of the training course. Each demonstration time they harvested between 20 grams to 100 grams of SIS. This training was provided to IP staff and they had a plan to replicate it with the farmers. The staff

gained knowledge on how to partially harvest SIS and what are the nutritional benefits of eating SIS. When the farmers get this training and they apply the learned technique, this will be beneficial to Households. When children under 5 years of age and women of reproductive age consume SIS whole (with head and bones intact) frequently, they will be benefited nutritionally because SIS contains Vitamin A, Vitamin B12 Calcium, Iron, Zinc, and essential fatty acids that are needed for growth and development.

Sharing experience of Fedwell Foods, Myanmar, and Danish Care Foods, Cambodia:

During the first week of March, the Fish for Livelihoods activity conducted an online meeting with the managers of Danish Care Foods and Fedwell Foods. The main aim is to link Fedwell Foods with Danish Care Foods to learn from Danish Care Foods' experience when developing therapeutic fish-based products in Cambodia <https://fish.cgiar.org/impact/stories-of-change/nutrix-big-reach-small-fish-nourishing-cambodia>. The meeting helped Fedwell foods on coming up with simple marketing strategies and on which products they should focus their effort and time on before the partnership with the Fish for Livelihoods activity ends. Also, after the initial meeting, Fedwell foods can directly communicate with Danish Care Foods for further questions related to product development and creative business strategies that can support in making the products with dried fish powder available at the local market in Myanmar.

Fish seeds distribution to Nursery Farmers in Kachin:

The Fish for Livelihoods activity, with the support from MFF Kachin, distributed fish seeds to targeted nursery farmers on March 10-11, 2021. A total of 370,000 fingerlings (Tilapia = 110,000, Common carp = 95,000, and Rohu = 165,000) were distributed to four (04) farmers across different villages in Myitkyina, Moegong, Bamaw, and Waimaw Townships. The size of the fish seeds varies from 1 to 2 inches. The farmers will nurse these seeds for 3 to 4 months until the time of the monsoon onset, then the nursery farmers can sell bigger and improved quality fingerlings at a higher price. Nursery farmers and their families are intended to benefit from the provision of fish seeds. Farmers were satisfied with the activity's assistance and assured their cooperation in the future. The farmers and their families are expecting to get more income from their nursery ponds within a few months and, will provide quality fish seeds to grow-out farmers in Kachin state.

Training on good post-harvest practices for fresh fish vendors in Pekhon:

Despite the challenging situation that prevails in-country, on 11th & 12th March 2021, Fish for Livelihoods delivered an online training to 11 participants through Asper Consulting company to selected fresh fish vendors, staff from KMSS Pekhon, and the WorldFish field team. The key topics discussed in the training included; 1) Good Post-Harvest Practices = Good Business, 2) Quality Fish is in Your Hands, 3) Ice for Profit,

4) Clean and Attractive Work Places for Good Business, and 5) Roles of facilitator and facilitation techniques. Aside from improving fresh fish vendor's food safety practices, the training aimed to build their capacity to become facilitators so they can provide training to other vendors in their area without the support from NGOs and other projects. The training provided detailed information on how to facilitate and best use the manual of the good post-harvest practices for fresh fish trading. The topics learned will help fresh fish vendors improve the quality of their fresh fish leading to improve income and enhancing their ability to provide safe and fresh fish for consumption among local consumers which are the ultimate objectives of the Fish for Livelihoods activity.

Post-coup challenges being faced by the activity staff and IPs:

The months of February and March were the first two months post-coup. Some of the challenges IPs facing include; restricted field movements, delivering training, data collection, carrying equipment and materials (e.g., laptops, cameras, GIS kit) in the field as those might be confiscated. Also, in some of the townships, villagers discouraged field staff to hold group activities in an open area because of section 144 imposed by the police in many townships, no one taking responsibility for the village committee due to the fracture political system, and the staff was not allowed to work in their field offices because the community coerces them to observe civil disobedience movement (CDM) in solidarity with the pro-democracy

protestors. In some of the townships, IPs were able to implement activities as planned because there's not much turbulence. There is a consensus that in future activities will be conducted only if the situation allows and the safety and security of staff members and project participants are ensured.

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>