2.1. INTRODUCTION

Once a topic has been decided, it is essential to review all relevant materials which have a bearing on the topic. In fact, review of literature begins with a search for a suitable topic and continues throughout the duration of the research work. Since a research report, either a dissertation or a thesis, is supposed to be a study of in-depth aim and contribution to knowledge, a careful check should be made that the proposed study has not previously been carried out.

The present study is the first of its kind. But there are a number of studies, which are related to the present study. 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.

“Sutrapada”\(^1\) is a village monograph prepared as part of 1961 census. It is a marine fishing village situated near the Veraval Port in Gujarat State. The monograph was aimed at studying the life of the fishermen, their social customs, literacy and education, economic conditions and also to see the possibility of developing the fishing industry. About 154 households were studied in the year 1960. A detailed account was given about the socio-cultural and economic conditions, fishing methods and equipment. The process of replacing dugout canoes with mechanized boats and of indigenous nets with nylon nets were described. The increase in fish landings and also the increase in the catch per unit effort as a result of mechanization were also analysed. The consequent changes in the incomes of the household were not presented

to enable any scholar to examine the impact of mechanization. It is socio-economic condition which portrays the situation of Sutrapada fishermen village at a single point of time ignoring the implications of this new factor of change.

In 1969, the Programme Evaluation Division of the Planning Commission\(^2\) made an evaluative study of the mechanized fishing in the Country by carrying out field investigations in the fishing villages of major maritime states in the country. The focus of this enquiry was on the economics of mechanized and non-mechanized units. The study found that mechanized fishing had brought tangible benefits to those engaged in that sector. The average catch per boat and income per worker were decisively higher in the mechanized units as compared to the traditional units. The study also found that in spite of such benefits, mechanized fishing did not increase overall fishing efficiency judged in terms of depth of operations of fishing boats, fishing time expended and costs and returns to investment.

Crutch Field [1972],\(^3\) has reviewed the development of East African experience with fishing vessel financing. Some of the general principles in financial aspects of fishing vessels are also dealt with in detail. The need for government financing to marine is also given. The author has concluded that loan programme should aim to speed up introduction of more efficient fishing gear and should generate its own repayment thus meeting its obligation to the national economy and releasing the borrowed funds for other purposes.

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\(^3\) Crutch Field J.A [1972], Experience with credit schemes [FAO / SWE / TF / 84], Food and Agricultural Organization, Rome, p. 8.
The Madras Institute Of Development Studies had undertaken a socio-economic survey of small fishermen in Tamil Nadu\textsuperscript{4}. A sample of 125 households was selected among 50,000 families concentrated in seven Districts of Tamil Nadu, and the fishing population was then divided into five strata. A questionnaire in Tamil was canvassed among the heads of the sample households. It is found that “the landings by the catamarans are poor and the inadequate to maintain the small fishing families even at the subsistence level. They are exploited by the motor-boat owners. The co-operatives societies serve only the motor-boat owners and are not beneficial to small fishermen. There is a wide and widening divergence between motor-boat owners and catamaran fishermen in respect of their income levels. This is due to the varying productivity of their crafts”. There are no organized marketing centres and no transport facilities. The result is that they are at the mercy of middlemen and are mostly engaged in distress sales. The Government’s policy of giving a mechanized boat to three persons results in frequent misunderstandings between the joint owners.

Larsson [1975]\textsuperscript{5} have made a detailed study on the demographic aspects, income status living conditions of fishermen in Kula Besut, Malaysia. He opines that the income of the fishermen is low and this is due to lack of capital for modernization and expansion, low productivity, poor marketing system and under –employment in the fisheries sector.

\textsuperscript{5} Larsson R. Vnnoort.A and Oswald.E [1975], A report on artisanal fisheries of Peninsular Malaysia with particular reference to Kula Besut, Manila, South China Sea Fisheries Development and co-ordination programme, p.58.
Food and Agricultural Organisation [1977]\(^6\) has reviewed the main issue in the creation and operation of fisheries credit institutions. It is suggested that in developing countries, it is better to have adequately trained and experienced administrators and fisheries officers for successful operation of the schemes. Further, schemes can be formulated depending on local tradition and systems of administration as well as characteristics of the fisheries sector itself. Many recommendations are given for successful operation of schemes in developing countries.

Bapat & Kurien [1978]\(^7\) has studied the role of India. The net profit estimate has been 17.84 crores with an average insignificant income of Rs. 558 per fishermen per year which is lowest compared to the huge capital investment, hazardous nature of the profession and the effort expended.

Joseph Vattamattom (1978)\(^8\) in his study entitled, ‘Factors Determining the Income of Fishermen – A Case Study of Poonthura Village in Trivandrum District concluded that though production had increased to a considerable extent in that village the income of fishermen did not change appreciably because of low bargaining power of fishermen in securing reasonable price for their catch.

John Kurien in his study entitled\(^9\) “Towards an understanding of the Fish Economy of Kerala State”, revealed that the output of catch in terms of

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\(^7\) Bapat & Kurien [1978] has studied the role of Small-scale Fisheries in India. Seminar on the role of Small-scale Fisheries and coastal Aquaculture in Integrated Rural Development – Central Marine Fisheries Research Institute [CMFRI], Abstract, No.1.


volume and value is higher in mechanized sector than the traditional sector. The benefits accrued from fishing very low for the traditional fishermen. The author also viewed that the distribution of income between different status groups in the non-mechanized sector might have worsened as a result of growing proletarianisation”.

Kalwar [1978] in his study The Employment pattern, Economics status and Indebtedness of the fishermen of Thane District, Maharashtra has stated that, nearly two third of societies are either defunct or dormant due to inefficient management. The societies have to be reviewed to fulfill the needs and requirement of fishermen. Modern technologies should be taught to fishermen. So that their economic conditions and the level of literacy could be improved. Thus an integrated approach involving financial assistance through soft loans and subsidies for procuring production means price support for fisheries products, storage facilities, effective marketing system and transport of technology.

Pietersz Et. Al [1978] has reviewed the present status and problems of marine small scale fisheries of Maharastra. From their work, it is evident that more number of traditional crafts has to be mechanized, priority should be given to loan / subsidy assistance for fisheries development with the object of balancing the levels of development along the entire coast of Maharashatra and private banks should encourage the fishermen by giving loans for the purchase of motorized boats. It is inferred from their study that co-operatives should play an active role in the implementation of National Co-operative Development

Corporation (NCDC) loan. Further the department of fisheries of Maharashtra provides loans and subsidies for the purchase of fisheries requisites, supply of fuel and the like. These have been channeled through co-operatives. The support of various institutions in developing marine small-scale fisheries is dealt along with diverse problems of fishing communities of the Maharashtra coast.

Freda Chandrasekharan [1979] has studied the role and status of fisherwomen in Mahabalipuram Tamil nadu. The study has revealed the fishermen population, literacy level, fishing operations, income, social customs and women’s involvement in fishing industry. It is concluded that the role of women in fishing activity in this village is less and the main activity has been marketing apart from sun drying and salt curing. They are also involved in net mending. The study also reveals that women play an active role in taking decisions in their family affairs particularly in financial matters. It is recommended that with proper planning and vocational education to fisher women, their literacy level and their participation in fishing activities could be improved.

Hye [1979] studied the socio-economic aspects of fishermen with special reference to their education in Chittagong District of Bangladesh. The study indicated that about 63 per cent of fishermen have their education up to primary level, 30 per cent below primary level and 6 per cent illiterate. It

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is suggested by the author that the fishermen need training and at least two coastal fishing schools should be started in Chittagong – coast.

A Study entitled "An impact of technological changes in fishing on fishermen", by Kurien and Mathew. According to this study there are wide regional variations in the species mix of the marine resource in the country. The nutritive value of all species-mix of the marine resource in the country. The nutritive value of all species of fish is almost the same but there are different types of market demand and prices for various species. There is direct impact of mechanization on fish production in quantitative as well as qualitative nature.

Platean and Hawhim et al have studied the impact of mechanization on the level and pattern of indebtedness. The study arrived at the following conclusions:

- the volume of credit in general and the institutional credit in particular availed by fishermen were positively related to the degree of mechanization of the fishing enterprises.
- the bulk of the borrowings by the mechanized units were for investment purposes, while that by non-mechanized units was for consumption purposes.

The findings emerging from the investigations of Platean and Hakim threw indications of the emergence of a class of capitalist fishermen.

Rathnam [1979] has discussed the socio-economic organization and problems of technology transfer to small-scale fishermen and suggested

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various measures for their economic uplift. A case study is conducted on socio-economic status of small-scale fishermen at Uppada Fishing Village in Andra Pradesh by the author. The main problems faced by fishermen in this area are erratic catch per effort, unorganized marketing, unremunerative prices, technological obsolescence and competition.

Rao [1979] has studied the involvement of women in Indian Fishing Industry with special reference to marketing of fish. From the study, it is evident that Indian retail fish marketing is dominated by women while the wholesale fish trading is dominated by traders. It is also observed that lack of finance and transport are the major reasons for women’s absence from wholesale marketing.

According to Srinivasan and Chari [1979] the essential infrastructural requirement like primary health centers with full complement of staff, common fish curing and drying facilities on modern lines, adequate water supply to the villages, shopping centers, communication facilities, link roads and schools should be provided in all fishing villages for the progress of socio-economic status of fisher folk. The role of fisherwomen in fishing industry is also stressed. The fisherwomen should organize themselves and must participate in net making, processing of fish, vending and auctioning. The authors recommended that to improve the welfare of fisher women, capital assistance should be given for purchase of yarn and payment of wages.

Ratnam, N.V [1979], Socio-economic organization and problems of technology transfer to small-scale fishermen. Workshop on Social Feasibility in small-scale Fisheries Development, Development of small-scale Fisheries in the Bay of Bengal, Madras, GCP / RAS / 040 / SWE, IND -7, P.25.

Rao P.S [1979], Role of women in Indian Fishing Industry with special reference to Fish Marketing. Workshop on Social Feasibility in small-scale Fisheries Development, Development of small-scale Fisheries in the Bay of Bengal, Madras, FAO / SIDA. GCP / RAS /040 / SWE, P8.

Nammalwar & Prakasam [1979] has critically discussed many problems of marine fishermen. Their low social status, poor economic conditions, middlemen role, traditional fishing equipment, need for its mechanization and methods of fishing, are also discussed.

The following are the conclusions from the workshop on social feasibility in small-scale fisheries development conducted at Madras, India [BOB 1980]. The socio-economic status of fishing communities in the Bay of Bengal shows that they live in over crowded houses in villages in the coastal areas exposed to floods and storms. Their income and literacy level are very low. Basic sanitation facilities and drinking water are non-existent. The power structure is related to the ownership of assets like land, houses, boats and fishing gears. Fisherwomen play an active role in fish marketing & processing.

Holaso [1980] has reviewed the functions of fisheries co-operatives in Asia and the problems such as:

- the existence of economic conditions of the fishermen characterized by varying degrees of productivity, dependence on artisanal technology, dependence on artisanal technology, non-ownership of productivity assets, fluctuation in marketing prices and untapped alternative income opportunities.

- resource limitations, conflicts between mechanized and traditional fishermen.

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• lack of improvement in marketing systems and
• lack of infrastructural facilities in fishing villages.

D. Monte Darryl in his study entitled “Fishing in troubled waters”. According to this study the economics of fishing and living conditions of fishermen and fishing in troubled waters in Cochin area. The study focused its attention mainly on the socio-economic conditions of fishermen and it did not analyse the other important areas like marketing, financing, transporting, packaging, preservation and price variations in marine fishing in Cochin”.

Panikkar has made a study to find out the extent of indebtedness of fishermen at Vizhinjam. His suggestions to solve the problem of indebtedness among fishermen households are:

• enacting legislations for the compulsory reduction of ancestral debts.
• limiting the interest rates to a reasonable level.
• establishment of rural banks and co-operative societies in fishing villages.
• regulating the activities of moneylenders.
• avoiding non-productive loans.
• introducing the fishermen to save certain portion of their income and
• formulation of Provident Fund Schemes for all those active fishermen.

Vedavyasarao .P.V. [1980] has reviewed the credit facilities in the form of loans and subsidies for the development of small-scale fisheries

23 Panikkar, K.K.P. “Coastal Rural Indebtedness – A Case Study” Marine Fisheries Information Services, No.18, April, 1980, pp.8-12.
24 P.V.Vedavyasarao, Credit facilities for the development of small-scale fisheries in India, proceeding symposium on the development and management of small-scale fisheries, FAO IPFC, 283-288.
of India. These facilities are extended by the central and state governments by formulating various projects and schemes which uplift the social status of fisher folk. The credit flow, various schemes which lend credit to small-scale fisheries of India, reasons for scarce flow of finance and utilization of credits with recommendations are discussed by the author.

**Durai Raj (1981)** in his work entitled, ‘Study of Marine Fishing Industry in Thanjavur District’ concluded that mechanized boat was the best to have more fish catch. He estimated that only 57 per cent of what the consumer pays for the fish 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 from 36 to 60 per cent. It was suggested that the money lending practices in fishing villages should be regulated immediately.

**Fernando [1981]** while discussing the economic conditions of fishermen has made suggestions for their uplift. The author opines that the fishing industry has not made any progress before and after independence. This is mainly due to static labour existing in the fishing occupation. To improve their economy, the author feels that more loans and schemes should be implemented. Mechanization of the existing indigenous crafts, providing more landing and berthing facilities, implementing infrastructural facilities such as processing units, cold storage, fish curing, yards and roads in each fishing village are needed to improve the social and economic conditions of fishermen. It is also suggested that fishermen should be given alternative jobs during lean season.

Purushothaman\textsuperscript{27} in his discussion "The Status of Pondicherry Fisheries" refers to the low socio-economic status of the traditional fishermen. The author has not examined any specific problem relating either to the socio-economic status of fishermen or any other aspects of the fisheries in the region. However, he has drawn attention to the increasing competition between mechanized boatmen and traditional fishermen leading to eruption of occasional conflicts, as a result of which the government was forced to impose certain restrictions on the operation of mechanized boats.

The traditional fishermen continued to be left in the lurch in spite of numerous developmental schemes introduced by the governments. One important reason for the continued deprivation of the traditional fishermen was understood to be the technological backwardness of traditional fishery. In the face of deteriorating conditions of traditional fishermen, it was felt imperative to motorize the traditional fishing crafts so as to enhance their productivity.

The Impact of Mechanized Fishing on the Economic Condition of Fishermen is studied by Sathiadas and Venkataraman [1981]\textsuperscript{28} in the fishing villages of Kerala. The authors are of the view that the households in the higher and middle income groups are benefited by the additional income generated by the introduction of mechanization in fishing. The economy of lower income group is poor and this could not permit them either to purchase boats or to invest huge amount of money on fishing and related activities.


Srinivasan\textsuperscript{29}, in his discussion of the status of Marine Fisheries of Tamilnadu also draws attention to the problems faced by traditional fishermen due to the increasing competition from mechanised boatmen following the prawn boom. He cautions that if the tempo of trawling continues unabated, the Madras coast may also experience the diminishing returns which have already set in on the west coast. The author stresses the importance of diversified techniques in maximizing production and improving the productivity of artisanal fishermen. The author suggests that the present system of financially helping a few big boat operators may be changed in favour of helping a large number of small boat operators.

William\textsuperscript{30} has highlighted in his article titled “Present Status of Small Scale Fisheries in Andhra Pradesh, the problems of artisanal fishermen who account for 70\% of marine fish production in that state. In the author's view, the artisanal fishermen remain poor due to lack of basic infrastructural facilities and due to the superstitious beliefs. According to him, there exists immense scope for ameliorating their conditions by diversifying fishing techniques, improving processing methods, undertaking extension work and extending drinking water and housing facilities.

Sexena [1983]\textsuperscript{31} has emphasized the need for financial assistance for fishermen by institutional financing agencies such as National co-operative Development Corporation (NCDC), Integrated Rural Development Programme (IRDP) and commercial banks, so that the involvement of middlemen could be

\textsuperscript{31} Saxena [1983], Financial requirement of small and medium Fishermen and their co-operatives. M.Visvessarayya Industrial Research & Rural Development Centre, Bombay, p.127.
avoided. This will not only help the economy of fishermen but also make the fishing industry economically viable. Council for Social Development [1984] has stressed that the fisheries co-operative in India should help the fisher folk to take up additional employment apart from the main activity i.e., fishing. Some of these activities include fish breeding, nurseries, retail sale of fish and fish products, marketing, preservation and processing activity, repair of craft and gear. The co-operatives should help the fisher folk by taking up these activities. The NCDC should assist the societies for all these diversified activities.

Ellora in her study entitled, “A Study of Seafood Industry at Tuticorin”, has explained the growth of seafood industry and the problems faced by it. According to her, the absence of timely credit, its inadequacy and the existence of cut-throat competition in the trade forces the entrepreneurs to borrow at any rate of interest from the moneylenders. Her study reveals that Fishermen Co-operatives were playing only an insignificant role in promoting the fisher men’s welfare. So she has recommended for the sanctioning of loans at concessional rates of interest by the Government.

Karuna Anbarasan [1985] has conducted a study on Fisherwomen in Three Fishing Villages of Tamilnadu. The study has revealed that literacy level among fisher women is very low and they give least importance in educating their daughters. The tasks performed by fisherwomen at home and outside are of very little value. Fisherwomen neglect their own medical and nutritional needs and give more importance to the needs of their husbands and

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sons. The factors influencing the role and status of fisherwomen are discussed in detail. The living conditions of fisherwomen in Andhra Pradesh, Orissa and Tamil Nadu are also reviewed by Karuna Anbarasan [1986].

The economic implications of the rise and growth of capitalism in Kerala fisheries was examined in depth by Ibrahim\textsuperscript{34} exclusively depending on secondary data. This study which looked at fisheries development of the state from a dialectical perspective attributed all the major problems currently experienced by the fishery sector such as declining fish output, resource depletion, deterioration of traditional fishery, conflicts between traditional fishermen and mechanized boatmen, declining percapita availability of fish and skyrocketing fish prices, to the growth of capitalist pattern of fishing which became tailored to shrimp trawling due to the higher prices of shrimp varieties.

The effects of mechanization on the fishing economy of Kerala according to the various studies cited above were largely negative. However, it may be misleading to generalize from the experience of Kerala that the effects of mechanization may be always and everywhere detrimental to the interest of fishermen, fishery resources and fish consumers.

Srivastava et al.,\textsuperscript{35} in their study of Gujarat and Karnataka explained as to how the results of mechanization would differ depending on its nature and pattern. The states of Gujarat and Karnataka had followed different types of mechanization. The study found that the impact of mechanization was on the whole positive in Gujarat, while it was largely negative in Karnataka. Differences in the pattern of mechanization was reflected in differences with

\textsuperscript{34} Ibrahim P. Fishing Industry in Kerala – A study of the Impact Technological change – Ph.D., Dissertation submitted to Kerala University (1986).

respect to ownership of means of production, magnitude of fishing efforts expended, distribution pattern of output and processing and marketing methods. A highly pertinent observation made by the study however is that taking the country as a whole, the growth in fish output was generally higher in such states where the tempo of mechanization was comparatively low.

As the degree of mechanization on the coasts of India mounted unprecedentedly with the growth of trawling and purseining, the socio-economic conditions of fishermen in general and those belonging to the non-mechanised sector in particular deteriorated sharply, of course, the respective state governments introduced several welfare measures together with fishing related regulations with a view to mitigating the sufferings of traditional fishermen.

The socio-economic characteristics of artisanal marine fisher folk of India and the ethnographic features are studied by Tietze [1986 B]. The author reports that marine small scale fisheries in India operate from scattered landing sites and there is a lack of basic amenities in the fishing villages. Lean season in fishing with little catch and low income drives the fisher folk to poverty. Finance and credit to fisher folk are provided by friends, relatives and by money lenders from outside as well as from inside the fishing communities who are usually merchants or big boat owners. Apart from non-institutional credit, institutional sources such as co-operative banks and regional rural banks also lend credit. The author has discussed the possible reasons for the low standard of living of the marine fishing community.

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Ganesan in his study entitled,37 “Marketing of Marine Fish – An Empirical Study in Coastal Villages in Kanyakumari” has given a brief explanation regarding the deplorable financial status of fishermen in and around Kanyakumari and various sources of finance opened to them. His study reveals that out of the surveyed 140 fishermen households, only 10 families have not borrowed any money. The remaining 130 families have borrowed money from different sources. According to him, even though the loans received from the money lenders were small the consequences are terrible because they used to charge 10 per cent of the sale proceeds every trip. This led to the passing of debt burden from the days of the father to those of the son.

Mammo [1987]38 has discussed in detail the income, indebtedness and savings pattern of Orissa fisher folk. The major assets for these fishermen are boats and nets. Other assets include lands, houses, plantation, jewellery, brass and silver utensils. The two main sources of income are fishing and other activities. The earnings of fisher folk differ in accordance with the i) possession of boats ii) sharing system prevalent in the area iii) factors like good and lean catching seasons iv) the type of fish available and v) activities other than fishing. The range of income varies from Rs.500 to more than Rs.3000 per month. The major part of the expenditure is devoted to food, clothing, medicines, followed by expenditure on marriages, social and religious functions. The fisher folk get loans from institutions, middlemen and fish

traders. The elasticity of the interest is determined by the urgency of the demand of the fisher folk.

The Techno-socio-economic Survey of Fishermen Households in Tamil Nadu conducted in 1987\textsuperscript{39} by the Institute of Techno-economic studies revealed that 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. It was also found that 69.77 per cent of total income of marine fisher folk had come from fish production, 28.81 per cent from fishing allied occupations and the remaining 1.42 per cent from other occupations.

A study conducted by Tempelman [1987]\textsuperscript{40} at Visakapatnam in Andhra Pradesh state reveals that majority of fisherwomen undertake income earning activities and also procure fish from group purchase and from auction. Fish marketing provides women with higher return than coir marketing or other activities. Further fisherwomen in this area are not familiar with banking procedures. As most of the fisherwomen are illiterates and live on a very low budget, it is essential that they should obtain guidance in starting loan groups. The guidance should be given to them from government extension personnel.

In “Socio- Economic Aspects of Motorization of Traditional Crafts”,\textsuperscript{41} Nishad has clearly analyzed the need for mechanization, types of mechanization, trends in mechanization programme in Gujarat, Kerala and

\textsuperscript{41} Nishad, Y.P. “Socio- Economic aspects of motorization of Traditional Crafts”, Fishing Chimes, Vol.7, October 1987, pp. 31-41.
Tamil Nadu and also factors affecting mechanization of fishing crafts. According to him, institutional credit and subsidy are the two major factors responsible for the mechanization of fishing crafts. The bulk of the credit required to finance fishing operations of small scale fishermen is still provided by private individuals in India. The Government’s credit has been diverted to the more capital-intensive sectors of fishing industry. Since fishermen are the weakest among weak, liberal credit should be given to them at differential rate of interest through National Bank for Agriculture and Rural Development and the National Co-operatives Development Corporations.

**Dr. Selvaraj** in his study\(^{42}\) has stated that fishermen need finance for production and consumption purposes. Absence of lending institutions locally may drive the fishermen to the doorsteps of moneylenders. Moreover, the fishermen do not have capital resource to be invested on mechanization or partial mechanization of fishing. So the commercial banks must open branches in the coastal villages to help the needy fishermen.

**Pollnac [1988]\(^{43}\)** has evaluated in depth the potential of fishermen’s organizations in developing countries. The author has discussed major types of co-operatives and associations namely supply-marketing, credit production, service and multipurpose organizations in developing countries. The people’s participation in the small-scale fisheries development cycle and socio-cultural aspects of small-scale fisheries of developing countries.


Sehara et al\textsuperscript{44} carried out an enquiry in 7 fishing villages of Maharashtra and Gujarat with the intention of knowing as to what extent fisheries development in these states had changed the life style and living conditions of fisherfolk. The authors found that half of the fisherfolk in these two states were virtually illiterates and 60\% to 80\% of the households were indebted. According to the study, the poorest category among the fishermen were gear owners, while mechanised boat owners enjoyed much higher income compared to the rest of the categories.

Socio-economic survey in marine Fisher folk in Kerala State is a study undertaken by Gupta [1989].\textsuperscript{45} The author is of the opinion that the lack of socio-economic and psycho-personnel data will lead to unrealistic planning and hinder proper appraisal of the programme. The author concludes that family structure and size, educational status, credit association, possession of improved craft and gear and social participation are indicators of the development.

George Jeramias (1989)\textsuperscript{46} in his study entitled, ‘Pastoral Ministry Among Fishermen in the Diocese of Kottar with Special Reference to Poverty’ exposed the socio-political and cultural realities of fishermen in Kottar Diocese of Kanyakumari District and analyses the role of church in their lives. Pointing out that 80 per cent of families had 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

\textsuperscript{46}George Jeramias, Pastoral Ministry among Fishermen in the Diocese of Kottar with Special Reference to Poverty, Pontificia Universities Lateranencies, Rome, 1989, pp.45-47.
fishermen had not improved precisely because they were the most exploited folk kept under ignorance.

A study conducted by the Bay of Bengal Programme [BOBP] reveals two sets of factors which influence the role and status of fisherwomen [MADHU 1989]. The fisherwomen as a group owe their status to four factors namely economic, technological, ownership of assets and traditional, socio-cultural factors. However the status of the individual fisherwomen is determined by her employment position, marital status and level of education. These two sets of factors interplay in determining the status of fisherwomen. Currently Bay of Bengal Programme concentrates on the income generating activities, training packages to improve the participation of fisherwomen in their own technological, socio-economic and cultural development and credit in the seven countries bordering the Bay of Bengal [Madhu 1989].

Organisation of fisherwomen co-operatives in Tamilnadu has created awareness among women [Moral 1989]. The author reports that the fisherwomen co-operatives in Tamilnadu are taking strenuous efforts to uplift the socio-economic status of fisherwomen. The author is of the view that there is an immense scope for expanding the services of the co-operatives to all coastal villages in Tamilnadu and bettering the social and financial status of women from the fishing communities.

Vega [1989] has compiled a selective bibliography of 168 articles on women in fisheries. The articles focus on the literature of the last two decades. There are more articles on women involved in fish processing, preservation

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47 Madhu S.R [1989], Fisherwomen of the BOBP, NAGA, The ICLARM Quarterly, p.3-5.
and handling followed by artisanal fisheries. In Asia there are more papers on training, extension and education than on the above topics, many of the articles are written from countries served by FAO’s Bay of Bengal Programme Vega [1989] emphasizes that in a fisher folk family, the women are also increasingly involved in fisheries research, education, training programme and even in policy making.

Rajalakshimi [1990] has studied the family structure of fisher folk, educational status, income and expenditure pattern of fisher folk in Chidambaranar District, Tamil Nadu. The author is of the view that though several rural schemes and fishermen welfare, programmes are implemented, the social and economic status of fisher folk have not raised to appreciable level. To make the welfare programme a success, the fisher folk should be educated and the importance of family planning has to be taught. Further as most of the fishermen are illiterates, they are fully exploited by money lenders. Hence the fisher folk of this district should be taught the importance of approaching formal credit institutions instead of depending on indigenous credit system. The author feels that this will be possible through group efforts like fisheries co-operatives which can play a crucial role to improve the socio-economic status of fisher folk through need based financial assistance. Further the co-operative societies in this district can undertake long-term commitment from the government in performing financial and marketing functions.

Nalini Nayak (1993) in her study, ‘Continuity and Change in Artisanal Fishing Communities analysed the socio-economic conditions of

51 Nalini Nayak, Continuity and Changes in Artisanal Fishing Communities, South Indian Federation of Fishermen Societies, Thiruvananthapram, 1993 , p.4.s
artisanal fishing communities engaged in motorized fishing on the south–west coast of India. The study revealed that consumption expenditure had 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.

R. Sathiadas (1996), in his work entitled, ‘Production and Marketing of Marine Fisheries in India’, highlighted the income and expenditure pattern of fisher folk 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.

The Task Force on Livelihood Secure Fishing Communities constituted by the Government of Kerala in 1997 to suggest 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

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composition of the 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 smaller buyers.

Carmel\(^{54}\) in his unpublished thesis submitted to the Madurai Kamaraj University for the award of Master of Philosophy has made a study of “Factors that determine the Income of Fishermen” – A case study of Thoothoor Village in Kanyakumari District. He opined that the income of the fishermen depended on the price they got for their catch. Given the quantum of the catch, the price of fish at the beach market is largely determined by the relative bargaining power of the fishermen in the market. But the relations themselves are ultimately determined by the production relations.

The Tamilnadu Marine Fisher Folk Census 2000\(^{55}\) conducted by the Department of Fisheries Government of Tamilnadu revealed that the annual income of 19 per cent of total earning population of marine fisher folk in Kanyakumari district ranged between Re.0 and Rs.3000 and the income of 23 per cent of earning population was between Rs.3001 and Rs.6000. The income of 37.5 per cent of fisher folk was between Rs.6001 and Rs.12000. Just 11 per cent of the total earning fisher folk came under the highest income range Rs.15001 and above.

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\(^{55}\) Tamil Nadu Marine Fisher folk Census 2000, Commissioner of Fisheries, Government of Tamil Nadu, Chennai, 2000, p.4
The study entitled,\textsuperscript{56} ‘\textit{Status Of Education, Employment and Health In Coastal Area Of Thiruvananthapuram Corporation}’ conducted in 2000 by Fisheries Research Cell of Programme for Community Organization 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-availability of food on time and hence they were more vulnerable to physical and mental ailments.

\textbf{O.P. Sharma And Anupkumar,\textsuperscript{57}} “Socio-Economic Status of Fishermen in relation to Lake Jaisamand” evaluate the impact of fisheries of Lake Jaisamind on the socio economic status of local tribal fishermen, all of them being members of the fisheries co-operatives in the vicinity of Lake Jaisamand. Only 7 fishermen were found to have fisheries as their sole source of income, most of them having their annual income less than Rs. 5000/-. But for a small increase in their income, no impact of fisheries was seen on their socio-personal status. SARMA highlighted some constraints in reservoir fisheries development in India. They are;

- Non-availability of suitable fish seed in adequate quantity, exploitation, infrastructural facilities for fish seed production and rearing, virtual lack of technical and extension support.
- There are several other reasons for very low production in Indian reservoirs, stocking fry and spawn rather than advanced fingerlings, large scale production by other fish and animals particularly due to

\textsuperscript{56} Status of Education, Employment and Health in Coastal Area of Thiruvananthapuram Corporation, Programme for Community Organisation, Thiruvanathapuram, 2000 , p.39..
stocking of small sized fish, lack of know-how for operation of proper
craft and gears for fish exploitation, proliferation of trash fish, want of
effective control of poaching and lack of organized and trained
manpower.

All these constraints and reasons are well applicable to the Lake
Jaisamand also and hence the low production has become inevitable. Thus it
could be said that the present status of fisheries of Lake Jaisamand is very
discouraging and posing challenges before the authorities responsible for the
management and conservation of the Lake to re-establish fisheries to its
original status.

Gabriele Dietrich And Nalini Nayak (2002) in their study,58 ‘Transition
or Transformation’ stated that the fisher folk 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 authors had suggested that a well-organized market system was the
only way to ensure that the fisher folk got the best price.

S. Ayyappan And A.D.Diwan 59 has studied the Fisheries Research
and Development in India in a profound manner. They have explained the
immense contribution of Fisheries to the Indian economy as it is the livelihood
of more than seven million fishers in the country. The researchers sketch on
the benefit of inland fishery throw light on poorly developed upland waters,
advantages of marine fisheries, growth of the fisheries sector, seafood exports,

58 Gabriele Dietrich and Nalini Nayak, Transition or Transformation, Tamil Nadu Theological Seminary, Madurai, 2002, pp. 64-65 and 170.
and fisheries potential / production. They suggest the following thrust areas of future research:

- Stock assessment and monitoring commercially important marine species.
- Development of fuel efficient crafts and gears for deep sea fishing
- Prevention of post-harvest losses.
- Development of improved transport, storage and processing of fish
- Development of value added fishery products for exports
- If supported these should ensure nutritional and food security, employment opportunities and socio-economic enlistment of the downtrodden.

M. Feroz Khan And Preetha Panikkar have attempted to “Indian Fisheries Scenario Peep into Constraints/ Needs for Its Future Development of Indian Fisheries”. They stated that the fisheries not only happen to add to export earnings but also add to national income. Aqua culture has made immense progress in India, but in this process externalities such as the environment, feed quality, management and social impacts could not be well taken care of. Globally, per capita demand for fish and fish products has increased from 10.5 kg per year to almost 16 kg over the last three decades. In India, the expanding per capita fish consumption forecast of 15 kg for a population of 130 crores by 2030, will require over 12 million tonnes of fish production per year, two times of India’s current annual production. Because of

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their importance as a food and income source for the poor, managing the
world’s fisheries resources wisely is a crucial element in national strategies to
reduce poverty.

M. Srinath and N.G.K. Pillai\textsuperscript{61} in their research article entitled “Marine
Fisheries of India: An Approach to Responsible Fisheries Management” has
registered a phenomenal growth during the last five decades both
quantitatively and qualitatively. It contributes to nearly Rs.220 billion which is
1.4% and 4.5% of the national GDP and agricultural GDP respectively. The
multi-species fishery comprises over 200 commercially important finfish and
shellfish species. There is an increase in the fleet size. The total marine fish
production in the country during 1947-48 was 3.73 lakh tonnes but it had risen
to about 2.7 million tones in the year 2000. The pattern of marine fish landings
in India during the past fifty years clearly reveals that the contribution by the
artisanal sector to the total production was significant only up to 1960s, while
presently, the contribution by the mechanized and motorised sector accounts
for 93% of the marine fish catch. Stock assessment studies have revealed that
most of the stocks are over fished. The issues that need consideration for a
rational management strategy are: 1) Excess fleet size, capacity and over-
capitalisation 2) Inappropriate exploitation pattern 3) Fish stock decline 4)
Exploitation of juveniles etc. They propose practical measures to responsible
fisheries like Code of Conduct for Responsible Fisheries, Shift from Open –
Access to User Rights, Closed Season/ Closed Area/ Marine Protected Areas
and so on. They felt that there is an urgent need for policy intervention at the

\textsuperscript{61} M. Srinath and N.G.K. Pillai, “Marine Fisheries of India: An Approach to Responsible Fisheries Management”,
state and national levels to meet the increasing domestic and export demand of seafood and to ensure better livelihood for the fisher folk.

**A Vision Document on Comprehensive Development Plan for Kanyakumari District**\(^{62}\) explains the merits of Kanyakumari district as it has tropical climate condition which is very good for fish diversity resources - a multi-species fishery representing almost all commercially significant fin fishes and shellfishes of India. Fishermen in Kanyakumari district are the most skilled in the country. There are only two groups in the fishing community – one is the artisanal fishermen and the other is the mechanized fishermen. There is only a sharing system of the profit, not wage. The number of sea going fishermen increased in Kanyakumari district as per the survey of the South Indian Federation of Fishermen Societies (SIFFS) in 2004. However, fishery gradually diminished due to fishing pressure and the problem of beach landing felt the motorised crafts as there was no local facility. Though there were fisheries developmental programmes in this district the fishermen in this district lack scientific knowledge about fish and its environments. The authors were successful in bringing out the lacunae in the fisheries sector of this district.

The National Fisheries Development Board (NFDB) was looked at all its dimensions by **S. Ayyappan, C.Seshasayana Rao, And S.Murali Krishna**\(^{63}\) in a profound manner. NFDB has been established to work towards strengthening of blue revolution with a focus on increasing the fish production of the country to a level of 10.3 million metric tonnes (mmt) from the present level of 6.4 mmt. So as to achieve doubling of marine products exports from

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the present Rs. 7,000 crores per annum to 14,000 crores and achieve direct
employment to an extent of 3.5 million people by extending assistance to the
various agencies for implementation of developmental activities under
freshwater, Brackish water and marine sectors. Objectives of NFD includes to
coordinate activities pertaining to fisheries undertaken by different Ministries/
Departments in the Central Government and also to coordinate with the State/
Union Territory Governments. The details of formation of the NFDB,
inauguration of the Board, executive functions of the same are given to
understand purpose of NFDB’s existence. The anticipated benefits of these
programmes are hygienic marketing of fish, supply of better quality fish to the
consumers, stability in prices and reduction of post-harvest losses.

S.D.Tripathi in his work entitled64 “Problems and Prospects of Fisheries
Development in India” has highlighted the richness of fish food and its products
at one hand and the issues and prospects of fisheries development on the
other hand. This study revealed that marine fisheries sector contributes about
3.0 million metric tonnes of fish annually with some of the species of high
economic value but any increase in capture is likely to endanger their stocks
as well. Once the oceanic resources of the Indian Exclusive Economic Zone
are exploited to a sustainable level, there will not be any further scope of
enhancing the capture production of marine fish. The issues faced by the
inland fisheries, coldwater streams and lakes, rivers and canals, wetlands or
oxbow lakes, estuaries, lagoons and backwaters, and brackish water
aquaculture are well documented and the author suggest to reframe the 110 –
year old Fisheries Act to meet the new millennium requirements in order to

64 S.D.Tripathi, “Problems and Prospects of Fisheries Development in India”, Fishing Chimes, Vol.27, No.1,
April, 2007, p.p.100-106.
preserve and develop the fisheries sector which employs over 14 million persons and generates over Rs.7, 200 crores worth of foreign exchange.

H.S. Veerappa Gowda and T.S. Vishwanath\textsuperscript{65} has brought out the portrayal of the Status of Fisheries Development in Karnataka. Traditionally, Karnataka coast is known as general coast. The state has 300 km of baseline, and 27,000 sq km of continental shelf area, particularly each in pelagic fisheries resources. At present there are about 2,947 trawling boats, 382 purse seiners, 4,389 gill netters, 104 other mechanized boats, operating in the state. Marine fish production from Karnataka coast has been showing considerable variation. The state has given importance for the development of infrastructure facilities and there are 455 primary fisheries co-operative societies in the state and Karnataka co-operative fisheries federation. There are two co-operative fish marketing federations. The state has 5.20 lakh has of inland water resources. During the year 2004-05 total fish seed production of the state was about 1,752 lakhs of fry. The inland fish production of the state during 1994-95 was 70,287 metric tonnes. There is considerable scope to increase inland fish production. Fishermen in the state are assisted by the department of fisheries through several fishermen welfare schemes.

2.2. CONCLUSION

The study on fishery entrepreneurs has attracted many researchers and academicians throughout the world. It is evident from the review presented that attempts are being made to study intricacies of fishery entrepreneurs with particular reference to fishery entrepreneurs in India. However, reviews reveal that no efforts have been made to analyse the problems of production practices, financing practices, marketing practices and factors affecting the fishery entrepreneurs. The present study is therefore, focused on problems and prospects of fishery entrepreneurs in Chennai City.