

Original Research Article

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## Constraints Faced By the Fishery Enterprises: A SWOC Analysis

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### ABSTRACT

Fisheries enterprise plays an sustainable role in Indian agriculture not only generating high income in the rural areas, but also for earning their livelihood along with securing nutritional securities. Even fisheries play a significant role in food production sector, agricultural exports and involvement of large number of people for different activities in the sector. Further past study reveals that for the livelihood especially for the female farmers in selected district of Dimapur in Nagaland have important role in their daily food meals due to non-vegetarian habit. For the present study a stratified simple random sampling method by adopted for the selection of 40 numbers of fishery enterprise-cum-producers from two blocks of Dimapur district and to access the problems of other marketing agencies 40 numbers of respondents were involved viz., 10 numbers of Wholesaler, 20 numbers of Retailer and 10 numbers of Cycle Vendors actively involved, therefore a total numbers of respondents will be 80 altogether. Study also highlights the problems and constraints faced by the fishery enterprise-cum-producers faced during the production and marketing as well as marketing agencies involving in the marketing. Among the various problems faced by the respondents the most serious problem in production of fishery enterprise was lack of knowledge about pest control, whereas high price fluctuation was the major problem of marketing faced by them. The most serious problem of market intermediaries was unavailability of proper storage facilities and further to suggest suitable measures through SWOC Analysis involved to make the study more meaningful.

#### Keywords

SWOC, Fishery,  
Production,  
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Resources

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### Introduction

Fish production plays an important role for the socio-economic of the rural people in India. Not only it is a rich source of protein and high quality food, but it is well known fact that it is an important source of income and employment to million rural farmers, particularly women (Jacinto, 2004). With a large human population in India and over 250

million economically strong potential consumers of food and those who have an adequate purchasing power, the domestic demand for the fish and processed fish food is increasing very rapidly (Anonymous, 2005; Anonymous, 2014). Fisheries in the country since the launching of the First Five-Year Plan in 1951, has witnessed an impressive growth from a highly traditional activity to a well-developed and diversified enterprise (Delgado

and Courbois, 1999). The fishery sector during the recent past has played an important role in the Indian economy through with high potentials for diversification of farming practices, rural and livelihood development, domestic nutritional security, employment generation, export earnings as well as tourism. The possibilities extend from vast seas to high mountains with valued coldwater species (maps of India). Untapped potentials exist in island systems from ornamental fishes to value added products (Investopedia, 2011). Indian fisheries and aquaculture is an important sector of food production (Delgado and Courbois, 1999). It provides nutritional security to the human food contributes to the agricultural exports and engages very large number of people in different activities (Anonymous, 2014; Dey, Anonymous, 2000a and b).

Fisheries sector plays an important role in the Indian economy. It contributes to the national income, exports, food and nutritional security and in employment generation (Faruque, 2007). This sector is also a principal source of livelihood for a large section of economically underprivileged population of the country, especially in the coastal areas. Share of agriculture and allied activities in the GDP is constantly declining (Islam, *et al.*, 2006). It has been observed that agriculture sector is gradually diversifying towards high value enterprises including fisheries (Anonymous, 2011). It is evident from the contribution of fisheries sector to the GDP, which has gone up from 0.46 per cent in 1950-51 to 1.16 percent in 1999-00 (Anonymous, 2015). The share of fisheries in Agricultural GDP has increased more impressively during this period from mere 0.84 per cent to 4.19 per cent (Anonymous, 2010b). This is largely due to a sustained annual growth rate of well over four per cent in the fisheries (Dey, *et al.*, 2010). GDP during the last five decades, the fisheries sector has recorded faster growth as compared

to the agricultural sector in all the decades (New, 1999). The growing production of fish suggests that fisheries sector is booming and contributing to the economic growth of the nation (Shah and Ahmed, 2006). More than 6 million fishermen and fish farmers are totally dependent on fisheries for their livelihood in India (Sapkota *et al.*, 2012).

Fish production in India has increased steadily from 0.75 mt in 1950-51 to 56.6 lakh tonnes in 1999-00 (Anonymous, 2016a-d). Marine fisheries remained the major contributor till 1990-91 (Islam, 1996). Its contribution to total fish production by 1960-61 was over 75.00 %, but it declined drastically to 61.93 % in 1970-71 (Alam *et al.*, 2011). Since then, it remained almost constant till 1990-91 (Crawford, 1997). In the nineties, fish production structure underwent substantial changes. The share of inland fisheries increased drastically reaching to 50.00 % in 1999-00 (Anonymous, 2010a). These changes were due to deceleration in growth of marine fish production and a policy shift in favour of inland fisheries, particularly aquaculture (New, 1997; Bendangjungla, 2015).

As Fishery Enterprise has been playing a very significant role in various socio-economic development programmes, even by providing self-employment, supplementary income and also as protective-cum-nutritional security in food with low cost for all sections of the people of Nagaland. Also, such studies will help to bring out hindrances and bottlenecks for the recommendation of a suitable marketing knowledge/information to the rural poor, monitor its use in a way that leads to meaning development (Sharma, 2012; Anonymous, 2017). But till today no concrete research has been carried out in Nagaland to investigate and find out the marketing aspects including problems. Hence, the present study is undertaken to study the production and marketing of Fishery Enterprise in Dimapur

District of Nagaland with views that its result may be useful to the researcher, planners, bank personnel, administrator and extension worker; who are engaged in generating and disseminating the different schemes of marketing for upliftment of the producer-farmers of all groups and producers in general for getting the produce in fair price.

### **Materials and Methods**

The present study was conducted in the Dimapur district of Nagaland, which comprises of two blocks viz., Nuiland and Chumukdema both were randomly selected, since fishery enterprise / rearing is quite prevalent, besides no systems, while from each block five (5) villages were selected randomly then a list of farmers adopting fishery enterprise were prepared and arranged in ascending order by following the stratified random sampling method then a total 40 numbers of fishery enterprise-cum-producers were selected, to access the problems 40 numbers while production as well as during marketing. Besides respondents other marketing agencies were involved viz; 10 numbers of Wholesaler, 20 numbers of Retailer and 10 numbers of Cycle Vendors, so total numbers of respondents will be 80 all together. The necessary primary data for the present study has been collected with the help of especially designed and pre-tested schedule through personal interviews method by the researcher. Both tabular and functional analysis was carried out to meet objectives of the study. Functional analysis was carried out to see the effects of various influencing factors affecting the production and marketing problems faced by the fishery enterprise in Dimapur district of Nagaland and further it was classified into different categories. Lastly a SWOC analysis was conducted to suggest the ways and means to improve the production and productivity of the fishery enterprise. The present study is based on the primary data

during the agriculture year 2014-2015 (Bendangjungla, 2015).

### **Results and Discussion**

The present study is an attempt made to identify the problem faced by the fishery enterprise during the production and marketing of fish enterprise. The problems are presented in the descending order of their relative important with the help of frequency, simple percentage and ranking. The ranking of various problems of fishery enterprise was found to be similar across various group sizes of respondents.

Table 1 reveals the different marketing problems faced by the fish growers in the study area were identified and are presented in the descending order of their relative importance. The foremost problems with 45.00 per cent of the total fishery growers were faced as constraints as high price fluctuation of fish cost as well as due to the lack of proper domestic market and poor market facilities in the area and also due to the lack of regulated market facilities were identified in the study area, so the farmers had to sell their produce in the open markets or have to sell from door to door and because of these sometimes they have to sell their produce at throw away prices. While 30.00 per cent were faced the problems due to the lack of approach road to the fishery ponds, followed by 25.00 per cent of the fishery growers were identified the problems of lack of standardization and grading facilities, due to that fair price were not in force to paid the fishery growers and remaining 17.50 per cent were facing the problem of unavailability of transport facilities due to that small growers has to pay more and finally producers have to sacrifice their share of profit.

An efficient system of marketing which supply accurate market information regarding

the price ruling in a market from time to time is lacking. Thus the traders took their upper hand as they are the only source of information to the producers. Table 2 reveals that the fish is a bulky and semi-perishable item and it is demanded throughout the year for consumption since most of the population were non-vegetarian. 62.50 per cent of fishery growers were faced constraints due to lack of storage facilities, could not store it for a long time and sold out within short span of time after harvest. Organized and efficient transport facilities are vital for marketing which is lacking in the study area. The farmers faced these problems especially for those who are staying far away from the main towns even they practiced several traditional methods for storing their produce for short time but it could not prevent from rodent attack and quality deteriorations and they compromise their profit. Even 57.50 per cent of the fisher growers were faced the constraints of poor road condition to pay more transport rate as compare to the urban growers, further 37.50 per cent of the fishery growers were faced the constraints of lack of transportation facilities ranked third in the order of importance. 27.50

per cent of fishery growers were faced the constraints of low quality produce.

Table 3 reveals that among the various problems of fishery enterprise fingerling was the most felt one. Good fingerlings of improved species were reported to be scarce. The government provides fingerlings to the fishery enterprises which was untimely, not of good quality and lead to low productivity. Moreover the fingerlings obtained from the available market are not of good quality in fact these are local and mixed type fingerlings.

The next important problem identified by the fishery enterprises was lack of knowledge about pest and diseases occurred in the fingerlings, which also hinders in the production due to the lack of knowledge on its protection measures leads to low productivity.

Another important problem faced by the fishery enterprises was lack of knowledge of recommended packages and practices. The fish growers still follows the old traditional system of fish culture, which decreases the yield.

**Table.1** Marketing problem faced by the fishery entrepreneurs (N=40)

S. No.	Items	Per cent position	Rank
1.	High price fluctuation of fish cost	45.00	I
2.	Lack of fishery regulated market	45.00	I
3.	Lack of approach road to the fishery ponds	30.00	II
4.	Lack of standardization and grading facilities	25.00	III
5.	Unavailability of transport facilities	17.50	IV

**Table.2** Constraints faced by market intermediaries agencies (N=40)

S. No.	Items	Per cent position	Rank
1.	Poor storage facilities in the area	62.50	I
2.	Poor road condition	57.50	II
3.	Risk in transportation and storage	37.50	III
4.	Low quality produce	27.50	IV

**Table.3** Problem faced by the Fishery Entrepreneurs during the production

S. N.	Problems	Nuiland block			Dhansiripar block			Overall		
		Frequency	Percentage	Rank	Frequency	Percentage	Rank	Frequency	Percentage	Rank
1.	Lack of knowledge about fish protection measures	18	90.00	I	15	85.00	I	33	82.50	I
2.	Reduction of production by disease and pest infestation	17	85.00	II	16	80.00	II	33	82.50	I
3.	Lack of training and demonstration	16	80.00	III	15	75.00	III	31	77.50	II
4.	Non availability of credit facilities	15	75.00	IV	14	70.00	IV	29	72.50	III
5.	Lack of technical knowledge	8	40.00	V	11	55.00	V	19	47.50	IV
6.	Non availability of fertilizers and its application	7	35.00	VI	10	50.00	VI	17	42.50	V
7.	Non availability of fingerlings on time and lack of fingerlings	6	30.00	VII	8	40.00	VII	14	35.00	VI
8.	High labour cost	3	15.00	VIII	5	25.00	VIII	8	20.00	VII

**Table.4** A Strength Weakness Opportunities and Challenges (SWOC) analysis faced by the Fishery Entrepreneurs

SN	List of variables		Nuiland block				Dhansiripar block			
			Yes		No		Yes		No	
			Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Strength	Consumer available	5	25.00	15	75.00	7	35.00	13	65.00
		Marketing linkage	8	40.00	12	60.00	12	60.00	8	40.00
		Demand of fish	4	20.00	16	80.00	8	40.00	12	60.00
		Transportation	10	50.00	10	50.00	13	65.00	7	35.00
2.	Weakness	Government policy	12	60.00	8	40.00	14	70.00	6	30.00
		Local market	9	45.00	11	55.00	10	50.00	10	50.00
		Price variation	8	40.00	12	60.00	12	60.00	6	40.00
		Supply of fish	9	45.00	11	55.00	9	45.00	11	55.00
3.	Opportunity	Non vegetarian	15	75.00	5	25.00	16	80.00	4	20.00
		Taste / Flavors	16	80.00	4	20.00	16	80.00	4	20.00
		Low cost	5	25.00	15	75.00	6	30.00	14	70.00
4.	Challenges	Price fluctuation	8	40.00	12	60.00	9	45.00	11	55.00
		Government scheme	9	45.00	11	55.00	12	60.00	8	40.00



Fishery enterprise required investment to the infrastructure; so fish entrepreneurs needed financial support of institutions, while non-availability of credit was a problem faced by the fish growers as study reveals that no one was found to avail the credit facilities from financial institution.

Another problem was non-availability of fish feed as well as lack of knowledge about the recommended doses, most of the fish growers do not have proper knowledge about recommended quantity of feed, so they used available feed in the market due to that reason the farmers usually don't follow. The next problem was production instability, which is very common. The production fluctuates every year and they could not predict the production in advance.

Labour was another problem faced was the growers, since labour cost is very high in the study area which leads to increase in cost of cultivation.

Another problem identified by lack of training and demonstration on fish cultivation which was felt by the farmers is very much needed. Both on and off farm training should be provided for various packages of practices.

According to farmers, low marketable surplus was another problem, though marketed surplus was found much higher than the marketable surplus, the farmers felt that they could have earned more and entered in the fish wholesale market if they had huge amount of produce. The farmers felt that the government must have some policy regarding marketing and transportation of their produce and because of these they can't produce in a large scale.

Price uncertainty was another problem faced by the fish grower they got less price when there were heavy arrivals in the local markets.

The farmers are lacking behind in collective organization among themselves to safeguard their own interest. An individual farmer freely deals in his own produce, with his low bargaining power he sells his produce either in bulk or in small quantity to the village traders or to the consumers directly. The main reason for lack of organization was the difference in their operational holdings and lack of proper policy for marketing.

### **Policy implications (A SWOC Analysis)**

Table 4 reveals that after the problems and constraints faced by the fishery producer and marketing agencies based on the above fact and findings of the present study certain policy should be implemented to improve the efficiency may as majority of the fishery producer / enterprise were young and middle aged, only 80 respondents were selected on pilot basis, out of which 40 were fish-producer and to access the impact on marketing cost 40 numbers of different middlemen were selected for the present study. Even many more farmers, who come forward to start fishery unit may be extended financial support by the banks. To keep small unit was not sufficient to raise income and employment level. To earn more income and generate more employment throughout the year extensive farming should be provided for the fishery-farmers by extending micro finance required based on the performance. Veterinary and Animal Husbandry as well as fishery departments should focus on fishery development programmes / management in every village by establishing mobile clinics, development of high yield saplings breeds and development of waste land in to adequate fishery pond should be encouraged. To tie over the problem of shortage of feed / concentrate during summer season, PDS must encourage. Training should be given to fishery respondents about nutrient management and other aspects of fish

management for supplement the deficiency of protein and energy in fishery. Extension services must be strengthened in order to make the rural people aware and to set up the entrepreneurs more efficient especially in terms of increasing their management capacities to produce/enhance meat production or productivity, so net returns of the fishery unit give more profit. Even aware about the marketing demand, supply, cost and return must be aware to both producer as well as consumers.

The problems and constraints faced by fishery growers and marketing agencies and its remedies, which will be helpful to the policy makers, researchers and academicians. The lack of infrastructure development, market regulations, price policy, inspection on commodity are the need of the hours; co-operative marketing could solve the problems up to some extent, the extension services must be improved, government should take an active role for disseminating the farm technologies and impart knowledge of entrepreneurship to the needy peoples.

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