

## An analysis of consumer preference towards aquatic products in Tamilnadu

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### Abstract

Fisheries form an important sector of the Indian economy. Both as a nutritive food item for internal consumption and as a commodity that can earn foreign exchange, its importance is well known. In the marine sector, fish are procured from 2244 landing centres located all along the 8085 km of coast line. The supply from inland sector is also scattered which is obtained from 27,000 km of rivers, 1,13,000 km of canals, 1.75 million hectares of tanks, ponds and derelict water spread area. The total fish production during 1992-93 was estimated at 4.04 million tonnes, 2.24 million tonnes from marine sector against the estimated potential yield of 3.9 million tonnes and 1.8 million tonnes from the inland sector against the estimated potential of 4.0 million tonnes. The present study seeks to address this question through a survey targeting college students (undergraduates or post graduates) to investigate their family and personal consumption preferences on aquatic products. The statistical sources and consumer survey data combined with the perception of Indian food culture to analyze food consumption and preference, and to understand the consumption status and trends of India's aquatic market.

**Keywords:** Aquatic products; Consumer preferences; Consumption patterns; Food culture

### Introduction

The globalized food market offers expanded sale opportunities and supply for both exporting and importing countries. Not only is there more trade in total, but the composition of agricultural world trade has been shifting away from bulk commodities towards expanded trade in fresh product and, especially, processed goods [2]. Income growth, urbanization, improved distribution and transportation and changes in consumer preferences have led to expanded trade and globalized market for food products [1]. India ranks second in the world for fish production and exportation. Income growth and transitional economic environment have dramatically changed the food consumption patterns in India. As India has the largest population, seafood consumption preference and consumption trends might have great effects on the global fishery market. There are many studies analyzing the influencing factors of aquatic products consumption markets or demand predictions of the Indian fishery market.

Demand for animal protein in developing countries has been gradually increasing due to rapid human population. Relatively few studies have focused on consumers' fish quality perception and public opinion towards the consumption of farmed fish is poorly understood [4]. However, little research attention has been paid to consumer preferences on aquatic products. As largest growing population, it should not therefore be surprising that India might play a pivotal role in the global seafood industry.

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### Fisheries in Tamilnadu - An overview

Fishery resources of Tamil Nadu are categorised as Marine, Inland, and Brackish water. Marine fishery resources available in the near shore areas extending up to 50m depth are almost fully exploited in India. The unexploited and under-exploited resource beyond 50m depth is estimated to be 1.7 million tonnes.

### Marine Fisheries

Tamil Nadu has 1.9 lakh sq. km of *Exclusive Economic Zone (EEZ)* and a continental shelf of 41,412 sq.km. The marine fisher population in Tamil Nadu is 9.43 lakh, living in 608 fishing villages in the 13 coastal districts. The inshore waters of 1,016 km length of the coast on the eastern side and 60 km length of the coast on the western side are overexploited, whereas the offshore and deep sea resources are yet to be exploited to its optimum levels. The marine fish production of the State presently is estimated as 4.57 lakh tones against the estimated potential of 7 lakh tones.

-  **Marine Fish Production** - (14-15) 4.57 lakh tonnes
-  **Marine Products Export**- (2014-15) 93,477 MT
-  **Value** Rs, -5038.17 crores

### Fishery Trade

Fishery trade plays an important role in the India, with special reference to Kerala. It is estimate that around US\$ 70 billion worth fish and fishery products were traded internationally during 2006-07 of which India accounted for 2.64% only. India's share in this trade was US\$ 1.85 billion (Rs. 8,363 crores).

### Area of study

The present study was carried out in Chennai city, Tamilnadu. Chennai, sometimes referred to as the "Gateway to South India, is located on the south-eastern coast of India in the north-eastern part of Tamil Nadu on a flat coastal plain known as the Eastern Coastal Plains.



### Methodology

#### ➤ Sources of data

The research work is mainly based on primary data collected from the sample respondents by administering a questionnaire developed for the purpose. Other information relevant for the study was collected from secondary sources such as magazines, published and unpublished research works, journals, and websites.

#### ➤ Sample size

A sample size of 650 respondents (students of different colleges) were chosen to whom the questionnaires were distributed. Out of the 650 questionnaires, 150 were ignored for lack of complete information. A sample size of 500 respondents was taken for the study.

### ➤ Questionnaire

The questionnaire had 20 questions, which were divided into two parts as family and individual consumption patterns on aquatic products. Most of the questions were multiple choices related to purchasing frequency, purchasing source, reasons for purchasing, consumer spending, cooking methods, as well as consumer perception and choice on fish versus meat, freshwater fish versus saltwater fish, raw fish and dried products. The questionnaire also included several questions which were designed to ask students to fill in the information about their favorite seafood, cuisine, and their advice on processing and development of fishery products. Percentages of responses in each category were calculated. Cross tabulation was used to examine relationships among and between the variables.

### Results and Discussion

Table.1 showing socio-demographic profile of respondents

Sl.No.	Demographics	Category	Percentage %
1	Gender	Male	46.50%
		Female	53.50%
2	Age	19-30	100%
3	Residence	Urban	71.60%
		Rural	28.30%
4	Annual household income in rupees	Low <5,000	50.20%
		Medium 50,000-10,000	35.20%
		High 10,000-20,000	10.70%
		Very high >20,000	3.90%

Respondent socio-demographic informations are summarized in Table 1. Among these respondents, 53.5% were female and 46.5% were male, ranging in age from 19 to 30 years. According to their hometown distribution, 71.6% of the respondents were from urban areas, and 28.3% were from rural areas. According to their hometown distribution, 71.6% of the respondents were from urban areas, and 28.3% were from rural areas. A four-level household income standard was developed based on average wage i.e., low (< 5000), medium (5000-10000), high (10000-20000), and very high (>20000). Accordingly, 50.2% of the respondents were in the low income level, 35.2% were in the medium income level, 10.7% were in the high income level, and 3.9% were in the very high income level.

### Sea Food consumption patterns

Table.2 showing purchasing place, expenditure, frequency, cooking method and consumption pattern of aquatic products

Sl.No	Details		Percentage %
	Questions	Answers	
1	Aquatic product purchase frequency	Less than once a week	30.40%
		Once a week	49.90%
		2-3 times a week	15.40%
		Almost everyday	4.30%
2	Purchase place	Super market	21.80%
		Wholesale market	16.70%
		Fish Market	47.20%
		grocery store	5.40%
		Others	5.10%

3	The reason for choosing purchase place	Close to home	45.80%
		Good freshness	48.60%
		Cheap	23.70%
		Good service	24.40%
		Easy to cook	2.80%
		variety	3.70%
4	Average expenditure incurred for seafood in a week( in rupees)	<100	19.40%
		300	23.10%
		300-800	29.20%
		>800	8.30%
5	cooking method	Gravy	77.20%
		Steaming	68.40%
		frying	39.20%
		Soup	41.70%
		Grill	20.90%
		Others	12.50%

Results of family consumption patterns relating to purchasing frequency, purchasing place, consumer expenditure and cooking methods of favorite dishes were listed in table 2.

#### ✧ **Purchasing frequency**

Regarding the purchasing frequency, 49.9% of the family usually bought fishery products once a week, and 30.4% did less than once a week. More frequently, 15.4% of the families made the purchase 2-3 times a week, and 4.3% even did almost every day. From the above results, we knew nearly 70% families consume fish products at least once a week, which indicated that fish is one of the important foods for everyday life.

#### ✧ **Purchasing place**

For the purchasing place, 21.8% of families bought fishery products from supermarkets, 16.7% bought from wholesale markets. Nearly half of the families (47.2%) reported buying fishery products from fish markets. Only 5.4% chose grocery stores, and 5.1% bought from other places. Moreover, it was found that the families (30%) from urban areas prefer to buy in the supermarket or fish market, while only 2% families from rural areas buy fishery products from supermarkets. The regional differences might be due to the different distribution system, because there are many facilities such as large supermarkets and large wholesale fish market with developed cold-chain distribution system, but in rural areas there are less facilities such as these, only with some grocery stores or regular markets. The reason to choose different purchasing places (multiple selection) were summarized as: convenience for shopping (45.8% of families), freshness (48.6%), good service (24.4%), cheapness (23.7%), variety (3.7%) and easy to cook (2.8%).

#### ✧ **Expenditure for buying fishery products**

The average expenditure for buying fishery products in a week was less than Rs.100 for 19.4% of families, 100-300 for 23.1% of the families, 300-800 for 29.2% of the families, and more than 800 for 8.3% of the families.

#### ✧ **Cooking methods**

When considering cooking methods for fishery products, 77.2% of the families showed a clear favor for gravy, which uses a combination of liquid and semi - liquid. Followed gravy, 68.4% preferred steaming, 41.7% soup, 39.2% frying, 20.9% grilling, and 12.5% other methods. For gravy and steaming, people like to use whole fish or cut fish pieces.

## **The relationship between consumption pattern and socio-economic variables**

### **➤ Effects of consumer gender**

The results showed that 56.2% of the female respondents and 55.3% of males preferred fish over meat, which was similar to the results of 55.8% for all respondents. There is no link between the gender and consumption pattern. Both male and female respondents like to eat fish because of its healthy value and good taste.

### **Conclusion**

The consumption characteristics of aquatic products in India were concluded as follows. Both urban and rural aquatic product markets were growing. Aquatic product consumption per capita increased year by year. With economy growth and urbanization, consumption per capita increased to some extent, but might be limited by fish resources. Coastal areas, relatively developed districts, consumed more aquatic products than western or central areas. Future study on processed fishery products will be focused on product specific factors such as easiness to eat, taste, and health.

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