



FISHERIES ECONOMICS-A LITERATURE REVIEW

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INTRODUCTION

Fisheries economics refers to the study of economic activities related to the management, production, and distribution of fishery resources. It involves analysing the economic aspects of fishing, aquaculture, and the overall seafood industry. This field explores topics such as resource allocation, market dynamics, policy implications, and sustainability within the context of fisheries and aquatic ecosystems. Fisheries economics refers to the branch of economics that focuses on the economic aspects of the fishing industry. It involves the study of the production, distribution, and consumption of fish and seafood, considering factors such as market dynamics, resource management, trade, and policy implications. The goal is to understand and analyse the economic behaviour and decision-making within the fisheries sector to promote sustainable practices and efficient resource utilization. Fisheries economics is a field of study that focuses on the economic aspects of fisheries and aquaculture. It involves analysing the allocation of resources, production, distribution, and consumption of fishery-related goods and services. This discipline examines the economic behaviour of individuals, businesses, and governments within the context of fisheries management, sustainability, and the impact of policies on the fishing industry.

TYPES OF FISHERIES ECONOMICS

Fisheries economics involves several types, including:

Commercial Fisheries: Focuses on the economic aspects of capturing and selling fish for profit.

Recreational Fisheries: Involves the economic analysis of fishing activities for leisure and tourism, considering the economic impact on local communities.

Subsistence Fisheries: Examines the economic aspects of fishing for personal consumption and local community sustenance.

Aquaculture Economics: Concentrates on the cultivation of fish and other aquatic organisms, analysing the economic viability of aquaculture operations.

Resource Management Economics: Involves the study of economic models and policies for sustainable fisheries management, ensuring long-term resource conservation.

Global Fisheries Economics: Considers the economic interdependence of fisheries on a global scale, addressing issues such as international trade and cooperation.

Each type of fisheries economics addresses different aspects of the fishing industry, aiming to balance economic interests with environmental sustainability.

PROBLEMS OF FISHERIES ECONOMICS

Fisheries economics faces challenges such as overfishing, depletion of fish stocks, environmental degradation, and the need for sustainable management practices. Additionally, there are issues related to illegal, unreported, and unregulated (IUU) fishing, which can undermine conservation efforts and economic stability within the



industry. Balancing economic interests with the need for long-term environmental sustainability remains a complex challenge in fisheries economics. Fisheries economics faces various challenges, including overfishing leading to resource depletion, lack of effective management strategies, inadequate data for informed decision-making, and the impact of environmental factors such as climate change on fish stocks. Additionally, issues like illegal, unreported, and unregulated (IUU) fishing contribute to economic losses and hinder sustainable development in the fisheries sector. Balancing economic interests with environmental conservation is a continual struggle in fisheries economics.

Fisheries economics faces several challenges, including overfishing, resource depletion, inadequate management policies, ecosystem impacts, and the economic vulnerability of fishing communities. Balancing economic interests with sustainable resource management is crucial for the long-term viability of fisheries.

LITERATURE REVIEW

A Literature review is a critical analysis and summary of existing research and scholarly articles relevant to a specific topic or research question. It helps identify gaps in knowledge, establish the context for new research, and showcase the existing body of work in a particular field, identifies gaps and helps establish the context for new research. Reviewing the opinions of various distinguished experts on the economics of fishing and economic development was undoubtedly beneficial in determining the direction of the current study.

In its annual report, the Central Marine Fisheries Research Institute (1987) reported that fish landings decreased from January to March and as late as mid-April. But following the prohibition, landings tend to rise before gradually declining once more toward the prohibited season. Consequently, the prohibition has a positive ecological impact that aids in the preservation of marine resources.

1. According to Noble and Narayanan Kutty (1978), indigenous fishing units have very good gross income to investment ratios and produce at a proportionately greater rate than mechanized units. Even in times when there aren't enough fish in the sea, rural crafts can be economically implemented with considerably little cost.

2. The effect of mechanized fishing on the socioeconomic status of the fishermen in Kerala's Sakhikulangar and Neendakara areas was investigated by Sathiadhas and Venkataraman in 1981. According to this report, the region's housing, employment, literacy, infrastructure, output, exports, and incomes have all improved. However, a growth in the amount of household debt among fishermen was seen, and this was linked to bank loans that the households had taken out to buy fishing boats. The study also identified the primary barrier impeding the project area's development as the absence of a fishing harbor.

3. According to Sathiadas (1982), increased cuttlefish captures led to higher gross and net earnings for motorized. He did, however, note that near the Tirunelveli coast, where the wind blows favorably for most of the year, there is little difference in catch and revenue between motorized and non-powered vessels, allowing the latter to operate with comparable effectiveness.

4. According to the Bay of Bengal Programme (1982), around 60% of the families experience days when they don't eat. The main cause is low revenue as a result of little or no catch. In terms of food intake, fish is consumed at least half the year, whereas vegetables, meat, and milk are only seldom ingested.

5. In their research, Kurien and Mathew (1982) found that the species-mix of the nation's marine resources varies greatly by location. All fish species have about the same nutritional value, however there are differences in market pricing and desires for different species. Mechanization has a direct effect on fish productivity that is both quantitative and qualitative.

6. In Nochikuppam and Ayodyakuppam coastal fishing hamlets in Madras city, the Bay of Bengal Programme (1997) carried out a nutrition survey. The results showed that, out of 482 children under five, 55% were malnourished mildly or moderately and 3% severely (Gomez weight/age classification). Depending on the fishing conditions, the families' food patterns varied quantitatively and qualitatively throughout the year.

7. According to Balakrishnan and Alagaraja's (1984) analysis, there were significant damages caused in 1978 in coastal areas ranging from Jagathapattinam in Pudukkottai District to Mallipattinam in Thanjavur district due to conflicts between the owners of mechanized boats and indigenous craft owners. It was proposed that a Peace Council be established, with the local R.D.O. serving as chairman and representatives from the State Fisheries Department, owners of motorized boats, and owners of indigenous craft.

Members effectively worked to put a halt to the altercations. The Peace Council created fishing schedules that limited traditional boat fishing to four days per week and mechanized boat fishing to three days. All boat kinds operate throughout the day, and the corresponding boat owners have adhered to this strictly and without any



violations. Given how well the system of regulated fishing operated, it may be expanded to other areas where there are conflicts between these two industries.

8. According to Sam Bennet and Arumugam's (1985) research, the advent of machinery of traditional fishing crafts has led to modest changes in the fisheries. The highlights are (i) by arriving earlier, fisherman gain from higher catch per unit as well as improved price for the catch. (ii) The addition of machinery to already-existing crafts has resulted in a notable improvement in the socioeconomic structure of the traditional sector; (iii) the number of people in each boat has been lowered from five to three.

9. In her study, Bhavani (1986) provides details on feeding and weaning habits, as well as health and nutritional issues that the residents of the coastal communities under investigation faced. A significant proportion of women and children experienced partial blindness as a result of vitamin A insufficiency. Malnutrition of the first and second grades affected 70% of the youngsters. Worms, whooping cough, and respiratory infections were the most prevalent illnesses in youngsters. These diseases were mostly caused by poverty and irregular income, poor medical facilities, ignorance, and underuse of the facilities that were provided.

10. According to the Institute for Techno-Economic Studies (1987), the majority of families (62.6%) had debt, with an average debt balance of Rs. 3100. Up to 58% of them had borrowed from moneylenders (at an interest rate of 36%), 13% from banks, and roughly 8% from traders, co-ops, and other family members, in that order. The other individuals had borrowed from boat owners. It is evident that the informal sector constituted the primary source of credit, with formal sources accounting for only 20% of total credit. This is related to the fact that obtaining and repaying loans is made more challenging by the official credit sources' inadequate adaptation to the reality of the industry.

11. Sathiadas and Panikkar (1988) in their study analysed that the costs and earnings of traditional fishing units along Trivandrum coast, Kerala. The study covers catamarans with hooks and lines, catamaran with gillnets and plank- built boat fitted with outboard motor (OBM). Considering the catch and revenue of different seasons for these units, monsoon period (June – August) is found to be more productive and profitable. The study indicates that the catamaran unit shows better input-output and capital efficiencies as compared to outboard motor units since the initial investment is comparatively less. Catamarans with hooks and lines are highly suitable as a family enterprise for the small investors who can go fishing on their own units.

12. A thorough investigation on the effects of mechanization of Kerala country crafts was carried out by Balan et al. in 1989. For both motorized and non-motorized plank-built boats, canoes, and catamarans using hook and lines, boat seines, and gillnets, the expenses, profits, and key economic indicators were calculated. For motorized units, the returns on capital and labour were relatively higher. Motorization also made it possible to expand the fishing area and use a variety of fishing techniques. It has been noted that motorization has given the fishing industry a certain degree of respectability. According to the study, there has been a significant increase in motorized vessel landings since 1980, whereas non-powered craft landings have been falling.

13. In 1989, Sathiadhas and Panikkar conducted a study on the cost-benefit analysis of three different sizes of trawlers: 8.5 m, 9 m, and 9.5 m. An analysis was conducted on their original investment, fixed costs, operational costs, and returns. Also, they have computed a number of important economic metrics specific to these kinds of trawlers. They came to the conclusion that smaller boats (8.5m and 9m) had better capital turnover ratios, rates of return on capital, and payback periods. However, the larger boats (9.5m) were more productive in terms of labor productivity pay, catch quantity, gross income, and net profit.

14. Varambally (1990) examined how well marine items performed in exports between 1981 and 1988 and offered some insightful recommendations for boosting exports even more. As per his statement, exporters must implement innovative marketing tactics to endorse Indian marine products abroad, comprehend the evolving preferences of their clientele, and conduct a thorough analysis of the global market to pinpoint the advantages, disadvantages, opportunities, and threats facing marine exports abroad.

15. In their study, Sathiadas and Panikkar (1991) examined the economics of catamaran fishing along the Madras coast and came to the conclusion that catamaran owners may increase their income by growing the size and quantity of gear on their vessels. Due to their low income and inability to obtain financing from institutional bodies, fishermen are forced to use less sophisticated fishing gear, which lowers their earnings and traps them in a never-ending cycle of poverty.

16. The experience of a community in Bhuvaneshwar, Orissa, under composite fish aquaculture was examined by Radhasyam and Tripathy (1992). The people were unaware of aquaculture in 1978. With an average family income of Rs. 185 per month, 88.64% of the families in this community were considered to be below the poverty line. When they began raising fish using culture techniques after 1978, they began to get good results. When the study was done in 1990, each family's monthly income had climbed to Rs. 12863. The family's percentage of those living in poverty decreased to 45.45%. The experience of this community demonstrates how aqua culture has



evolved in numerous ways, making it capable of considerably expanding the scope and bringing about a qualitative transformation in the socioeconomic condition of the rural poor.

17. According to BOBP (1994), the primary food and revenue source for residents in Tamil Nadu's rural coastal communities was fish. In the rural coastal villages, fishing is the main source of income. The majority of the fisher folk's income is spent on food. Additionally, it was stated that the majority of the fishermen in the rural coastal areas are impoverished. The majority of them fish, yet their earnings are insufficient to cover their expenses and ensure their survival. They are unable to take their kids to school because of their low money. As a result, the majority of fisherman lack literacy, and very few have completed primary school.

18. In his study, Mahesh V Joshy (1996) highlighted the significance of fisheries to the Indian economy. He examines how mechanization affects employment prospects in the marine fishing industry, revenue, exports, standard of living, and fish catchment.

19. In their 1996 study, Kanwar Surendra Singh and Radhika examined the socioeconomic circumstances facing fishermen in the Himachal Pradesh region. They emphasized how different this group of people's living conditions are from one another. In their microwork, the applications of certain indices to the many aspects are done successfully. However, their research did not address the gap in the knowledge of debt conditions and marketing channels.

20. In their study, Jacob Jerold Joel and Ebenezer (1996) examined the current state of the Colachel trawl fishery over a five-year span, from 1990 to 1994. According to the survey, the average yearly gross income earned from fishing trips ranged from Rs. 8,121 in 1990 to Rs. 22,683 in 1994. Consequently, it was discovered that Colachel's trawl fishing offered higher productivity and profitability.

21. According to Ali's (1996) research, remote coastal fishing communities lack access to basic amenities including power, clean drinking water, health care, and education. The majority of fishermen lacked personal fishing gear, such as nets and boats. The fishermen's housing is not in the expected condition. They have poor levels of education and literacy as well.

22. The study conducted by Pathak (1997) revealed that the primary factor influencing the growth of fish export and production is the timely and sufficient financing availability. Additionally, he stated that over 5200 fisheries schemes have been approved by NABARD, with a total refinance assistance of Rs. 4037 million. The credit disbursement for fisheries has increased at a compound annual growth rate of 36.7% during the last ten years, with the total assistance provided to all scheduled banks rising from Rs. 133.5 million in 1985–86 to Rs. 1071.7 million in 1995–96. Therefore, the greatest indication of the banker's participation is the fact that, of the 2.469 million tonnes of documented marine fish landings in 1992–1993, more than over 28% of the total capture came from vessels that used the bank's credit facilities. Bankers may decide to invest in fisheries programs in the future. By the end of the Ninth Five Year Plan, they might have invested over Rs. 8,000 million, and the export of seafood would have a three billion US dollar market.

23. Kerala's government came to the conclusion in 1997 that increased expenses and investments had also resulted in increased debt. Both the official sector—banks and cooperatives—and the unofficial sector—traders and moneylenders—are sources of credit, albeit the latter is still more significant. Only 53% of fishing communities in Kerala have banks, according to a survey conducted by Matsyafed.

24. According to the Tamil Nadu Fisheries Policy (1997), the state's fisherman's cooperative societies operate poorly on average, and for the vast majority of fishermen, their main function is to channel government credit; for other purposes, they are almost nonexistent. According to credible sources, the primary reason for joining a cooperative society in Tamil Nadu is to gain access to the state's welfare programs (housing, GAIS, and SCR). It's also said that borrowers have often repaid their loans poorly.

25. According to Srinivasan's (1985) research, a group of agents, dealers, sellers, and wholesalers dominated the Tamil Nadu marine seafood industry. A female auctioneer, who received a commission from both the seller and the buyer, handled the fish that was caught by each boat. According to an analysis of pricing spreads, fishermen's share of consumers' rupees varied from 30% to 95% in the fresh and dry fish trade. Additionally, it revealed that the state's Fishermen's Cooperatives had certain weaknesses, such as insufficient funding, bad management, and a lack of a marketing plan, which allowed traders to dominate the fishermen. As a result, the study recommended strengthening and modernizing the co-ops through state government, which would benefit the fishermen who are actively engaged in the industry.

26. In the Madras area of Tamil Nadu, Sathiadas and Panikar (1988) investigated the pricing and marketing structure of marine fish. The fishermen, commission agent, wholesaler, retailer, and consumer channels were found to be the ones through which the greatest number of fish was being transferred. The percentage of consumers' rupees that went to fishermen varied from 32 to 72%, and for prom frets, it was over 60%. They also disclosed the margins for retailers (69.50%), wholesalers (12.50%), and marketers (18%) related to the promotion of pretreats. The wholesale price for several fish varieties ranged from Rs. 2.50 to Rs. 7.10 per kg, according to



the price behaviour analysis. The report recommended using cooperative systems to safeguard the interests of producers and consumers

27. In 1990, Chidambaram and Rajan conducted research on the marine fish selling in the Tamil Nadu region of Tiruchendur. Data on marketing was gathered using a basic random sample technique. The study found that middlemen control the fish marketing system and recommended that in order to improve the system's effectiveness, the government support cooperative groups financially and with suitable infrastructure. A supply chain is a network of enterprises connected by both upstream and downstream connections (Christopher, 1992). In the different procedures and endeavours that yield value in the form of goods and services for the final customer.

28. Supply chain management practices include more value delivery to customers, a reliance on just-in-time systems, waste elimination, involving all stakeholders in the value creation process, developing close collaboration, working closely with suppliers, reducing the number of suppliers, and developing efficient suppliers, according to Shadur and Bamber (1994).

29. Velayudhan (1999) detailed the problems with fish marketing in Kerala and the potential for local government involvement. According to the study, middlemen are forced to buy the fishermen's catches at extremely low prices. The study revealed that the primary issues in the fish market were middleman control, unsanitary conditions, price fluctuations, a lack of cold storage facilities, high fish perishability, seasonality, dispersed fish landing centers, and fishermen's helplessness in disposing of their catches. Fishermen were compensating the auctioneer for their services with a commission of four to six percent. The report recommended putting the developmental programs into action to enhance the fish marketing facilities.

30. The distribution issues and marketing management of India's marine fisheries were documented by Sathiadhas and Kangman (2000). According to the survey, the primary channels for conducting fish trading were the fisherman, auctioneer, wholesaler (primary market), wholesaler (retail market), retailer, and consumer. Fishermen, auctioneers, merchants, and customer channels. The price spread investigation showed that while the worked-out marketing cost for all fish kinds in the consumer's pricing was 6 to 13%, the share held by fishermen ranged from 30 to 60%, the part held by wholesalers from 5 to 32%, and the share held by retailers from 14 to 47%. The commission charged by the auctioneers ranged from 5 to 10% of the total amount of fish they sold. Increased uncertainty, fish's high perishability, supply and demand imbalances, and a dearth of information regarding fish prices were some of the distribution issues.

31. According to Chandra and Kumar (2000), stakeholders are essential to the success of a supply chain management system. How they establish particular competencies, such building a trustworthy relationship with its suppliers, aiming for complete chain coordination, improving communication to lower levels of uncertainty and inventory, outsourcing non-core competencies, lowering levels of inventory, and cutting costs. As stated by the Supply Chain Council, supply-chain management encompasses all activities involved in creating and delivering a finished good or service, from suppliers to consumers. This includes managing supply and demand, locating components and raw materials, manufacturing and assembly, warehousing and inventory tracking, order entry and management, distribution through all channels, and customer delivery.

32. Gopal et al. (2001) investigated the fresh marine fish trade's marketing effectiveness in Cochin and Veraval. The key data for the main fish species were gathered twice a week from the landing center, wholesale, and retail markets. The landing center – wholesaler – store – consumer channel handled the majority of the fish. The wholesale and retail market price spreads, which ranged from 01.11 to 46.00% and 04.74 to 14.10%, respectively, were exceptionally substantial, according to the results.

33. According to the study's findings, all fish varieties displayed a very wide range of price Zynudheen et al. (2003) looked into the marketing routes and market middlemen in the fish sector in Veraval, Gujarat. Utilizing the Rapid Rural Appraisal (RRA) technique, the data were gathered. They discovered a large number of middlemen engaged in fish marketing, including suppliers, merchants, agents, and vendors. Retailers and wholesalers were found to have chopped off a sizable portion of the consumer rupee's profit margin. They also suggested that setting a price at the primary level will be crucial to guaranteeing fishermen and customers receive a fair price. variations that reduced their share of benefits significantly, depriving both farmers and consumers of a fair price.

34. The fish supply chain is made up of a network of interconnected parties (fishers, processors, and distributors) who collaborate, whether knowingly or unknowingly, to get products made from fish to the final customer (Thorpe and Bennett, 2004). Numerous advantages can be obtained with supply chain management, including increased sales, profits, customer happiness, cost reduction, and competitiveness (Poirier and Quinn, 2004; Chan and Qi, 2003; Sethi and King, 2004). The goal of supply chain management is to provide better customer value at a lower cost by managing interactions with suppliers and customers both upstream and downstream. Thus, by emphasizing relationship management, supply chain management is producing a more beneficial result for all chain participants (Suresh, 2005).



In Mumbai, Maharashtra, Khobragade and Sonawane (2004) assessed the marketing margin in the marine seafood sector. According to price spread analysis, the margin for retailers and wholesalers ranged from 5 to 60 percent in consumer rupees, while the share collected by fishermen ranged from 30.16 to 91.40 percent. The study found that, rather than being a result of marketing expenses, the large marketing margin for many fish types was primarily attributable to the larger share that the intermediaries earned. They also recommended that a cooperative fish selling system be established in order to reduce the number of middlemen involved and boost system efficiency.

36. In his 2006 study, S. Satheesh Jino examined the following topics: (i) the proportion of the consumer's rupee that goes to fishermen for commercially significant fish varieties in private and cooperative marketing channels; (ii) the distribution pattern of the consumer's rupee to producers and intermediaries; and (iii) the relative benefits of cooperative fish marketing in terms of guaranteeing a fair price. The fish trade between fishermen, auctioneers, commission agents, wholesalers, retailers, and consumers was also examined. According to Ravindranath (2008), a few issues with the fish supply chain are the high bulkiness and perishability of the material, the high degree of species-to-species variation in size and weight, the high cost of transportation and storage, the lack of a guarantee for the quantity and quality of the commodity, the low demand elasticity, and the high price spread.

37. The domestic fish marketing system in India, as examined by P. Shinoj et al. (2008), should be strengthened into a robust network of effectively operating marketplaces, since almost three-fourths of the nation's total fish production is marketed domestically. The effectiveness of markets must be given top priority when a new global economic system is unleashed. Using monthly pricing data on significant marine fish species, the degree of price transmission and spatial market integration among India's key coastal markets has been revealed. It has been noted that species-specific differences exist in the degree of integration and rate of price transmission. Due to its availability for all socioeconomic levels, Mackerel has demonstrated a higher level of integration, which has led to a wide consumer base.

38. According to B. Ganesh Kumar et al. (2008), the study was carried out to understand the domestic marketing of fish in India in all of the major coastal states as well as a few chosen inland areas. It has been determined that the combined marketing expenses for the auctioneer, wholesaler, retailer, vendor, marine fishermen cooperative society, and contractor / freshwater fishermen cooperative society are, respectively, Rs. 0.98, Rs. 8.89, Rs. 6.61, Rs. 4.50, Rs. 6.00, and Rs. 3.51. Depending on the length of the market channel, the marketing efficiency for Indian major carps (IMC), sardines, and seer fish range from 34% to 74%. Since freshwater species travel farther from the point of production than marine species, the latter have been proven to have higher marketing efficiency.

39. According to Munireddy (2008), marketing costs are the true expenses borne by fishermen and other middlemen during the process of moving fish from the landing site to the customer. In the marine fish marketing of mackerel and sardine in coastal Karnataka, fishermen earned just 32.5% of the rupees paid by consumers, with middlemen receiving the remaining 67.5%. The middlemen profit from a high price spread, robbing the consumer and fishermen of the true price. He came to the conclusion that the distribution channel receives the majority of the consumer's payment, with the manufacturer receiving very little of the consumer rupee.

40. According to Ravindranath (2008), the private sector handles the majority of fish marketing in India, with public agencies giving it little thought. Because of this, there are a lot of middlemen in the marketing channels, particularly in the subsector of freshwater fish. Consequently, the proportion of fishermen in the consumer rupee drops, which raises retail prices.

41. Seven distinct fish marketing channels were identified by Ganesh Kumar et al. (2008) after they examined the fish marketing channels and fish disposal patterns in Kolleru Lake in Andhra Pradesh. He examined the pricing spread, margin, cost of marketing, and marketing effectiveness of various © 2023 IJRAR, Volume 6, Issue 2, May 2023, www.ijrar.org (P-ISSN 2349-5138, E-ISSN 2348-1269) IJRAR19K1

42. Rahman et al. (2009) listed the following as the causes of fish quality loss: incorrect ice use; rough and unhygienic handling; loading and unloading of fish at various stages of transportation; prolonged exposure to high temperatures; contamination; and a lack of awareness regarding quality-related issues.

43. Apu et al. (2013) investigated a particular Tripuran fish market. In the chosen fish markets of Tripura, the study examined the producer's share, marketing margins, marketing channels, and marketing efficiency. The study has also determined the local fish produce and fish imported from other states' marketing channels. The length of the marketing channel has been proven to affect the marketing. Fisherman → wholesaler → retailer → customer is the simplified fish distribution chain proposed by Hassan et al. (2014). Up until the final consumer, fish in good quality condition is allowed. However, fish deterioration rate rises under high temperatures and high relative humidity, resulting in financial loss for the vendor. This can be avoided by using proper handling techniques and fish preservation, which keeps the amount and quality of fish intact.

44. Aswathy et al. (2014) investigated the different fish selling channels and fish disposal patterns while studying the Kerala fish markets. They used an economic analysis of fish markets to investigate pricing discrepancies



among various players. During their investigation, they discovered that Kerala has four main fish supply pathways, with the second channel being controlled.

45. The function of different middlemen in the marketing of marine products at landing centers was investigated by Ramarao Mopidevi and Sarada Devi K. (2015). They looked at the price transmission, market margins, marketing costs, and the size of variations in these variables. And discovered that the main issues facing fisherman at primary markets are storage, spoiling, transportation costs, financing, and finally, market taxes. India's fish marketing is progressively moving from a prehistoric to a modern state. The interests of customers and fishermen are negatively impacted by the multiple middlemen involved in the marketing chain. Many markets lack the basic necessities needed to carry out marketing operations effectively.

CONCLUSION

In conclusion, the intricate dynamics of fisheries economics underscore the importance of sustainable management practices. Balancing economic interests with environmental conservation is imperative for the long-term viability of fisheries. As we navigate this complex field, collaborative efforts and informed policies play a pivotal role in ensuring the prosperity of both the industry and the ecosystems it relies upon. In conclusion, the intricate dynamics of fisheries economics reveal a delicate balance between ecological sustainability and economic viability. As this review has highlighted, effective management strategies, innovative policies, and global cooperation are crucial for ensuring the long-term health of fisheries and the prosperity of communities dependent on them. The interplay of market forces, environmental considerations, and societal needs underscores the need for adaptive approaches in navigating the complex waters of fisheries economics.

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