

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

A review of existing studies undertaken by both individuals and institutions was found highly useful in designing the present study. A brief account of some of the relevant studies made previously is given below.

2.2 Theoretical literature review of the study

Ayyappan, (2009) revealed that the overview of Indian fisheries sector in the perspective of the Eleventh Five Year Plan highlighting issues, constraints, achievements and opportunities. The study highlighted issues of open access fisheries in marine sector, deep sea fisheries, island fisheries, water management, organic aquaculture, customized cold chain, disaster management, climate change, food safety and quality assurance. The mentioned effect of climate change on fisheries which will increase temperature and may lead to early maturity and breeding of fishes this required for further analysis. The study pointed out new avenues in mariculture, large scale cage culture, seed and leasing policy, biosecure system for producing disease-free seed. The study highlighted

strength and opportunities of the sector in coming years and emphasized the need for treating aquaculture at par with agriculture.¹

Anwar Hashim (2011) analysed the tsunami that wreaked havoc in Japan last week is set to rock the \$2-billion Indian seafood export industry. The North-Eastern city of Sendai in Japan, the epicenter of the quake and tsunami, was a bustling city full of seafood factories and processing units with which Indian exporters had direct links. He studied that while admitting that seafood exports to Sendai would be immediately affected, he pointed out that the impact on other export destinations such as Tokyo and Osaka has been on a far lower scale and trade with these destinations could revive faster².

Sathiadhas et al., (2007) suggested that the gross earnings from marine fisheries at first sales in India recorded an increase of 48% between 1995 (Rs.7409 crores) and 2005 (Rs.11, 007crores). The fishing industry in India was still depending on the export markets as 50% of the gross earnings at landing center level was contributed by exportable varieties like crustaceans and cephalopods which hardly constituted about 20% of the total landings. The average landing center price of different varieties ranged from R.11 per kg for silver bellies to Rs.596 per kg for lobsters in 2005. Although the share of producers increased over the years for high quality fishes, there was also

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1. Ayyappan S. DDG (Fisheries, CAR), "An overview of Indian fisheries sector in the perspective of the Eleventh Five Year Plan" Proceedings of the National Conference of State Fisheries Ministers Bhubaneswar. 4 – 5 July 2009, p 25.
 2. Anwar Hashim, (2011) President of the Seafood Exporters Association of India, <http://www.thehindubusinessline.com/todays-paper/tp-agri-biz-and-commodity/article1541394.ece>

enormous scope to enhance the marketing efficiency of low quality fishes such as silver bellies and lizardfish's in the internal markets³.

Nikita Gopal et al., (2007), reported that the export of finfish from India had been rising over the years, having touched 1.86 lakh tones in 2005, which accounted for 37% of the total seafood export. In value terms, however, its contribution was only 16%. The unit value realisation for finfish exports, excluding ribbonfish, was \$ 1.92 per kg in 2005, which was not significantly different from what was realized in 1991 at \$ 1.56 per kg, an increase of 23% in 15 years. This unit value realisation of finfish is low comparison with the domestic prices⁴.

Joseph Vattamatoom (1978) in his study entitled, 'Factors determining the Income of Fishermen – A case Study of Poonthura village in Trivandurm district' concluded that though production has increased to a considerable extent in that village the income of fishermen in securing reasonable price for their catch.⁵

K.M. Warriar (1979) in his study, 'A socio – economic survey of Fishermen in Madras City' focused the attention on the litereacy rate, pattern and level of employment, levels of income, indebtedness and the expenditure pattern

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3. Sathiadhas, etal, (2007), "Economic efficiency of domestic fish marketing in India - Technical Session 1X: Exports, Trade and Globalization", Fisheries and Aquaculture: Strategic Outlook for Asia, Book of Abstracts, 8th Asian Fisheries Forum (8aff2007), November 20 - 23, Kochi, India, pp.230-231.
 4. Nikita Gopal, etal, (2007), "An analysis of the Exports of finfish from India - Technical Session 1X: Exports, Trade and Globalization", Fisheries and Aquaculture: Strategic Outlook for Asia, Book of Abstracts, 8th Asian Fisheries Forum (8aff2007), November 20 - 23, Kochi, India, pp.231.
 5. Joseph Vattamatom, factors determining the Income of Fishermen – A Case Study of Poonthura village in Trivandrum district, unpublished M.Phil. Thesis, Jawaharala Nehru University, Centre for development studies, Thiruvananthapuram, 1978, pp.52 -54.

of fishermen, the study found that most of the fishermen households did not save and they were under indebtedness. The study attributed the causes for the low income of fishermen to lack of fishing equipments, intensive competition among fishermen and migration of fish shoals.⁶

Durai raj (1981) in his work entitled, 'Study of Marine Fishing Industry in Thanjavur District' concluded that mechanised boat was the best to have more fish catch. The study estimated that only 57 per cent of the price paid by the consumer had gone to the fishermen and the middlemen had provided 60 per cent of credit requirements of fishermen at an exorbitant rate of interest, which varied between 36 and 60 per cent. The study suggested that the money lending practices in fishing villages should be regulated immediately.⁷

Thulasi (1987) revealed that the 70.92 per cent of total expenditure by marine fishermen was on food followed by clothing, social and religious functions and medical expenses with 10.32 per cent, 7.09 per cent and 5.66 per cent respectively. The expenses on education ranked last with 2.2 per cent. The study also found that 69.77 per cent of total income of marine fisherfolk has come from fish production, 28.81 per cent from fishing-allied occupations and the remaining 1.42 per cent from other occupations.⁸

George Jeramias (1989) in his study entitled, 'Pastoral Ministry Among Fishermen in the Diocese of Kottar With Special Reference to Poverty'

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6. Warriar K.M., A socio economic Survey of Fishermen in Madras City, Loyola College, Chennai, 1979, p.56.
 7. Durai A. Raj, study of marine Fisheries Industry in Thanjavur district, unpublished Ph.D Thesis, Madurai Kamaraj University, Madurai, 1981, p. 167.
 8. Thulasi, Study Report on Techno-socio-economic survey of fishermen Households in Tamil Nadu, The Institute for Techno economic studies, Chennai, 1987, p.12.

exposed the socio-political and cultural realities of fishermen in Kottar Diocese of Kanyakumari district and analyzed the role of Church in their lives. Pointing out that 80 per cent of families has earned below Rs.300 per month and eight per cent below Rs.100, he asserted that most of the fishermen had been reeling under irredeemable indebtedness and the socio economic conditions of fishermen had not improved precisely because they were the most exploited folk kept in ignorance.⁹

Nalini Nayak (1993) in her study, 'Continuity and Change in Artisanal Fishing communities' analysed the socio-economic conditions of artisanal fishing communities engaged in motorised fishing on the south-west coast of India. The study revealed that consumption expenditure has exceeded the income of most of the fishermen indicating that they were in a permanent state of indebtedness. Only 12 per cent of total sample had income slightly higher than their expenditure. The study also concluded that income had a direct bearing on consumption.¹⁰

Maria John (1994) in his work entitled, 'A Study of Economic Impact of Fishermen Co-operative societies In Kanyakumari District'" estimated that nearly 74.67 per cent of sample households had borrowed to meet family expenses. The study made an attempt to measure the economic impact of fishermen co-operative societies on their members. The economic impact was measured by calculating the percentage of rise in eleven variables after availing

9. George Jearmias, *Pastoral Ministry Among Fishermen in the diocese of Kottar With Special Reference to Poverty*, Pontificia Universitatis Lateranensis, Rome, 1989, pp.45-47.

10. Nalini Nayak, *Continuity and change in Artisanal Fishing Communities*, South Indian Federation of Fishermen Societies, Thiruvananthapuram, 1993, p.4.

loan from co-operative societies. It was found that there was a significant increase in all expenditures, all sources of income except income from subsidiary occupation and all investments after availing loan from co-operative societies. It was also ascertained that the wide range of inequality of income which had existed among the fisherfolk in Kanyakumari district before availing loan from fishermen co-operative societies got decrease after availing the loan.¹¹

Sathiadhas (1996) in his work, 'Production and Marketing of Marine Fisheries in India', highlighted the income and expenditure pattern of fisherfolk in Tamil Nadu. The study, which was based on a sample survey in five coastal villages in Tamil Nadu, revealed that the average annual income of a fisherman household was Rs.19713 whereas the average annual expenditure was Rs.15520. While 14 per cent of households had an annual income less than Rs.5000, 17 per cent had annual income less than Rs.10000 and 32 per cent of the households were in the income group Rs.15000-20000. Only 3 per cent households had earned annual income exceeding Rs.100000. The expenditure on food items alone worked out to about 60 per cent of the family budget.¹²

Hari (1997) suggested that the policies and programmes to improve the livelihood security of fishing communities in Kerala found that the fishermen's lack of control over the marketing of their fish was one of the important reasons for their low income. The report of the Task Force revealed that the market power of the fishermen was determined by the composition of the

11. Maria John S. A Study of Economic Impact of Fishermen Co-operative Societies in Kanyakumari District, unpublished Ph.D. Thesis, Madurai Kamaraj University, Madurai, 1994, pp.206, 237 and 239.

12. Sathiadhas, R. Production and Marketing of Marine Fisheries in India, Central Marine Fisheries Research Institute, Cochin, 1996, pp. 162 and 168.

buyers on the beach that is the point of first sale. Other things remain the same, the more the number of smaller buyers, the greater the market power of fishermen, which in turn, would lead to fair price for the catches and a situation wherein only a few large buyers at the first point sale would be inimical to the interest of fishermen. The report also stated that 70 per cent of coastal villages in Kerala had large number of small buyers.¹³

Seker (1998) revealed that the fishing community in general, spent all its income on food, liquor and festivities without saving. The study further pointed out that the fishing community had steadfast faith in the gift of the sea and they could get their daily bread through fishing and therefore they, in general, did not attach much importance to saving.¹⁴

Amutha (1998) observed that the Socio-economic Conditions of Fishermen in Tuticorin. The study pointed out that the gross annual income of fishermen in mechanised sector was three times greater than in non-mechanised sector.¹⁵

Murugan (2000) revealed that the irregular and unstable income from fishing and uncertain economic base had prevented the fishermen families from maintaining health and educating the children. The study also pointed out that the fisherwomen used to undergo high tension due to poverty, non-

13. Hari, Report of the Task Force on Livelihood Secure Fishing Communities, State Planning Board, Government of Kerala, Thiruvananthapuram, 1997. pp.25,26,44 and 45.

14. Seker, Report on the Study of Kanyakumari Zone of Kottar Diocese, Department of Economics, St.Mary's College, Tuticorine, 1998, p.12.

15. Amutha D., socio Economic Conditions of Fishermen in Tuticorin. Department of Economics, St.Mary's College, Tuticorin, 1998, p.12.

availability of food on time and hence they were more vulnerable to physical and mental ailments.¹⁶

Ezhil, (2000) revealed that the annual income of 19 per cent of total earning population of marine fisherfolk in manyakumari district ranged upto Rs.3000 and the income of 23 per cent of earning population was between Rs.3991 and Rs.6000. The income of 37.5 per cent of fisherfolk was between Rs.6001 and Rs.12000. Just 11 per cent of the total earning fisherfolk came under the highest income range, 15001 and above.¹⁷

Gabriele Dietrich and Nalini Nayak (2002) in their study, 'Transition or Transformation' Stated that the fisherfolk were reeling under a kind of 'cyclical poverty' which follows from low income, poor health and malnutrition and they spent a large sum of money on festive occasions such as birth, marriage and death. Such celebrations form a significant part of their social life. The study suggested that a well-organised market system was the only way to ensure that the fisherfolk got the best possible price.¹⁸

Joseph Durai and Srinivasan (2002) focused on fisheries development in Tamil Nadu. The study deals with the average annual growth rate of fisheries, demand and supply, the state Gains significantly from the marine products exports. The study also brings out the long-term growth rate for the state has been far higher than all-India linear growth rate for the period 1970-2000

16. Murugan, 2000, Status of Education, Employment and Health in Coastal Area of Thiruvananthapuram Corporation, Programme for Community Organization, Thiruvananthapuram, , p.39.

17. Ezhil, 2000, Tamil Nadu, Marine Fisherfolk Census, op.cit., pp.24. and 245.

18. Gabriele Dietrich and Nalini Nayak, 2002, Transition or Transformation, Tamil Nadu Theological Seminary, Madurai, , pp.64-65 and 170.

both in terms of quantity and in terms of value. Further, the study found the growth rate in the State during the last decade in terms of quantity has been far below the growth rate of all-India fish exports. The study observed that average growth rate of marine products exports from the state, in terms of quantity during the second half of the last decade had been better compared to the first half. However, the study argued that export growth in Tamil Nadu has declined in terms of quantity and infrastructure facilities and other intermediaries were inadequate for the development of fisheries sector in Tamil Nadu¹⁹.

Mini Sekharan and Ramachandran (2007) identified that the constraints faced by the Indian ornamental fish exporters. The constraints were put forward as high freight charges, need for free imports of new varieties, lack of international flights, non availability of quality breeding stock of exotic fishes, lack of professional training in breeding and seed production, lack of training in handling and packing, poor marketing strategies, restriction on the marketing of marine fishes and invertebrates and lack of incentives. To enhance ornamental fish exports from India, the prime requisite is to analyse the order in which these constraints were considered to be severe by the marketers. The study suggested that in the case of the exporters of the metropolitan cities, lack of flight facilities, the highest mean score was obtained by the high cargo rates followed by tough export procedures and difficulty in consignment filling respectively. Unlike the exporters of the metropolitan cities, the main constraints faced by the indigenous ornamental fish marketers of Kerala were lack of flight facilities, high cargo

19. Joseph Durai and Srinivasan, 2002, Analysis of fisheries development in Tamil Nadu, <http://www.thehindubusinessline.com/2002/01/22/stories/2002012251152100.htm>

rates, difficulty in filling consignments and lack of market information. Transportation and information dissemination are two severe constraints faced by the marketers of India and these problems have to be alleviated for India to attain a position in the world trade²⁰.

Karna (2011) observed that the Visakhapatnam was one of the major marine product export centres in the country but of late it was registering negative growth and therefore the IIP had decided to hold the workshop to educate the exporters and others in the field on the need for proper packaging of marine products. The study is highlighted on handling marine products, storage and logistical problems associated with marine products and also on the latest trends and technologies²¹.

Kuruvila Thomas (2009) highlighted that the need for increased cooperation between the processors and the other stake holders including fishermen. The concept of benefit sharing is essential to the sustainability of the sector. The fishermen should be given reasonable price for his catch. The study could help in spreading awareness, particularly amongst the fishermen community of the need to made high standards in sanitary and hygienic practices in the handling of marine products. The study suggested that Indian exporters should now focus to overcome the problems caused by Antidumping Duty. The study also concluded that some of the domestic policy and legislative constraints

20. Mini Sekharan and Ramachandran, 2007, "A probe into the constraints encountered in exporting ornamental fish from India - Technical Session IX: Exports, Trade and Globalization", Fisheries and Aquaculture: Strategic Outlook for Asia, Book of Abstracts, 8th Asian Fisheries Forum (8aff2007), November 20 - 23, Kochi, India, pp.231- 232.

21. Karna V.K, 2011, Deputy Director of the Indian Institute of Packaging <http://www.thehindubusinessline.com/2011/01/22/stories/2011012251152100.htm>

need to be immediately addressed. For instance, the Excise Duty for processed products remains at 8% as against 0% for agricultural products. The study analysed that India should be made a seafood processing hub in order to fully utilize the capacity²².

Venkatesan (2009) revealed that the existing and emerging barriers in the fishery trade. The main cause of that study highlighted the Quality Control programmes and safety standards had caused significant interest to exports. Substantial investments were required for ensuring the international quality hygiene standards. The study hoped that the provide awareness to the SPS requirement and other conservative practices. The study that the product segregation based on traceability and eco-labelling are gaining momentum and that the Indian exporters should adopt these concepts as a marketing tool. The study could be helpful in disseminating reliable and correct information on trade related issues to all concerned²³.

Venkatesan (2005) observed that on various trade barriers in the international trade of fish and fishery products. The study details of various agreements of the WTO that are relevant to fishery trade, the implementation of the agreement by principal nations and its impact on the international trade, the role played by the WTO in removing the barriers etc were elaborated. Problems

22. Kuruvila Thomas, Director, MPEDA 2009, 'Strategies and Preparedness for Trade and Globalisation in India', The United Nations Conference on Trade and Development (UNCTAD)-Government of India- DFID, Project.

23. Venkatesan V., SEAI, Chennai 2009, 'Strategies and Preparedness for Trade and Globalisation in India', The United Nations Conference on Trade and Development – UNCTAD, (Project) Government of India- DFID.

faced by India in the international trade of fish and fishery products he found special mention²⁴.

Ramachandra Bhatt (2005) examined the changing structure of marine exports and analysed cost implication conforming EU regulations for the Indian Exporters. The study expressed their concern about the variety of issues currently faced by the seafood sector. The escalating price of fuel as well and the operating cost for a matter of concern, the study suggested that the Government should waive levy of Sales Tax/VAT on fuel used for fishing purpose²⁵.

Chellappa (2005) emphasised that the export should not be on the cost of poor fishermen. The study explained the impact of globalization in India particularly in the field of agriculture. The concept of globalization, trade barriers and standards are the parts of international trade. The study felt the globalization help s in corporate hijacking. Since India has good and cheaper labour force, he opined that we should be able to produce at a cheaper rate. The developed countries would project the interest of their people, farmers and industry and provide them with subsidy at the same time advice developing countries to cut short the subsidies to their poor people. The Antidumping policy of US should review in this context. The study also explained the need of developing the

24. Venkatesan V., SEAI, Chennai 2005, The 3rd Sector Inception Workshop of the UNCTAD-DFID Project on "Strategies and Preparedness for Trade and Globalisation in India" (Project) in the Fisheries Sector was organized in Visakhapatnam.

25. Ramachandra Bhatt, Professor, 2005, College of Fisheries Mangalore, Under Government of India, UNCTAD DFID project on Strategy and Preparedness for Trade and Globalization in India (project) a Sector inception Workshop in the fisheries sector was organized in Goa.

domestic market. No attention had been given for developing the international market and training of human resources for this purpose²⁶.

Kuruvila Thomas (2005) explained that the marine product export is not making a positive growth and since 1994-95 our export is in between US\$ 1100 million and 1450 million. In this connection, he gave a detailed plan of MPEDA and its activities like Developing and regulating off-shore and deep sea fishing, Registering fishing vessels, processing plants, Fixing of standards for export of marine products, Rendering of financial and other assistance, Carrying out inspection of marine products, Regulating the export of marine products, Export marketing of marine products, Registering of exporters, Collecting statistics and Such other matters as may be prescribed. The study highlighted the problems faced by the Indian Marine Product exporters in international markets particularly in China, Japan, USA and EU. MPEDA is focusing its attention to sort out these problems and to achieve a target of export of US\$ 4 billion by 2009-2010²⁷.

Abijith Das (2005) stressed that the study will strengthen human and institutional capacities of stake holders and policy makers who take better informed decision and formulate their strategy with greater level of understanding of the impact and opportunities from globalization particularly from pro-poor perspective. The study that the UNCTAD and Government of

26. Chellappa C, IAS, (2005), The 3rd Sector Inception Workshop of the UNCTAD-DfID Project on "Strategies and Preparedness for Trade and Globalisation in India" (Project) in the Fisheries Sector was organized in Visakhapatnam on 4thOctober 2005.

27. Kuruvila Thomas, Director (Mktg), (2005), MPEDA presented a paper on "Indian export on overview", The 3rd Sector Inception Workshop of the UNCTAD-DfID Project on "Strategies and Preparedness for Trade and Globalisation in India" (Project) in the Fisheries Sector was organized in Visakhapatnam on 4thOctober 2005.

India accept MPEDA and SEAI to carry out these activities. Such as building networks of existing trade related institutions capable of providing essential support services to exporter's trade policy information, commercial intelligence, export promotion, marketing, product development, establishing an effectively functioning trade portal and formation of virtual sector network for facilitating interventions across the entire value chain.²⁸

Elias Sait (2005) found that the fishery potential of India and the availability of processing infrastructure. The growth of captured fisheries was slow at an average rate of 2.23% per annum compared to culture fisheries where it is 8.13% during the period 1989-2004. Analysis of the marine fishery of the country revealed that the catch from the sea is stagnated around 2.5 million tones whereas the world production is recorded at 85 million tones. About 65% of the catch was by mechanized vessels whereas the traditional crafts account only about 34%. The deep sea fishing vessels accounted only about 1% of the total catch. About the infrastructure facilities, he stated that the country had six major fishing harbours, 41 minor fishing harbours, 138 landing centres. Out of the 402 fish processing units complying HACCP requirements, about 150 units are approved for export to EU countries.²⁹

Ashok Nanjappa (2005) concluded that the Tamil Nadu opined that a crisis exist in the industry about the scarcity of raw material. The study

28. Abijith Das, Trade Officer, UNCTAD, (2005), MPEDA presented a paper on "Indian export on overview", The 3rd Sector Inception Workshop of the UNCTAD-DfID Project on "Strategies and Preparedness for Trade and Globalisation in India" (Project) in the Fisheries Sector was organized in Visakhapatnam on 4th October 2005.

29. Elias Sait (2005), The 4th Inception workshop for the Project strategies and preparedness for trade and globalization in India with special reference to assessment of export capabilities of small fishermen was held at Chennai on 6th October, 2005.

suggested that separate Ministry in the Centre exclusively for Fisheries and that development of internal market for fish and fishery products was an alternative to increase the income of fishermen.³⁰

Venugopal (2005) observed that the problems faced by tuna long line operators. Presently baits were imported and import of bait for 5 to 6 vessels became a costly proposition. Moreover, Tuna fishing was not economically viable as the hooking rate was very low. The study pointed out the system should be developed where by the smaller tuna fishing vessels could transfer their catches to a mother vessel stationed at mid sea and these small vessels could go for further fishing which helps in reduction of fuel cost.³¹

Krishnaiah, (2009) measured the strategies for the development of the fisheries sector in India. The study highlighted the need for intensive aquaculture in ponds and tanks, reservoir fisheries development, coastal aquaculture, revival of shrimp culture & diversification, coldwater fisheries, mission mode approach, intensive district development plans, resource mobilization, increased role of private sector, human resource development and need for policy interventions.³²

Syda Rao (2009) analysed the status of marine fisheries in India while marine fisheries have performed well, there is still a scope for better

30. Shri.Ashok Nanjappa, President, SEAI, Tamil Nadu (2005), The 4th Inception workshop for the Project strategies and preparedness for trade and globalization in India with special reference to assessment of export capabilities of small fishermen was held at Chennai on 6th October, 2005.

31. Shri.Venugopal ICSF, Chennai (2005), The 4th Inception workshop for the Project strategies and preparedness for trade and globalization in India with special reference to assessment of export capabilities of small fishermen was held at Chennai on 6th October, 2005.

32. Krishnaiah P., CE, (4 – 5 July 2009) “Strategies for the development of the fisheries sector in India” Proceedings of the National Conference of State Fisheries Ministers Bhubaneswar.

management in areas like fisheries prediction, re-visit CCRF to suit to changing local conditions, introduction of catch quotas, introduction of eco-labeling, introduction of ecosystem based fisheries management (EBFM), better monitoring, control and surveillance (MCS) and vessel monitoring system (VMS). He further proposed interventions in terms of introduction of total allowable catch (TAC), setting of annual catch levels (ACL) for important resources for sustainability, implementation of mesh-size regulations to reduce the exploitation of juveniles, reduction of discards through targeted fishery, introduction of log sheets for mechanized vessels, encouragement of exploitation of oceanic stocks such as tunas, squids and pelagic sharks, by introducing high capacity vessels with storage and processing facility, conversion of existing trawlers to long-liners for the exploitation of oceanic resources and introduction of marketing chains through co-operative sector.³³

Leena (2009) stressed need to augment quantity and quality of catch she wanted sustained fishing as against intense fishing. The study highlighted the need to promote deep sea fishing and to combat decline in shrimp export due to disease and antibiotics residual problems. Subsidy provided by MPEDA should be availed by the state governments. The study emphasized on the need for stringent rule for hatcheries on introduction of exotics, bridging the gaps in legislation, enactment of the seed act as in agriculture. The traceability and eco-labeling from hatchery to final product are the new trade issues which required attention. The status of hygiene at the fishing harbours and landing

33. Syda Rao G., Director, CMFRI, (4 – 5 July 2009) “Status of marine fisheries in India” Proceedings of the National Conference of State Fisheries Ministers Bhubaneswar.

centre should also be looked into only 20 per cent capacity of cold storage utilized and therefore there is a requirement for more emphasis on processing. The study also drew attention towards some other issues like traceability of trawlers and registration of the fishing vessels, popularization of ornamental fisheries as export commodity and inadequate insurance covers good aquaculture practices (GAP) to avoid rejection in the export market. The study emphasized the need to set up a system to take care of the issue of delay in the testing and retesting of the export commodity.³⁴

Sreenivasan (1981) analysed small-scale marine fisheries of Tamil Nadu. The study examined plans for the development of small-scale marine fisheries and rural development. The study reveals that to improve the facilities for handling, storage and utilization aspects of catch.³⁵

Kaushal (1997) observed that the Quality consciousness must for more exports from India. The study deals to quality problem because, Indian marine consignments to each of the major importers have been returned. The study underlines the decline in fish landings is also the reason for fall in exports. Moreover it is improve to efforts at exporting value added products and developing new markets could also help Indian seafood exports.³⁶

Chari (2006) analysed the development of marine products and export potential of Tamil Nadu. The study observed that increased production

34. Leena Nair, Chairperson, MPEDA, (4 – 5 July 2009) “The need to augment quantity and quality of catch she wanted sustained fishing as against intense fishing” Proceedings of the National Conference of State Fisheries Ministers Bhubaneswar.

35. Sreenivasan, Analysed small-scale marine fisheries of Tamil Nadu, Central Marine Fisheries Research Institute, Cochin, 1981, p. 16.

36. Kaushal, Quality consciousness must for more exports from India, Department of Economics, St.Mary’s College, Tuticorin, 1997, p.25.

and diversifications of the marine products in established processing centers will be a feature in the years to come depending upon the consumer preference standard of living and availability of raw materials. The study also found the export front, quite a number of ice plants and freezing plants of suitable capacities, and processing units will have to be put up at important centers of fishing and the products like frozen shrimps, lobster tails canned shrimps.³⁷

Kurian (2010) assessed the problems of the fishing industry in Tamil Nadu. The studies by kurian stated great emphasis has to be made on the need to build up excellent infrastructure facilities. Without such facilities it would be inadvisable to initiate any seafood industry unit.³⁸

Ramachandra Bhatta (2003) focuses Impact of Globalization on the Marine Exports of India. The study deals with the trend of the marine exports, market margin analysis, Policy Environment and Constraints and export potential. The study has also mention about an important reason for the decline in marine exports comes through sanitary and phyto sanitary sanctions. However, the study argued that the export oriented production of high value commodities such as shrimp is that the benefits of increased foreign exchange will “trickle down” to benefit the poor and create more jobs. As the importance of fish and fishery products in the international trade increases how many and how much of benefits actually trickle down is an issue to be studied.³⁹

37. Chari, The development of marine products and export potential of Tamil Nadu, PhD Thesis, Madras University, Chennai, 2006, p 47.

38. Kurian, Problems of the fishing industry in Tamil Nadu, Project Report, Centre for Development Studies, Thruvanathapuram, 2010 pp 55 and 71.

39. Ramachandra Bhatta , Impact of Globalization on the Marine Exports of India, Dissertation, Fisheries College Mangalore, 2003, p 23.

Praduman Kumar and Anil Kumar (2003) analysed the Food Safety Measures: Implications for Fisheries Sector in India. In his study he has focuses on the cost of compliance with the Food safety standards, Export competitiveness of fish and fishery products, Economic Impact of Food safety measures. The study reveals that the compliance with food safety measures is a costly proposition for the developing countries and also affected the export competitiveness adversely. However, he argued that the small producers who are scattered throughout the rural/coastal areas to HACCP processing plants will remain a major challenge.⁴⁰

Guledgudda et al., (2003) examined the Production and Export Performance and plan allocations: Review of fishery sector in India. It was observed that the growth trend in marine production and export share in domestic fish production, trend of fishery product exports in India. The study also brings out during the last four decade and nine years, the growth rate of fish exports in terms of quantity (10.89 percent) was positively significant due to increase in the quantity of fishery products exports. However, he argued that the fishery sector exports had made rapid Strides in the period from 1960-61 to 2001-02.⁴¹

Devadasan (2003) focused on the Value Added fish and fisher products. The study reveals that most of the market channels currently used are not suitable to trade value added products and adopt a new appropriate channel would be the super market chain, which would want to procure directly from the

40. Praduman Kumar and Anil Kumar, The Food Safety Measures: Implications for Fisheries Sector in India, Conference Proceedings, CMFRI, Calcutta, 2003, pp 33 and 36.

41. Guledgudda, Patil, Hiremath and Dodmani, Production and Export Performance and plan allocations: Review of fishery sector in India, Research Report, CIFT, Cochin, 2003, p 48.

source of supply. Moreover the study argued that the latest packaging must also keep abreast with the latest technology.⁴²

Mukherjee (2004) studied that the Perspective of fisheries and manpower development in India. The study found that the emergence of new frontiers of fisheries science and technology and a higher expectation of increased productivity, it is important that an in-depth examination is done to reassess the quality of on going fisheries education and training.⁴³

Gnanadoss (2007) examined the operatives' training and development of marine fisheries in Tamil Nadu. The study reveals that Tamil Nadu state should be able to build up a good proportion of the skilled manpower enquired for her modern fishing industry.⁴⁴

Natarajan (2008) assessed that the faster development of fisheries in Tamil Nadu. The study observed that finance have been a bottleneck of the fisheries industry until recently. On finding that modern techniques of commercial fishing, marketing, financing, improve the socio-economic conditions of the fishermen together with the development of fishing harbors and other sea shore facilities and research for exploitation of fishery wealth-these will constitute the major planks in over development programmed for the decade ahead.⁴⁵

42. Devadasan, Value Added fish and fisheries products, Project Report, Marine Fisheries College, Calcutta, 2003, pp 82 and 83.

43. Mukherjee, Perspective of fisheries and manpower development in India, Dissertation, Agriculture University, Bangalore, 2004, p 54 and 61.

44. Gnanadoss, The operatives' training and development of marine fisheries in Tamil Nadu, Project Report, Madras Christian College, Chennai, 2007, p 24.

45. Natarajan, The faster development of fisheries in Tamil Nadu, Project, Annamalai University, Chidambaram, 2008, p 94.

Shyam Sallm and Ojha (2004) confined that the commodity diversification and geographic concentration of Indian seafood exports. The study concludes that the analysis of the commodity diversification and the geographic concentration of Indian fisheries export using the Gini-Hirschmann index suggested that there has been dynamism in export in commodities as well as markets from the traditional one commodity (shrimp)-one country (Japan) framework.⁴⁶

Ambrose Fernando (2006) analysed the Fisheries development in Tamil Nadu. The study observed that the immobility of lab our in fishing industry, pattern of development, lack of higher education and risk bearing social schemes. Hence, the study concluded that the some of the serious drawbacks confronting this age-long and traditional industry. Moreover, it is necessary that immediate attention is paid to all of them so that Indian fishing industry can be put along sound lines.⁴⁷

Ayyappan and Krishnan (2004) found that the fisheries sector in India to dimensions of development. The study observed that the export dimension, market structure, prospects of fisheries growth, quality control and food safety. The study reveals that the role of the fisheries sector need to be highlighted in order to build awareness among the population to enhance

46. ShyamSallm and Ojha, Commodity diversification and geographic concentration of Indian seafood exports, Project, Fisheries College, Mangalore, 2004, pp 47 and 48.

47. Ambrose Fernando, The Fisheries development in Tamil Nadu, Dissertation, Allahappa University, Karikudi, 2006, p 39.

increased participation and create social cohesiveness for the development of the sector.⁴⁸

Shyam et al., (2004) analysed the export performance of Indian fisheries in the context of globalization. The study deals with the export performance and potential of Indian marine products under the trade liberalized economy and explores the possible impacts of WTO agreements on the Indian fisheries sector. However, the study concluded that the better performance of Indian fisheries export with respect to the world fisheries export.⁴⁹

Verma (2004) examined the growth and constraints of fish production in India for the period 1980-81 to 2001-02. The study observed that most fishing harbors in the country are not properly maintained, due to lack of management and inadequate revenue collections. In line with these observations, the study suggested that there is a need to improve the accessibility of poor fish farmers to institutions dealing with inputs like fertilizers, supplementary feeds, fingerings, and credit.⁵⁰

Sarad et al., (2004) identified that the Indian seafood export demand an application of principal component regression. The study to find price and foreign income elasticity of seafood export demand from India for the two major importers Japan and U.S.A. The study revealed that, to make use of Japan and U.S.A markets' vast potential, Indian seafood items should be priced

48. Ayyappan and Krishnan, Fisheries sector in India to dimensions of development, Project Report, Madurai Kamraj University, 2004, p 85.

49. Shyam, Sekhar, Uma and Rajesh, Export performance of Indian fisheries in the context of globalization, Research Report, CIFT, Cochin, 2004, p 64.

50. Verma A.R, Growth and constraints of fish production in India for the period 1980-81 to 2001-02, Dissertation, CMFRI, Cochin, 2004, p25.

competitively and the quality should be kept superior compared to fish and fish products export competing countries.⁵¹

Umamaheswari et al., (2004) examined an analysis of export competitiveness of marine fisheries in India. The study found that the production performance and export competitiveness of fresh and processed marine fishery exports in terms of growth, instability, geographical diversification and relative export performance during the pre-reform period I:1980-81 to 1990-91 and post-reform period II: 1991-92 to 2002-03. The study observed that the fisheries production increased six-fold from 0.75 million tones in 1950-51 to 5.66 million tones in 2000-01 and marine fishery production grew by 8 per cent per annum on an average between 1980-81 to 2001-02 but remained stagnant in the post –WTO period. The study also brings out the efforts need to be made for diversification and quality control of products for the export market.⁵²

Arjun Singh et al., (2004) observed that the prospects and perspectives of fishery sector in India. The study has focused on the production and exports of marine and fish products, comparative position of fisheries exports in agriculture exports nationally and worldwide and fish consumption. The study analysed that the India has vast potential sources for marine products alone with 8,085 kms coastal belt and 2.02 million square kms. However, the study argued that the scope of fishery sector is quite bright in future and sustains a good hope for providing rich diet to the people and earning good foreign exchange provided

51. Sarad C., T. Ravisankar, M. Krishnan and P. Ravichandaran, Indian seafood export demands an application of principal component regression, Project, CHIFT, 2004, pp.41 and 42.

52. Umamaheswari, Nasurudeen L P and Binukumar D., An analysis of export competitiveness of marine fisheries in India, Project, Aligarh University, Agra, 2004, p 39.

proper attention is given and proper multifunding is done in this sector in the competitive age of globalization, modernization and liberalization.⁵³

Pagire et al., (2004) analysed that the production status and potential for export of Indian fisheries. The study deals the trends in production of Indian fisheries, fishery potential of exclusive economic zone (EEZ) and directions of fishery trade during pre-liberalization and post-liberalization periods. The study observed that annual of fish production during post-liberalization period was a bit higher than during pre-liberalization period. The study suggested that the market strategies should be developed to increase the various kinds of marine fisheries. Moreover, product diversification and value addition to Indian marine products along with adoption of proper marketing strategies and co-coordinated efforts of the marine products exporters.⁵⁴

Perumal (2003) assessed that the growth trends of marine fish production and export in Tamil Nadu. The study observed that the export of marine products from Tamil Nadu is nearly 10 percent (1998-99). Further, the study found that the marine fish and fish products export trend increases at the increasing rate. Hence, the study argued that the nature provides long shoreline to Tamil Nadu. So the government can construct some more major fishing harbours (at present only three major harbors Chennai, Tuticorin and Chinna muttom) and so more mechanized trawlers can be operated in Tamil Nadu.⁵⁵

53. Arjun Singh, Raisingh and Dalbirsingh, Prospects and perspectives of fishery sector in India. Research Report, CIFT, Coachin, 2004, p105.

54. Pagire B.V, .Navadkar D.S and.Birari K.S, Analyzed the production status and potential for export of Indian fisheries.Project, Kerela University, 2004, p24.

55. Perumal V.M.S, Growth trends of marine fish production and export in Tamil Nadu, Dissertation, Indian Institute Management, Ahmadabad, 2003, p 72.

Maarten Bavinck (2009) analysed the Spatially Splintered State: Myths and Realities in the Regulation of Marine Fisheries in Tamil Nadu, India. The study observed to develop geography of law' and investigates expressions of state center law regarding common pool natural resources. The study argued that the state occupies a relatively weak position vis-à-vis user groups, and strives to maximize its legitimacy by adapting to local political circumstances and the end result was legal patchwork with strong spatial connotations.⁵⁶

Anjani Kumar (2004) studied the Export Performance of Indian Fisheries strengths and challenges ahead. The study discusses some of the issues like temporal changes in the composition of exports, magnitude of growth in exports of fishery products and determinants of fisheries export, comparative advantage of fishery products in the international market and recent trade policy reforms in fisheries sector and their potential implications. The study also brings out the export of fish and fish products have performed well and liberalization policies too seem to have augmented their growth. To give exports a further boost various sanitary and phyto-sanitary measures should be taken up vigorously to ensure international hygiene standards for Indian fisheries products. The study points out to fisheries developments have both positive and negative impacts on the livelihoods of poor people in developing countries like India.⁵⁷

Shyam and Salim (2008) observed that the study indicated the trade liberalization initiated during 1991 had resulted in improvement in the Indian shrimp export. The study analysed that the recently there was erosion in

56. Maarten Bavinck, *The Spatially Splintered State: Myths and Realities in the Regulation of Marine Fisheries in Tamil Nadu, India*, CMFRI, Chennai, 2009, p 69.

57. Anjani Kumar, *Export Performance of Indian Fisheries strengths and challenges ahead*, Report, MPEDA, Cochin, 2004, p77.

the competitiveness of Indian shrimp trade. Nevertheless, there were issues of concern due to the competitiveness, instability and rejection on quality grounds⁵⁸.

Geethalakshmi et al., (2009) export trade of seafood started way back in 1953 with the first shipment of frozen shrimp to USA by M/s. Cochin Company from the port of Cochin. Frozen shrimp has since then been the major revenue generator among seafood exports from India. Its share in 2005-2006 has been 59% in terms of value of total seafood export, India having exported 145,180 tonnes of shrimp out of a total of 512, 164 tonnes of seafood exports. The Indian marine product exports are driven primarily by the Japan, US and European Union markets. Japan had been the leading importer of Indian frozen shrimp till 2001-2002. Then USA became the major market for Indian frozen shrimp to be replaced by EU during 2004-2005.⁵⁹

2.3 Summary

The above said reviews examined the trade constraints to the exports of marine products in Tamil Nadu. The problems encountered by the marine products exporters and marine industries. The nature of trade constraints and the reasons for trade constraints among the marine products exporters were analysed. Even though there are so many studies related to the performance evaluation of the marine products exporters. So that the present study focus on an indepth analysis on marine products exporters in Tamil Nadu at multy dimensions view on them.

58. Shyam and Salim (2008) 8th Asian Fisheries Forum (8aff2007), Technical Session 1X: Exports, Trade and Globalization”, Fishing Chimes, Vol.27 No.10/11, January & February, pp.23.

59. Geethalakshmi, Nikita Gopal and Unnithan, “Shrimp Exports from India an Economic Analysis, India’s Exports: Perspective and Sectoral Trends”, 2009 pp.126.