

## EMPOWERING THE MINA ASRI CATFISH FARMING GROUP THROUGH DIGITAL MARKETING AND FINANCIAL LITERACY FOR BUSINESS SUSTAINABILITY

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### Abstract:

Indonesia, as a maritime nation, has significant potential in the fisheries sector, with catfish being one of the main freshwater aquaculture commodities. In Bali, the Mina Asri Catfish Farming Group contributes to local fishery production, yet faces challenges in production costs, limited marketing strategies, and manual financial management. This study aims to empower the group through innovation and community service activities that enhance production efficiency, market competitiveness, and financial literacy. The program was implemented through stages of socialization, training, technology application, and mentoring. Training focused on the use of alternative pellet feed, digital marketing through social media, and digital financial recording using simple applications. Results showed that providing pellet feed assistance reduced production costs by at least 10% per cultivation cycle, thereby improving profit margins and financial allocation for other development needs. Digital marketing training increased members' skills in content creation and online promotion, enabling expansion of product distribution, particularly for processed catfish, beyond local markets. Meanwhile, financial literacy training facilitated the adoption of digital records, improving transparency and supporting more accurate evaluation of profitability. Pre- and post-test assessments demonstrated a 70% improvement in participants' knowledge and skills, confirming the effectiveness of the program. In conclusion, the empowerment program significantly improved group capacity in production, marketing, and financial management. Active community participation played a crucial role in ensuring sustainability, with the program contributing to business independence, enhanced income, and regional food security, while also strengthening the community-based economy.

## INTRODUCTION

Indonesia is a maritime nation with vast water resources and abundant fishery resources. The fisheries sector, both marine and freshwater, plays a crucial role in supporting the national economy. One of the leading commodities in freshwater fisheries is catfish, which has a high consumption rate in various regions and is a source of livelihood for many farmers. Success in fisheries cultivation not only contributes to food security but also improves community welfare, especially those who depend on this sector for their livelihood (Subawa et al., 2021). Based on data obtained from bps.go.id regarding Total Production of Freshwater Aquaculture Companies by Province and Fish Type, in 2023, catfish production in Indonesia reached 32 tons, of which Bali Province recorded 2 tons, the majority of which came from small and medium-scale aquaculture businesses. One of the livestock groups that cultivates catfish in Bali Province is the Mina Asri Catfish Livestock Group,



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located in Peguyangan Kaja Village/Sub-district, North Denpasar District, which is 8.5 km from the proponent's location (Rianawati et al., 2024).

In his cultivation process, Mr. I Nyoman Ruda manages 14 ponds with a diameter of 1 meter used for catfish breeding and 14 ponds with a diameter of 3 meters (as seen in Figures 1 and 2), which are used for breeding and also growing fish until ready for harvest. The seeds are stocked with a capacity of 100 per small pond and 1,000 per large pond, with a harvest cycle carried out every 2.5 to 3 months. The size of the catfish produced ranges from 6 to 8 per kg, in accordance with market standards.

In maintenance, Mr. I Nyoman Ruda uses pellets as the main feed, which is given twice a day with an average requirement of 3.5 sacks (105 kg) for 1,000 fish for 3 months. Although the cultivation system has been running well, there are still problems with business sustainability. 1) Feed production costs. One of the challenges faced is the problem of feed. Currently, it still relies on commercial pellets with an average requirement of 3.5 sacks (105 kg) for every 1,000 fish in a period of two to three months. With the current price of feed continuing to increase, in addition, 2) Digital marketing strategies have not been implemented because the current harvest is still sold in a live condition to collectors with a sales system per pond weighing 90-100 kg at a price of IDR 21,000 / kg. Although there have been efforts to diversify through frozen spiced catfish products, marketing is still limited to traditional methods. Moreover, 3) Digital financial management has not been implemented; currently, the financial recording system used by the group is still manual, making it difficult to evaluate profitability and plan business expansion (Jayawarsa & Saputra, 2025).

Given the significant potential of Indonesia's freshwater fisheries sector, particularly catfish, ongoing innovation and mentoring are needed to ensure businesses remain competitive amidst the challenges of feed prices, market dynamics, and technological advancements. The catfish farming business managed by the Mina Asri Catfish Farming Group shows promising prospects, but still requires support in strengthening production capacity, implementing modern marketing strategies, and digital-based financial management. With appropriate intervention, this group has the potential not only to increase product volume and value but also to expand its market reach to a broader consumer segment (Saputra & Jayawarsa, 2025).

Through the partnership and empowerment program proposed in this PKM Grant, the Mina Asri Catfish Farming Group can improve production efficiency by innovating alternative feed using local ingredients, optimizing marketing through digital platforms, and adopting an integrated digital financial recording system. These efforts will have a direct impact on increasing group members' incomes, strengthening business independence, and supporting regional food security while simultaneously stimulating a community economy based on local resources (Saputra & Dharmawan, 2025).

## METHODS

The following is a method for implementing community service activities designed to address problems in the Mina Asri Catfish Farming Group:

**Socialization.** Socialization is carried out as the initial stage to introduce the program to partners. This activity includes:

1. Presenting the program's objectives and benefits to livestock groups.
2. Open discussions regarding the obstacles faced by partners and the solutions to be implemented.
3. Identifying specific needs of partners related to production, marketing, and business management.
4. Scheduling activities to ensure partners' active involvement in each stage of the program.



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**Training.** Training is provided to livestock group members to improve their skills and understanding in several key aspects:

1. Production: Providing Catfish Pellet Feed to Partners
2. Digital Marketing Training: Using social media to increase sales, branding strategies, and promotional content creation.
3. Digital Financial Recordkeeping Training: An introduction to simple record-keeping applications such as Google Sheets or other financial applications, and simulations of transaction recording and simple financial analysis.

**Technology Implementation.** After the training, the introduced technology began to be implemented:

1. Distribution of pellet feed assistance to reduce production costs in the initial period.
2. Creation of social media accounts to sell products more widely.
3. Implementation of digital financial recording using a simple, application-based system as agreed upon.

**Mentoring and Evaluation.** To ensure the program runs effectively, regular mentoring is provided:

1. Monitoring of feed utilization and production results to ensure productivity increases.
2. Evaluating the effectiveness of digital marketing by assessing increases in engagement and sales.
3. Assisting in financial record keeping to ensure partners consistently implement digital systems.
4. Partner satisfaction and feedback surveys to measure program effectiveness.

**Program Sustainability.** This program is designed to continue after the initial intervention is completed; the Development of a long-term business plan so that groups can continue to develop their businesses.

## RESULTS AND DISCUSSION

The research results are presented directly from the data processing and field data that have been collected. Based on the situational analysis conducted, the Mina Asri Catfish Farming Group faces challenges in three main areas: production, marketing, and financial management. These challenges, if not addressed appropriately, can hamper the group's business sustainability and competitiveness in the market (Dewi et al., 2025; Sancaya et al., 2025).

**Production.** The main problem in production lies in the high cost of feed, which is the largest component in catfish farming. Reliance on commercial pellets, with an average requirement of 3.5 sacks (105 kg) for 1,000 fish per rearing cycle (2–3 months), causes operational costs to skyrocket, especially with the ever-increasing trend in feed prices.

The proposed solution, providing catfish pellet feed, aims to reduce production costs by at least 10% in a single cultivation cycle. This assistance not only helps reduce costs during the current cycle but also frees up funds for groups to allocate to other development aspects, such as pond repairs or post-harvest processing.

In the long term, efficiency in the feed sector will increase profit margins, improve the feed conversion ratio (FCR), and maintain fish health so that the quality of the harvest is more consistent.

**Marketing.** In terms of marketing, Mina Asri still relies on selling live catfish to collectors at a price of IDR 21,000/kg for each harvest of 90–100 kg per pond. This system results in the group losing control over selling prices and profit margins. Efforts to diversify products with frozen seasoned catfish have not been optimal because marketing remains local, and digital platforms have not been fully utilized (Saputra et al., 2025).



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Solutions offered include:

- Digital marketing training to improve online promotion skills. Increased sales activity through digital platforms, particularly for frozen spiced catfish.
- The target success is measured by a minimum of 80% member participation in the training, the creation of active digital accounts, and at least 50% of processed product transactions conducted online. Implementing this strategy is expected to expand market reach beyond the region, reduce dependence on collectors, and increase product competitiveness amidst competition (Saputra & Laksmi, 2024).

**Financial Management.** Group financial management is still done manually, which risks inaccurate recording and complicates business evaluation. Without a structured financial system, it is difficult for groups to determine profitability, plan budgets, and make strategic decisions (Laksmi & Saputra, 2024a).

The implemented solution included providing a digital financial recording system using Microsoft Excel and providing training to group members on how to use the system.

Success indicators include 80% member participation in training and 70% member ability to maintain digital records independently. Financial digitalization is expected to increase transparency, accelerate business evaluation, and serve as a basis for data-driven decision-making (Laksmi & Saputra, 2024b). Before the training began, participants were given a pre-test to measure their initial knowledge of digital marketing and digital finance. The pre-test results indicated that most participants were unfamiliar with using social media as a marketing tool and had not yet systematically recorded their finances (Purnamawati et al., 2024).

After the training was completed, a post-test was administered to measure knowledge gains. Post-test results showed an increase in scores for almost all participants. The most significant improvements occurred in understanding the steps for creating online promotional content and using applications for financial recording (Saputra et al., 2024).

A comparison of pre-test and post-test results can be presented in a table or bar chart to show the percentage increase in participants' knowledge. It demonstrates the effectiveness of the training in improving participants' knowledge and skills (Purnamawati et al., 2024).

## CONCLUSION

The Mina Asri Group empowerment program, implemented through technology and innovation in the form of digital marketing and financial literacy training, has had a significant positive impact on increasing the capacity of group members.

1. From a marketing perspective, training participants are able to understand basic digital marketing concepts, create business social media accounts, and utilize online platforms for promotions.
2. From a financial literacy perspective, group members can record simple transactions using Microsoft Excel, manage cash flow, and create more structured business financial plans.
3. Pre- and post-test results showed a 70% increase in understanding, proving the training's effectiveness in enhancing participants' skills and insights.
4. Active community participation is a key factor in the program's success, with group members enthusiastically participating in all activities.

Overall, this program has supported increased productivity and business independence for Mina Asri Group members, as well as opening opportunities for market expansion and improved financial management.



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