

CASE-STUDY

A Case Study on “Women Empowerment Through Backyard Ornamental Fish Culture” in Bishnupur Block, South 24 Pargana District, West Bengal, India

Debojit Mandal*¹

¹Department of Industrial Fish and Fisheries, Asutosh College, Kolkata-700026

Correspondence

Debojit Mandal, Department of Industrial Fish and Fisheries, Asutosh College, Kolkata-700026

Email: debojitmandal031@gmail.com

Publisher's Note

The opinions presented in this article are the exclusive views of the authors and do not necessarily reflect the views of their affiliated organizations, the publisher, editors, or reviewers. The publisher does not guarantee or endorse any product evaluated in this article or any claim made by its manufacturer.

Conflict of Interest

The authors assert that the manuscript was developed without any commercial or financial associations that could be interpreted as a potential conflict of interest.

Authors Contribution

All listed authors have contributed significantly, directly, and intellectually to the work and have endorsed it for publication.

Abstract

This study explores the role of backyard ornamental fish culture as a means of women empowerment in rural communities of West Bengal, India. By examining the socio-economic impacts of small-scale aquaculture, the research highlights how engaging women in ornamental fish farming can enhance their financial independence and boost self-esteem. Ornamental fish farming offers women a unique opportunity to harness their nurturing abilities, contributing to their household's financial stability while balancing domestic duties. Some women of Bishnupur continue to earn money for their families by farming ornamental fish. Bishnupur is a place in south 24 Pargana of West Bengal, where most families are involved with ornamental fish farming. Women in almost all families cultivate the fish at home by creating an environment conducive to fish farming and if the fish are ready to be salable, their husband sells them in the market. This paper shows the fish farming skills of 10 women and how other fisherwomen living in the Bishnupur block earn money through ornamental fish farming.

KEYWORDS

Women empowerment, ornamental fish culture, gender equality, rural development

This is an open access article under the terms of the <https://creativecommons.org/licenses/by/4.0/> License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2024 Chronicle of Aquatic Science.

INTRODUCTION

Ornamental fish culture has emerged as a promising avenue for women's empowerment, particularly in rural areas in various countries. Women from ecologically sensitive areas can engage in backyard ornamental fish culture. This not only empowers them but also contributes to the protection of endangered ornamental fish species. Indigenous fish species in India have untapped potential, and women can play a crucial role in their sustainable development. Ornamental fish culture is relatively simple, requiring less time and labor compared to other forms of aquaculture. Women, with their innate nurturing instincts, can successfully manage ornamental fish enterprises and also can contribute to their household's financial stability and gain economic independence. India's rank in ornamental fish farming is 31st among exporting countries globally. India currently contributes only 0.3% to the global market (Raja et al., 2019). The major ornamental fish production state is West Bengal, where mainly Hooghly, Uttar Dinajpur Nadia, Kolkata, South 24 Pargana, North 24 Pargana, Haldia, Mednipore and Malda are mainly involved with ornamental fish culture. Government of India is also encouraging the women for the culture of ornamental fish to create self employed women by providing them subsidy, loan and other benefit under various schemes. Government of India launched a scheme that name is "AQUARAINBOW VISION- 2030" to promote entrepreneurship development opportunities to rural and urban youth in the field of ornamental fisheries. Also empower and encourage women, SC, STs to substantiate their earnings through ornamental fisheries. In West Bengal, the state government also provides much benefit to fisher community under Sonar Bangla scheme. The state government gives a lot of opportunities to the women's by develop their skill on ornamental fish farming. The women of different district of West Bengal take the benefit of government and culture, breed and sell the brood of ornamental fish and doing business.

The villages where ornamental fish farming is very much, Bishnupur of south 24 Pargana district is one of those places (Sinha et al., 2019). The local fisher women believed that ornamental fish farming can make more profit with less cost than other fish farming. They often face many problems such as various facilities provided by the government often do not reach these women, yet they keep themselves associated with fish farming. Apart from farming in their own family ponds, they also rent ponds from others and sometimes build cement tanks in their backyards to breed and raise fish. In this way their livelihood is improving economically by catching a small amount of fish every day. Bishnupur, a block of villages of south 24 Pargana district of west Bengal, where ornamental fish culture is become a hereditary business for almost every family. As in a family both husband and wife contribute to the financial development of their family through various activities and arguments, similarly in the case of fish farming the housewives here are not only tied to the family life but they work with their husbands, fathers and brothers. This study is on those women, who create their fish farm and culture the fish and make themselves as self employed women from a housewife.

LITERATURE REVIEW

India's vast coastline and abundant water resources have created a thriving fishing industry that supports millions of people. But beyond the numbers, there are stories of women who have found financial freedom and empowerment through ornamental fisheries. They're part of self-help groups that have enabled them to take control of their finances and their futures. By reviewing the paper of Sinha and Tekade (2023), the women about 20% of SHG member, 5% - for cultivation and breeding of decorative fish. These women got classified under the category of business women. They've discovered a lucrative way to supplement their income and gain economic independence. But some cases women also face many problems like market challenges. Their day begins before dawn, haggling with middlemen to purchase fish, only to carry heavy loads on their heads for long distances. Despite their tireless efforts, they often return home with meager earnings, struggling to provide for their families. Their daily struggles are a testament to their resilience and determination, yet they deserve better opportunities and support to improve their livelihoods. Jeno Delcy C. and Immanuel R. (2022) shed light on the struggles of women fish vendors in Thoothukudi district of Tamil Nadu in their paper about "A Study on the Problems of Women Fish Vendors in Thoothukudi District". These hardworking women face numerous challenges in the market, which leaves them with meager earnings - often not enough to meet their basic nutritional needs. They could be encouraged to explore alternative income sources like raising goats, poultry, or vegetables. Moreover, the government can play a vital role by providing access to low-interest loans, empowering these women to break the cycle of financial instability and build a brighter future.

OBJECTIVE OF THE STUDY

- Study on the empowerment of rural women of south 24 Pargana District.
- To know the challenges of women in sector of gender equality.
- Working procedure of rural women on backyard ornamental fish culture system.

- To know the problems, that is faced by women of West Bengal in fish farming sector.

METHODOLOGY

STUDY PERIOD:

The study was going on from May 2024 to July 2024.

OVERVIEW OF THE STUDY AREA:

The total area of Bishnupur is about 1.81km². It's located near of Kolkata. The distance of Bishnupur from the mega city Kolkata is about 27 km. The villages are near off Galiff Street aquarium fish market, which is the biggest ornamental fish market in India. The inhabitants living in this place belong to different caste and religions. And people from SC, OBC or financially backward classes are more involved in fish farming.

DATA COLLECTION:

Primary source: In this study the data are collected from primary source like direct interview with local women and self observation.

A questionnaire was created for interview with women and local fishing folks. The questions was about local women's economic planning, working methods with their own teams, ways of managing their home and business together, and the current portfolio of their traditional businesses etc.

Secondary source: secondary data collect from the published research journals about Ornamental fish and empowerment through it, and some data from governmental and non-governmental website like Portal of Fisheries Department of India, District statistical E-book of West Bengal.

DATA ANALYSIS:

The study is done on 10 fisher women. All the data that are collected from them are representing by use of MS-Word 2007, MS-Excel 2007 and all calculation of data are calculate by use of CasioCalculator.

RESULT & ANALYSIS

OWNERSHIP DATA:

The ownership data of fisher women including of how many of them have their own ponds, how many of them do business in partnership, or how many of them do business with leased of fish rearing and culturing pond or tanks are presented by using of Pie diagram.

Table:1 Total data of pond ownership

SL No	Ownership	Percentages
1	Own pond	40%
2	Leased with single owner	20%
3	Partnership with leased pond	10%
4	Partnership with own pond	30%

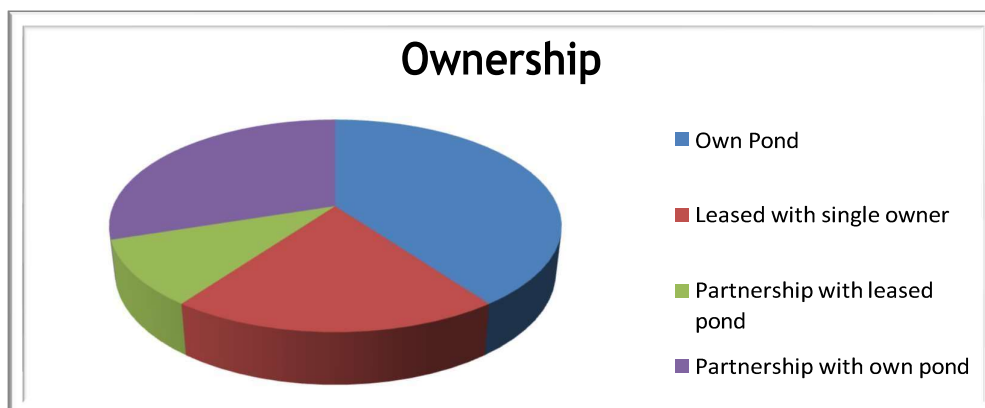


Figure:1 Ownership data in Pie diagram

INVESTMENT & PROFIT SECANARIO:

The total investment and net profit per annum are analyzed by using of Bar graph. The graph is not an accurate data, because the fisherwomen could not calculate the business properly due to lack of business analytical knowledge. This graph is made based on the theory as much as possible by talking with them about investment

and profit ratio.

Table:2 Data chart of investment and profit

Total investment in a year	Rs-84000	Rs-60000	Rs-110000	Rs-144000	Rs-24000	Rs-48000	Rs-36000	Rs-30000	Rs-96000	Rs-240000
Net profit in a year	Rs-36000	Rs-24000	Rs-48000	Rs-60000	Rs-6000	Rs-12000	Rs-18000	Rs-12000	Rs-50000	Rs-120000

EDUCATIONAL QUALIFICATION OF FISHERWOMEN:

Among those interviewed, most of the women have not passed 10th, while a few women have passed 10th.

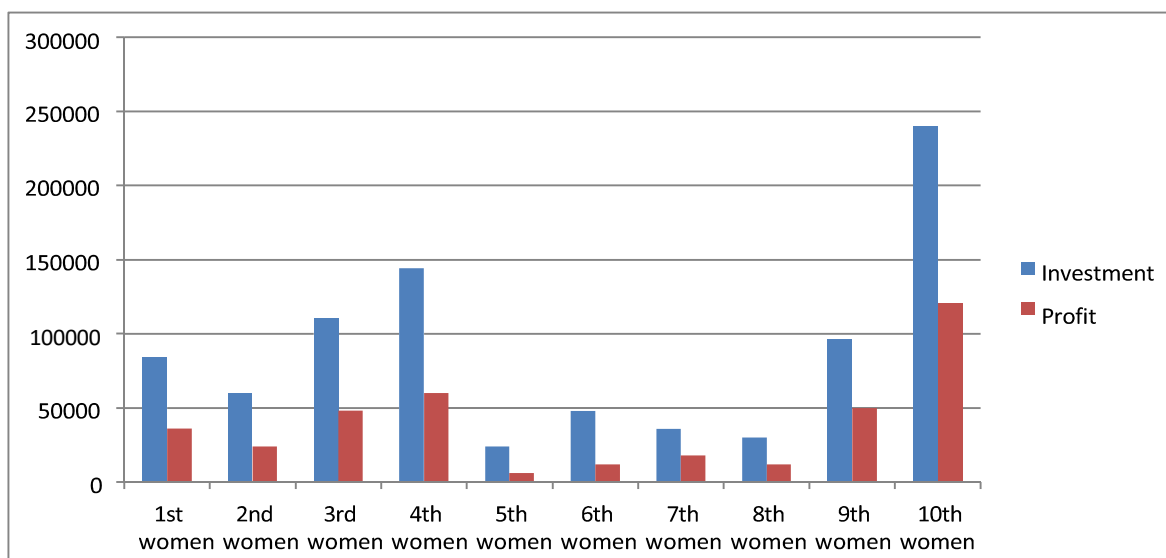


Figure:2 Data of investment and profit analysis with Bar graph

EXPERIENTIAL DATA:

Some of other data collected from the women regarding their work experience, working style and current state of the business are discussed below-

Table:3 Experience data of fisher women

Fisher women name	Year of experience	Has any fish farming training been done?	Which fish does she cultivate?
Jharna Jana	10	Yes	Molly, Guppy, Swordtail
Suma Bhowmick	10	Yes	Guppy, Angel, Barbs
Sangita Pramanik	15	Yes	Gold fish, Molly, Guppy, Tetra
Rekha Sona	10	No	Gold fish, Angel
Monika panja	15	No	Tetra, Gold fish

Snehamoyee Panja	12	Yes	Barbs, Sward tail, Angel Fish
Srijita Ojha	10	No	Gold fish
Mousumi Payra	15	No	Molly, Leon tetra, Gold Fish
Sandipa Haldar	12	No	Tetra, Guppy, Cichlid
Satabdi Jana	10	No	Guppy, Chilled, Gold Fish, Tetra, Angel fish.

ABOUT WOMEN CONTRIBUTION:

Women are equally participating in developing their communities, promoting sustainable fisheries practices and enhancing economic growth in the region. Women's are engaged in activities like breeding and culture. Once the fish is marketable, they sell it to the famous fish market in Galif Street in the nearby city of Kolkata and the Dashpur fish market in Howrah. At present they have started fish farming not only as a small scale but also as a commercial one. The District Fisheries Officer is standing by their side to ensure that the various facilities provided by the government reach them. The village women were unaware of the SHG system when they used to farm fish with their families only a few years ago, but now they work under various SHGs or Self Help Groups, which has started to improve their business. For example, a woman named Jharna Jana has formed an SHG called "Joyi Sorajgari Group" with about 10 women. In this group they hold monthly discussion meetings and calculate the business of their organization. SHGs are believed to be the vehicle for women empowerment and poverty alleviation (Maheshwari & Goyal, 2014). Women can increase their access to markets and improve their bargaining power by creating collective arrangements in which to sell their fish and fish products as well as other products with a common feature, such as geographic origin or an environmental designation. Participation in SHGs empowers women to voice their opinion. This solidarity and collective action empowers them, increases decision-making power and empowerment as a whole.

CONTRIBUTION OF CO- OPERATIVE SOCIETY:

Cooperative societies can help in promoting employment for women in West Bengal through backyard ornamental fish culture in various ways. Cooperative societies can organize training programmes for women on backyard ornamental fish culture. Through these trainings, women will learn about the techniques of breeding, feeding and management of the fish. Many of Co-operative society are involved with many of project to help the women of Bishnupur, like Kanyanagar is one of the village of Bishnupur block that have a society, that name is "Kanyanagar Society For Community Empowerment", is create to help the women of Kanyanagar. They enable women to access wider markets by mobilizing their resources, and jointly marketing their products can result in more profitable sales and thus increased income.

PROBLEMS FACED BY WOMEN:

In some cases, these women still face some problems, such as -

- Every family not supports to their women.
- Lack of culture knowledge.
- Team management or basic educational problem.
- Lack of guidance or mentorship.
- Lack of self-confidence or motivation.

CONCLUSION

Ornamental fish culture can be a significant avenue for women's empowerment, providing them with opportunities for income generation, entrepreneurship, and skill development. By engaging in this industry, women gain financial autonomy, contribute to household incomes, break barriers in traditionally male-dominated fields and can improve their social status. Furthermore, their involvement promotes sustainable practices and biodiversity conservation, thus creating a positive impact on local ecosystems. As women continue to thrive in ornamental fish culture, they exemplify resilience, innovation, and a commitment to community development, setting a precedent for inclusive growth and gender equality in diverse sectors

worldwide. Overall, it promotes gender equality and empowers women both economically and socially. As per observation on backyard ornamental fish farming, my findings are that it is a positive source to make our countries women self independent. Women are well-suited for this ornamental entrepreneurship due to their natural patience, assuming they receive proper training. Significant effort is needed to tap into the present and hidden entrepreneurial potential of women in this field.

REFERENCES

1. Raja, K., Anand, P., Padmavathy, S., & Sampathkumar, J.S. (2019). Present and future market trends of Indian ornamental fish sector. *International Journal of Fisheries and Aquatic Studies*, 7(2), 06-15.
2. AQUARAINBOW VISION-2030_ Department of fisheries, Government of India. (<http://dof.gov.in/>)
3. Sinha, A., Swain, H.S., & Das, B.K. (2019). Ornamental fish farming a tool to empower rural women of WestBengal. *Journal of Inland Fisheries Society of India*, 51(1), 55-59.
4. Tekade & Sinha, A. (2023). Ornamental fish culture: Current status and further scope for women empowerment. *International Journal of Science and Research*, 12 (9), 1177-1180.
5. Delcy, C. J., & Immanuel, R. (2022). A study on the problems of women fish vendors in thoothukudi district. *International Journal of Food and Nutritional Science*, 11(3), 4751-4758.
6. Maheshwari, M., & Goyal, S. (2014). Role of self help groups in socio-economic empowerment of women: A review of studies. *Pacific Business Review International* 7(2),85-93.

QUESTIONNAIRE USED FOR SURVEY

1. Fisher women name _____
2. How many years she has been farming ornamental fish?
3. Is she facing any problem in farming? If yes then what kind of problem?
4. First, how much money was spent to make culture/ rearing/ breeding setup?
5. How much is the approximate income now?
6. Is she associated with any SHG organization with other women in the village?
Yes () No ()
7. Has she done any training related to colorful fish farming?
Yes () No ()
8. How and where do they sell the fish?
9. Which fish do they prefer to farm?
Fishes name _____
10. What is the ownership type of ponds they fish in?
Own pond () Leased pond ()
11. How do they do the fishing business?
Individual () Partnership ()
12. What is the educational qualification of them?

Below 10 th standard	Above 10 th standard
---------------------------------	---------------------------------

13. Does she get any subsidy?

Yes ()

No ()

14. How does her family support her in fish farming?

15. How do they manage fish farm?

16. Note Point_____

(Note points are made because if any unexpected information comes from them to write it down.)

PHOTOGRAPHS



Fig-3. This woman is a leader of her SHG, Name- Jharna Jana

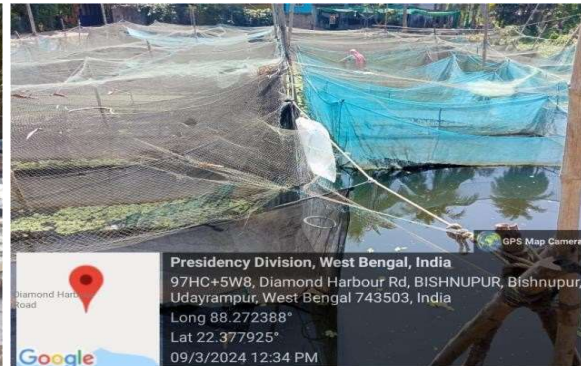


Fig-4. It's a pond taken on lease by Jharna Devi.



Fig-5. This men is Jharna Jana's husband, doing their work



Fig-6: This is their own pond



Fig-7: This woman is a member of her own SHG, name: Soma Bhowmic

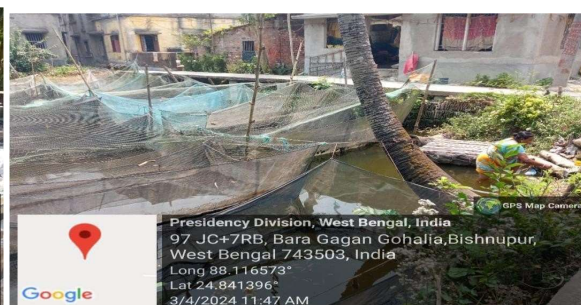


Fig-8: A rearing pond of another woman

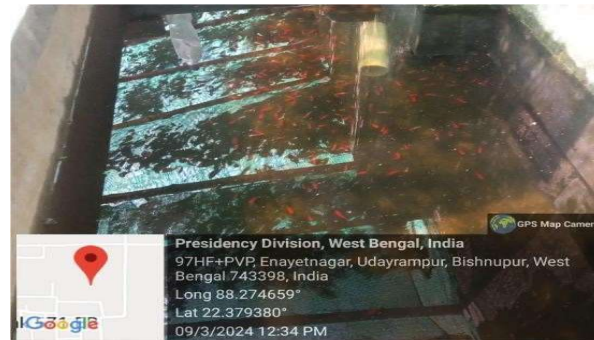


Fig-9: It is a breeding tank

How to cite this article: Mandal D. A Case Study on "Women Empowerment Through Backyard Ornamental Fish Culture" in Bishnupur Block, South 24 Pargana District, West Bengal, India. Chron Aquat Sci. 2024; 2(4): 1-8