



# MYCulture

Promoting Sustainable Growth of Aquaculture in Myanmar to Improve Food Security and Income for Communities in the Ayeyarwady Delta and Central Dry Zone

## Success story

### Small-scale aquaculture brings light to the life of a woman fish farmer

It is challenging to do small-scale aquaculture in the Central Dry Zone. The lack of water sources, limited knowledge of aquaculture, and adverse climatic conditions make it difficult for anyone. For Hnin Nu Moe, however, it was a challenge that the 36-year-old married woman embraced as she engaged in small-scale aquaculture thanks to support from the MYCulture project, which funded by the Livelihoods and Funds Trust (LIFT) (2015–2019).

Moe has five family members: her mother-in-law, sister-in-law, husband, a 2-year-old baby girl and one son, who is in Grade 6. Moe, her husband and sister-in-law all work as local farmers, but even though they all worked hard it was tough for them to meet their daily needs with their limited income from farming. Moe used to borrow money, with interest, whenever her family needed financial support, and she struggled to pay back the loans. She found it hard to earn enough income to fulfill the family's needs and survived with limited income—until she joined in the MYCulture project. As a fish farmer through PACT Myanmar, she was soon able to pay back her debt with the income gained from aquaculture.

Moe attended the training sessions organized by the project, where she improved her knowledge of aquaculture and later applied what she learned in her training to her pond. Then in July 2016, she stocked her pond (150 x 70 feet) with 750 rohu. Less than a month later, with support from the project, she stocked

her pond again, this time with 180 grass carp. Three months after stocking, she noticed that the fish were growing well. She had applied better management practices she had learned in the training sessions, including regular feeding, sampling, replacing the water, applying fertilizer and testing the water quality.

Six months after stocking, Moe harvested 547 fish weighing a total of 219.2 kg, with an average weight of about 65 1040 g. She sold her fish at MMK 4000 per viss (1viss=1.6 kg). In total, she earned MMK 550,000 from her initial investment of 50,000 MMK, including labor costs.

Moe said she does not need to borrow money anymore to meet her family needs. Instead, she has bought a cow—something she had been dreaming of doing since her previous cow was killed accidentally. Aquaculture has made her family more healthy, because they often eat the fish harvested from her pond.

*If we carefully follow all the techniques, knowledge we gained from the project, we would be successful fish farmers even if we have lots of challenges.*

—Hnin Nu Moe

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### Aquaculture brings joy and profits to a local family

Daw Than Myint lives in the village of Phoe Swar, where she owns 7 acres of farmland and her husband grows rice. She has two daughters, and both help her with household chores. There is enough income for her family, but it is no longer enough to cover the social events for relatives, as well as others, that she used to pay for.

Myint had heard about the MYCulture project during a village-level orientation organized by the Network Activities Group (NAG). She was very interested in aquaculture and immediately became a member. Aquaculture has always been a hobby of hers, and she already had a pond, where she used to culture fish using the limited knowledge and experience she had picked up.

In June 2016, with support from the project, Myint stocked her pond with 600 pangasius seeds were in her pond. She invested MMK 15,000 in her fish farm to cover the costs of pond preparation and labor. In February 2017, she harvested 585 pangasius weighing a total of 282 viss (451 kg). Using her own boat, she went to other villages, the town bazaar and any available markets to sell her fish. She estimates she earned about MMK 400,000.

Myint succeeded because she knew how to take good care of her pond thanks to the training she had received from the project. Even though people told her that the training sessions and meetings were a waste of time and would only disrupt her routine, she found them useful for her business. She also had help from her husband and daughters, who all assisted with the work. She also grew papaya, melon and kyun on her farm for extra income.

Now a successful fish farmer, Myint shares her knowledge and techniques with her relatives and others so that more people in her village will become interested in aquaculture.

*Beyond the project period, I will continue this job because I know fish seed sources and how to make fish culture business successful. I will continue this job because I know that there is profit for me and I have ponds, but I will prepare to minimize risks. If pangasius is not okay, I will change another species.*

*– Daw Than Myint*

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## Success story Training changes lives

U Thant Zaw is a farmer who lives with his family in the village of Koeintan in Pyarpon Township. His eldest daughter works at a factory in Yangon, while his other three children are still in primary and high school. As a fish farmer, Zaw and his wife struggled to support their children's education and pay for other expenses. Their monthly income from farming was not enough to cover all their needs, and he accumulated debt on a monthly basis to support the needs of his family.

That all changed when Zaw joined the MYCulture project and saw how he could earn additional income for his family through fish farming. He absorbed all he could from the training sessions and applied everything he learned. He quickly became a knowledgeable and assertive as a fish farmer.

Zaw carefully followed and practiced the knowledge, skills and methods he received from training. He learned about pond preparation, seed transportation, acclimatization during stocking time, feeding regimes, keeping daily records, water quality testing, fertilizer application, replacing the water when necessary, monitoring other threats, fish sampling and harvesting.

weighing 20 viss (32 kg). In total, he earned nearly MMK 1.4 million.

With the money he earned from fish culture, Zaw bought 1200 ducks in hopes of earning extra income. He is now planning to extend his livestock business while continuing to work on aquaculture long term, using the training he has received from the project. He encourages to other farmers to apply what they learned to increase their profits through aquaculture—just like him.

*I am planning to keep working on small-scale aquaculture in future because I can get enough income in a short time for my family. I am so happy because I do not need to lend money on monthly basis for my kids and now I can be free from paying monthly debt.*

*– U Thant Zaw*

In addition to project subsidies, Zaw invested MMK 75,000 of his own money into pond preparation and pond maintenance. In May 2016, he stocked 1100 pangasius and 100 rohu seed, and the following December began harvesting his fish: 690 pangasius weighing a total of 552 viss (883.2 kg) and 80 rohu

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## Success story

### A local farmer strikes gold with silver barb

Daw Khin Pyone Yi lives in the village of Tha Late Chaung in Pyapon District. There are six members in her family, including three primary students and two migrant workers. Health problems prevented her husband from working and her children were still very young, so she had nobody to help earn money, because. To meet her family's monthly needs, Yi had to earn about MMK 100,000 every month. She had wanted to try earning money from fishponds but did not have enough cash to invest.

regular basis and measured the pH level and temperature once a week. Project staff assisted her in monitoring fish growth and adjusting the feeding rate monthly.

In January 2017, Yi harvested 718 silver barb, weighing a total of 88 kg, and earned MMK 200,000 from selling her fish. Until then, she had only done partial harvesting—eating some at home and selling the rest whenever money was needed to cover expenses related to her children's education.

On June 2016, Yi joined a farmers group after hearing about the MYCulture project from a village-level orientation organized by the Network Activities Group. She received aquaculture training, where she learned about pond preparation, including removing weeds and replacing the water. She also received technical instruments, fish seed, feeds, fertilizers from the project. She also had MMK 120,000 of her own money to invest.

*My children feel happy. They are interested in this job and help me in feeding and cleaning pond. I can support my children for their education from this pond.*

*– Daw Khin Pyone Yi*

The month, Yi stocked 900 silver barb in her pond and applied what she had learned to her fishpond. She fed her fish twice a day on a

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## Success story

### Good pond management brings benefits

Daw Hla Thein is a fish farmer from the village of Maenyo in the Thalike Kyi village track of Pyarpon Township. She has three family members, and they all work on the paddy farm, which is their main source of income. She owns 4 acres of land and receives over MMK 10,000 per month, including the extra income the family earns from growing plants and raising livestock, such as chickens and ducks.

Thein connected with the MYCulture project through the IMPROVING FISHERY GOVERNANCE SYSTEM (IFGS) and village development committee member U Win Tin, both of whom are connected to the Network Activities Group. She was very interested in doing small-scale aquaculture, even though she did not have enough available land.

Despite this, Thein was eager to try small-scale aquaculture. With the help of her three family members, she dug a new pond, and in January 2016 the project provided 6000 pangasius fry for her first culture period. She did all the things necessary for proper pond management: feeding the fry, applying lime, palae and T-super, and using a blue net, pH paper and a thermometer as well as other important equipment.

Thein joined the small-scale aquaculture training sessions regularly and systematically applied the aquaculture techniques she learned, such as feeding and pond management, to her pond. After harvesting, she distributed 3000 pangasius to her neighbors, and to restock her pond she bought fry from project nursery farmers at MMK 25 per

fry. Overall, her small fishpond earned her over MMK 90,000 in extra income from the harvest.

For her second culture period, the project rented Thein's fishpond to nurse 10,000 mola for 2 months at MMK 50,000 per month, starting in November 2017. She nursed them carefully, because she knew that mola—a small fish species that is full of vitamin A, calcium, iron, zinc and omega 3—is a very sensitive fish with a high mortality rate.

Before distributing mola fry to other fish farmers, Thein practiced netting mola twice to reduce the mortality rate and increase resistance at stocking time. Afterward, she applied lime to improve the water quality. She also distributed mola fry to other fish farmers and used the profits from her nursery pond to cover the cost of harvesting the paddy.

*Thein has a dream to not just operate a nursery pond, but also a grow-out pond. With everything she has learned about fish culture, nursery pond management and aquaculture technical knowledge from her training, she now has what she needs to make her dream come true. In 2018, she proposed to the project that she become a nursery fish farmer. She said she cannot thank MYCulture project enough for all the support she has been given.*

– Daw Hla Thein

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# Success story

## Farming increases fish and vegetable consumption at home

U Zaw Gyi is 48-year-old father of four who lives in the village of Ywarhit in the Ohn Tone village tract of Meiktila in the region of Mandalay. The village is 35 miles from the town center, approximately 2 hours by motorbike.

When Zaw Gyi was younger, there were only 27 households in the village, but over time the population has increased. The majority of the villagers farm traditional staples, such as rice, beans and peanuts. Over the years, he has observed changes in the weather. It has become drier and hotter affecting crop production.

In 2014, PACT Myanmar started to implement the Shae Thot project, which provided technical support in agriculture for his village. It also delivered maternal and child health and promoted water, sanitation and hygiene activities, with the aim of improving health and increasing income for the rural communities.

In 2016, PACT Myanmar entered into partnership with WorldFish through the MYCulture project, funded by the Livelihoods and Funds Trust (LIFT) (2015–2018). The aim was to increase the income of rural households and improve the nutrition of women, men and children through innovative small-scale aquaculture technology. In Zaw Gyi's village, the project provided financial support for fish seed, fish feed and digging ponds in order to start fish farming. To ensure high return on the project's investment, the training sessions included pond management as well as training in aquaculture technology. Zaw Gyi did not know the methods needed to farm fish, but he was very interested in aquaculture farming because his area has rich water resources that made it suitable for the project. The water flows easily, even if he digs only about 2 feet, unlike other villages that have difficulties getting water.

Currently, Zaw Gyi has one grow-out pond with tilapia and rohu, and one nursery pond with a mix of species, including rohu,

silver barb and tilapia. In addition, he started cropping vegetables on his pond dike. From the training sessions he attended, Zaw Gyi learned that fertilizer from rice bran and fish waste enriches the pond water with nutrients that he can in turn use for watering his vegetables. As a result, his production increased.

Aside from aquaculture production inputs, the project also provided vegetable seeds. This added valuable income for the family and increased their dietary diversity and frequency of eating nutritious food. Because of the accessibility of harvesting fish from the pond, they are now eating fish at least twice a week instead of only three times per month.

From the training he received, Zaw Gyi learned the benefits of eating fish as a rich source of animal protein as well as essential nutrients, especially for young children and pregnant and lactating women. In addition, fish farming has also reduced his household expenses on food allowing his family to divert a portion of their money to our other needs, such as fuel, rice and school fees.

*I would like to say thank you to the MYCulture project, because it has given us the opportunity to improve our lives by increasing our income and giving us nutrition information that can support us in living a healthy and happy life. With that, I will continue with aquaculture farming and vegetable production even when the project ends, and I will keep on spreading the information to other villagers.*

– U Zaw Gyi

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## Success story

### A local fish farmer's unquenchable thirst for aquaculture

U Nyan Lin is from the village of Hnone Gyi, 2 miles from Yinmarbin Township. He is 55 years old and lives with his wife, Daw Myint Wai. Together, they have six children (two daughters and four sons). Two are married, but the other four are still students. Lin's hope is that all of their kids will graduate and become educated people so that they do not have to work as hard as they do.

Lin's village focuses on agriculture farming rather than livestock for income, and his family's income mainly comes from agriculture farming as well. He works as a retailer, buying and selling materials (as retailer) at the village level, but also raises livestock (one pig and one horse). He and his wife work hard to provide their children with enough food.

PACT Myanmar came to Lin's village in 2016. Because he is a retailer, he had seen some fish farms before, in Yangon. Although he was interested in aquaculture, he was not able to try it. When the MYCulture project was introduced into our village, Lin was overjoyed: "When I feel thirsty," he said, "I fall down to the well." He began aquaculture after attending the meetings and training sessions supported by project. With the fish, feed and MMK 50,000 he received from the project, Lin dug a fishpond (70 x 30-feet).

In February 2017, Lin stocked his pond, for the first time, with 350 rohu fingerlings. The second time, the following December, he stocked 200 rohu and 150 silver barb fingerlings. During this time, he was not only working as an aquaculture farmer but also as a feed miller. The project supported him with a grinder and pelleter for his feed mill. On top of that, it also subsidized MMK 50,000 to cover the cost of setting up a feed mill as well as a feed dryer, which helped the village small-scale aquaculture group members as well as other nearby villagers, who are also aquaculture farmers. Lin started his feed mill in May 2017 and produced 1700 viss (2720 kg) of fish feed over 8 months. He found that pellet feed is better than rice bran because it reduces waste.

In the beginning, WorldFish provided raw materials for the fish feed. Lin now buys the raw materials himself in Monywa and Yinmarbin. Rice

bran and sunflower cake are cheap because they are local outputs. Dried fish is expensive, but the price has come down. One viss (1.6 kg) of dried fish used to cost Lin MMK 1300, but now it only costs him MMK 900 because of his experience working together with my wife.

Since Lin cannot do the work alone, his wife helps him. Her main responsibilities are mixing raw materials to make pellets and also drying the pellets. Sometimes, she also helps him with making the pellets and measuring the weight of the feed. MYCulture no longer provides farmers in the village with fish feed, so Lin buys raw materials with his own money to make pellets. He sells them to the farmers for MMK 1100 per viss, including the cost of transportation. If farmers buy at his home, the cost is MMK 1000 per viss. This allows him to make an MMK 300 profit per viss. Lin sold 350 viss, so he made over MMK 100,000 in extra income over just 2 months.

Lin has used this money to cover the cost of his children's education. When the project finishes, he plans to continue fish farming. He has already bought the raw materials. He will encourage other farmers to continue their aquaculture activities in the future, and he believes that his feed mill will be sustainable because fish culture has also started in nearby Pale Township.

*I would like to say thanks to the MYCulture project. We can eat fresh fish coming from my own pond. We have one fish curry at the ready whenever we want and can get nutritious meals. We had get extra income from my fish feed mill. So, I would like to call the project staff who are working on the MYCulture project "dream supporters."*

– U Nyan Lin



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## Success story

### Nursery farming for successful aquaculture

Soe Min Aung is from the village of PyanLaet in Yinmarbin Township, where he lives with four family members. Currently, he raises pigs and chickens, but he has always been interested in starting an aquaculture business.

In 2017, Aung was invited to join a fish breeding training session, organized by the Department of Fisheries, with about 25 interested fish farmers from nearby areas as well as government staff and staff and fish farmers from PACT Myanmar. The training included an illustration and explanation of the structure, organs of silver barb as well as eggs and injection conditions, and he found it all very interesting. At lunch time, he met with group from PACT Myanmar and began talking about starting aquaculture business.

Aung accepted PACT Myanmar's invitation to do small-scale aquaculture for two reasons. He wanted to work with the organization, and he was already doing aquaculture farming anyway. After an initial meeting, PACT Myanmar staff met with fish farmers from his village. Today, the project now supports five fish farmer groups in small-scale aquaculture.

In 2018, project staff advised him to start farming nursery fishponds. At the time, he was wondering whether a nursery pond would be successful or not and if the knowledge and technical skills he had learned would be enough to operate it successfully. But Aung trusted the training he received from the project and the government hatcheries near his villages, and he believes he can continue learning from both.

In February 2018, Aung decided to start a nursery pond. He began with 12,000 silver barbs donated by the PACT team. The project gave him MMK 200,000 to cover the costs of pond preparation and materials, such as an inlet/outlet pipe and a blue net. Three months after stocking, he harvested 2200 silver barb fry, which he sold to other grow-out fish farmers from

seven villages. Project staff organized and led operations for the first stocking because they lacked knowledge regarding packing and seed delivery. They did a lot of preparation before stocking. First, they filled the oxygen tanks. Then they collected materials, such as polybags along with rubber strings to tie them. By early June, they were ready to stock their ponds.

The fish farmers arrived from the village of Mitakune at about 05:00 after they finished packing. Aung was happy to see project staff and fish farmers working together. He also learned a lot about filling oxygen tanks and packing, which he enjoyed doing. He even gave 2 viss (3.2 kg) of fish from his ponds to his friends and other fish farmers. By working together with project staff and other fish farmers, they built up a friendship that will allow them to work together as a team in the future. After this stocking, they had 8500 silver barb fry left over out of an initial 12,000. Aung bought silver barb fry at MMK 13 per fry and was able to sell them for MMK 50 each. After deducting his investment costs, he made MMK 300,000 in profit from selling 10,000 fry.

*I gained a lot of experience on how to operate a nursery pond from training and practical experience and I will continue operating a nursery pond in the future. I really want to say big thanks to my friends who are sharing their technical knowledge and learnings to me included project staffs who are guiding and teaching trainings. I wish our project and project staffs keep supporting us for technics and trainings in future too.*

– Soe Min Aung

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## Success story

### Looking forward to a sustainable aquaculture business

U Kyaw Thaung lives in the village of Zee Taw, 6 miles away from Yinmarbin Township. He lives there with his wife and two sons, both of whom are students. The villagers are mainly paddy farmers, but they do not earn a regular income from agriculture.

PACT Myanmar started working in his village in 2013. Their main activities were organizing women's saving groups as well as groups for improving the health and security of women and children. In February 2016, the organization arranged a meeting to introduce a small-scale aquaculture project. Thaung had been hoping to start doing something that would provide him with a steady income. He had been wanting to try his hand culturing fish for a long time, and his village has good water resources, which improved his prospects for success.

Although was interested in the meeting, Thaung did not have a lot of experience. But once he joined the project and learned about proper aquaculture techniques, he found it very useful. In his village, only three people cultured fish, so he got together with fish farmers from the village of Lar Poet and formed a small-scale aquaculture farmers group called Kyan Taing Aung. Together, they stocked 125 rohu and 210 grass carp fingerlings in July 2016. However, all the fish died because they applied too much sulphur.

Undeterred, Thaung tried again. He dug a pond in another area and stocked 600 rohu fingerlings less than a month later. Although he dug two different fishponds, he was not worried about the cost, because the project had been

provided him with fish seed and feed as well as MMK 50,000 to cover the cost of digging the pond. In October 2017, he had a fish yield 93 viss (148.8 kg), which earned him MMK 372,000. Using that money, he restocked his pond soon afterward with 300 rohu and 300 silver barb fingerlings.

After seeing Thaung's success, other villagers became very interested and formed another small-scale aquaculture farmers group called Tet Khit Aung. Thaung even donated fish from his pond to make curry for other villagers. In a donation ceremony, pork curry and fish curry was made for his fellow villagers. Overall, he donated 20 viss (32 kg) of fish from his pond, enough to treat them to as much as they wanted. He wants to continue culturing fish long-term, even after the project is finished, because aquaculture has been so profitable for him.

*Thanks to project and project staff. This job is suitable for our long-term economy so we should do this activity. I would like to name this project as 'thinking long-term sustainable, culture the fish.'*

*- U Kyaw Thaung*

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## Success story The benefits of conservation

Daw Tin Tin Cho is a married woman who lives together with her mother, her husband and her four daughters in the village of Thel Eain Kyaungsu. They own 8 acres, which her husband uses for rice farming. Cho makes bean sprouts and sells them around the village in order to provide the household with an extra source of income. Her eldest daughter is a teacher. Her second daughter works in a factory in the city and helps supports the household financially. The two youngest daughters are both students, one of whom is in Grade 11 so her school and tuition fees are high. Because rice farming is a seasonal activity, they only make money after harvests. But it is not enough for their household. Cho's income along with the money her daughters earn is only enough to cover basic necessities, such as meals, and the education of the two youngest daughters, which leaves them with no extra money.

One day, Cho learned about the MYCulture project from Mg Win Naing, a member of the Fisher Development Association (FDA), who lives in the same village. She became interested and decided to participate. She asked if she could farm tilapia in her pond (43 x 38 feet). In May 2016, at her request, she was provided with 600 tilapia fingerlings, as well as urea, lime and TSP to use in her pond. Equipped with the knowledge she had learned from training, she was able to apply the inputs properly. Today, she continues to systematically use the feeds that she receives under the project. She also consistency measures the water

temperature and water quality, using pH paper. As a result, she has achieved high fish yields from her pond.

After 6 months, during harvest, Cho noticed that not all fish are the same size, so she sold 75 viss of larger fish for MMK 3000 per viss (1.6 kg), earning MMK 225,00 in total revenue. With that money, she was able to pay for her daughter's Grade 11 education. She put the remaining 250 tilapia in a *chan myaung* and continued farming. In her second year, she farmed 200 rohu and caught about 90 tilapia from her first year's stock, which she sold in the village for a total of MMK 80,000. A fish farmer from the same village bought 30 tilapia from her to serve as broodstock, and there about 100 fish still remain in the *chan myaung*. Cho can now support her daughter's education with the money she has earned from fish farming. She has told her neighbours about her success, and they, too, are now interested in aquaculture and will participate in this year's project. Cho said there are also many more people want to join next year.

*Even when the project is over, I will continue the fish farming. We can get surplus income this way and can handle the household problems. I want my environment to be as successful as me that's why I am sharing my experience.*

*- Daw Tin Tin Cho*

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## Success story Change for the better

Many women fish farmers from participating project villages in Pyapon Township (such as Hta Lon Yay Kyaw, Kyon Thin, Kwin Wine, Kyon Tar and Pa Tote Kalay) do not know the benefits of consuming small fish. But thanks to the MYCulture project, they now they know that eating small fish is good for children's health, body and even helps cognitive development.

*Nga-kaly-Oh-kat* is a traditional dish that women in these villages often made for meals. Before participating in the project, however, they did not know how to prepare the properly to maintain optimal nutrition. They used to wash mola several times, remove the heads, cut the abdomen and, after preparing them, fry them in a pan. After the project started, the women were given training on how to properly cook mola for optimal nutrition. Now when they cook mola, they only wash them once or twice, do not remove the heads, and remove the waste from the fish without cutting open the abdomen. They then pound them into fish balls, which are then fried prior to eating. Since learning how to properly cook mola, they have

shared this cooking method with relatives and acquaintances who have children.

Another way to eat mola is to ferment it and use it in a salad. This is done by adding sliced onion, oil and salt to the fermented mola during meals with rice. Since the project put up educational posters on how to cook mola in the schools and the streets, children have been asking their mothers to cook mola the same way as shown on the posters.

Overall, the demand for small fish has increased in some of the villages. One customer who buys pig feed said that, in the past, whenever he bought feed for his pigs he could see the heads of small fish it, but now there is no trace of fish heads at all.

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## Success story

### Moving forward through collaboration

Ko Yin Thein lives in the village of Hnaw Yoe, 2 miles away from Yinmabin. He lives there with six family members: his mother, grandmother, three younger sisters and one nephew. He is a 45-year-old mechanic whose job is the main source of income for his entire family. Although his income was sufficient enough to meet his family's needs, he wanted to take on another job to earn more money. The problem was that Thein did not know what other job he could do. That was before the MYCulture project was introduced into his village.

Although Thein had some interest in fish farming, he did not own enough land to do it. Fortunately, one of his friends rented his pond (100 square feet) to him so that he could join the project. Eleven farmers (six from Hnaw Yoe and five from the village of Myo Thit) organized themselves into a farmers group called *Sint Pwar Aung*.

The project provided them with MMK 50,000 for pond digging and preparation. They were also given fishing nets, measuring scales, a thermometer and vegetable seeds (including eggplant, watercress and long bean) for dike cropping. But Thein found it difficult to retain water in the pond because the pond was new.

In July 2016, Thein began his first culture period. He stocked his rented pond with 750 rohu, 140 catla, 90 grass carp and 100 mrigal fingerlings. Although his pond fills automatically with groundwater, there was

no water at the time of stocking. Yet even though he did not have any experience, the first culture period went well because he had received aquaculture training. In February 2017, he harvested his pond and got 40 viss of fish. It was not enough to make a profit, but he did not feel like he had failed.

The second time, Thein arranged and properly prepared his pond for stocking. In July 2017, WorldFish provided him with 1000 rohu and 1000 silver barb fingerlings. This time, his pond filled up with groundwater, so there was no need to pump water in. He did a partial harvest three times and got 120 viss (192 kg) of fish. He got MMK 5000 per viss (1.6 kg) for a total of MMK 600,000. Another 100 viss (160 kg) of fish remained in my pond.

*I feel very happy. Now I have a regular source of income which I can draw from whenever I need to. Thanks to project staff. I would like request to help in other area that are really needed. If project, project staff and farmers are linkage, our goal will reach and success.*

*– Ko Yin Thein*



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# Success story

## A second chance at success

Maung Aye lives with three other family members in the village of Kan Baung, 2 miles away from Salin Township. The family’s main source of income is aquaculture, but the family earns additional money by selling and growing flowers and vegetables. The farmland he owns is flooded land, which cannot be used to grow rice, so he prepared the land and started fish farming in 2013 without much experience. His land was full of lotus flowers, however, so his first attempt at fish farming was a total failure.

a fishpond. He stocked rohu and silver barb one spring, and by applying his knowledge of land preparation, sampling and regular feeding, he found that his fish grew well. In the past, he only used to grow bananas on the pond dike, but after being trained on how to grow seasonal vegetables properly, he applied what he learned and now makes more money. He also grows long beans, lady fingers and Roselle. Buoyed by such good results, Aye believes his fish will be even bigger this year than last.

In the spring of 2018, when the MYCulture project was introduced to his village, Aye attended an aquaculture orientation session organized by PACT Myanmar. He was very interested in fish farming, so he registered as a member, along with 13 others, after joining the orientation. Because local businesses produce fabric from the lotus flowers, people did not want to remove them from their ponds. However, thanks to project staff, they came to understand that fish farming is likely to fail if a pond is full of lotus flowers.

*I will encourage the rest 14 members of our batch to follow the instructions of the program. I expect to get more achievement in aquaculture in next years. I thank PACT Myanmar, WorldFish, staff from MYCulture program and donor who help fish farmers to increase income and to have food security and to get nutritional knowledge.*

*– Maung Aye*



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# MYCulture

Promoting Sustainable Growth of Aquaculture in Myanmar to Improve Food Security and Income for Communities in the Ayeyarwady Delta and Central Dry Zone



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## Success story

### Soulmates and partners for life

U Nyan Lin, a 55-year-old paddy farmer, lives in the village of Nong Gyi, 2 miles away from Yinmabin Township. People from his village make their livelihood as farmers. Lin inherited his family's agriculture business, and he also does some trading and breeds one pig and one horse. He has six children (four sons and two daughters) and two of them have already gotten married. He continues to pay school fees for his other four children, because he wants them to become educated so that they do not become unskilled laborers like him. But with many people in his household, he struggles to meet all of their needs.

Although Lin was very interested fish farming, he did not have the necessary inputs to get started. So when Pact Myanmar introduced MYCulture to the village in 2016, the project was like blessing for him. He attended training sessions and he received inputs through the project, including much needed MMK 50,000 for fingerlings, fish feed and digging a fishpond.

In February 2017, Lin stocked his pond (70 x 30 feet) with 350 rohu. He then added 150 silver barb and another 200 rohu the following December. He is also in charge of a machine that grinds ingredients to produce pelleted fish feed. The project provided the machine but also supported him with MMK 50,000 for installation, as well as a fish drying rack. The machine has made lives so much easier for project farmers in the village, as well as fish farmers from the closest village. The machine has been up and running since May 2017. In the first 8 months of production, 1700 viss of fish feed was produced for project farmers. At first, the project purchased the raw materials, but now Lin buys by his own from Mong Ywa

and Yinmarbin townships. The pellets are better than rice bran, and there is less waste. But since rice bran and sunflower are local products, they are cheaper to buy.

Dried fish had been expensive, at about MMK 1300 per viss (1.6 kg), but now, Lin is able to buy dried fish at just MMK 900 per viss. His wife helps in fish feed production by mixing all the ingredients and measuring, grinding and drying the feed. Lin spends his own money to buy raw materials for fish feed production and sells the feed to farmers who are no longer supported by the project. One viss of fish feed is MMK 1100, including all the transportation costs. Lin made a total of MMK 100,000 by selling 350 viss of fish at MMK 300 per viss. The money was enough to cover his children's education costs.

Even though the project has ended, Lin wants to continue fish farming and has stored the raw materials needed for fish feed production. With the nearest town also having started fish farming, he believes producing feed will remain a sustainable business for him.

*Thank you so much, MYC. I don't need to worry for meal. Because of fish farm, I have fresh and nutritious source of food. And because of fish feed production machine, I earn extra money. That's why I want to metaphor MYC project and all the staff as my life partners.*

*- U Nyan Lin*



# MYCulture

Promoting Sustainable Growth of Aquaculture in Myanmar to Improve Food Security and Income for Communities in the Ayeyarwady Delta and Central Dry Zone

## Success story

### Floating feed grows fish fast

Daw Naing Naing Maw is a 44-year-old woman who lives with her mother and younger brother in the village of Takan Gwa Gyi in Pyapon Township. Unmarried, she is the main breadwinner for the family, because her mother has no income and her younger brother is only a casual worker. As the eldest child, she has to take responsibility for fulfilling the family's basic needs. Although she owns 9 acres of land, she rents it out because none of her family members can use it for agriculture. She breed chickens to earn extra money. She also sells bamboo fish traps, but they only make money in April, May and June, so any income she earns from them is irregular.

Maw has been interested in fish farming since 2016 when the Network Activities Group (NAG) introduced the MYCulture project and its activities to her village. After joining the project as a fish farmer, she invested her own money to dig a small fishpond (0.11 acres) in her compound. NAG shared technology and skills for fish farming, including how to prepare and maintain a fishpond as well as test the water quality and feed the fish. NAG also provided her with aids, including nets, litmus paper, a thermometer, pesticide, fingerlings and fish feed.

Maw started fish farming in 2016, but it did not go well because adverse weather made the water level too high. Still, the setback did not deter her. She tried again in 2017 with 1000 pangasius fingerlings, carefully following the instructions she learned from the training sessions. She was so enthusiastic to learn about fish feed production and about how using a proper feeding method plays a vital role in fish growth. This time, she raised the level of the dike and fed her fish once a month with just the right amount so that there was less waste. This time, she earned a profit of MMK 200,000 from fish farming alone.

Maw's third attempt came in May 2018, when she stocked 1000 pangasius in her tiny pond. The following September, she harvested 680 pangasius and earned MMK 450,000 from selling 180 viss (288 kg) (MMK 2500 per viss 1.6 kg). After expenses, she made a profit of MMK 250,000.

Maw used bran as fish feed, but her fish did not reach the size she had hoped for. Now, she uses floating feed, which she buys from Twantay Town when she visits her friends. With limited money, she could only feed her fish small amounts. But because floating feed results in bigger fish, other fish farmers began asking for her fish feed. In May 2018, she sold MMK 27,000 of feed per bag to 11 fish farmers—enough to cover her cost of buying the feed. At the request of MYCulture, she became a fish feed sales representative. She made agreements with MYCulture on factors such as sales, profit, fish feed quality, storage, transportation, distribution and cost of labor and ordering 2 days in advance. That September, she distributed 28 bags (560 viss: 896 kg) of fish feed to 52 fish farmers from 13 villages. The following month, she distributed 53 bags (1060 viss: 1696 kg) to 51 fish farmers from 14 villages. In early November of that same year, she distributed 46 bags (920 viss: 1472 kg) to 92 fish farmers from 17 villages, and later that month she distributed 41 bags (820 viss: 1312 kg) to 40 fish farmers from 11 villages.

In total, Maw made a profit of MMK 327,200 just from distributing fish feed, some of which she invested into the next distribution and some that she donated to fix the roads in her village. Thanks to MYCulture, she also learned how to grow vegetables on her pond dike, where she grew 20 bananas and water grass. Her motto is "save money by consuming what I have grown." As a sales representative, she could continue her fish feed distribution business because of the high demand, including six regular customers.

*Even if the project ends, I will keep doing fish farming as the project gave me adequate knowledge and sharing my knowledge with other fish farmers. I say thanks to MYC and NAG for helping me to operate a business and creating an income source for my family.*

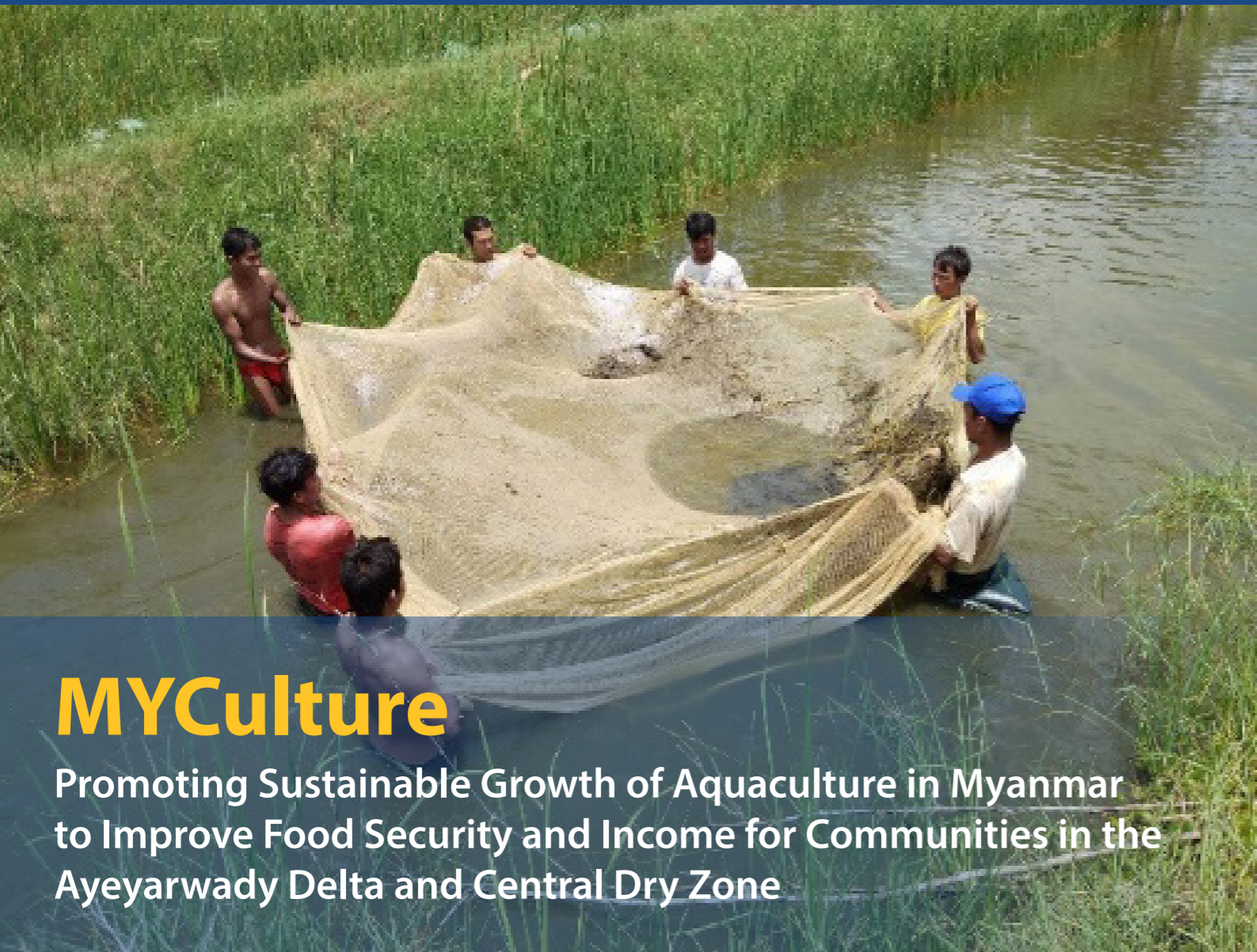
*– Daw Naing Naing Maw*

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## Success story

### Aquaculture for a brighter future

Born in Ywa Ngan, Hlaing Oo has been living in Ywar Thit for 10 years after marrying a woman from the village. Together, they have two children. Oo was a stockman who operated a mom and pop shop, which earned him enough money to support his family. In 2016, the MYCulture project, which aims to promote nutrition, livelihoods and businesses in the delta region, was introduced to his village.

Since fish farming was already a hobby of his, Oo registered as a fish farmer and began fish farming that year with one fish pond. Over the next year and a half, he gained a lot of experience. His silver barb grew fast, but he found that people preferred rohu. Oo he was getting demoralized, and it showed in his farming business. After consulting with a trainer from MYCulture, he learned more about water circulation. He needed to deduct 5 years of costs to dig a pond, but he was able to continue fish farming. At the same time, he became interested in duck breeding as well. He joined a training session for breeding fingerlings in Yangon, Mandalay and Pyapon, and he learned a lot.

There are now seven ponds in the village, including his, that stock fingerlings.

For participants, however, the learning does not end after receiving training because the trainers continue to share their knowledge as often as they can. Raising fingerlings is not easy, because they need constant care, including the proper amount of feed.

Two months of stocking his pond, Oo's fingerlings were ready to sell. With the help of project staff, he had many customers. So far, he has earned MMK 2 million from selling fingerlings. With this money, he was able to buy a MMK 2.3 million oil pump for his shop. To cover the cost, he had to take out a loan for an extra MMK 300,000, but he never expected to be able to buy a pump. To expand his business, he plans to do a lot more in fish farming. The project that has had such a positive impact on him and his community.

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## Success story

### Running his own business

U Kyaw Kyaw Soe lives with six family members, including his son and daughter, in the village of Kyone Tar in Pyapon Township in the Ayeyarwaddy Region. The family's main source of comes from farming breeding chickens and pigs. The family earns about MMK 800,000 per month from their livestock, which is more than enough to cover their household expenses (MMK 300,000 per month).

Although fish farming was always high on Soe's priority list, he lacked the knowledge needed to make it happen, so he continued livestock farming. In 2017, with the help of the Network Activities Group, he became fish farmer of the MYCulture project. An enthusiastic trainee, he put the fishing methods he learned into practice by stocking 1352 pangasius in his new 0.15 acre pond. (The project provided the fish feed.) He harvested 600 viss (960kg) of pangasius and sold them at MKK 2000 per tical, which earned him a profit of MMK 750,000 after expenses.

With financial support from the project, Soe bought raw materials for fish feed production. His fish feeds (both pellet and powder) were, in turn, bought by the project and distributed to its beneficiaries. He continued fish feed production because it was in demand from nearby villages. He found it easy to buy the raw materials, making it easy for him to continue fish feed production. In 2018, MYCulture made him an offer he could not refuse: he was asked join the project as a fish feed distributor. With a burning desire to expand his business, he gratefully accepted the offer.

An agreement was already in place between the project and sales representatives on selling fish feed, food processing and profit. Good quality floating feed was bought from HtooThit. The project purchased 89 bags (each weighing 20 viss) to distribute to its new fish farmers and made MMK 133,500 in profit. The second time, the project purchased 136 bags and

made a profit of MMK 204,000. The third time, it purchased 113 bags and made MMK 169,500, and the fourth time it purchased 160 bags for a profit of MMK 240,000. In total, the project purchased 198 bags and earned net profit of MMK 747,000. Fish feed was in high demand from the villages in the non-project area of Kyitlat Township, where 20 bags are now sold each month.

Soe found that there were some differences between producing fish feed on his own and being sale representative. When he made his own fish feed, even though there were no significant challenges, buying raw materials and food processing was time consuming and it required effort. As a sale representative, there were no challenges in purchasing and distribution, and high demand is an indicator of good quality. He will be continue fish farming and fish feed production by purchasing floating pellets from Yangon. He even has plans to build a fishpond to raise fingerlings so that he can distribute fingerlings and feed to fish farmers on time. He also wants to produce feed for pigs since he already breeds them.

By applying the knowledge and using the technology from the project, Soe feels secure in knowing he can cover all of his household expenses as well as the cost of his children's education. He encourages fish farmers to look long term and apply what they have learned from the project. He also intends to share his knowledge and experiences with other farmers. Before joining the project, he thought anyone could take up fish farming if they had a pond, but a lack of knowledge and inputs showed him that much more is needed to be a successful fish farmer. He will keep running this business and continue learning from the project, because he knows he make even more money from fishing farming. To this day, he remains very grateful to the project and its staff.

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# MYCulture

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# Success story

## Mola for consumption and savings

For rural farmer households in the Ayeyarwady Delta, fish is the cheapest source of animal protein in their diet.<sup>1</sup> However, fish stocks are declining because of illegal fishing practices, population growth, and unregulated use of pesticides, all of which have negative implications for consumption, nutrition, and income. To mitigate these negative impacts, WorldFish in partnership with the Department of Fisheries promotes sustainable growth of aquaculture through the MYCulture project, funded by Livelihoods and Food Security Fund (LIFT).<sup>2</sup>

U Kyaw Than Oo is a 46-year-old farmer who lives with his wife and two daughters in the village of Kyone Phae near Pyapon Township. He used to earn money from rice farming and raising pigs, but it was not enough to support his family. At one time, he was able to buy fish regularly at the local market, but then could only do so to occasionally because there was less fish available and the price had increased. With support from WorldFish, however, he has now been able to increase his income and improve food consumption at home.

One day, community facilitators from the Network Activities Group, one of WorldFish's implementing partners, visited his village to talk about aquaculture. Oo attended the meeting and was interested in joining the project. After he participated in several training sessions on pond preparation and management, nutrition and vegetable production, the project provided him with mola, rohu and pangasius seed to start his small-scale aquaculture activities. He combined mola with large fish species. Oo said that he prefers the combination of two fish species, because he and his family like to eat an adequate amount of small fish frequently without spending money. He likes the taste of small fish and has learned that it is highly nutritious when eaten whole, so it can help him and the family improve their nutrition. Previously, he had to buy the small fish such as *Mola*, darkina and other small pelagic

fish from the local market or fishers from the village, but that entailed spending money, time and effort to acquire food. That has all changed. He can now go to his pond anytime and partially harvest 15–20 tical (250–320 g) of small fish every 2–3 days, which is enough for one meal for a family of four.

While other farmers struggled to maintain Mola in their ponds, especially during the dry season when the water is low and the temperature is high, Oo measures the water temperature and maintains the correct water depth either by pumping water or using the inlet/outlet pipes. This has helped him sustain his fish throughout the year. He learned the technique from the community facilitators and WorldFish staff and has benefitted in other ways. He can exchange fish for labor when he asks neighbors to help him in the field, and he can also share fish with neighbors, friends and parents at no extra cost. He encourages other farmers to do the same by showing them his ponds and also by teaching them to partially harvest their fish to increase fish consumption.

Next year, Oo wants to try farming only Mola in a *chan myaung* (a small ditch channel) to find out if the production rate would still be high without the presence of large fish. He heard of one farmer in the village who earned an impressive profit by farming fish like this. The farmer stocked only 80 mola last year and was able to harvest at least 30 viss (48 kg). He sold his fish within his village at MMK 3000 per viss (1.6kg) compared to the market price of MMK 2000 the previous year.

Oo's message for other farmers, who have not yet adopted the technology for small-scale aquaculture, is that mola is highly nutritious, highly fecund and can provide food all year long, if the pond is managed properly. And if there is a surplus of fish, they can sell it for additional income because it is in high demand.

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<sup>1</sup> Belton B, Hein A, Htoo K, Seng Kham L, Nischan U, Reardon T and Boughton D. 2015. Aquaculture in transition: Value chain transformation, fish and food security in Myanmar. International Development Working Paper 139. Yangon: USAID/Burma and LIFT by MSU, M-DRI-CESD and IFPRI. [www.fsg.afre.msu.edu/fsp/burma/Myanmar\\_Aquaculture\\_Value\\_Chain\\_Study\\_Report\\_FINAL.pdf](http://www.fsg.afre.msu.edu/fsp/burma/Myanmar_Aquaculture_Value_Chain_Study_Report_FINAL.pdf)  
<sup>2</sup> WorldFish. 2016. Promoting the sustainable growth of aquaculture in Myanmar to improve food security and income for communities in the Ayeyarwady Delta and Central Dry Zone (MYFC). Penang, Malaysia: WorldFish. [www.worldfishcenter.org/content/promoting-sustainable-growth-aquaculture-myanmar-improve-food-security-and-income](http://www.worldfishcenter.org/content/promoting-sustainable-growth-aquaculture-myanmar-improve-food-security-and-income)



# Success story

## Integrating small-scale aquaculture with raising ducks

U Chit Thal lives with five family members in the village of Ka Zaung, where he owns 5 acres of paddy fields. The income he earned from his paddy fields was enough to cover his household's expenses, but there was never any money left over.

One day, Thal went to buy ducks from a neighboring village, and friend there suggested he try start small-scale fish farming. Intrigued, he followed his friend's advice and started fish farming the fish by himself to earn extra income for his family. He earned a small profit from it, but not much. Then he participated in a village development committee monthly meeting, which collected proposals from farmers interested in breeding fish. Staff visited and checked the condition of his pond. They deemed it suitable for farming, so he prepared his pond and began culturing fish farming in June 2017.

Thal attended four aquaculture training sessions. After the first module, the project provided him with 600 fingerlings (400 rohu and 200 silver barb) along with rice bran and ground nut to feed the fish for 2 months. He kept attending the training sessions, where he learned about fish production, nutrition and how to grow vegetables. After 2 months, when the feed provided by the project ran out, he bought the feed (rice bran and prawn husk) himself. As a farmer who practices integrated farming (he also raises ducks in a duck hut above his pond) his fish feed and duck feed (broken rice and prawn husk) were nearly the same, so the feed cost for his whole production cycle was low.

The project recommended feeding the fish for 6 months with pellet feed, but Thal found that his fish were not growing rate well, so he extended the farming period to 11 months. He fed his fish rice bran and prawn husks, which together cost are MMK 153,500 for 11 months. In April 2018, he harvested about 350 rohu and 60 silver barb, each species weighing about 0.8 viss (1.28 kg). The price for 1 viss of rohu or silver barb at the market in Pyapon Township was MMK 2800 MMK. In total, he earned MMK 918,400, and after deducting his expenses (MMK 153,000) he made a profit of MMK 765,400.

Buoyed by this success, Thal started a second culture period in December 2017. He received another 600 fingerlings (400 rohu and 200 silver Barb) from the project and raised 400 ducks in the hut above his fishpond, using his own money. In March 2019, after a 15-month long production cycle, he harvested his whole pond: 300 rohu and 80 silver barb. One rohu weighed an average of 0.8 viss while one silver barb weighed about 0.5 viss (0.8 kg). As a bonus, he also harvested 10 viss (16 kg) of wild prawns of the large variety as well. When it came time to sell his harvest, he sold them at MMK 10,000 per viss for his prawns, MMK 2600 per viss for rohu and MMK 3000 per viss for silver barb. In total, he earned over MMK 1 million. After deducting his expenses (MMK 206,500) he made MMK 837,500 in profit.

*The opportunity of fish farming is not only for extra income but also easily access to fishes in the village, get enough fishes for family consumption and get effect in nutrition sector. Everybody should do this business if they have access to land. As for me, even after the project stops the support, I will continue this business by myself. Duck and fish integrated farming reduces the feed cost and enable to get more income. If the fishpond is wide and farming time is long, the growing rate will be good and it will be possible to get a better price. By feeding fishes with proper method it reduces loss of feed and thus reduces the expenditure. By joining the project, I got a lot of knowledge from various kind of project's training, for example fish disease, water quality and fish growing rate. Thank you.*

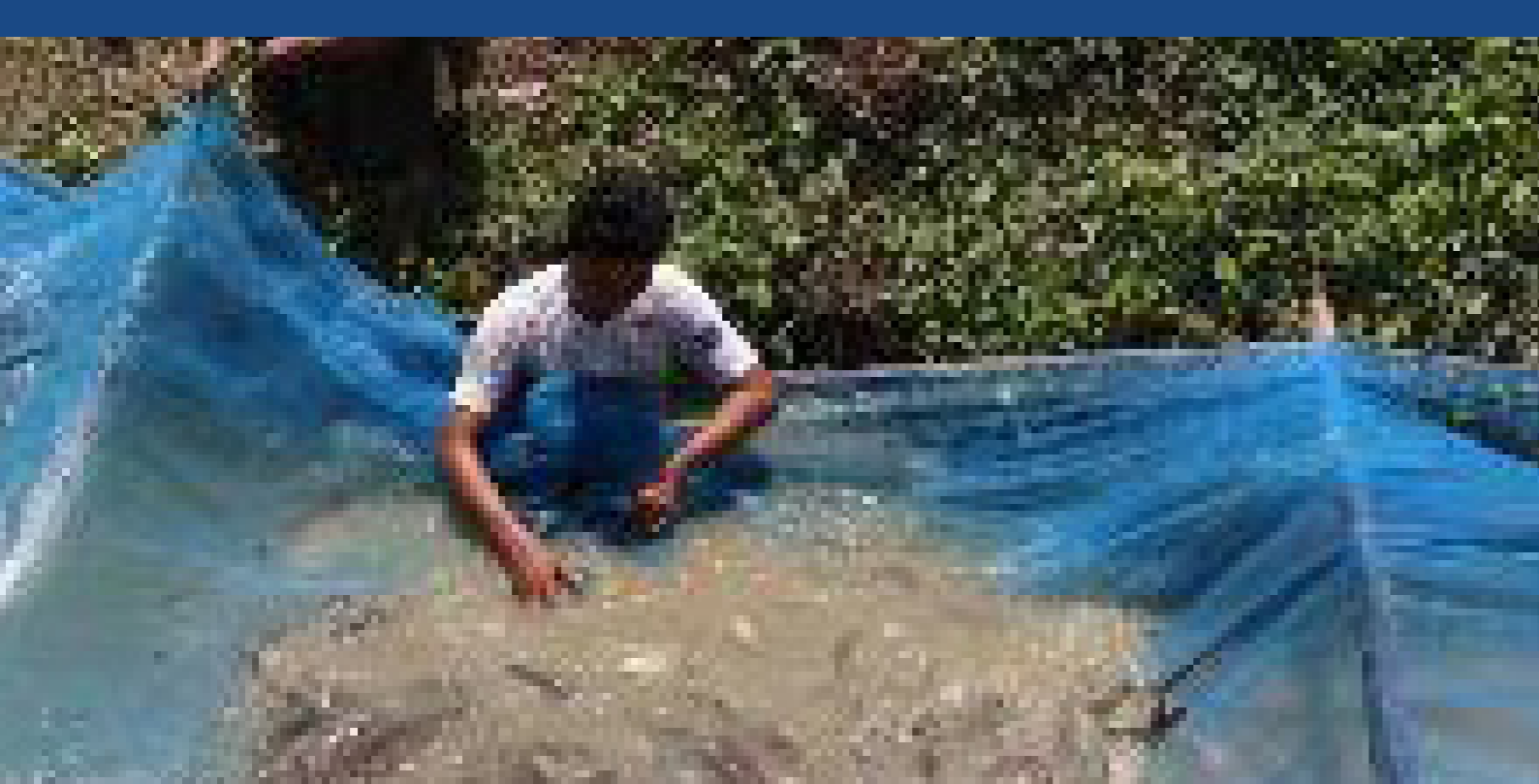
- U Chit Thal

# MYCulture

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# MYCulture

## Promoting Sustainable Growth of Aquaculture in Myanmar to Improve Food Security and Income for Communities in the Ayeyarwady Delta and Central Dry Zone

# Success story

## The joys of being a rural fish farmer

U Tint Swe is a 39-year-old fish farmer from the village of Kyone Tar in the Kyone Tar Shan Kwin village tract of Pyapon Township. He lives there with his 66-year-old mother, 78-year-old aunt and 12-year-old daughter. As an owner of 5 acres of paddy fields and 1 acre of land, his main source of income comes from agriculture. Apart from growing rice, which is his main crop, he also grows seasonal crops, such as radish, coriander, eggplant, chilly, green pea, banana and maize, on his pond dikes. HE is very into fish farming, but his enthusiasm was drained after Cyclone Nargis caused him to miss a fish farming training that was held in Pyapon.

In 2017, the Network Activities Group implemented a self-sufficient fish farming project in his village. U Tint Swe did not join in the first year of the project, because he thought he needed to go to town to participate in the training sessions, as usual. But then he discovered that the project supports participants with fingerlings and feed based on pond size. He joined the project, along with 17 fish farmers from the villages of Kyone Tar and Kyone Phel, the following year and attended training sessions in the village. In addition, the project provided him with assistance, and other fish farmers from the village also helped him.

In July 2018, with support from the project, U Tint Swe stocked 480 Rohu seeds in his 0.14 acre pond. Over three months, he attended three daylong training sessions, where he participated in discussions on preparing ponds, selecting land, calculating pond size, applying fertilizers, removing carnivorous fish, transporting fingerlings, controlling weeds with pesticides, detecting poison in pond water, fish feeding methods, making natural feed, calculating the feed conversion ratio as well as nutrition, gender roles and growing vegetables on pond dikes.

U Tint Swe did not have any previous experience in fish farming. He had only used his *Chan Myaung* for growing flowers by using water from his pond. He was delighted to earn extra money from fish farming and being able to eat fresh and nutritious fish and vegetables grown on his pond dike. He adopted all

the aquaculture techniques he had learned from the training sessions, and in March 2019 he began harvesting his fish.

Although U Tint Swe had only stocked 480 rohu, he harvested 374 rohu weighing, on average, between 15 and 30 viss (24 kg and 48 kg). His achievement was the result of studying from the manuals he was given, consulting with the trainers, monitoring implementation and adopting good agricultural practices.

U Tint Swe has decided to continue fish farming even if the project finishes. He even bought additional land to expand his business and hopes that an office will be established in Pyapone to help fish farmers in his village deal with challenges and infections and also to promote more projects in the area. Finally, he encourages farmers who own land to try fish farming, because it has been very good to him.

*In the past, I only heard about fish farming, but now, I am really implementing it and I got a lot of experience and knowledge from it. Therefore, I really thanks to NAG Phyapon branch which brought this valuable project to us.*

*– U Tint Swe*

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## Success story Toward a better future

U Maung Aye is a 52-year-old fish farmer who lives in the village of Khanaung Shan Kwin in the Khanaung Shan Kwin village track of Pyapone Township. He lives there with two family members: 48-year-old Daw Hnin Hlaing and his 17-year-old daughter named May Thu Win. As the head of his household, he owns 15 acres of paddy fields and 5 acres of farmland, which generate approximately MMK 4 million per year.

In 2017, Aye stocked 800 pangasius seeds in his fishpond (120 x 28 feet). Then in late April 2018, he stocked 800 pangasius for a second time. He heard about the MYCulture project through a village administrator back in 2017 after being invited to a meeting. Staff from the Network Activities Group told participants that anyone who owned virgin land or an old pond could do fish farming and that the project would provide technical input, fingerlings, fish feeds and 50 USD in support. In the meeting, project staff said that anyone who was interested in fish farming needed to attend four training sessions.

When Aye heard this, he immediately registered with the project. Later, someone from the project examined his old pond. The staff member took some measurements and instructed Aye on how to prepare his fishpond. In 2017, Aye attended the mandatory four training sessions, where he learned about pond preparation, removing carnivorous fish, measuring water quality, applying lime, selecting fingerlings, proper feeding methods and how to grow vegetables on pond dikes. A year later, he completed two refresher training sessions. He learned about every stage of fish farming—everything from pond repairing and pond preparation to harvesting.

However, Aye still had a lot to learn after his first year of training. Whenever project staff collected fish samples from his pond, he was reminded to remove the watercress from the pond because they led to decreased fish growth and even death. He was reluctant to do so, however, because he told them he knew he could make money from selling watercress but did not know how much he could get from selling fish. So he decided not to remove any aquatic weeds at all. When it came time to harvest his fish, although he had stocked 800 fish seeds, only 200 survived because of carnivorous fish. As a result, he did not earn any profit from fish farming during his first year.

The next year, Aye decided to use the aquaculture techniques he had learned from the training sessions and listen to what project staff told him. He gave aquaculture a second chance and stocked his pond with 800 pangasius again. After 6 months, his fish grew up to 50 ticals (800 g). To pay for fish feed, he did a partial harvest and sold 300 fish. In late April 2019, he did a complete harvest, and out of the 800 pangasius he had stocked, he harvested 701. In total, he sold 220 viss of fish and earned MMK 660,000. He sold 120 silver barb, weighing a total of 18 viss, earning him an additional MMK 540,00. He also earned MMK 200,000 from selling the fruits and vegetables (such as banana, eggplant, bitter melon, gourd, chili, roselle, pea and ladyfingers) he had grown on his pond dikes. After subtracting the cost of inputs, such as fish feed and seeds, he earned a profit of MMK 500,000.

In the past, the MMK 4 million Aye earned annually was not enough to cover all of his family's expenditures, including food, health, education and land, so he had to take out loans at 6% interest. But after his second attempt at fish farming, he was able to cover half of his children's education.

Although Aye did not benefit from the project in 2019, he learned enough about fish farming from his training and has all the inputs he needs to keep practicing small-scale aquaculture. It remains his main source of income.

*I feel really regret for not practicing well in the first year. So, in this year, I really cared about fish farming. Even if I am away, I ask my wife to take care of fish pond. My wife also knows fish feeding method. Special thanks to the Network Activities Group staff who closely monitor my pond and the project which showed the way to earn extra money..*

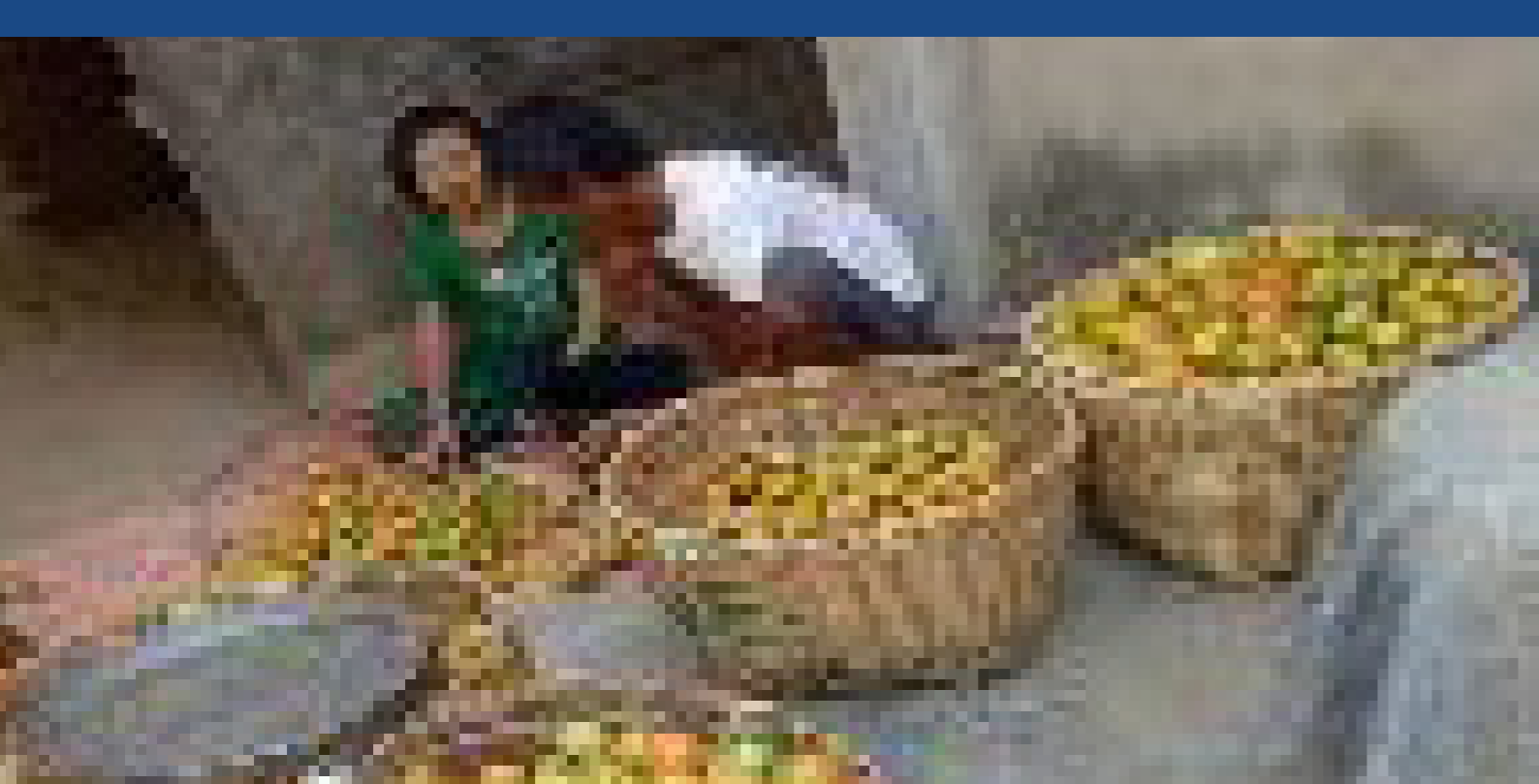
*– U Maung Aye*

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## Success story

### Better agriculture for a better future

U Sein Win is an experienced farmer in the village of Ywar Tan Shyay in the Gwayh Ai village tract of Meiktila. The past 2 years, he has faced many failures in farming because of a multitude of factors. Many organizations had implemented rural development programs within this village, but he was not interested so he did not join any of them.

One day, Win paid a visit to his neighbor U Thein Han. All the rural development programs in their village were introduced in Han's house. Fortunately, the day Win visited Han was the day when one of the staff from the MYCulture project was sharing her knowledge of fish farming with all the project's participants. The fact that registered farmers received MMK 50,000 for pond construction drew Win's attention, so he immediately registered as a farmer.

Win's farm did not have a pond, so he had to rent a backhoe to build one. He built a 0.08 acre pond 4 feet deep and filled it with rainwater. Project staff monitored the construction and gave him technical advice on

how to grow vegetables on the pond dikes.

Win started by stocking 1000 rohu in his pond. While feeding his fish twice a day, according to the instructions, it occurred to him that he should start growing vegetables on his pond dikes as well. Instead, he decided to grow onion, chili and tomato by irrigating water from his fishpond. Both were a huge success, as evidenced by the 10 laborers he hired to work on his farm.

*I earn 280,000 MMK on fish sale, 1,000,000 MMK on onion sale and 1,000,000 MMK on tomato sale. Altogether I earned 2,280,000 MMK in this year. I am always welcomed to the project which made my life well-off. I promise that I will contribute in any role for this project.*

*– U Sein Win*

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# MYCulture

Promoting Sustainable Growth of Aquaculture in Myanmar to Improve Food Security and Income for Communities in the Ayeyarwady Delta and Central Dry Zone

## Success story

### Sharing is caring

Tamar Chaung, which is 3 miles away from Salin Township, is a village where most of its residents earn money by making fabric from lotus flowers. This local resident U Than Htay, a father of three, makes his living. To earn additional income to cover the education costs of his two children, Htay stocked some fish in his small lotus pond; however, the income he earned did not end being worth it.

Later, Htay heard about the MYCulture project when the village administrator told the whole village to join the orientation session. During that session, project staff told him he would get financial assistance and technical inputs to start fish farming. He felt so blessed—like the project was a beam of light in his dark life.

Htay registered with the project as part of a 24-person team called *Tamar Myay*. As a project beneficiary, he received technical training along with MMK 65,000 within 4 months. With that money, using the knowledge he had learned in the training sessions, he stocked his pond with 500 silver barb and 1500 rohu in June 2018. Using proper aquaculture practices brought him great satisfaction. Previously, he had only fed his fish rice bran, but after receiving training from the project he started feeding his fish a mixture of rice bran, groundnut cake and broken rice. He also discovered that fish were also fond of natural feed. In early February 2019, he harvested his pond: 41 viss (65.6kg) of rohu and 66 viss (105.6kg) of silver barb.

The total cost of all the inputs was MMK 192,000 (MMK 150,000 for feed and MMK 42,000 pond maintenance). After selling his fish, Htay made MMK 129,000—much more than he made in the past.

Now, whenever he needs money, Htay does a partial harvest. He has become a skillful fish farmer and proudly shares his knowledge with others. Because of his encouragement, other villagers have become beneficiaries of the project too. He believes that they will also become successful fish farmers, perhaps as early as next year. In addition, because of successful stories from former beneficiaries like Than Htay, 11 women formed a new group called *Tamar Myay-2*.

*U Than Htay is so grateful to all the staff from the project. Because of the program, he got the chance to earn more money. The project brings mutual benefits—sharing is, indeed, caring.*

*– U Than Htay*

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## Success story

### The benefits of fish farming—with interest

U Tun Aung Kyaw lives in the village of Kyi Htaung Kan in Pokepa Thi Ri Township of the region of Nay Pyi Taw. He has been married to same woman for 35 years, and together they have three children. The family earns money from agriculture and a grocery shop. He owns 4 acres of farmland, out of which 0.4 acres were constructed to make a pond dike for buffalos and cattle as well as for watering vegetables.

Kyaw was always very happy whenever he saw his fish jumping while he was feeding, so he decided to expand his fishpond because it has become one of his main sources of income. The trainers from the program are so kind and he has learned so much from them. He has also made many new friends by sharing his experiences. He even participated in a greenway software application training session in Thahton. Today, he only does fish farming 5 months out of the year because the ponds are drying out. To do fish farming year-round, he has to expand his fishpond and irrigate water in order to make more money, and he plans on doing just that. He thanks the project staff, who supported and encouraged him to try fish farming.

Kyaw first tried fish farming in 2018, when people from the MYCulture project encouraged him to take up fish culture and offered to provide him with fingerlings free of charge. He started by stocking silver barb, rohu and silver carp. Among them, silver carp grew the fastest and made him more money at the local market. Because the rohu was stocked for the short term, their growth rate was much slower. However, Kyaw made money from all three types of fish. Five months after stocking, he realized his fishpond was getting dried out, so he harvested all of the fish so that he could repair his pond.

*Fish farming make a lot of money. In the past, my small pond was useless and it didn't make any income. Now, the small pond makes money. My fish pond produces big fish.*

– U Tun Aung Kyaw

Kyaw never imagined doing fish farming. His inspiration to try it came from MYCulture. Since receiving training and fish feed, he has become very interested in learning more about fish farming, and his family is now more likely to eat fish than ever before. As one of the beneficiaries of the project, he profited more than MMK 100,000 from just 5 months of fish farming.

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## Success story

### Jumping for joy

U Kyaw Kyaw Oo lives with his parents and aunts in the village of Wat Su in the Maung Yan village tract of Oaktayathiri Township in Nay Pyi Taw. Oo used to make firebricks when the capital of Myanmar, Naypyitaw, was built, but now he earns money as a farmer.

Of the 3 acres of land his family owns, 0.3 acres were used to build a fishpond, whose main source of water comes from a nearby creek. Oo never imagined becoming a fish farmer. He even did not know how to do fish farming or even how to buy fingerlings.

For these reasons, he did not stock any fish in his pond and simply left it as source of water for buffalo and cattle. He did not make enough money from agriculture because of poor productivity and low market prices.

Oo was at a low point in his life when the MYCulture project came to his community. He quickly became interested in fish farming and began stocking fish once he learned how to do fish farming properly and how to buy fingerlings.

Oo was able to start fish farming, because his pond receives water year-round from the creek. With the free training, fish feed and fingerlings he received from the program, he started by stocking his pond with 1000 fingerlings of silver barb, rohu and silver carp.

Oo has now been doing fish farming for 5 months. Thanks to the training he received, he knows how to do fish farming systematically, including keeping monthly records of stocking and production. When he checked his production rate for the first time, using a fishing net, the result was 24 ticals of silver carp, 10 ticals of silver barb and 12 ticals of rohu. (100 ticals: 1 viss: 1.6 kg)

Oo also catches big fish regularly and cooks them for his household. They loves how fish tastes. He is very happy that he got into fish farming and has decided to continue. He gets so excited to harvest every April when his fishpond is full of water. He is so thankful to the MYCulture program and the staff who encouraged him to pick up fish farming.

*Happiest moment for me is that I can see fishes jumping in the pond when I feed them.*  
– U Kyaw Kyaw Oo

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## Success story

### Encouragement goes a long way

Daw Khin Than Nwal has been living in the village Mone Sa Yine since she was born. The village is located at the foot of Zwe Kapin mountain in Hpa-An Township, Kayin State. Because her family owned a pond, she has been involved in fish farming most of her life.

In 2019, with the help of Japan International Cooperation Agency (JICA), Nwal started fish farming on her own. Thanks to the training and technical inputs she received from JICA, she began earning money from her pond and producing food for her family. In early 2018, the MYCulture project was implemented in her village. The project taught villagers how to do aquaculture and provided them with fingerlings for stocking. The fingerlings were about 3 inches long. Since the program provided the right amount of fingerlings, losses were minimal. Compared to the previous year, the fish grew much bigger, and the pond was harvested in February, 2019.

believed that fish feed was the most important factor, so she spent more money on feed. After receiving training from the MYCulture program, she realized that water and fertilizer are more important factors and can save money on fish feed. They makes fish grow faster and healthier.

*It is no doubt that our family can consume fish more and earn more money from my fishpond. Thanks a lot.*

*– Daw Khin Than Nwal*

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Among the many things she learned, Nwal noticed that the water source of water plays a vital role in fish farming. Previously, she