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Review of Literature on Fish Marketing in Coastal Districts of Karnataka - Challenges and Opportunities

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Abstract: Purpose: In Indian economy fishing has its own importance. India is one of the largest producers of fish both sea and in land. Fisheries help in expanding food supplies, employment generating, raise nutritional level and earn foreign exchange. The fisheries production contributes around 1% to India's Gross Domestic Product (GDP) and over 5% of agricultural GDP. The fisheries sector provides employment for over 11 million people who are fully employed, part time or in ancillary activities related to the sector with an equally impressive proportion of the population engaged in ancillary activities. At present, India being the largest fish producers in the world, accounts for about 6% of global fish production. Purpose of the study to know the challenges of fresh fish marketing activity and the opportunities for fishermen and women in fresh fish marketing in view of improvement of their socio - economic status as well as supply of quality products to ultimate consumers. Fish sellers faces numerous problems while marketing the fish such as poor drainage, safety, electricity, icing, personal expenses, unsanitary environment and transportation, etc., The development of fish marketing facilities is vital, by improving fish transportation facilities, building an ice factory and introducing a fish quality monitoring unit.

Design/Methodology/Approach: In this study systematic literature review methodology is used to identify research gap and research agendas. A technical study was used for research. Studies based on the secondary information. Information related to fisheries problem in procurement, transportation, selling the fresh will be collected. Their views regarding magnitude of the problems will be presented in tabular form. Further their expectation from institutional agency and their support for fisheries activities. Secondary data is collected through books, newspapers, previous research and government websites.

Findings: Significant number of research initiatives in the field of Fish marketing issues, management, functions, climate change effect, performance of fisheries cooperatives in the international and in India but very few studies are done to socio - economic conditions of fisher - women, fish - marketing in Coastal District of Karnataka – Challenges and opportunities. Level of education in fish marketing is low. Adequate storage conditions must be provided to preserve the fish. Finally, this paper highlights the challenges of fresh fish marketing activity and the opportunities for fishermen and women in fresh fish marketing regarding improvement in their socio - economic status as well as supply of quality products to ultimate consumers. Recommendations for future research are also formulated in systematic literature reviews.

Originality/Value: Fisherwomen plays an important role in fisheries sector and responsible for providing services to fishing families and community networks and support structures. Studies have not thrown light on problems of fisherwomen in procurement, processing, transportation and marketing of fresh fish in distinct location. Academia, researchers and experts working in the field of fish marketing will find this article useful in understanding the current state of the literature on fish marketing opportunities and challenges and existing gaps.

Paper Type: Review of Literature

Keywords: Fish marketing, intermediaries, challenges and opportunities, infrastructure support, customer comport, research gap and SWOC analysis.

I. INTRODUCTION

When it comes to food, nutrition, employment and income in India fisheries play an important role. For centuries, India has a traditional practice of fish culture in small pounds. In the early 19th century significant advances in productivity were made with the controlled breeding of plants in tanks where river conditions are stimulated. Fishing plays an important role in India's economy. When it comes to both sea and inland, India is one of the largest fish producers.

All the member's activities are coordinated by fisheries cooperative societies resulting in more efficient effort for deployment than in the independent fleet (Robert T. Deacon et al., 2008) [1]. Biologically, fish is abundant source of animal protein and is one of the healthiest options for fighting hunger and malnutrition as well as financially low in cost. The share of fishing in the total Gross Domestic Product (GDP) (at current prices) has increased from 0.40% in 1950 – 51 to 1.03% in 2017 – 18. Commercial fishing activity involves - catching fish and other seafood for business purposes. It is applied in many countries of the world with a large quantity of food. In certain conditions fish producers face a lot of difficulties to reach their destination. Over the decades, ocean fish marketing has undergone rapid changes. Increase in demand for fish enhances the fishing intensity and excessive demand for certain varieties. Hence this led to target fishing in our unrestricted fisheries area (R. Sathiadhas et al., 2012) [2]. Marketing of fish includes variety of tasks required to deliver the fish or fish products from the producers to the consumers. To deliver fish to consumers at the right place at the right time requires an effective marketing system. Marketing activities include assembling, storage, and grouping, grading, covering, attach labels and carriage. The problem of marketing of fish includes easily spoiled fish products, not enough and poor processing facilities, and below standard fish products. The main problems faced in production and sale of fishes are theft and pilferages, non-availability of quality fish seeds, lack of govt. support (M. S Rahaman et al., 2013) [3]. In fisheries not only the men are involved. Millions of women around the world work in the fish sector, whether paid or not. Quantifying the role of women in fisheries has significant implications for poverty management and development policies. Women contribute a significant contribution to the global fishing economy (Sarah Harper et al., 2013) [4]. All women are mainly involved in the work before and after catching the fish from the water, they can also help with catching or harvesting. India's fish marketing system is rapidly changing in recent years due to the wide improvement in handling technology, transportation and consequent market competitiveness (Sathiadhas R and A Kanagam, 2000) [5].

II. OBJECTIVES OF THE STUDY

The following are the main emphasis of the study.

- 1) To identify the problems faced by the fresh fish sellers in marketing activities.
- 2) To explore institutional support available for fresh fish marketing activities.
- 3) To provide suggestions from the point of view of improvements in marketing activity as well as socio economic status of fish sellers.
- 4) To identify the research gap with regard to fish marketing in coastal Karnataka – challenges and opportunities.

III. METHODOLOGY

The existing literature be related to fish marketing, livelihood status of fishermen and other component in International and India, Fish marketing and livelihood status are analysed by taking into consider published thesis, books, research papers from journals through Google scholar. Thus, the data here presented and discussed in the paper is purely secondary, which has been collected from various sources like books, reputed journals, conference proceedings, websites magazines and newspapers.

IV. REVIEW OF LITERATURE/ RELATED WORKS:

The main purpose of the research study is to review the existing literature. It facilitates understanding and evaluation of earlier scientific efforts. Most of the research works are undertaken on the area of livelihood status of fishermen, fish marketing, impact of environmental changes on fishing, co-operatives. The following descriptive and tabular format summarises and discusses the contributions.

A. Fish Marketing

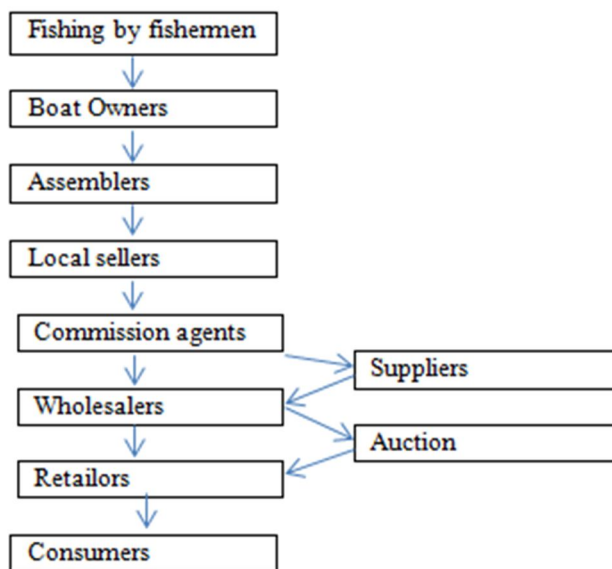
A fish market is a fish and sea food market where sea food can be sold to individual consumers or wholesale between fishermen and fishmongers. To sell fish from fishermen to consumers at the right time and place, you need to influence and execute effective marketing system. Farmers are not directly selling fish with market consumers. The sale path of famed fish starts with the producers passes through a series of intermediate products and ends with the needy consumer.

The fisheries sector has proven to be a strong source of employment and income, as it provides growth of several supporting industries and is the most important and nutritious food source, while at the same time being a means of subsistence for a large proportion of the county's people with low economic status. Men and women have different roles in the fisheries - value chain and their socio-economic status affects their power relation. Females and males can have dominant roles or they can be in positions of high dependency. Women make up about half of the population involved in fishing activities.

B. Market Intermediaries Involved in Fishing

From the landing centre or fish pond fish passes through several intermediaries then to the end consumer. The intermediaries are involved in providing loading, processing, preservation, packing and transportation services and these activities incur costs at every stage of marketing (Hussain et al., 2003) [6]. The Intermediate in fish marketing involves agents, wholesaler, retailer and final seller. There are also local fishermen and fishermen’s cooperatives also exist at many markets.

Marketing channel for large fish groups in fish markets:



Source: Hilsha fish market Marketing channel, (Md. Khabirul Ahsan et al., 2016) [7].

Fishermen have difficulty accessing the market for several reasons; this is mainly due to strong non-cooperation and resistance from retailers. It is clear that the community has become poor or are getting poorer over the years. The market in the initial fishing stages is almost completely non-competitive and the abuse is therefore high.

C. Economic Importance of Fish

Fish is rich in omega – 3 fatty acids and vitamins such as D and B2. Fish is rich in calcium and phosphorus and is an excellent source of minerals such as iron, zinc, iodine, magnesium and potassium. It has religious values and provides independent employment for millions of people around the world. They give food safety in many regions of the world, and are a valuable addition to varied and nutritious diets. Eating fish has several health’s, nutritional and social benefits over other territorial animal’s meat. Fish also provides number of by-products. Large scale fish farming in ponds, lakes and reservoirs increases the nation’s productivity and economy.

D. The Concept of Marketing Mix in Fish Marketing

The marketing mix is made up of the four P’s – Product, Price, Place and promotion. It is marketing tool used to attract customers to a business and all four elements plays an important role in fish marketing strategy. While taking the marketing decision related to fixing prices, product to sell, selecting distribution channels marketing mix are taken into consideration. (Fitriah, A. W and et al., 2019) [8].

- 1) **Product:** Product plays a positive effect on business.
- 2) **Price:** Price or cost is the important variable that the buyer’s impression on product. Whether to buy the product or not. There is relationship between price demand.
- 3) **Place:** Consumer always expect the product should be available at the right place, when they needed it, it applies in fish marketing also. Consumer convenient is taken into consideration.
- 4) **Promotion:** Without promotional activity product can not to be sold. Individual offering, advance deal, direct promotion can be used to increase sale.

There is a significant relationship between product, price, place and promotion in fish marketing activity. The county’s fish production has also developed continuously and sustainably in recent years since independence. In India fish production has experienced a compound growth rate over 7% per year (AQUAPOST) [7]. Presently Indian sector contributing 60% of the country’s fish production provide jobs for around 23 lakh households in the country. It makes it more productive and sustainable to provide food security and job creation to landless, small and marginal farmers.

India’s Blue Revolution started with a 7th Five Year Plan (1985 – 1990) during the sponsorship of the Fish Farmers Development Agency (FFDA) by the government of India. Fully integrated development and management of fisheries to realise high potential. The honourable Prime minister has called it as ‘a revolution’ in the fisheries sector and called it as ‘Blue Revolution’. The multidimensional activity of the blue revolution is primary aimed at increasing the production of fishermen and increasing their inland and marine resources.

E. Fisheries Cooperative Societies

A cooperative is an association of people who have volunteered to work together, i.e., to pool their resources and work together in a common, economically viable enterprise towards the achievement of a common economic and/or social goal. The fishermen’s cooperative aims at reducing production costs while increasing their yields, improving the living standard and quality of life of their communities, and serve multiple roles.

To improve the socio-economic condition of fishermen and women appropriate inputs of education, finance, marketing communication, technology, transport, seed availability, health and government policies etc., were organised at community level and this solved certain problems and gave rise to the idea of fisheries cooperative societies. As early as in 1913 the movement of fishery cooperative in India began when the first fishermen’s society was organised under the title of “Karla Machhimar Cooperative Society” in Maharastra. After that number of fisheries cooperative societies came into existence. Types of Fisheries co-operative societies:

- 1) Producer’s co-operative societies.
- 2) Fish consumer’s societies.
- 3) Fisheries credit societies.
- 4) Insurance co-operative societies.
- 5) Marketing co-operative societies.
- 6) Transport co-operative societies.
- 7) Storage co-operative societies.

Co-operative societies largely aim at it Provides source of income to many people in coastal areas through fishing occupation, speeding up fish catch by introducing mechanization of boats, Cooperatives help their members by providing loans for buying mechanised boats, it supplies essentials like nets, kerosene, etc. It provides facilities and services such as shipyards, ice mills, refrigerators, canneries and vehicles. It facilitates proper marketing of fish and fish products and its by-products, it provides loans to fishermen and from sale price of fish products, they recover the loan etc., it helps in the improvement of socio-economic condition of fishermen and women. (Ankit Thakur) [9].

There are significant number of studies are undertaken in the area of fisheries sector. The following descriptive and tabular format shows the contribution of different authors related to the study.

Table 1: Contribution to different authors from national and international

S. No	Field of Research	Focus	Outcome	Author/Reference
1	Marketing system	Formation, Growth and Adaptive change	The Growth and formulation, development system of marketing depend on environmental changes. Problems faced by the fishermen in marketing of fish include preservation, huge investment price instability, high transportation cost.	Roger A. Layton (2015). [10]

2	Fish Market	Market structure and constraint analysis	The study states that fish markets in Nanded district, like other states in India, lack marketing and infrastructure decreasing the supply and demand. Improving the fish marketing and distribution system in the state will not only increase supply and demand, but will also help ensure the food and nutrition security for the country's population.	Vinay M. Hatte et al., (2015). [11]
3	Fish marketing	Problems of fish marketing	Fishing plays an important role in securing livelihoods. It contributes to national income, employment and foreign exchange. This paper noted that important problem of fishermen's fish marketing are storage and transportation problems as well as quality problems. They solve this problem with the help of a cooperative and the government.	Jasbin Bino. P and Radhika R, (2016). [12]
4	Fish Market	Socio – economic status of market functionaries	Study says household fish market plays an important role as it is highly organized and non - regulated. The environment of several marketing intermediates, which reduces the proportion of production. The wholesale fish market is owned and the marketers can make a higher profit margin.	A.D Upadhya et al., (2016). [13]
5	Fish marketing	Trends of fish marketing strategy and trade	The survey found that inland culture and capture fishing accounted for a lion's share within the state, accounting for about 90% of the market share. The most important intermediaries in the fish marketing were auctioneers, wholesalers or sellers. Some of the main resistances such as lack of cold chains and waste disposal facilities are required for development in this sector.	Surjya Narayan Datta et al., (2017). [14]
6	Fish Marketing	Fish availability and marketing system	Study states that Bangladesh is a lowland country and has rich water resources in and around the country. In Bangladesh, fish marketing is almost entirely managed, financed and controlled by a group of powerful middlemen who have played a large role in the fish marketing channel. The marketing infrastructure is generally inadequate and unsanitary and in poor condition.	Md. Yusuf Ali, (2017). [15]
7	Fish Market	Assessment of seasonal price fluctuations	The study undertaken to know seasonable and price variations for marine fish in Karnataka. The prices were very volatile and changes between wholesale markets, retail markets and final fish markets between the landing centres every month. An inverse relationship was found between the quality of fish traded and price. An inverse relationship was found between the	BS Viswanatha et al., (2018). [16]

			quality of fish traded and price fluctuations.	
8	Fishery sector	challenges and opportunities	Growth of fish sector in India and employment opportunities for millions of people, research deals with export performance from 2005 to 2017, growth percentage, challenges along with opportunities suggests that the government needs to entitle the fishing community and set up proper facilities for their lifelong security.	B. Indrani, (2019). [17]
9	Small scale fisheries	Challenges and Opportunities	Small – scale fisheries are a key factor in the national economy. However, the sector faces major challenges including limited access to funding, limited market access, the need to ensure good quality products, lack economies of scale and not able to add value to fish catches. Opportunities include government incentives, community participation, government funding and a large workforce.	Ahmed Rashid, (2020). [18]
10	Small scale fishing	Issues and Problems	According to the study issues and challenges faced by poor fishing communities affecting the security of food, livelihoods and fishing environments. Climate change is the major issues in fishing. Livelihood depends upon the earning capacity of the fishing community. Training and education needed to develop fishing communities.	Mohammed Mamun Rashid et al., (2020) [19]
11	Fisherwomen	Challenges and Opportunities	Fisherwomen play an important role in development of fisheries sector and they are income generator of their families. They face many problems when they engage in fishing activities like changes in prices, lack of basic amenities at market places and unhygienic. Poor social acceptance also the major issues.	Laruna Bamel et al., (2022) [20]
12	Fish marketing	Information technology – fish marketing	The combination of marketing mix and IT applications, fish marketing is expected to have an improvement and brings benefit both for communities, fishermen, marketers and government. The government should take attention to the issue regarding fish marketing as a part of economic activities and regional income territory.	Arsyad Lubis et al., (2019) [21]

The fisheries sector is on the cusp of a big transition. More focus has been given on increasing production and investment. The announcement of Pradhan Mantri Matsya Sampada Yojana (PMMSY) is aimed at promising public investment and creating an ecosystem for private investment in the whole fisheries value chain starting from production to consumption. However, the fish marketing faced with major problems include restricted market entry, the need to ensure quality of fish products, large scale financing is not possible, price reduction and cannot add value to their catches.

Table 2: The List of other scholarly publications related to Fisheries sector

S. No	Field of Research	Focus	Outcome	Author/ Reference
1	Cooperative societies	Women’s cooperative societies languish	This study draws on both primary and secondary data, focuses on the challenges faced by women’s cooperatives. Necessity for women cooperatives to overcome the problems of lack of information about market, transportation and infrastructure, product quality, lack of skills. The scope of women’s empowerment is severely limited by property rights and gender relations.	Nisha Velappan Nair, (2015). [22]
2	Fishermen	Socio – economic status	The study shows light on socio – demographic situation of fishermen community. It reveals that most of the respondent having low literacy, they work as wage earners. Lower level of education is one of the major problems and business of fishing is male dominated.	Gaurab Jyoti Kalita, (2015). [23]
3	Fishing communities	Credit Requirements	Research evaluates credit facilities in the form of loans and grants for the development of small-scale fisher folk of India, which are provided by the state and central governments from their development projects. It will help the small fisher folk development in India.	G. V Raju (2015). [24]
4	Fishermen	socio-economic condition	Study highlights that, fish farmers 45% of the income come from fishing activities, lowest income come from livestock and 15% comes from various types of agricultural activities, 28% of the income come from daily labour. Not only one community, other communities also involved in fishing business.	Faishal Ibna Hossain et al., (2015). [25]
5	Income inequality	Determinants of income inequality and consumption	The paper examines the extent to which household and regional characteristics affect income inequality and consumption or welfare. An integrated policy of investment in modern irrigation, crop diversification, reform, education and rural infrastructure is a necessary condition to increase consumption welfare and reduce income inequality.	Sanzidur Rahman, (2015). [26]
6	Fisher women	Economic Potentials of Fish Marketing and Women	Research results showed that the average age for the fish markets was 38 years for producers, 42 years for wholesalers and 46 years for retailers and also majority of them were married. The participation of men and women will improve the marketing of fish. Market was under weak oligopoly.	Babalola DA, O Bajimi & SU Isitor. (2015). [27]
7	Role of Micro Finance	Microfinance on indebtedness in fisheries sector	The study states that when comparing urban areas show better socio – economic indicators than semi urban area. Fishermen’s support group is	Vipinkumar V.P et al., (2015). [28]

			evidence to the immense benefits they have gained from the new collaborative facility. SHG's and many cooperative societies help in the improvement of socio-economic status of fisher folk.	
8	Resource management	Livelihood approaches and management of fishing resources	Study implies excellent opportunity to improve rural economy through development of small-scale fisheries. Efficient use of available land and water resources through mass farmer participation in aquaculture could thus contribute to the economic condition of the state's farmers.	Budhin Gogoi et al., (2015). [29]
9	Fish exporters	Marketing Strategies for fish exporters	According to the study, frozen fish is the country's second highest export earning sector. Study explains the concept related to, methods of pricing, possibilities to expand the market, how to deal with promotional measures and possible risks.	Dr. V R Palanivelu, (2016). [30]
10	Fish Marketing	Decreasing trend in participation of women in fish marketing.	According to the study, in the fisheries sector, women's involvement usually occurs after the fish has been caught. Fish retailing was primarily a women domain. In Patna, the percentage of women in the fish market has declined during recent decades. The main reason is no security, lack of basic amenities, literacy, etc.	B. Kumari, (2016). [31]
11	Fisherwomen	Marine Resource Use Through a Gender Lens.	The study states that an emerging scenario suggests that male retailers are able to compete with the female retailers and threaten the role of fisherwomen. There is need to protect the livelihoods of fisherwomen who are marginalised an excluded from mainstream society. They are denied and deprived by the expanded utilities available as most of them are unaware of the systems.	Kathleen Schwerdter Manez & Annet Pauwelussen. (2016). [32]
12	Fishermen	Socio economic conditions of fishermen.	Study found that the characteristics of fishermen compared to the general part of the population, backwardness is the main problem of the fishermen. In the study area fisheries is a advanced sector. Entire fishing community belong to both mechanised and motorised sector and have a good socio – economic situation. The mechanised category shows better advancement than the motorized category.	Jasna P.T & Sanghamitra Palai, (2016). [33]
13	Fish Market	Socioeconomic status of fisher – women.	The study showed that socio – economic capital is provided by the fisherwomen an essential support for the family well- being and income. However, with an increasing market share and income of men retailers and women retailers are marginalised, despite of their excellent marketing skills and comparable levels of profitability.	S Gunakar and Ramachandra Bhat. (2016). [34]

14	Fish Production	Fish production in India – Present status.	The study assesses that, India is the 3 rd largest fish production country, the marine fisheries sector provides livelihood to nearly 4 million people in India and meets the food and nutritional needs of a significant portion of the population.	TV Sathianandan, (2017). [35]
15	Fisherwomen	Contributions by women to fisheries economies.	Research shows that the direct, formal and paid fishing activities normally dominated by men. It ignores those are informal and unpaid, where women are involved. The contribution of men and women are totally ignored from fisheries decision – making processes.	Sarah Harper et al., (2017). [36]
16	Gender Issues	Gender in Fisheries development.	Study says that women in fisheries contribute to this significant to household income, but their control over it a challenge. Working condition must be improved in line with the changes in all other areas of life. Skills must be developed in order to craft them able to adapt to technological changes. Care must be taken in the process of inclusion of women in more areas of fisheries.	Nikitha Gopal, (2017). [37]
17	Fisheries	Climate change and marine fisheries.	This study evaluates the future effect on climate change on fisheries have a negative effect a on the scope of socio – economic factors. Water heating can affect the diversity, distribution, richness and phenology of fish. The increase in the sea surface will reduce fish production and lose the living in the community.	Robert Blasiak, (2017). [38]
18	Climate change	vulnerability due to climate change, Deriving indicators.	Study states that the vulnerability scores are obtained using consistent literature and multi – criterion analysis and validated by expert opinion. The study shows that physical and financial constraints of the fishing community persist in vulnerability.	Sibananda Senapathi and Vijaya Gupta, (2017). [39]
19	Fishermen Community	Occupational health hazard and safety assessment.	The study was conducted to examine work related health and safety. Most of the fishermen as a whole have never completed any training program for their professional activities, while only a few fishermen have completed the fisheries board. Fishermen’s lack of knowledge and support from inspirational material are the main obstacles to their health or life safety.	Shibaj Mandal et al., (2017). [40]
20	Small scale fisheries	The impacts of environmental and socio – economic stressors.	The study states that small – scale inshore fisheries face much aggravation such as bad governance, lack of opportunities to get different job, over-fishing and disease. For effective small – scale inshore fisheries that collectively impact.	Freduah et al., (2017). [41]
21	Cooperativ	Members	This study has revealed that most of the	Chakrapani Pegu,

	e Societies	perception towards fishermen's cooperative societies.	respondents can overcome most of the benefits from their societies. In light of the recognition of members of the company, research was carried out to examine the functions of the cooperative fishermen's association.	(2018). [42]
22	Fish products	Fish in human nutrition	This study states that fish and fish products play an important role in nutrition image because they provide source of nutrients and a balanced ratio of vitamins, protein and minerals and comparably low-calorie content.	Jag pal et al., (2018). [43]
23	Fish and fish products	Growth and performance.	This study can conclude that the growth and fluctuation of Indian fish transportation to abroad have increased in terms of quantity, value and credit. Commerce experienced the take – off stadium in the 1990's due to trade liberalization. The quantity and value of exports gradually increased.	K. Radhakrishnan et al., (2018). [44]
24	Small scale fisheries	Women's perspectives	Study states that gender intersects with caste, income, geographic location, age and household membership, experiences and knowledge that reflects the complicities associated with gender and environmental change. Social end ecological processes that contribute to the continuous reshape the gender identities.	Fathima Noor et al., (2018). [45]
25	Climate change	Impacts of climate change on fisheries	The study recognises that impact of climate change on the fisheries sector is determined by the sector's resilience. When emphasizing the multifaceted and interrelated complexities of fisheries and aquaculture, climate change which have direct and indirect impacts on fisheries.	Manud Barange et all., (2018). [46]
26	Cooperative societies	Role in aquaculture Development.	This study covers the role of cooperatives in fishery development, includes access to government intervention policies in aquaculture such as, providing of subsidised input, increasing productivity and improving agricultural technology.	O. A. Akinrotini, (2018). [47]
27	Fisheries community	Community empowerment through social and educational institutions.	The study states that through the use of natural and human resources, empowering the community to always be optimistic and independent and strengthening the competitiveness of school educational institutions.	Bayu Adi Laksono (2018). [48]
28	Fishery Cooperativ	Status of the fishery -	The study shows that infrastructure such as cold storage, ice plants in fish landing centres are not	Ankit Thakur, (2018). [49]

	e	cooperatives, SHG and fishermen groups.”	adequate. It suggested that fisheries co-operative can develop these facilities in landing centres.	
28	Credit facilities	Role of credit for upliftment of the fisheries sector.	Research states that in India main issues the fisheries face in the development are the evaluation of natural fisheries resources, the potential from the viewpoint of producing fish. These tasks may be overcrowded through credit facilities and popular institution plays a very important role.	Iqra Nazir, (2018). [50]
29	Dry fish production	Economics and marketing of Dry fish production.	Study states that during lean fishing seasons, due to high demand from the dried fish company, dried fish are brought by fishermen at fish landing centres. Dried fish can be transported to areas where these fish have good market potential. Dry fish will have greater demand during fish ban period. When compare to we fish, dry fish has a higher concentration of protein and its feed is a very cheap source of animal protein.	M. S. Madan et al., (2018). [51]
30	Fishermen	Asset management.	The study aims at examine the issues of beneficiary selection, transaction costs incurred, managing the schemes and problem involved it, benefits realised. This system helps many in terms of improved social status and improved credit reliability.	M Srinivasa Reddy, K Hanumantha Rao, (2019). [52]
31	Fish Marketing	Problems of fish marketing in the coastal areas.”	According to the studies, the industry faces problems such as climate change, marketing problems and fisheries problems between the borders of the countries. The other issues such as fish accessibility, seasonal demand and pricing methods result in most fishing gear being used illegally by fishermen and most spices being caught illegally year-round.	Dr. M. Mathivanan and S.R Ramesh, (2019). [53]
32	Regional fisheries	The influence of performance reviews Management organisation.	Studies have shown that Regional Fisheries management organizations (RFMO’s) are an international organisation that regulates local fishing activities in the high sea. Countries interested in fishing in certain geographical areas form special RFMO’s.	Bianca et al., (2019). [54]
33	Fish marketing	Contribution of Information Technology.	The study shows that technologies such as IT sites, and social networks help the marketers to promote product in the market and support the supply chain in marketing process, it helps to increase the sales. Technology helps the consumers to take better decisions.	Arsyad Lubis et al., (2019). [55]
34	Fisheries	Subsidies policy to support sustainable	The study concludes that the government implemented fisheries subsidy policy but it was not planned with good policy and administration.	Muhammad Nur, (2019). [56]

		fisheries.	The subsidy to impact on overfishing or Illegal fishing.	
35	Climate change	Migration as a livelihood adaptation.	The study says that a link between emigrate, climate change and serious sectorial resilience issues. Governments should take initiatives to include climate in migration policies and to mitigate the impact of natural disasters as a contribution to national development plans.	Md. Shamimul Islam et al., (2019). [57]
36	Fisheries sector	Growth of fisheries sector.	The studies have shown that fish production has increased slightly over the years (1970-71) 0.5%, although its production has shown an unwelcomed decline (2015-16) 0.21%, attributing to the Indian economy a slower pace of growth in state fish production. This study points out that the guidelines for building infrastructure and efficient use of available production resources came from this study.	SH baba et al., (2019). [58]
37	Fishing Community	The formation of livelihood strategies in an urban fishing community.	The study examines livelihood strategies used by fishermen and youth fishing community in urban areas. The fisher and youth have employed vigorous diversification strategies for both savings and risk management. The availability of services and industrial production methods in Mangalore and around the port offers job opportunities.	Alin Kadfak, (2020). [59]
38	Small scale fisheries	The Covid 19 Pandemic on fisheries and Coastal Fishing Communities.	The study revealed that pandemic covid-19 results major challenges for the fisheries sector all over the world and short – term impacts here are long – term crises related to economic problems and worldwide food crisis.	Nathan J. Bennet et al., (2020). [60]
39	Fish Market	Fish transportation and marketing.	The study concluded that fresh fish must be transported and marketed either in live. It was found that none of the fisherwomen were involved in the transport and transporting of fish. A fish marketing infrastructure should be developed to identify the potential production and assembly centres.	S. Prasad, (2020). [61]
40	Fishermen	Socio – Economic condition and livelihood status.	The study shows that most in fishing people are involved in one or the other way. There were no necessary training facilities for in-site fishermen in the study area, and they were not receiving sufficient credit for proper management. Their community depends on fishing and fishery – related activities for their living. The fishermen were deprived of many rights.	Md Kamal Uddin et al., (2020). [62]
41	Fisheries	Role of women in fisheries.	Study analysing in fisheries sector the role of women in related to their operational scale and fish distribution networks, they are using fisheries resources for their livelihoods and some proposed	Anita B. Ameyaw and Denis W. Aheto (2020). [63]

			livelihood improvement is possible with the help of fishing.	
42	Fisheries sector	Analysis of the potential investment attractiveness.	A research study the potential investment attractiveness of the fishery complex at the present stage is characterized by the existence of legal basis, the increasing demand for fish in world market and domestically, the conditions of obtaining quotas and biological resources, the participation of government and the capacity for scientific opportunities, etc.,	V. M Kruchinina, S.M. Ryzhkova (2020). [64]
43	Fish marketing	Status of drying fish, marketing channel and associated problems.	This study conducted in the area of Kuakata coast of Patuakhali district, Bangladesh, many fish drying places was observed, sun drying is carried out under unsanitary conditions. In the present study low quality and limited infrastructure have been identified. For this a scientific drying method must be practiced to get desirable dried fish.	Md. Jabir Al Mehedi et al., (2020). [65]
44	Fishermen	Assessing the livelihood status of fishermen.	Study states that the financial situation of the fishers was considered very bad, since the land they have owned decreasing constantly. When illiteracy and natural disasters like floods increase, we think that living conditions are all bad for us. So, governments and NGO's play role to improve fishermen's problems.	Mohammed Amran Hossain, (2020). [66]
45	Fisherwomen	Socio – economic status.	Study says that, fisher women who belonging to Mogaveera community in general are idealised for the strongest and hardworking person, because of their age and years of experience, they still work harder every day to provide economic stability to their families. It is inspiring how women support their families while balancing work and family life.	Dr. Ashalatha and Prof. S. Saravanan, (2020). [67]
46	Fishermen	The social situation of fishermen community.	The study states that most of the fishermen's families rely on the fishing business on a daily basis as they have no other alternative business to protect their family. If the government or any other non – government organisation did this, their old-fashioned fishing style would be encouraged. Adequate education, skill and training is required.	M. Punithan, (2021). [68]
47	Cooperative societies	Sustainable Management.	The study found in India there is regional indebtedness, many prospectuses as and many constraints in relation to the fishermen cooperative. The Fishermen cooperative societies have largely been overlooked sustainable management of the aquatic ecosystem.	Bhaskar Mahanayale and Ashis, (2021). [69]
48	Fish product	Nutritional needs of fish to prevent	Study analyses that many children's face the problem of malnutrition, paying attention to	Sunarto Kadir, (2021). [70]

		stunting in early childhood.	children’s eating habits and marketing children’s needs with clean water and sanitation, it helps nerves, tissues and include complete amino acid composition.	
49	Fish Distribution	Business performance determinants.	This study aims to measure the market orientation, entrepreneurial orientation and marketing skills of fisheries on the performance of salt fish distribution business. Even during the pandemic, entrepreneurship and marketing skills influence the current performance of the business, and all marketing powers are maintained and there are unmatched intermediaries.	Michael Christian et al., (2021). [71]
50	Fisheries sector	Impact of Covid 19 Lockdown.	This study has been discovered that during the peak of the lockdown number of parking boats has decreased; those boats already moved out to the land area were not returned. The small-scale fisheries sector in India has reduced due to drastic changes in the fish catch, market, and delivery patterns.	Ram Avtar et al., (2021). [72]
51	Loss of fish stock	Examining the causes from the perspective of indigenous fishermen.	This study area is a strong biodiversity site and the livelihoods of the native coasts are highly dependent on the fish resources of the region on the southwest coast of India. A very strong traditional living practice that preserves ocean biodiversity and its sustainable use for generations.	Kumar Shahayaraju and Jhonson Jament, (2021). [73]
52	Small scale fishermen	Factors affecting household income.	This study assesses the factor affecting household income after female civil servants are empowered. The results show that after empowering women. The household income of fishermen’s wife’s is determined by the age of the wife and the active family members. Further skills required for processing fish by providing market knowledge for the sustainability fishing activities.	Rahim et al., (2021). [74]
53	Fishing	Determinant of fishing performance.	The study states that the main problems faced by fishermen are the market price of fish and the number of fish and the technology they use as a positive trigger for fishing. The number of fishing vessels should be regulated in a way that reduces, if not eliminates, their negative impact on fisheries while encouraging the use of technology.	Mamudu Daffy et al., (2021). [75]
54	Fishermen community	The role of the village government in the economic development.	The study states that the fishing communities have not played an enough role, especially in the realisation and development of production centres, purifying centres, entry to rural, the development of joint ventures, as well as the development of communication and information technology, to stop them continuously. The effort	Hasdinawati, Ernawati Abd wahid, (2021). [76]

			of the village government improves the economy by planning the development facilities and infrastructure for fish farms.	
55	Small scale fisheries	Gender equality in diluted in commitments.	The study argues that achieving gender equality is essential in the fisheries sector for effective and equitable development outcomes of coastal centres. Study has found that the policy instrument frequently places focus on women, considering gender as a development policy instrument as diverse social identities and relationships.	Sarah Lawless et al., (2021). [77]
56	Fishing	Traditional access rights and methods of fishing	Study states that long-term sustainable fisheries management is essential for the food security, livelihoods and poverty alleviation. Fishermen make an important contribution to household food supply. Traditional gender norms must be applied to the change and development of rural communities to enable women to fully participate in the fishing industry and lift themselves out of poverty. Studies overlook the involvement of women and their contributions in fish value chain.	Nikita Gopal et al., (2021). [78]
57	Fish distribution	Marine fish distribution channels.	This study indicates that two types of channels have been mainly discovered. The first is shown to be all distributors of wholesale fishermen or retail committee agents and consumers. Second are fishermen – retailers – suppliers. For understanding the problem of fish distribution factor analysis is effective in identifying the efficiency of fish distribution channels.	Mr. Girish Jadhav, Dr. Sachin Borgave. (2022). [79]
58	Fisherwomen	Skills, constraints, and agency in supplying affordable, safe, and high-quality fish.	Study analyses that women seller, whether formal or informal, are affected by development forces. Developing new markets and ensuring vendors have adequate facilities and access to social security is easier said than done and vendor's interest are only considered if they are represented and involved in the established fisheries bodies. Infrastructural support plays an important role.	Ragnhild Overa et al., (2022). [80]
59	Fishermen	Strategy to improve economic condition.	The results showed that in spite of having many marine resources, the economic situation of fishermen was not reached. In certain condition the fisheries which are a source of income are not enough to feed her family due to low catch productivity because the selling price is low. The government does not provide clear and back support strategies to solve the economic problems of fishermen.	Firwan wan tan et al., (2023). [81]

V. CURRENT STATUS & NEW RELATED ISSUES

Study of literature on Fish marketing has thrown lot of insights into various problems, opportunities, strengths and weakness of fish marketing. In spite of a persisting limitation regarding fish marketing the position of fish marketing has undergone considerable changes particularly positive trends are visible. The problem of transportation of fish from the place of production to the marketing centre is still a challenging issue, since fish is a perishable item causing lot of stress and strain to the fish sellers. The existing marketing system has been modernised to suit the current supply and demand. The government fisheries policy is by and large are in favour of the advancement of fish marketing and improving the socio-economic conditions of the fisher's community. Policy provides various provisions with regard to financial assistance, establishing cooperative societies, formulation of Self-Help Groups, etc., Government also supports women fisheries because they are facing many problems while doing fishing business, economically they are backward. Finding out the challenges and opportunities of the fishers, it helps the government and institutions to take necessary steps for the improvement.

VI. IDEAL SOLUTIONS, DESIRED STATUS & IMPROVEMENTS REQUIRED

The ideal, desired status and improvements that are required in the area of fish marketing can be summarised as follows:

- 1) Upgradation of fish marketing. Providing specialised transportation facilities for the fish sellers for better marketing of fish items.
- 2) Specialised financial institutions providing timely assistance for the fish seller.
- 3) Government should take steps to improve the educational status of fisher's community.
- 4) The various schemes formulated for the fisher's community should reach the real beneficiaries without any middlemen.
- 5) Insurance coverage should be made available to the fishing business.
- 6) Since fish is perishable item there is an urgent need to provide storage facilities in rural and urban areas at the marketing centre.
- 7) Basic amenities like drinking water, washroom, resting place, etc., & infrastructural facilities should be provided in view of the wellbeing of fish sellers.
- 8) Steps should be taken for the empowerment of fisherwomen and their family.
- 9) The cleanliness of the marketing place should be maintained by the local administrative.
- 10) It is better to conduct periodical training program to the fish sellers regarding the marketing, preservation, competition, maintenance of hygiene and healthy relation between sellers and buyers of fish.

VII. RESEARCH GAP

The review of literature indicates that most of the studies focussing on fish marketing, economic status of fishermen and functions of institutional agency, effect on climate change on fisheries are undertaken. However, these studies have not thrown light on problems of fisherwomen in procurement, processing, transportation and marketing of fresh fish in distinct location. In coastal region most of the fisherwomen they are the bread winners of the family, they were facing several problems while marketing fresh fish in distinct location. "Challenges of fisherwomen in fish marketing activity in Coastal Karnataka" can be undertaken for future study. Hence, there is a need to conduct research study pertaining to challenges faced by fisherwomen in fresh fish marketing activity. The role of institutional agency in supporting their activity is also needs a closer look. Empowering women in fisheries and supporting their activities makes them major contributors to national and household food security.

VIII. RESEARCH AGENDAS BASED ON RESEARCH GAP

Based on the literature review, the researcher proposes the following:

- 1) What type of challenges women are facing while interacting with customer?
- 2) What type of infrastructural support required for women while dealing with marketing activity?
- 3) How far marketers in fresh fish activity can interact with 4 Ps of marketing?
- 4) A satisfied customer is a good advertisement, how far statement is relevant in fresh fish marketing activity?
- 5) What type of support the institutional and government agencies can provide for women in fish marketing activity?
- 6) What type of training needs are required for women in fish marketing activity and also to improve the socio-economic condition of fishermen?
- 7) How far the existing fish marketing system can be improved and modernised to attract younger generation in the fish marketing activity?
- 8) Briefly narrate the SWOC analysis of fresh fish marketing activity?

IX. ANALYSIS OF RESEARCH AGENDAS

There are a large number of studies are undertaken on fish marketing area, to analyse the above research questions various published studies were reviewed from google scholar, research gate, academia, government publication, websites, and various publication domain, etc., very few studies are undertaken in the area of challenges of fisherwomen in fish marketing activity.

X. FINAL RESEARCH PROPOSAL/PROBLEM IN CHOSEN TOPIC

Although various studies have been conducted in the area of fish marketing activity, socio economic conditions of fishermen, etc., these studies have not thrown light on problems of fisherwomen. It was identified negligent number of studies undertaken in Karnataka. There are lot of scope for future research in the area of challenges of fisherwomen.

- 1) *Proposed title:* Challenges of fisherwomen in fish marketing activity in Coastal Karnataka.
- 2) *Purpose:* The purpose of the study is to analyse the problems of women in the area of fish marketing. To understand the opportunities for women in fish marketing field. To understand the role of financial institutions, government agencies with regard to the fish marketing. To understand the socio – economic conditions of women fish sellers.
- 3) *Research Objectives:* The objectives of the proposed title are given below
 - a) To study the challenges faced by women in fish marketing.
 - b) To focus on infrastructural support facilities required for fish marketing activity.
 - c) To establish relations with regard to 4 Ps of marketing.
 - d) To analyse the role of institutional support for fish marketing activity.
 - e) Intend focus on the training needs for women in fish marketing to improve their socio-economic conditions.
 - f) To suggest measures for the upgradation of the existing fish marketing system.
 - g) To study the SWOC's in the field of fish marketing.

4) *Proposed methodology:*

This study will be conducted on fish marketing of coastal district of Karnataka. Sample size minimum 500 will be included in the study. A questionnaire will be prepared to collect the data regarding above mentioned objectives. And the collected data will be analysed by descriptive statistical method and inferential statistical method. Under descriptive statistical method frequencies, percentage, mean and standard deviation will be used. Inferential statistical method such as chi square test, Karl Pearson's correlation coefficient and regression analysis will be used.

XI. SWOT ANALYSIS

SWOT analysis was conducted to determine the factors of strength, weakness, opportunity and threats. This analysis can be used for decision making and determining strategic steps to face competition. (Intan Kusuma Dewi Ratnasari et al., 2022) [82].

A. *Strength*

- 1) Family background, fixed sales areas, own fish tank.
- 2) Family experience in fish marketing.
- 3) Ability to maintain good relationship and interact with regular customer.
- 4) Financial support from Cooperatives.
- 5) Skill in semi processing.

B. *Weakness*

Some of the problems of fish marketing include:

- 1) Exploitation by other fish sellers.
- 2) Price fluctuation
- 3) Inadequate demand, Storage problems, Quality issues
- 4) Unhealthy competition among fish sellers
- 5) Transportation problems
- 6) Inadequate facilities in the market place
- 7) Low sale of fish on ritual days.

C. Opportunity

- 1) Government gives lot of incentives in the form of subsidies
- 2) Many financial institutions and SHG's to give financial assistance for fishing activities.
- 3) To get more opportunities in the educational enhancement of women is needed.
- 4) Optimal utilization of transport facilities.
- 5) They can make use of their community support.

D. Threats

- 1) High Competition – Big sellers sell fish in sophisticated manner.
- 2) Problem with local institutions or Panchayath.
- 3) High fishing fees
- 4) Conflict between fishermen.
- 5) Low rate of literacy of fishermen community.

XII. SUGGESTIONS TO IMPLEMENT RESEARCH ACTIVITIES ACCORDING TO THE PROPOSAL

Keeping in view the research proposal, the following suggestions may be implemented:

- 1) To encourage female literacy among the fisherwomen incentives should be given in the form of educational loan, scholarship, etc.,
- 2) For the empowerment of fisherwomen proper guidance and counselling cells may be established.
- 3) For the proper marketing of fish transportation vehicles may be arranged by the fisher's cooperative societies.
- 4) Houses can be provided to the poor fisherwomen under various housing schemes of state and central government.
- 5) Proper storage facilities may be provided at the marketing centre to preserve the unsold fishes.
- 6) Financial institutions aimed at providing financial support for the fisherwomen should provide loans with zero interest rate.
- 7) Timely awareness programmes may be arranged about the various government schemes.
- 8) Periodical training needs may be conducted on marketing and storage.
- 9) Government should take initiatives to provide basic amenities to ensure cleanliness and sanitation in the market places.
- 10) Establishing modern hi-tech fish markets with modern amenities so that consumers are easily attracted and there is increase in sales.

XIII. CONCLUSION

The literature review reveals those studies undertaken in the area of marketing and livelihood status of fishermen have provided a clear insight about the area to be considered for further study. A detailed review of Fisheries sector and marketing opportunities and challenges was attempted in this study. Fisheries have been considered as an important means of poverty elevation and food security besides promoting health and wellbeing. Fish is still one of the most traded foods in the world. Fishing is predominantly male activity, mostly because this involves boats, equipment and long absences at sea. But women are responsible for handling equipment, processing and marketing of fish. However, women are often less acknowledged. But it was identified that a negligent number of studies in the area conducted in Karnataka. In case of Dakshina Kannada and Udupi District a detailed study in respect has not been initiated. In this context, it is highly imperative to have an in-depth study regarding the Socio-economic conditions of fisherwomen in Dakshina Kannada and Udupi district, as fisher women are the main participants in the marketing and selling of fish and fish products. Fish marketing activity provide livelihood support as well as supplement the family income of fisherwomen, there is a need to strengthen their activity through proper support.

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