

Ornamental Fish Culture: Current Status and Further Scope for Women Empowerment

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Abstract: *Ornamental fish keeping at home is emerging as one of the most popular hobbies in the world. Aquarium keeping is said to be the second largest hobby next to photography in the world. Aquarium fish and accessories industry is fast gaining importance due to its tremendous economic opportunities and prospect the ornamental fish keeping which started as a hobby across the world, owing to its burgeoning demand in national and international markets, has turned out to be a commercially traded commodity in different parts of the world. The sector has been recognized for its ability to generate employment opportunities, alleviating poverty and contributing to the growth of national income by enhancing foreign exchange earnings. With the phenomenal increase in the demand of ornamental fishes worldwide, more countries have realized the economic potential of this sector and intervened directly to promote its development. The present domestic market for ornamental fishes is INR 300 crores and provides jobs to around 50, 000 people through 5, 000 aquarium retail outlets and an equal number of production units (Vinayak 2017). The activities are mostly concentrated in the states of West Bengal, Maharashtra, Tamil Nadu and Kerala. Women have been identified as potential employees in the ornamental fisheries sector in several countries. Many women in India, particularly in rural regions, have taken up ornamental fish farming or breeding as a profession. Women are encouraged to explore ornamental fish farming because it requires only a few simple techniques and minimal investment. This paper concludes that women as entrepreneurs can make a significant contribution to the nation's gross product. Women are well - suited to this ornapreneurial path because of their intrinsic patience, but only if they are properly trained. Significant work is required to unlock the existing and latent ornapreneurial empowerment of people in this sector.*

1. Introduction

Ornamental fish keeping at home is emerging as one of the most popular hobbies in the world. Aquarium keeping is said to be the second largest hobby next to photography in the world. Aquarium fish and accessories industry is fast gaining importance due to its tremendous economic opportunities and prospect the ornamental fish keeping which started as a hobby across the world, owing to its burgeoning demand in national and international markets, has turned out to be a commercially traded commodity in different parts of the world. The sector has been recognized for its ability to generate employment opportunities, alleviating poverty and contributing to the growth of national income by enhancing foreign exchange earnings. With the phenomenal increase in the demand of ornamental fishes worldwide, more countries have realized the economic potential of this sector and intervened directly to promote its development. The present domestic market for ornamental fishes is INR 300 crores and provides jobs to around 50, 000 people through 5, 000 aquarium retail outlets and an equal number of production units (Vinayak 2017). The activities are mostly concentrated in the states of West Bengal, Maharashtra, Tamil Nadu and Kerala. Women have been identified as potential employees in the ornamental fisheries sector in several countries. Many women in India, particularly in rural regions, have taken up ornamental fish farming or breeding as a profession. Women are encouraged to explore ornamental fish farming because it requires only a few simple techniques and minimal investment. This paper concludes that women as entrepreneurs can make a significant contribution to the nation's gross product. Women are well - suited to this ornapreneurial path because of their intrinsic patience, but only if they are properly trained. Significant work is required to unlock the existing and latent ornapreneurial empowerment of people in this

sector. The culture of ornamental fish or aquaculture is simple, easy to understand, takes less time and cheap labour required in comparison to any other forms of aquaculture practices. Moreover, India has vast potential in ornamental fish production due to presence of rich biodiversity of more than 250 species and favourable climatic conditions but is 31st in world ranking with annual trade of just US \$ 1.6 million (Raja et al.2019). In the global scenario, neon tetras, gold fish, angel fish and Discus dominate the trade but our indigenous fishes are highly potential. Hence, women from ecologically sensitive areas can support in the protection of the endangered ornamental fishes in terms of backyard culture and also help in development of ornamental fish trade sustainably. Women have the potential and capacity to successfully manage any type of enterprise because of her parental/ motherly instincts. A women enterprise is defined by the government of India as an enterprise in which at least 51% of capital is in the financial interest of women and a minimum of 51% of the employment generated goes to women (Sharma, 2013). Women is pulled back by the innumerable responsibilities on her shoulders while being prevented by several taboos and myths pertaining to women (Singhal, 2016). Nevertheless, she is forced by the patriarchal society to limit her dreams citing her commitments to her family and the welfare, growth of her children. Empowering women must never be considered as a charity or a means to poverty alleviation but, it is the empowerment of generations to come, as she will inspire children and grandchildren (Nune, 2008). The aquaculture sector is itself a lucrative option for woman and community development. It is sustainable and can also contribute to the national gross production. This paper focusses on the role of ornamental aquaculture in woman upliftment and a few success stories.

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Ornamental Fish Trade in India

India's share in ornamental fish trade is 0.008 percent of global trade. Major part of export trade is based on wild collection from north eastern states. This capture based export is not sustainable and is a matter of concern. Hence focus should be on culture based system. There is very good domestic market based on domestic breed exotic species. The overall domestic trade in this field crosses Rs.10 crores and is growing at the rate of 20 per cent annually. The earning potential of this sector has hardly been understood and is under exploited. Considering relatively simple techniques involved, this activity has potential to create substantial employment opportunities in rural areas for women, besides generating additional income with minimal risk and consuming less time. With the inception of national agriculture innovation projects (NAIP) in Chitradurga of Karnataka ornamental fish culture was introduced with initial investment from the project by constructing cement tanks and by introducing suitable varieties of ornamental fish (Molly, Guppy, Swordtail). Farm women were trained and exposure visits were arranged to establish fisheries units around Bangalore. Formation of ornamental fish grower associations secured good prices. Fish were directly sold to aquarium shops are to Karnataka fisheries Development Corporation. Gross return per annum is Rs.25, 000 with an expenditure of Rs.10, 000. Kolathur in north Chennai has become the hub for ornamental fish trading in the country, not because of any special policy of state government, but because of efforts' of individual entrepreneurs. Few enterprising people started to breed the fish in the back yards of their homes.

Ornamental Aquaculture – Past and Future

Ornamental fish keeping has been a recreational activity for many people but it can also give a financial outcome. Subsequently, the ornamental fish sector gained more attention due to high demand and rapid growth of the export market and trade. The total global ornamental fish trade has been estimated to be more than US\$ 15 billion (Raja et al.2019). But, India's contribution to the global trade is insignificant even though India is blessed in the biodiversity of ornamental fishes with more than 100 indigenous species. Many NGOs and institutes provide hands - on training on various aspects such as breeding techniques, information on the feed used, method and frequency of feeding, water exchange particulars, growth rate, fecundity, mortality, hatching rate, marketing particulars to the rural women (Raja et al.2014). Total ornamental fish production can be increased by the establishment of backyard hatcheries by women SHGs or fisherwomen cooperatives or other organisations. So, it is essential to speed up ornamental fish production with women entrepreneurs in the near future throughout the world.

Potential for Women in Ornamental Fish Culture/ Fisheries

As in the several other sectors, women have been consistent in pushing her boundaries in the fisheries and aquaculture sector too. When her opportunities were taken away by mechanisation and industrialisation, she was empowering to do something better thereby increasing the standard of her life. Ornamental fish culture is found to be most suitable for women, as this sector has increasing domestic and global

demand and its ability to be adapted to small scale and large scale will make this industry a lucrative business option (Goswami, 2011). It has been increasingly attracting the interests of several women who want to make it big in this competitive world (Pandey and Mandal, 2017). In India, central and state governments as well as multiple non - governmental organisations are active in promoting women in the ornamental fish rearing sector. Recently, (PMMSY - Pradhan Mantri Matsya Sampada Yojana) boasts several beneficiary based activities for women in seaweed cultivation and as well as in ornamental fish culture. Backyard Ornamental Fish Culture and Women – A Saga of Success The backyard small - scale ornamental fish culture enterprise is relatively stable and is most popular in southern states of India. According to NFDB (National Fisheries Development Board), a backyard unit is involving any house hold or SHG members who have sufficient backyard area, and availability of resources for maintenance of the fishes. The practice of ornamental fish culture is claimed to be a lucrative business by women in villages and cities alike and are generally willing to adopt innovations and technologies considering the economic advantages, Backyard ornamental fish culture enterprise do not add to their drudgery for a women because of its convenience in operation (Shaleesha and Stanley, 2000). For a housewife, it gives a sense of becoming an earning member of the family and a women in the ornamental fish rearing sector. Recently, (PMMSY - Pradhan Mantri Matsya Sampada Yojana) boasts several beneficiaries based activities for women in seaweed cultivation and as well as in ornamental fish culture.

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the funding opportunities provided by the various financial organisations and their method of funding and repayment. On successful completion, potential and interested candidates are provided with brood fish/ seeds and certain basic necessities to arouse an interest in them. There are also frequent follow - up visits by resource persons to take account of their progress in post - training

Support from Funding Agencies

The ornamental fisheries sector is an area that has received much attention in the past and also in the recent days. It has been receiving specific funding for development of new units or up scaling of existing units. Special consideration is given for women as individuals and also for the women cooperative societies and SHGs in various states without much condition on the eligibility criteria (Nune, 2008). The major fund provider is the NFDB (National Fisheries Development Board, Hyderabad), NABARD (National Bank for Agriculture and rural Development) and the MPEDA, Kochi (Devi et al.2016). PMMSY also have many lucrative funding options for anybody interested in ornamental fish culture with the AQUARAINBOW vision - 2030 (DoF, 2020). Under PMMSY for development of ornamental and recreational fisheries, ` 30.30 Cr. have been allotted; this is mainly for the creation and promotion of backyard ornamental fish rearing unit in freshwater and marine water areas.

Case Study of West Bengal

Presently, there are over 1, 00, 000 SHGs in West Bengal formed under various schemes through Government and Non - Government Organisations (NGOs). Following the formation of the SHG the members are trained in two broad aspects: a) Technical Training or Skill Development Training and b) Banking Training. The technical training is imparted to the members to develop their skills in the trade of their choice such as agriculture, horticulture, animal husbandry, dairy and fisheries (Mandal, Dutta and Laha 2012). The State Government gives a lot of emphasis on skill development on ornamental fish farming. Several SHGs and co - operative societies are now engaged in ornamental fish farming and allied activities. This trade plays an important role in assuring the economic and livelihood security of the rural women. This in turn, results in women empowerment, which is the primary objective to alleviate poverty.

Prospect of the Self - Help Groups in ornamental fish trade

Women in rural Bengal were not only homemakers, but had already learnt to earn money and establish food security for their family, before the loans to organize Cooperatives became available to them. The SHGs are engaged in both breeding and rearing of the ornamental fishes. Live bearers such as guppy, platy, molly and swordtail are bred and subsequently reared while the egg layers such as angel, barbs, gold fish, tetra and catfishes are reared after procurement of their seed. Several costly exotic varieties such as oscar and arowana also have a good market demand. After successful completion of the training and following several hands - on training programmes, the women beneficiaries gain confidence to start their own farming and breeding initiatives and market their produce. Model

bankable projects are available with the Department of Fisheries (Government of West Bengal), NABARD and NFDB. Such projects may be adopted by SHGs financed by bank The Jafarpur Mahila (Women) Association of ornamental fish farmers was founded by Sujata Gure and her husband Ranajit Gure; they assembled fifteen women whom they trained in ornamental fish activities in the village of Jafarpur (South 24 Parganas) till they became eligible - as an organization - for a loan of Rs.65, 000 from Benfish. Talking to Sujata Gure, currently heading the Cooperative of thirty - six women, however, reveals that married women still consider managing the family their primary responsibility. Once, they have completed their household chores, they lend a hand in their husband's enterprise of ornamental fish. Though both men and women know the fish - craft equally well, it is the men who wade knee - deep in water, releasing the fish in the ponds or collecting them before they are marketed. The weekly visits to the market to sell the fish to shopkeepers are also undertaken by men; while women add to the repository of local knowledge about fish care from the training programs conducted by the State and Central fishery institutes, the men guide their production of certain variety of fish by following the market trends. Both add to the local knowledge, either through technical know - how, or practical business skills. In such a scenario, where Sujata is strictly emphasizing the gendered division in farming labour, one is naturally led to inquire why the Cooperatives are women - centric. In response, she says that financial aids to set up the basic infrastructure for farming were only available to women in this sector, because the need for female empowerment was government - recognized. It is interesting how women fish farmers have actually incorporated the farming activities into their daily responsibilities. Sunita Guchhait from the Jafarpur Cooperative prepares forty chapatis every alternate day for the ornamental fish in her backyard; she has identified how the fish prefer the cooked bread over flour dumplings. The women of the Cooperative have put together a common fund from their monthly savings after selling the produced ornamental fish. They keep aside this money for use in times of natural disaster leading to a dip in fish production, or during a personal crisis of a Samiti member. This is an independent initiative outside the influence of any funding body or fishery institute, says Sunita Guchhait.

2. Conclusion

Women as entrepreneurs can also contribute much and increase the national gross productivity. They assist in generating employment opportunities for other women who are in need of help. They can develop a sense of economic independence in their children and other women. Overall, it improves the standard of living of women communities, leading to self - confidence. In addition, it spreads a message of enhanced awareness and sense of achievement among women. Women fit into this particular ornapreneurial avenue owing to their enormous innate patience provided they are trained and considerable effort is required to capture the existing and latent ornapreneurial potential of women in this sector.

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