

## Socio-economic Perspective of Fish Marketing in India

(Prof.G.Parthasarathy Memorial Lecture)

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I am immensely pleased for the opportunity to deliver Prof.G.Parthasarathy memorial lecture here today. I had the opportunity to work with him as a colleague of School of Economics at Andhra University till his superannuation and have continued my association with him as an academic till the last breath of his life in Visakhapatnam. Though I was not his direct student, I had the benefit of his affectionate consultation in academic and common interest social activities including public debates on contemporary issues. He was an enlightened and committed economist who stood for the marginalized communities. It is quite instinctive to speak on a topic that is quite dear to him. I am grateful to the organizers to have thought of me a non expert in the subject to speak on an issue relating to Agricultural marketing.

Market and marketing have emerged as two distinct economic activities, the former as an economic institution and the latter as a dominant business function in an advanced capitalist system today. Marketing became popular with the rise of consumer culture following industrial revolution and economic expansion. Agricultural marketing as a subsystem of marketing that deals with harvesting, grading, packaging, processing, storage and price discovery is an important area of study in Economics. The FAO has defined marketing is “the series of services involved in moving a product (commodity) from the point of production to the point of consumption.” As well, we are looking at the socio-economic factors that influence the series of services in moving the fish from traditional landing centers/sites to the point of consumption here. There are several issues that need to be considered in fishing in a country that carry social stigma with fishing and its role in marketing including the economic parameters like demand, supply and unique social background of both the fishermen and fish consumer.

It is really disappointing to notice that the studies relating to the subsector of Fishing and related issues of Fish marketing are relatively neglected though fishing comes under the broad subject of Agriculture. The government of India has extended the benefits that are hitherto confined to farm sector to Fisheries by giving Kisan Credit Cards as Matsya Kisan Card to fisher folk to ease out the difficulties of getting loans from Banks, ushering in a new provision that help the resource poor fishermen from the year 2024. It is reported in the National Policy of Fisheries 2020 that, “India’s fisheries sector provides enormous potential in extending its reach to hitherto un/underexploited resources in both marine and inland waters; sizeable hikes in production and productivity from aquaculture; productive integration with other farming sectors such as agriculture, horticulture, poultry, and livestock; expansion of non-foodfisheries such as ornamental; and in enhancing the availability of nutritious fish protein rich in omega-3 fatty acids to the nation’s growing population. On the

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environmental front, pond, tanks and floodplains can play a very important role in harvesting and holding rainwater and in the process serving as a valuable ameliorating agent for the recharging of groundwater.<sup>21</sup>

India is the second largest fish producing country in the world and accounts for 8 percent of the global production. The total fish production during FY 2023-24 is estimated at 18.40 MMT with a contribution of 13.91 MMT from Inland sector and 4.49 MMT from Marine sector. The annual average growth rate in the Fisheries sector has been 6.30% over the last five years. The Fisheries sector plays an important role in the national economy and the share of Fisheries sector in the total Gross Value Added (GVA), at Constant prices, in 2022-23 is estimated at Rs. 1,65,075 Crores that constitutes about 1.12 percent of the total national GVA and 7.26 percent of agricultural GVA. Fisheries and aquaculture continue to be an important source of food, nutrition, income and livelihood for millions of people. The values of fisheries sector of India has shown an impressive growth rate of 7.58% (Constant Price: 2011-12) during the year 2021- 22 to 2022-23.<sup>2</sup>

India is also a major producer of fish through Aquaculture and ranks second in the world after China. Inland fish production constitutes about 75 percent of the total fish production of the country and the annual growth rate of production has also been high. The exports of Marine products are valued at Rs 63969 crores in 2022-23 of which the exports to USA and China constitute around 50 per cent. Interestingly the highest amount of 26.38 per cent of the exports in the country takes place from Visakhapatnam port, Andhra Pradesh, the state being the number one state in the country (with Rs 111223 crore) through fisheries value added to GSDP in 2022-2023. The economic contribution of fisheries sector is mentioned here to understand the significance of marketing in the context of socio-economic characters that are unique to India.

There are broadly two categories of fish in India. One, the Marine fish on the 8000 and odd kilometers of coast and the corresponding EEZ that India possess. The inland capture fisheries resources include a riverine length of 2,01,496 km (including the tributaries, and irrigational canals) 3.52 million ha of small and large reservoirs and 1.2 million ha of floodplains, etc. The total area available for the inland fishery is estimated at 8.24 million ha excluding rivers and canals.<sup>3</sup> The total inland fisher population is estimated at approximately 24.29 million. The marine fishermen population is 3.77 million in 2023; together the fisher folk constitute 28.06 million. All of them are not considered as equivalent in terms of social structure of the country that plays an important role not only in capture and aquaculture farming but also in making the output or fish reaching the consumer.

### **Nature of Fish as Perishable Commodity**

Fishing is one of the oldest, if not the only occupation that Homo sapiens have inherited to endure in the modern period. All over the World the whole population consumes fish except India where only 72 per cent on average consume fish. The data from NFHS and others culled out by World Fish Organization show that the consumption of fish varies from 99.3 per cent in Tripura to 20.55 per cent the lowest in Haryana and almost the same proportion in the neighboring states Punjab and

Rajasthan. The fish consumers of the largest population states like Uttara Pradesh are only 55.4 percent while in Bengal it is 98 per cent, compared to Bihar at 87.5 percent of the population. The proportion of people eating fish was the highest in India's northeastern states, followed by its eastern states, and Tamil Nadu, Kerala and Goa. Fish consumption varied across the states. In the northern and central regions of India, where the percentage of people eating fish is lower than the national average of 72%, less than a quarter of the people ate fish at least once a week. However, in the northeastern and eastern regions of the country, as well as in the coastal states of Goa, Andhra Pradesh, Tamil Nadu and Kerala, where the percentage of fish consumers is greater than 90%, the proportion of people who ate fish at least once a week was more than 40%. It is worth noting that only a few states had a considerable proportion of their population who ate fish daily, such as Kerala, Goa, West Bengal, Manipur, Assam and Tripura.<sup>4</sup> This has a bearing on the marketing of fish along with other parameters of socio-economic conditions of not only the producers but also the customers. This is quite different from other items of food in India.

Fish, whether it is Marine or Inland is perishable. Unlike other commodities, fish has a unique character of nutritional value of protein containing 20-25 grams in each 100 grams plus omega 3 fats and vitamin D, B and others. This is different from other Non Vegetarian items of chicken with 27-30 grams of protein, low fat, vitamin B6 and others. The nutritional content of mutton is 28 grams per 100 grams with high fat and B12 and other contents. The greatest advantage of fish is that it is easily digestible and recommended for patients with heart ailments. The supply of fish as against other non vegetarian items is limited and cannot be increased or decreased once fish are caught and kept for sale. This makes the marketing of fish vulnerable. The elasticity of supply of fish as a perishable good is inelastic and its price elasticity of demand is inelastic for some species like tuna and canned fish and is elastic for other ordinary species available in India.

### **Demand Characteristics**

Before discussing fish marketing, it is necessary to understand the economic dimension of demand for fish. The demand for food is generally considered as price inelastic. But the basket of food contains different categories of food with varying elasticities with respect to income and price. For example, seasonal vegetables will have different effect compared to pulses. Scholars have estimated income and price elasticities for Rice, Wheat, Coarse cereals, Pulses, Milk, Edible oils Vegetables, Fruits, Meat, fish & Eggs, Sugar and Other food commodities and Non food commodities. They found that the values vary widely across income groups, and food commodities. The analysis of price and income effects based on the estimated demand system has suggested that with increase in food price inflation, the demand for staple food (rice, wheat and sugar) may not be affected adversely but, that of high-value food commodities is likely to be affected negatively.<sup>5</sup> It is noted that Meat, Fish and Eggs as one component in the NSS data gave income demand effect positive and price demand effect negative. It is also noted in several studies that there is a shift in the budgetary allocations from cereals to high value based fruits, meat etc over a period of time. The FAO database on food balance sheets indicate the trends in per caput annual fish consumption and in per caput annual fish food protein intake of consumers in the selected Asian countries. Trends and changes in fish consumption by source (e.g. freshwater, pelagic, demersal,

etc.) and their contribution to total fish consumption suggest that fish is a luxury commodity for the poor and a necessity for the rich. However, the prices of assorted small fish among carps are inelastic indicating that they are mostly consumed by the poorer families. The FAO is right in saying that in India, to 'the best of our knowledge there is no study that estimates elasticity of demand for a particular species of fish, or for fish as a separate group'. The recent ICT/AI based dynamic pricing and price commitment strategies for perishable goods are not relevant to Indian fisheries as some of its segments are still in the food gathering stage.

The cost price of fish is based on the amount of labour put in by the fisher men in capturing fish. Fishing is a labour intensive process with traditional skills acquired in the family on the job. Traditional fisher folk either marine or inland use very limited gear and therefore always at a disadvantage compared to those who use advanced gear with capital investment. Since fish is a perishable item the price depends upon the demand, supply remaining constant. But the fishermen at the landing centre are deprived of the opportunity of change in demand as he receives what the auctioneer pays at his discretion. The price that the customer pays and the remuneration the fishermen receive are always different as the auctioneer at the landing centre pays less than the market price. The vendors mostly fisherwomen are at a disadvantage to raise the price as per demand as it is a perishable good would be deprived of the proceeds if it remains unsold. Thus the pricing of fish is precarious except shrimp cultivated in fish farms with huge investment for freezing, canning and other techniques to avoid at least temporarily the problem of perishability. We do not have in depth studies on pricing of different species of fish in India compared to the West to understand the nuances of market pricing.

#### **Substitution Effect and Giffen Paradox in Fish Consumption**

Fish consumption in India is typically not uniform across regions and castes. Almost all the people (around 98-99 per cent) in the North East without exception consume fish along with other non-vegetarian foods. They eat fresh water fish for which they create small ponds that is part of the culture of the East India from Bengal to Arunachal Pradesh. As noted above people in the central and North West India, around 50 percent only eat fish and the people on the Coast except Gujarat; eat fish in the same proportion as that of North East. Fish is nutritious and tasty, relatively cheap compared to some non vegetarian items for those who live on the coast and on the banks of the rivers and lakes. Therefore for a wide variety of communities fish has become a staple food indicating that they eat fish every day. It is not only the fishermen, but even for people of Bengal and Konkani Brahmins, fish is compulsory in the diet. Some on the coast of Goa, Kerala, Tamilnadu and all fisher folk of Andhra Pradesh and Orissa eat fish every day while many eat at least once in a week. Throughout India, there was a clear trend in people eating fish more frequently. The percentage of people eating fish occasionally dropped 4.9 percentage points, while those eating fish weekly increased 11.3 percentage points. However, there was no significant change in those eating fish daily, only a slight drop of 0.3 percentage points during 2005-2021.<sup>6</sup>

The role of fish consumption as a part of habit and culture is strongly associated with some communities generally supposed to reflect on the MPCE as an average along with Eggs, Meat and Fish. There is an increasing trend that as incomes

raise, the proportion of Food as part of MPCE is declining from 59.4 per cent in 1999-20 to 46.3 in rural India in 2022-23 and from 48.06 to 39.7 in urban India. The decline is steeper in rural areas than in Urban India indicating a shift in the pattern of consumption. This is to be examined in terms of the concepts like substitution effect and Income effect of consumer behavior. Marketing strategies generally consider these concepts to develop and differentiate product, target customers and forecast demand for the product. However, fish marketing is still in a nascent stage in India and the use of technology and fixed capital investment to convert the perishable fish in to value added products to suit the consumer's tastes has not yet grown-up. A brief understanding of the behavior of the fish customer in terms of the standard market parameters like income and substitution will enhance our perception.

The substitution effect of perishable goods is very sensitive on demand for close substitutes bringing the idea of cross elasticity ie, the quantity demanded of one product in response to close substitutes' change either positively when price declines or negatively when price raises. As noted above, several studies have proved that poor families keep buying fish of lower grade or assorted small fish irrespective of the change in price. It is like a Giffen Paradox of Inferior goods where increase in the price of bread or rice will make the poor customer to buy more of it in order to maintain the necessary food quantity. The fish addicts mostly from the lower socio-economic categories in India defy the concept of substitution effect of going for a close substitute when prices increase as there are no substitutes for assorted fish in the market.<sup>7</sup> The fisheries sector though growing in the recent years has not been able to develop alternative fish products that are now readily available in the West.

### Disposition of Fish

The disposition of fish after harvest is very important to reach the customer on time and get remunerative price for the producer. However, the disposition of fish is still under the regulation of traditional informal institutional structures that have not been broken by modernization, they are being exploited by the emerging corporate operators in the growing sector. It has four layers, the fishermen at the landing centre, local auctioneer, wholesaler and retailer/Vendor. The local auctioneer is a traditional fisherman or woman from the community who lends money and support to the fisher folk in advance and they are obliged to sell first only to him or her at the landing centre measured in traditional method of size of a basket. There are three categories of vendors in marketing fish 1. Stationery vendor at a designated place in the Fish market, 2 Peripatetic Vendor mostly women walk through and sell the fish (sometimes prohibited to enter) and 3. Mobile Vendor who uses cycle or motorized vehicle to reach the customer. The latest government report 2023 notes that the total fish catch stands at 171.13 lakh tons out of which 134.19 lakh tons are going for marketing. It means that just 36.94 lakh tons are left for freezing, curing, caning etc. Interestingly, Andhra Pradesh is the number one state both in production and disposition at 51.06 lakh tons with Bengal at a distant second position with 20.45 lakh tons. However in terms of per capita consumption Andhra Pradesh stands at a distance with 9.38 Kg per annum compared to the highest per capita consumption of 27.62 Kg of Tripura and Kerala and Karnataka at 20.6 Kg per capita each. The India fish market size was valued at **INR 1881.84 Billion in 2024 (out of GVA of 2885.26 bln)**. The industry is expected to grow at a **CAGR of 10.20%** during the forecast period of 2025-2034 to reach a valuation

of **INR 4970.48 Billion by 2034**. Is the structure of fish industry uniform or divided or segmented?

### **Fish Market Segmentation and Social Division Reinforce**

Market segmentation is a strategy to divide the customers on the basis of demography such as age, gender etc, life style, rural urban, tastes, geographic location, nature of the fish Inland- Marine and other considerations by the organized traders. There are several intermediaries in fish marketing such as auctioneer, wholesaler, and retailer as noted above. In marine fish, the auctioneer is present at fish landing centre and immediately takes control of the catch once it reaches shore as per tradition. In freshwater fish marketing, the auctioneers employ or source fish through a commission agent. The commission agent purchases fish from landing sites (river banks, culture ponds, etc.) and sends the fish for sale to the auctioneer. The agent charges 5 -10 per cent of the sale value as his commission from the fisherman. The government of India has devised guidelines to control, regulate or ban destructive gear and conserve fisheries, but no mention is made about fish markets. Fishery is a state subject under the Constitution of India but only a few states have a policy specifically aimed at fish marketing. The Andhra Pradesh Marine Fishing Act 1995 and The AP (Agricultural Produce and Live Stock) Markets Act 1966 defined market as any notified area specified through a notification and the live stock includes other animals that may include fish.

The emergence of deep water fishing and aquaculture promoted by the government of India through various schemes has advanced Fish production in India that surged 115% with a compound annual growth rate (CAGR) of 5.63% during 2005–2006 to 2019–2021. Domestic consumption of fish accounted for 82.36% of total production in 2005–2006, 86.2% in 2015–2016 and 83.65% in 2019–2020.<sup>8</sup> The proportion of India's population who ate fish increased at a higher rate in the rural than in urban areas. Those eating fish at least once a week increased 11.85 percentage points in rural areas and 9.55 percentage points in urban areas. The gap in fish consumption between rural and urban areas narrowed from 5.15 percentage points to 2.85 percentage points during the period noted above. The World Fish study indicates that there was a linear increase in the lowest, second, middle and fourth wealth quintiles for both NFHS-3 and NFHS-4. In NFHS-5, however, the trend reversed (though this was not the case for those eating chicken or meat). One potential reason for this recent reversal in the fish-consuming population could be that wealthier people might prefer to eat different varieties of fresh fish or processed fish, such as single-bone or live fish.

Fish markets are segmented in urban areas and in metropolitan centres by the organized traders who study the demand for fish by category and create markets for each species. There are broadly Pelagic, Demersal and Fresh water fishes and in each category there are several species that may count in dozens. The demersal fish include sharks, pomfret and groupers are expensive and sardines, tuna categories under pelagic are also expensive. Fresh water fish include catla, rohu, murrel, exotic carps constitute the major component of fish basket. In fact none of the exotic species like sardines, tuna etc., are not caught by traditional fishermen who use catamarans and low horsepower boats. Therefore, traditional fishermen are not benefitted by the market segmentation. The fishing zones are classified as traditional to limit the extent within 5 nautical miles or 8 kms from shore and for mechanized boats can go beyond 15 kms

and deep fishing vessels go up to 200 nautical miles as per regulations in Andhra Pradesh and other coastal states have similar zonation and fishing regulations. The zonation is also applicable to reservoirs, rivers, lakes etc in freshwater fishing. There are several incidents of violent conflicts among fisher folk mostly in the marine coastal areas due to overstepping of zones by different categories of boats. The unintended outcome of this zonal system and the amount of capital investment necessary to go beyond continental shelf for deep sea fishing enabled the division of fishermen high and low in addition to the traditionally divided caste categories. At the fresh water farms and brackish aquaculture, the role of the traditional fishermen is slowly replaced by non fisher communities and mechanized gear. It is reported that “the rate of investment in fisheries has grown faster than that in the agricultural sector, but has not translated into equivalent rise in GDP from fisheries indicating declining efficiency of investment...Over a period of time, the marine fisheries has witnessed high rate of capitalization, while catch per effort has been declining. Inland fishery also faces sustainability issues in terms of environmental degradation. The shrimp aquaculture in many low lying areas is at the cost of paddy cultivation. Aquaculture is susceptible to a host of diseases”.<sup>9</sup>

#### **Social Division and Marginalization of Fisher folk in Marketing**

Fishing community in India in general and marine fisher folk in particular are considered as the most disadvantaged social group. Some of them are identified as scheduled caste in some Northern states and some are recorded as Backward Castes mostly in the South. They are demanding the status of either Scheduled tribe or Caste. There are very few studies on the Marginalization of fisher folk at all India level. There is a technical problem in considering the fishermen as one single unit as some of them are categorized as backward castes in some states and some as Scheduled castes and as Tribes in some states. There are around 64 castes that come under Scheduled caste, 252 as backward castes mostly in the South and Maharashtra and 7 groups as tribes in Chhattisgarh, Assam and Nagaland. We have conducted a study on Marine fisher folk of three North Coastal districts to understand poverty, marginalization and deprivation during 2017-18.<sup>10</sup> The economics of fishing with modern gadgets was analyzed and found that the total income earned by 482 mechanized fishing families in a year is Rs 48488300 and the total operating expenses or variable cost is Rs 32275930 allowing a net income of Rs 16212370 in our sample survey. We need to add an amount of Rs 238393 as depreciation cost per year calculated at 50 per cent for boats, 25 per cent for nets and 10 per cent for traps. It means that the 482 households that go for mechanized fishing would get an annual income of Rs 33635 per household per annum. This is a little higher than the average income from the fisher folk using traditional fishing gear.

The income from fishing is earned in one of the three ways. One, those who have their own catamarans goes for fishing and uses the proceeds for themselves. Two, some fisher folk join the big vessel as share croppers at agreed for 15% /20% share value (5-6 persons per boat). Three, some join the boat owners for fishing as laborers for a fixed wage. The average daily wage is estimated to be Rs 226 for the region and it varies from Rs 185 in Srikakulam to Rs 433 in Visakhapatnam. The average monthly income from all sources is estimated to be Rs 7601 in Visakhapatnam, Rs 7515 in Vizianagaram and Rs 9223 in Srikakulam districts respectively. The average size of the family of majority of the households in 34.7 per cent families is 4 members, 21.4% families have 5 members,

though 2 members norm of nuclear family is found among 10.3 households. 6 to 10 members of joint family are not infrequent. Therefore, we have taken MPCE and disaggregated the income at individual level in the range of Rs 960-1500 MPCE indicating that 61 per cent are below poverty at RS 32 per day per capita criteria and if the Rs 961-1500 (31%) MPCE marginal group is also included; the figure comes close to CMFRI figure that recorded 97 per cent of families are below poverty line in 2016 as cited in the study. This study also found that fishermen's share was lower for low-value fish (sardines) and high for higher value fish (seer). In addition, fisherman's share was lower for longer channels and vice-versa. Fishermen's share was found highest (96%) when fish was sold directly to consumers and lowest (34.48%) when the intermediaries were involved. This shows the precarious condition of marine fishermen on the coast. It is further noted that the fishermen are highly indebted community on the coast where the average loan per household obtained from friends and relatives stands at Rs 141910 and the outstanding amount after repayments etc., stands at Rs 128516 for each household.

The economic status of the marine fishermen can be compared with the income estimates made for inland fisher households by Anjana Ekka et al.<sup>11</sup> The researchers from Central Inland Fisheries Research Institute conducted a study in 7 states, Andhra Pradesh, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Tamil Nadu and Uttar Pradesh. The 425 samples have been used to estimate the monthly income of respondent households. It is reported that the maximum per capita monthly income of Rs 9759.42 is observed in Andhra Pradesh and the lowest of Rs 533.6 is reported from Madhya Pradesh. This appears to be not different from the economic status of marine fishermen noted above from the ICSSR study.

### **Fisher Women Double Marginalized**

The poverty levels, economic deprivation and social marginalization of traditional fisher folk in the country seem to have not undergone any tangible change compared to other marginalized communities in the country. The socio-economic status has a bearing on the marketing of fish by the vendors. The most neglected and double marginalized social group among fisher folk is the Women vendors. As noted above, the ultimate vendors of fish either fresh or dry are fisher women in the entire country except in one or two places in Orissa and others where men go for vending of fish. It is really disgraceful to notice episodes of fisher women are being threatened not to enter the streets of certain so called civilized elite habitations in urban areas. The traditional functions of fisher women were limited to peeling, curing, cleaning and carrying head loads to the market. It is reported by the Department of Fisheries in the annual report that out of 1.01 crore fisher women in inland fisheries, only 4.8 per cent are fully employed, another 6 per cent are partly employed and 22 per cent are employed in unspecified occasional jobs. These accounts for only one third of the total fisher women who are employed in fishing and the rest are employed in sundry jobs including working as agricultural laborers, house maids etc (in 2019-20). The status of women in marine sector is little different where 18 percent are working as full time and 29.5 per cent work as part time occasional jobs. The rest of 50 per cent of women on the coast have precarious situation as they cannot get employed in agriculture sector as there is no scope for agriculture or allied activities on the coast. We have noticed in our field study that in North Andhra some women belonging to palli caste are employed in

plantation work like cashew, coconut in some pockets of Uddanam. But that is not available to all women.

The livelihoods of fishermen either on the coast or in the inland fisheries depend upon the free access to common property resources like free marine resources of the sea, river front, lakes and other natural commons. The traditional communities used to protect the environment and the commons like that of the tribes in the forest lands from time immemorial. They have a sense of sustainability in not touching resources that are deplete and protect those that are scarce. They have used the barter system to procure their daily means of living from others in exchange of the fish in the past. It has slowly developed in to a market transaction growing in substantial way through the use of science and technology to procure more than what is required for present consumption by developing preservation and processing techniques that are essential to allow aquatic products to be distributed and marketed domestically and internationally. These techniques are based on temperature reduction (chilling and freezing), heat treatment (canning, boiling and smoking), reduction of available water (drying, salting and smoking) and changing of the storage environment (vacuum packaging, modified atmosphere packaging) and refrigeration. Thus, the product design of fishery resources is undergoing a change with value chains and supply chains are being built in to the marketing strategies of fish products in the World. The commercialization of marine, aqua and other natural resources for which the traditional communities like fishermen had a natural right is being followed in breach rather than protecting them with legitimate commitment. This is undermining the capacity and traditional skills of the artisans like the fishermen that is ultimately pushing them from the market with weak social background, economic deprivation and little bargaining power. Market is considered as an important economic institution that is supposed to dissolve all social barriers is being subjected to social constraints in India with the poor and socially marginalized fisher folk enduring as a socially exclusive group.

The fisheries sector is undergoing several challenges ever since free access to common properties are given to all particularly with corporate capital investment in the sector. We have found that the use of Trawls ( Pelagic trawls, Demersal trawls, Shrimp trawl) , dredges, Trammel nets , Seine nets, Gillnets and other modern fish gear has affected the fish stock resulting in fishing holidays as mandatory. This has adversely affected the marine fish catch of traditional fishermen who return empty handed once in three days of a week of fishing in the sea. The situation in the inland fisher folk seem to be not different due to encroachments, corporate presence and over exploitation of fisheries resources both at the brackish waters and in fresh water fish exploitation for profit. This is dichotomous as the quantity of fish for sale doubling while the economic conditions of fisher folk diminishing. Therefore FAO has warned that “Central to estimating the value of sustainable fisheries is the biological sustainability of stocks. The sustainable management of fishery stocks remains critical for ensuring that fisheries continue to generate economic growth and support equitable development, meeting the needs of today without compromising future generations.”<sup>12</sup> It echoes the UNDP sustainable development goals that include not only endangered fisheries but also the threatened fisher folk.

There seem to be not many investors from the fishermen community in the fishing industry and it is alleged that binami transactions in the name of fishermen to

appropriate the subsidies and loans at concessional rate from financial institutions is rampant. There may be some regions like West Godavari and Krishna districts in Andhra Pradesh where large number of fish and aqua farms is located are subject to spillover effects benefitting few fresh water fisher folk. This is a serious topic of research for scholars to examine how one of the largest fresh water lakes of Asia, Kolleru with 90100 Hcs (901 sq kms) is being exploited by powerful political and economic lobbies with little or marginal benefit to the traditional fisher folk. The adverse affect of the overexploitation of the lake is observed time and again through flooding of neighboring cities and farm lands. Yet, this is the region that produces one of the World's largest quantities of shrimp and gets export earnings to the extent of one third of the Rs 63000 crores fish exports from India. (This is inferred through the scrutiny of highest value of fish exports being made from Visakhapatnam port in India.)

### **Fish Markets Carry Social Stigma**

The advancements in Science and Technology and their application in improving the catch or output of fish both inland and deep sea fishing has made India as one of the top three countries in the World. The states of Andhra Pradesh including Telangana play an important role in the production and marketing of fish. But, the socio-economic conditions of the fisher folk particularly the marine fishermen on the East Coast of India are still languishing in poverty, deprivation and neglect. The situation of inland fishermen in Telangana and Andhra Pradesh is far from satisfactory in terms of living conditions. The most striking image of fisher folk particularly the women vendors in the market where the primordial conditions of haggling and bargaining take place in relation to the low social status of the vendor and not in relation to the quality of output. The conditions of fish market and marketing are still of the status of a village santha or mandi or weekly market of the feudal period (or even earlier period of food gathering) where commodities used to be identified with the caste. The seller is obliged to part with her wares by the end of the day due to the perishable nature and also the seller's vulnerability to raze it in a situation of buyer's market. The common resources of the fisher community like the sea, lake, river etc are neither exclusive nor leased out by government to fisher folk to be independent farmers with a status. They are always at the mercy of the community and the local political power structures to remain as dependent and cannot play the role of price maker. There is no MSP for any of the fish species.

The spatial distribution of fisher folk in the country indicate that 60 per cent of them are in Assam, Bihar, Uttar Pradesh, Madhya Pradesh, Bengal and Orissa where majority of the poor in India are now living. It can be surmised that the presence of the socially backward fisher folk in these states is the cause of backwardness? Is it possible to state that to make them come out of poverty require special focus with additional funding? This group appears to be the most weak and powerless to get identified as a target to develop them as strong players of market either as independent operators or in cooperatives and not necessarily as recipients of doles. The entitlements of fisher folk with economic support and presenting them with lease titles to common resources would enable them to secure power to stand as important players of the market.

It is important to draw the attention of scholars working in the field of Agricultural marketing to note that fisheries sector is an emerging area of study of

research to be pursued further. It is in this connection we may dredge the interest of experts that the Government of India has already drawn a “National policy framework on agriculture marketing 2024”. It was released by the government in November 2024. “It aims to build a vibrant marketing ecosystem in the country wherein farmers of all categories find a market of their choice to realize best price for their produce, to be accomplished through improved efficiency, enhanced competition with multiple marketing channels & no monopsonic market structure, transparency, infrastructure and adoption of innovative digital technology and also agri value chain based marketing.” However, it does not contain any reference to fish marketing that calls for the indulgence of scholars to discuss the issues critically and publish the results so that government policy makers get the opportunity to incorporate the suggestions for the welfare and wellbeing of our most neglected community. This should help formulate policies for sustainable marketing particularly with reference to Fisher women. It is reported that the ‘International Collective in Support of Fisher workers’ have drawn a note in Mumbai workshop for consideration by the stakeholders is given below for examination. This can be taken as benchmarking for discussion to formulate policies of fish marketing in India. They are:

1. Facilities at existing markets (for water, sanitation, waste disposal) need to be revamped.
2. Seating and fish storage facilities (ice etc) need to be improved.
3. Fish stalls should be located at the front of general markets (for better visibility).
4. Tampering with the weighing of fish in wholesale markets needs to be controlled
- 5 Existing vendors should be involved in the redevelopment process at all stages.
6. All redevelopment should be funded by government agencies like NFDB. (The PPP model should be avoided.)
7. Vertical development of markets, with different floors for different fish product categories, could be considered, with the ground floor set aside for fresh fish.
8. Licenses should be provided to all legitimate vendors through a transparent process.
9. Licenses should be transferable within families so that future generations can continue in the Trade.
- 10 The fishing community/women vendors should be an integral part of the process of developing new fish markets.
11. A street vendor policy should be notified. Fish vendors selling on the street should be provided with identity cards so as to be recognized as fish workers
12. Marketing co-operatives/self-help groups (SHGs) of women fish vendors should be facilitated and supported.
13. Training should be provided to fisherwomen on organizational skills, value addition, hygienic handling of fish, financial management and so on.
14. Fisher women should have ensured access to general programmes developed by government agencies
15. Street Food in cities should be promoted with specific locations as is done in Bangkok, Singapore and in other developed courtiers.

16. The Rythu Bazaar scheme for vegetable vendors being practiced in Andhra Pradesh and Telangana can be extended to fisheries and fish products.

**End Notes:**

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