

## “Prospects of Fish Processing Units in Chhattisgarh – An Overview”

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**Abstract:** Fisheries sector is the fastest growing sector in Chhattisgarh state. Its contribution in the state economy shows a remarkable coverage. Chhattisgarh is endowed with abundant geographical resources and an apt climatic condition for production of fish. But fish being of highly perishable in nature need to be adequately processed. This paper primarily focuses on the “Prospects of Fish Processing Units in Chhattisgarh – An Overview” The objective to study the usefulness and response of other states towards this concept of fish processing industries and their impact on the economy of the State. The researcher found that processing of fish in organized way will be greater help to the fish farmers of state and will thus help in strengthening the financial status of people involved in this work. Immense scope is observed in fish processing industries in Chhattisgarh state.

**Keywords:** Fish Processing Units, Processed Fish products, Consumers, Marketing.

### INTRODUCTION:

Fisheries is an important sector playing a pivotal role in the socio-economic development of the country. It has been recognized as a powerful employment generator and contributes to the food security of the country. Fisheries plays an important role in economy with a coastline of over 8,000 km, an Exclusive Economic Zone (EEZ) of over 2 million sq km, and with extensive freshwater resources, providing source of livelihood for a large section of economically backward population of the country.

Fish is a rich source of easily digestible protein providing polysaturated fatty acid ,vitamins and minerals for human nutrition. Therefore its highly demanded as a source of protein rich food. Yet a large amount of it remains unused due to inherent problems related to unattractive colour, flavor, texture, small size and high fat content. The prime issues faced in development of fisheries in the country includes accurate data in terms of fish production on assessment of fishery resources and their potentials, development of sustainable technology, harvest and post harvest operations, storage and most importantly proper pricing.

Chhattisgarh, is bestowed with varied water resources, which could be exploited economically, and sustainably more to provide livelihoods security as well as economic security to the tribal

community. And to generate substantial revenue through this prime natural resource Fisheries sector could play key role.

## II. LITERATURE REVIEW:

The fisheries sector is showing immense growth and the production rate is continuously increasing. So in order to attain new pinnacle of expansion an unfurl vision is needed. For this study Researcher has reviewed the below mentioned papers:

S. No	Author/ Year	Area of the Study	Objectives	Findings
1	Thyagarajan Desikan, 2014	Tamilnadu, India	Lack of expansion in processing due to low demand for processed foods leads to restriction in the production of quality products. Diversification of poultry products industry is attributed to lack of adequate infrastructure facilities for storage and processing. Marketing expansion is possible with major policy support, creation of facilities and reaching the consumers with quality and safety products. Main reason for disturbance in poultry marketing network is out as for monopoly of traders and restricted profit to the consumers.	Development of low cost and efficient poultry processing technologies and well established quality control norms can be attained by continuous research and development. For uniform sharing of profits by all players in the poultry marketing system of India transformation is needed rather than year old tradition of market dominance by private traders and commission agents.
2	Dr. V.R.Palanivelu, 2016	Salem, Tamilnadu, India	The study aims at finding the marketing concept and pricing methods used. To find out the promotional measures to be adopted for expansion of market area and the possible risk to be handled in this work.	For exporting frozen fish holistic marketing concept can be applied. Cost based pricing as well as other pricing methods can be exercised with the proper consideration of cost related elements. To determine the price the product, customers, competitiveness and quality are well considered. Export market success depends largely on

				adapting production.
3	Kelly A. Davidson , 2012	Hawaii, USA	The main of the study is to investigate Hawaii to consumers' willingness to pay for fish product attributes including farmed vs. wild-caught. To evaluate the consumer perception and public attitudes towards aquaculture at national and regional level.	A study on 610 respondents was done both through online and in-person. It was found that at Hawaii consumers are willing to pay more for wild-caught fish than farm raised. Even fresh fish are more preferred than previously frozen fish with the degree of preference varying across species. It also suggest the strong preference for fresh,wild-caught tuna in Hawaii. Conditional logit models were used to estimate the impact of the attribute variables on the decision to purchase the product provided for choice situation.
4	Davide Menozzi, 2020	France, Germany, Italy, Spain, and the UK	This study focuses on consumers' preferences for fish products. This article also reports consumers' willingness to pay for different fish species and attribute on representative samples in five European countries.	The Researcher revealed that highest premium was fetched for wild-caught fish than farm raised. Fish fillets preference is more species specific, where Ready-To-Cook food is more preferred to whole fish. It is also revealed that positive premium for sustainability label and nutrition and health chain with heterogeneity across countries and species.
5	V. Geethala kshmi , 2013	Palakkad, Kerala	To increase awareness about nutritious diet and health. To study quality control, value addition and consumer appeals. To evaluate the consumer willingness to pay for value added fish products.	The Researcher applied an orthogonal design where 18 hypothetical products concepts were generated and 120 respondents marked their preferences. A conjoint analysis showed that the quality is the most important attribute influencing consumers' behavior. The results also revealed that certified quantity will help to improve market opportunities for value added fish products. It is also observed that young and earning age prefer to pay 10-15% for quality ensured ready to cook fish products.
6	Chinglen Meitei N,2019	Manipur, India	To identify the efficient marketing channel to be employed for marketing of fish and value added products. To develop a	For this Research, a sample of 60 numbers of fishermen and 10 numbers of different intermediaries were taken into contemplation. Due to lack of resources all fishermen were not able to value

			policy option for upliftment of livelihood and income of the different persons involved including fishermen in business of fish and fish products at Loktak Lake of Manipur. To provide an overview of value addition in fish at its different stages of marketing	addition in their products. It was found that the local trader-cum-retailer earned a higher profit as compared to that earned by the fishermen. It was concluded in this study that majority of the intermediaries (62.85 %) in the study area performed the value addition (smoked) of fish before the produce reached to the ultimate consumer.
7	<u>Karthick umar Paramasi van,</u> 2020	Tamil nadu, India	To create awareness among coastal women regarding nutritional benefits and the business opportunities present in the value addition of sea products. To provide psychological stimulation to motivate these women. To acquire skill upgradation, knowledge in areas of marketing, skills in production, processing and packaging. To ensure sustainability among these group.	This study proved to be advantageous for the fisher women of all the groups. Through the skill development programme there was observed change in their confidence level, sense of achievement, enhanced awareness, improvement in leadership quality and in decision making and empowered economically. They were able to gain more than what they have invested in it, which covers the operation cost and the production cost, which was very difficult in the vending business.

### III. Objective of the Research

The objective of this research to study the prospects of value addition in fisheries. Chhattisgarh is showing remarkable growth in fisheries sector, hence enriching this sector can bring benefits to both economy of state and farmers. The aim of this study are:

- To study the impact of value addition in fish Business
- To determine the utility of Value-addition of Fish.
- To study prospects of processed fish industries in Chhattisgarh State.
- To study about the acceptability of Consumers towards Value-added fish products.

#### IV. Research Methodology

In this paper, an effort is made to provide an overview of the existing study on prospects of value-addition in fish sector in Chhattisgarh state so as to make adequate utilization of fisheries in case of excess production. The main aim of this paper is to review and reassess the extent work on the possibilities of fish products without application of empirical technique. The is completely based on the critically reviewed journals, websites and articles to get the deep insight of the subject authenticity of the information.

#### V. Analysis of the proposed Research Objective:

The top fish producing states in India are Andhrapradesh, Gujrat, West Bengal, Orissa. As per Ministry of Fisheries India the total fish production of 12.59 million metric tones was registered during 2017-18 with the contribution of 8.90 million metric tones from inland sector and 3.69 million metric tones from marine sector. It was found that the average growth in fish production during 2017-18 stands at 10.14% when compared to 2016-17(11.43 million metric tones). The main reason is due to 14.05% growth in Inland fisheries when compared to 2016-17(7.80 million metric tonnes). It is also world number two in aquaculture production. As per report published by Ministry of Fisheries-India is currently world's second largest producer of capture fisheries and according to article published in times of India Chhattisgarh securing sixth position in the country for fish production. The state has recorded 13% increase in fish seed production in past two years. It is generally observed that a large percent of total production gets waste due to Improper post harvesting, storage facilities, processing losses, mishandling, improper packaging, ill-equipped and weak cold chain infrastructure. Saurav Negi in this paper titled food processing entrepreneurship for rural development drivers and challenges says that this extent of wastage can be reduced only by means of high processing levels. There is even the possibility of over production in state due to emerging entrepreneur in this sector, which may result in price reduction due to more supply as compared demand in market. To avoid this its needed to develop fish processing industries in Chhattisgarh state. Devi in his article emphasizes that the higher selling price after value addition is mainly because of higher purchasing price. These results were supported by Devi and found that value added fish products were getting 68 per cent more return than non- value added selling of fish.

Many states are taking initiatives to develop their processed fish industries along with Fish Businesses. According to The Hindu- The Central Institute of Fisheries Technology(CIFT), a dedicated research body under the Indian Council of Agricultural Research, has joined hands with the Marine Products Export Development Authority(MPEDA) to impart training on to increase earnings by value addition to the technocrats engaged in fish processing units. It also states the words of CIFT scientist Dr. P. Viji “The low awareness level is a major barrier. Hence, we are trying to educate fishermen, technocrats as well as all other stakeholders on how to earn more through value addition and the results are encouraging,”

Health Vision and Research, Kolkata has conducted the Fisheries sub sector Study for potential livelihoods in fresh water aquaculture in Chhattisgarh . The multidisciplinary team lead by Dr. Saha has found immense investment opportunity in the state. The team has also assessed critically current scenario of fresh water fish production, supply chain availability, marketing in domestic market for fresh water fishes.

With number of government initiatives and policy support, The Marine Products Exports Development Authority (MPEDA), prognosticate that India will achieve an export target of USD 10 billion by 2022. •

Ministry of food processing industry Policy Support and Key Fiscal Incentives 100% FDI in trading, including through e-commerce, for food products produced • and manufactured in India. 100% FDI permitted through automatic route in food processing sector. • Food processing units can avail preferential rates under Priority Sector Lending. Special fund of INR 2,000 crore (USD 300 million) with NABARD for designated food parks and processing unit.

### **Drivers of fish Processing Industries**

#### **a) Favorable conditions and competitive edge in fish processing**

Due to its favorable climatic condition India has a very wide range of raw materials which drives entrepreneurship in food processing and has a very wide scope in this sector.

#### **b) Increasing consumers spend on ready-to-eat item and processed food**

The per capita income of consumers is increasing as a result of which they are ready to spend more amount on food items. Consumers are demanding better quality of food products

because of increasing health awareness and consciousness and hence they are ready to spend heavily on it. Below are the factors which drive processing in the said area.

i.) Increase in the per capita of disposable income leading to an increase in the per capita of consumption expenditure on food.

ii.) Growth in consumption of both primary and secondary processed products.

**c) Government support**

Government has taken many initiatives by providing various offers in taxes, infrastructural facilities, and financial support etc. Government conducts various EDP and training programmes to promote Fisheries sector.

**d. Increasing Fish Products retailing in India**

The Retail market is showing robust growth because of its great potential and changing life style of people. Various outlets are established by government and growth is registered in private sector to sell commodities in the market. Following are some factors:

i.) Increasing number of Retail outlets

ii.) In India Processed food retailing format are growing.

iii.) Established and reputed brands are planning to expand their geographies and Reliance Fresh, Spencer's Daily, Food World etc.

**VI. Suggestions based on study:**

In this paper, Researcher analyzed that there is significant scope for development of fish and fish products in Chhattisgarh state. Observing the policies of other developed states in this sector, inspiration can be taken. Following are some suggestions based on the conceptual study of the topic:

- Establishment of Fish Processing industries may help in reduction of waste due to lack of storage, infrastructure etc. facilities.
- Utilization of low cost fish which are equally good from nutritional point of view can be a potential option.
- Small scale units with minimal investment should be promoted by government.

- Using different methods of advertisement is need of hour to popularize the product throughout the country.

## VII. Findings and Conclusions:

In the modern era, food processing industries are giving exceptional contribution in food sector. To supplement this supply chain processed fish also plays a significant role. In Chhattisgarh region, it was observed that fish production rate is tremendously increasing, so developing fish processing units is felt to be the need of hour. In Chhattisgarh people focus more on nutritional value of food products, so fresh fish is preferred over the processed products. So with modern preservation methods not only the quality of food, its nutritional properties are adequately maintained. Various studies and researches are done to know about the usefulness of these products. In current run of life where people have heavy workload, these processed fish provide supplement for fresh food with all flavors attached. Thus processed fish industry will not only be beneficial for customers but also to the fish farmers who use to suffer loss because of perishable nature of fish. It will in return help in growing economy of the state considerably.

## VIII. References:

1. Davide Menozzi ,(2020) Consumers' Preferences and Willingness to Pay for Fish Products with Health and Environmental Labels.MDPI Journals /Nutrients /Volume 12 /Issue 9 /10.3390/nu12092650
2. V. Geethalakshmi ,( July 2013)Consumer preference and willingness to pay for value added fish products in Palakkad, Kerala. Indian Journal of Fisheries 60(3):67-71
3. Chinglen Meitei N ,(2019) Economics of Value Addition in Fish in Manipur State of India: Empirical Analysis: Journal of Fisheries Research/vol 3/issue 1/ DOI :10.35841/fisheries-research.3.1.18-25



4. FAO, (2016) The State of World: Fisheries and Aquaculture. Fisheries Department. Rome.
5. Devi PKVV. Value chain management practices in marine fisheries: A case study of Andhra Pradesh. International Journal of Managing Value and Supply Chains. 2016;7(2):9-19
6. Saurav Negi 2013: food processing entrepreneurship for rural development: drivers and challenges
7. CIFT joins hands with MPEDA to promote value added fish products <https://www.thehindu.com/news/cities/Visakhapatnam/cift-joins-hands-with-mpeda-to-promote-value-added-fish-products/article25062944.ece>
8. (Dr.) Dipankar Saha,2016 /DOI: 10.13140/RG.2.1.4006.1600, Fishery Sub Sector Study of Chhattisgarh State of India a revised Technical Report 2010.
9. [https://www.researchgate.net/publication/277978189\\_Fishery\\_Sub\\_Sector\\_Study\\_of\\_Chhattisgarh\\_State\\_of\\_India-\\_a\\_revised\\_Technical\\_Report2010](https://www.researchgate.net/publication/277978189_Fishery_Sub_Sector_Study_of_Chhattisgarh_State_of_India-_a_revised_Technical_Report2010).
10. J. M. Koli, 2012: Fish products and their value addition, retrived from [https://www.researchgate.net/publication/325037298\\_Fish\\_products\\_and\\_their\\_value\\_addition](https://www.researchgate.net/publication/325037298_Fish_products_and_their_value_addition).
11. Evaluating Consumer Preferences for Value-Added Fish Products Attributes in Oman. July 2012 Conference: IIFET 2012 Tanzania conference on Visible Possibilities: The Economics of Sustainable Fisheries, Aquaculture and Seafood Trade in Dares Salaam 16 to 20 July 2012. At: Dar es Salaam, Tanzania.
12. Karthickumar Paramasivan, 2020 production of value added fish products -a potential business for coastal women.
13. International Journal of Science, Environment and Technology, Vol. 9, No 2, 2020, 126 – 132 ISSN 2278-3687 (O)
14. Hygienic handling of fish and value addition, National Institute of Fisheries post-harvest technology and training (NIFPHATT) Kochi, Kerala, retrieved from <http://ifpkochi.nic.in/FISH%20HANDLING%20AND%20VALUE%20ADDITION.pdf>.

15. Fish Farming offers benefits for feed manufacturers and aquaculture producers, retrieved from <https://www.bentoli.com/fish-farming-benefits-producers>.