

Transformative Learning and Empowerment through Demonstration Pond: An inspiring narrative of a woman fish farmer in Chapiya Village, Nepal

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Nepal's fish sector has witnessed significant growth in recent years, with production rising steadily over the past few decades. According to a report by the Central Fisheries Promotion and Conservation Centre, under the Ministry of Agricultural and Livestock Development, Nepal's total fish production was 62,897 metric tons in the fiscal year 2016/17, which increased to 83,623 metric tons by 2020/2021. This growth can largely be attributed to the rising demand for fish, fueled by increased public awareness of its health benefits. As more people recognize the nutritional value of fish, consumption has surged, driving the sector's expansion.

Despite the growth, several sectoral challenges persist in the fish sector which include the lack of quality commercial fish feed in the local market, limited awareness among fish farmers about the benefits of using fish feed for optimal fish growth, and their insufficient knowledge regarding the correct application of such feed. In addition, the fish sector in Nepal is predominantly male dominated, with women making up only 33 percent of the total smallholder farmers involved, primarily concentrated only on production, according to data published in a report by the SAARC Agriculture Centre (SAC).

To address these issues, the UK's Foreign, Commonwealth and Development Office (FCDO) funded the CASA Programme, which is implemented by Swisscontact in Nepal, to partner with Annapurna Maccha Dana Udhyog. Under the partnership, a key initiative involved organizing demonstration pond (demo-pond) sessions in selected pocket areas in Provinces 2, 3 and 5 of Nepal. The demo pond aimed to showcase to fish farmers how to manage their ponds effectively for maximum fish growth. This included demonstrations on using the correct amount of fish feed, feeding techniques, maintaining water quality, and guidelines on implementing proper pond design, among other practices.



The demo-pond sessions were successfully conducted in all three provinces. In Chapiya Village, Siyari (Province 5), only three out of 41 participants were women. While women's participation in the fisheries sector is often limited, it is notable that one of those women participants, Pushpa Bhattarai, took the training and turned it into real success.

MEET PUSHPA FROM CHAPIYA

Pushpa Bhattarai is a permanent resident of Chapiya Village, Siyari-5, Rupandehi District, which is particularly known for its fishery and aquaculture practices, with agriculture being the main livelihood for the local people of the village. As a mother of two daughters, she has been involved in the fishery sector for over 12 years. Her family owns a fishpond that spans 61,965 square feet (17Katta), which is officially named Kabya Maccha Farm after her daughter, Kabya. In addition to fish farming, she cultivates vegetables and crops and raises livestock to support her family, while managing her time with other household responsibilities and caring for her children.



Pushpa stands in front of her fishpond, where she has implemented the knowledge gained from the demo-pond session.

Photo Courtesy: Novela Acharya/CASA, Swisscontact

SHIFT FROM TRADITIONAL TO CONTEMPORARY FISH FEEDING

Before attending the demo-pond session, Pushpa Bhattarai relied solely on bran, broken rice (*Fulki*), and wheat (*Gahu*) to feed her fish, unaware of more effective alternatives. After participating in the demo-pond session, she transitioned to feeding her fish with the Annapurna feed once a day after witnessing how tailored fish feed enhances fish health and growth. While financial constraints prevent her from feeding her fish more frequently, her understanding has greatly improved with the recognition that the commercial fish feed has higher protein content than local bran and other alternatives, which are crucial for optimal fish growth, knowledge she lacked before.



Pushpa gets her fish feed from Shree Jal Devi Fish production Co-operative Limited in Siyari-5, Banghusari, which has a formal agreement with Annapurna to serve as the distributor for three major rural municipalities in Rupandehi district: Siyari, Mayadevi, and Suddodhan. Pushpa is one of the co-operative's members; of 327 members, only 30 are women. In addition to this, she is also in charge of overseeing the storage facility at the co-operative and is involved in distributing supplies to the fish farmers. Being associated with the co-operative has given her access to some discounts on the fish feed, although the amount is modest. Likewise, through her active involvement in the co-operative, she has been positioned as a leader within the village's fish farming community, earning the admiration of her fellow farmers and showcasing her leadership abilities.



Pushpa standing in her storage area at home, where she keeps Annapurna fish feed for daily use.

Photo Courtesy: Novela Acharya/CASA, Swisscontact



Shree Jal Devi Fish Production Co-operative Limited premises in Siyari-5, Banghusari, Rupandehi
(Photo Courtesy: Novela Acharya/CASA, Swisscontact)

HANDS-ON LEARNING THROUGH OBSERVATION

“The demo-pond session allowed me to acquire hands-on experience by observing appropriate fish feeding practices up close,” says Pushpa. The live session taught her about the benefits of fish feed, their correct usage, the importance of regular checks and maintenance of water quality to ensure optimal oxygen levels and temperature for fish health. She also learned how to identify common fish diseases, and about effective prevention and treatment strategies. Additionally, Pushpa discovered that using bran and household alternatives leads to higher water pollution, while fish feed causes less pollution, highlighting the importance of sustainable aquaculture practices that reduce environmental impact.



Pushpa stands next to Ramu Bhusal, the fishpond owner (in white t-shirt), whose pond was used for the demo-pond session. They are accompanied by Pancham Lodh, the Junior Technical Assistant (JTA) supported by FCDO funded CASA, who is checking the water quality of the fishpond.
Photo Courtesy: Novela Acharya/CASA, Swisscontact

INVALUABLE KNOWLEDGE, RESOURCE FOR RURAL FISH FARMERS

The demo-pond serves as an invaluable educational resource for rural fish farmers like Pushpa, who have never had access to such training before. The insights acquired through the demo-pond have allowed many villagers to modernize their fish farming techniques. As per Ramu Bhusal, the fishpond owner whose pond was used for the demo-pond session, “The demo-pond

offered a unique learning opportunity through observation, making it accessible for even those who lack formal education, unlike traditional training that often necessitates some level of literacy.” Pushpa fully supports this statement of Ramu Bhusal.

ENHANCED MOTIVATION THROUGH INCREASED INCOME AND CONFIDENCE

Pushpa shares that when given Annapurna fish feed, the fish quickly come to the surface to eat, indicating that they enjoy the feed. This has allowed her to monitor their growth more effectively, as the fish’s behaviour makes it easier to assess their sizes. She states that the fish growth she has experienced is noteworthy, even with just one use per day of fish feed, compared to when she relied entirely on bran and other household alternatives.

Pushpa emphasizes that Mr Pancham Lodh, the CASA-supported Junior Technical Assistant who conducted the demo-pond session, visited her fishpond regularly up until harvest, providing encouragement and boosting her confidence by observing that the fish were growing properly. Pushpa harvested her fish in November 2024, and sold them to a local fish trader, who distributes and sells fish across various municipalities in the Rupandehi district and nearby districts too.



By switching to feeding her fish with Annapurna feed at least once a day, she was able to double both her income and profit. Last year, by using bran and other household alternatives, she harvested 5 quintals of fish and earned NPR 100,000 (£600). However, after switching to fish feed once a day, she harvested 10 quintals of fish and earned NPR 200,000 (£1,200) in just six months. She also stresses that what is truly notable is that last year, she stocked nearly the same number of fish fingerlings in her pond as she did this time, yet the results in terms of size and weight have been significantly better this year compared to last year. This positive result encourages her to continue using fish feed, and she is confident that, with time, she will be able to feed her fish more than once a day.

Pushpa further shares that she noticed when using only bran, fish growth is slow, taking nearly a full year to reach harvest size, and many fish often die due to changes in weather and temperature during the process. In contrast, the use of fish feed allows the fish to grow and reach harvest size in just six months, making it even possible to complete two growth cycles within a year. Based on her experience, Pushpa adds, "Fish feed requires smaller quantities and produces less waste compared to bran. In contrast, bran requires larger amounts, takes longer for fish to grow, and sinks, causing increased water pollution, higher usage, and greater wastage, which ultimately leads to added costs."



Pushpa Bhattarai, JTA Pancham, Mr Thaman Poudel of Shree Jaldevi co-operative, along with some local fish farmers who attended the demo-pond session, gather for a meeting.

Photo Courtesy: Novela Acharya/CASA, Swisscontact

KNOWLEDGE SHARING WITH FUTURE GENERATIONS

Pushpa also expresses her joy in seeing her daughters observe and learn the new knowledge about fish feeding that she has been implementing in her fishpond. This highlights how the demo-pond has enabled the transfer of knowledge across generations, ensuring that the learning will provide long-term, sustainable benefits for future generations.

IGNITING A WAVE OF EMPOWERMENT BY RISING AS A ROLE MODEL

Pushpa's experience exemplifies the empowering impact of supportive family dynamics and inclusive programs like the demo-pond, which have enabled her to make key decisions in fishery practices and engage fully with the co-operative. The level of freedom Pushpa has received is rare, which is one of the reasons for the lower participation of women in the demo-pond program compared to men in Chapiya village. Pushpa believes that if other women in her village received similar support, they too could participate in the demo-pond, learn modern fish feeding techniques, and pursue fish entrepreneurship more effectively. As a role model in a male-dominated sector, she advocates for the empowerment of other women, showing how social and institutional empowerment of women can lead to their increased productivity, income, and economic independence, fostering both individual and collective growth in the community.





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