

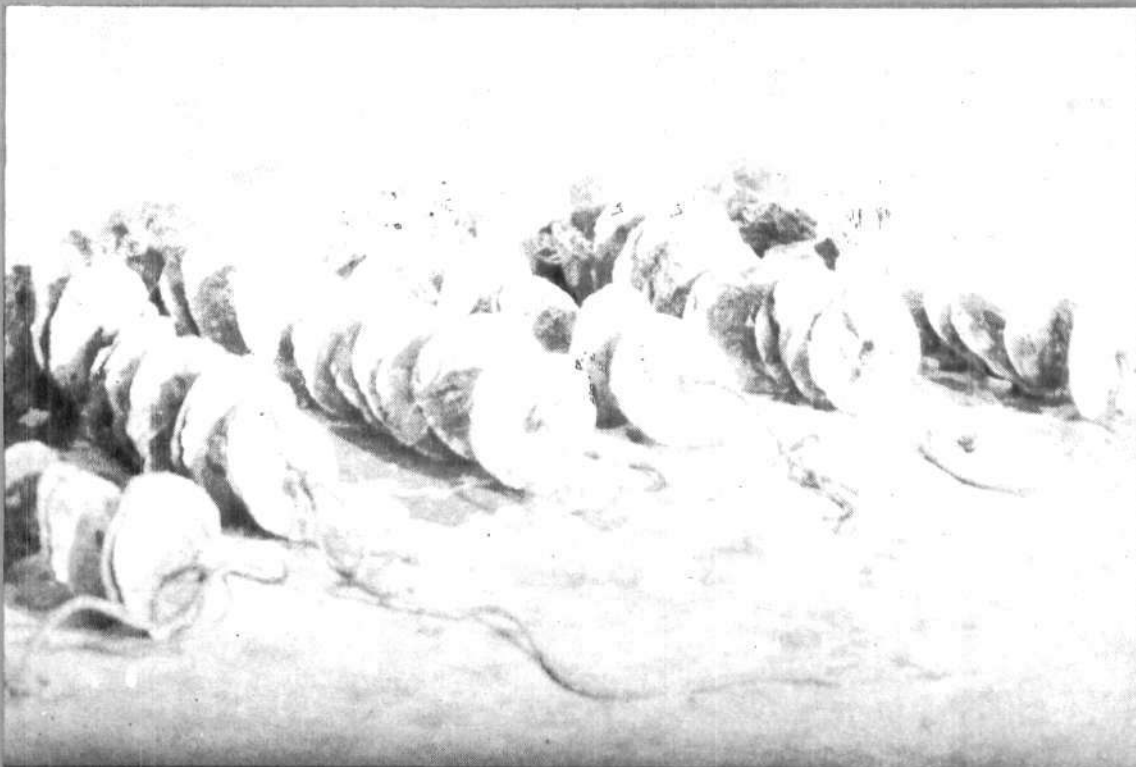


समुद्री मात्स्यकी सूचना सेवा

MARINE FISHERIES INFORMATION SERVICE

No. 135

DECEMBER 1994



तकनीकी एवं TECHNICAL AND
विस्तार अंकावली EXTENSION SERIES

केन्द्रीय समुद्री मात्स्यकी CENTRAL MARINE FISHERIES
अनुसंधान संस्थान RESEARCH INSTITUTE
कोचिन, भारत COCHIN, INDIA

भारतीय कृषि अनुसंधान परिषद
INDIAN COUNCIL OF AGRICULTURAL RESEARCH

TRADITIONAL FISHERMEN IN LOW INCOME TRAP — A CASE STUDY IN THANJAVUR COAST OF TAMIL NADU

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Introduction

The technological changes and consequent improvement in fishing methods like the introduction of synthetic nets and motorisation of country crafts have considerably paved the way to reduce the stress and strain of traditional marine fishing and to a certain extent improved the living conditions of fishermen. Many developmental schemes have also been launched by the government with the intention of improving the socio-economic status of fishermen. No doubt, some of these schemes helped to increase fish production and also employment generation in the coastal rural sector. But several recent studies conducted at selected fishing villages along the Indian coast indicate that the benefit of increase in fish production and higher fish price have mainly benefitted the middlemen and did not percolate to the fishermen who are the actual producers of fish.

The unequitable distribution of income and consequent widening of the gap between the rich and poor in marine fisheries sector have been a topic of debate among the planners and social scientists. It is argued that the intensive mechanisation programme has even deprived the traditional fishermen of their legitimate claim for fishing in the near shore areas. There are also frequent conflicts between the mechanised and non-mechanised fishermen over their fishing rights. The continuous monitoring of the situation is highly essential and the C.M.F.R.I., regularly conducts socio-economic surveys of fishermen families at selected centres of various regions of our country. The present investigation was carried out at Keechankuppam

and Mallipattinan villages in Thanjavur coast of Tamil Nadu with the following specific objectives :

- to study the socio-demographic status of fishermen pertaining to housing, literacy, family size and occupational pattern,
- to assess the ownership and level of investment of fishing equipments,
- to analyse the income and expenditure pattern of fishermen families and extent of indebtedness along with credit facilities available in the village and
- to find out the major constraints confronted by the fishermen inhibiting their socio-economic development and to suggest necessary remedial measures.

Data and methodology

A preliminary investigation was carried out in the fishing villages along Thanjavur coast and information pertaining to fishermen families, craft and gears, fishing season, marketing pattern and availability of infrastructure facilities were collected by contacting panchayat or village level leaders. On the basis of this preliminary investigation and considering the predominance of traditional fishermen families, Keechankuppam village near Nagapattinam and Mallipattinam near Pattukottai were selected for detailed socio-economic survey. The household survey was carried out during 1990-'91 along with the investigations on costs and earnings of different craft-gear combinations. The survey was undertaken with the help of local

enumerators hailing from fishermen community of the respective villages.

Housing pattern

Housing is one of the major problems confronted by the coastal fishing communities. Most of the fishermen do not have any land ownership. They live in huts all along the sandy beaches of the coast. A dwelling place with a thatched roof and having either a mud wall or an enclosure made of *thatties* is classified as hut. About 51% of fishermen households at Mallipattinam and 42% at Keechankuppam are living in huts. For the present study a dwelling with a thatched roof and brick wall is considered as *kutchu* house and 34% and 45% of families have this type of houses in Mallipattinam and Keechankuppam fishing villages respectively. Only about 15% of the houses at Mallipattinam and 13% at Keechankuppam come under the category of *pucca* houses having tiled roof and brick wall. The survey indicates that the absence of land ownership and inadequate earnings as well as loan facilities are the factors responsible for the poor housing facilities along the coastal belt.

TABLE 1. Village-wise distribution of different types of houses

| Type of houses | Mallipattinam | | Keechankuppam | |
|----------------|---------------|----------|---------------|----------|
| | No. of houses | Per cent | No. of houses | Per cent |
| Hut | 113 | 51 | 184 | 42 |
| Kutchu | 74 | 34 | 197 | 45 |
| Pucca | 33 | 15 | 60 | 13 |
| Total | 220 | 100 | 441 | 100 |

Population, literacy and employment

The details of population, size of family, educational status, literacy and occupational pattern are given in Table 2. The average size of a family works out at 5 in both the fishing villages. The literacy rate is very poor and far less than the state average of 47%. Less than 20% of fishermen population both at Mallipattinam and Keechankuppam have at least primary (a pass in V std.) level of education.

With regard to employment status, about 30% of fishermen at Mallipattinam and 32% at Keechankuppam have some regular occupation. It is worth to note that among these 70%, at Mallipattinam and 74% at Keechankuppam are engaged in active fishing. Women are engaged only in fishery related activities. About 10% of the employed at Mallipattinam and 23% at Keechankuppam are women and they are engaged mostly in activities like fish marketing, processing,

TABLE 2. The distribution of population, size of family, literacy and occupation pattern

| Items | Mallipattinam | Keechankuppam |
|----------------------------|---------------|---------------|
| 1. No. of households | 220 | 441 |
| 2. Population details | | |
| Adults | | |
| Male | 346 | 679 |
| Female | 344 | 657 |
| Children | | |
| Male | 179 | 382 |
| Female | 195 | 335 |
| Total | 1064 | 2053 |
| 3. Average size of family | 5 | 5 |
| 4. Educational status | | |
| Primary | 110(72%) | 68(72%) |
| Middle | 22 (14%) | 17 (18%) |
| Higher secondary and above | 22 (14%) | 10 (10%) |
| 5. Occupational status | | |
| Active fishing | 224 (69%) | 489 (74%) |
| Fishery related activities | | |
| Male | 42 (13%) | 3 (1%) |
| Female | 29 (9%) | 152 (23%) |
| Other activities | 29 (9%) | 14 (2%) |

Figures in brackets indicate percentages.

drying and curing. Due to the overall poverty of marine fishermen families, many children of school going age are also involved in fishing or fishery related activities.

Ownership pattern of means of production

Most of the fishermen at Mallipattinam and Keechankuppam villages have no sufficient fishing implements. About 80% of the fishermen households at Mallipattinam and 33% at Keechankuppam have ownership on some sort of means of production. The ownership pattern of fishing equipments at Mallipattinam is given in Table 3. Both mechanised and non-mechanised plank built boats are operating at Mallipattinam landing centre. The mechanised boats operate gillnets and 11% of fishermen households have ownership of the same. Non-mechanised plank built boats operate *Koivalai*. On an average fishermen require 20 pieces of this net for sufficiently efficient operation of these boats. However, most of the fishermen do not have enough number of pieces of *Koivalai*. About 50% of the fishermen households own P. B. boats and 60% of them have less than 10 pieces of gillnets (*Koivalai*). Among the fishermen households, 43 of them own only nets and usually they do join as workers along with their nets in other's boats.

Keechankuppam is the adjoining fishing village of Nagapattinam which is a major mechanised

TABLE 3. Ownership pattern of means of production at Mallipattinam

| Particulars of crafts & gear | Ownership (No. of families) | Per cent |
|--|-----------------------------|----------|
| 1. Mechanised boat & net | 24 | 14 |
| 2. Nets alone | 43 | 25 |
| 3. Plank built boat with less than 5 pieces of net | 2 | 108 61 |
| 4. plank-built boat with 5 to 7 pieces of net | 50 | |
| " 8 to 10 " | 26 | |
| " 10 to 15 " | 15 | |
| " 15 to 20 " | 8 | |
| " 20 to 25 " | 5 | |
| " 25 to 30 " | 2 | |
| Total | 175 | 100 |

landing centre in Tamil Nadu. Hence among those who have fishing equipments, a considerable number of fishermen households (38%) possess mechanised boats (Table 4). However, majority of the fishermen still depend on catamaran fishing for their livelihood. It is well established that several resource specific gillnets are required for doing marine fishing throughout the year depending upon the seasonal availability of different varieties of fish for getting better economic returns. About 75% of fishermen having catamarans could not operate their units effectively throughout the year due to lack of sufficient nets. It is worth to note that only 26% of catamaran owners have more than three types of net.

TABLE 4. Ownership pattern of means of production at Keechankuppam

| Particulars of crafts & gear | Ownership (No. of families) | Per cent |
|------------------------------|-----------------------------|----------|
| 1. Catamaran alone | 2 | 1 |
| Catamaran + 1 net | 17 | 12 |
| Catamaran + 2 nets | 48 | 33 |
| Catamaran + 3 nets | 22 | 15 |
| Catamaran + 4 or more nets | 2 | 1 |
| 2. Mechanised boat & net | 55 | 38 |
| Total | 146 | 100 |

Capital investment on fishing equipments

The investment pattern of fishermen households on fishing equipments at Mallipattinam and Keechankuppam village is given in Table 5. Among the fishermen households, 25% at Mallipattinam and 53% at Keechankuppam having ownership of means of production, invested only less than Rs. 5,000/- on fishing implements. At Keechankuppam 18% and at Mallipattinam 17% of the families invested more than Rs. 50,000 each which is mainly on mechanised fishing units. The study

TABLE 5. Family-wise break up of capital investment on fishing equipments

| Capital Investment (Rs) | Mallipattinam | | Keechankuppam | |
|-------------------------|-----------------|----------|-----------------|----------|
| | No. of families | Per cent | No. of families | Per cent |
| Less than 5,000 | 37 | 25 | 167 | 53 |
| 5,001 - 10,000 | 56 | 39 | 64 | 20 |
| 10,001 - 15,000 | 8 | 6 | 23 | 8 |
| 15,001 - 25,000 | 10 | 7 | 1 | - |
| 25,001 - 50,000 | 8 | 6 | 2 | 1 |
| 50,001 - 75,000 | 8 | 6 | 2 | 1 |
| 75,001 - 1 lakh | 12 | 8 | 6 | 2 |
| 1 lakh and above | 4 | 3 | 49 | 15 |
| Total | 143 | 100 | 314 | 100 |

reveals that 64% of owners at Mallipattinam and 73% of owners at Keechankuppam have invested less than Rs. 10,000/- on fishing equipments.

Annual and per capita income

The average annual income of a fisherman household in Mallipattinam works out at Rs. 11,778 and Rs. 8,074 in Keechankuppam, the per capita income being Rs. 2,356/- in the former and Rs. 1,615/- in the latter places respectively. The classification of fishermen families based on major occupation and annual income is given in Table 6. In Mallipattinam 70% of the fishermen households are earning maximum income from active fishing, 19% from fishery related activities and 11% from other activities and in Keechankuppam 81% from active fishing 18% from fishery related activities and the remaining from other activities.

Majority of the fishermen households having fishing as major occupation earn an annual income in the range of Rs. 5,000 - 15,000 at Mallipattinam. However, in Keechankuppam, majority of the households having active fishing as their major occupation earn in the range of Rs. 3,000-9,000 per annum. Among the active fishermen, most of the households having fishery related activities as their main occupation earn less than Rs. 5,000 per annum in both the places. The low annual income from fishery related activities is mainly due to the seasonal nature of fishing activities.

Annual and per capita expenditure

The annual average household expenditure of a fishermen family works out to Rs. 8,685 at Mallipattinam and Rs. 6,508 at Keechankuppam. The annual per capita expenditure comes to about Rs. 1,737 at Mallipattinam and Rs. 1,302

TABLE 6. Classification of fishermen families based on major occupation and annual income

| Income groups (Rs.) | Fishing | Mallipattinam | | | Keechankuppam | | | |
|------------------------|---------|----------------------------|--------|-------|---------------|----------------------------|--------|-------|
| | | Fishing related activities | Others | Total | Fishing | Fishery related activities | Others | Total |
| Less than 3,000 | 2 | 10 | 4 | 16 | 18 | 42 | 1 | 61 |
| 3,001 - 5,000 | 15 | 10 | 7 | 32 | 94 | 26 | - | 120 |
| 5,001 - 7,000 | 30 | 8 | 3 | 41 | 96 | 3 | - | 99 |
| 7,001 - 9,000 | 31 | 5 | 5 | 41 | 73 | 5 | 5 | 83 |
| 9,001 - 12,000 | 22 | 4 | 4 | 30 | 28 | 1 | - | 29 |
| 12,001 - 15,000 | 19 | 2 | - | 21 | 10 | - | - | 10 |
| 15,001 - 20,000 | 12 | 1 | - | 13 | 18 | 1 | - | 19 |
| 20,001 - 25,000 | 11 | 1 | - | 12 | 7 | 1 | - | 8 |
| 25,001 - 30,000 | 4 | - | 3 | 7 | 9 | - | - | 9 |
| 30,001 - 35,000 | 4 | - | - | 4 | 1 | - | - | 1 |
| 35,001 - 40,000 | - | - | - | - | 2 | - | - | 2 |
| 40,001 and above | 3 | - | - | 3 | - | - | - | - |
| Total | 153 | 41 | 26 | 220 | 356 | 79 | 6 | 441 |

Keechankuppam. The average expenditure pattern of a fisherman household on various items like food, clothing, education etc. for both the centres have been worked out and given in Table 7. The expenditure on food items alone works out to 58% and 85% of the family budget of Mallipattinam and Keechankuppam villages respectively. It is worth to mention here that a considerable number of fishermen households take loans for household expenditure particularly to tide over the lean season. The low level of spending for education and medical purposes clearly indicates their socio-economic backwardness.

TABLE 7. Average annual expenditure pattern of a fisherman household

| Items | Mallipattinam | | Keechankuppam | |
|---------------|------------------|----------|------------------|----------|
| | Expenditure (Rs) | Per cent | Expenditure (Rs) | Per cent |
| Food | 5038 | 58 | 5510 | 85 |
| Clothing | 1326 | 15 | 508 | 8 |
| Light & fuel | 905 | 11 | 202 | 3 |
| Education | 77 | 1 | 79 | 1 |
| Medical | 704 | 8 | 112 | 2 |
| Entertainment | 288 | 3 | 97 | 1 |
| Others | 347 | 4 | - | 1 |
| Total | 8685 | 100 | 6508 | 100 |

Indebtedness and credit facilities

Only a few households have reported meagre savings after meeting the production and consumption expenditure and many are therefore compelled to borrow money either for production or consumption purposes or for both. Out of 220 families in Mallipattinam, 83 (38%) are in debt and

out of 441 families in Keechankuppam 137 (31%) are in debt. The total amount of debt incurred by the fishermen families of Mallipattinam and Keechankuppam worked out to Rs. 9.5 lakhs and 2.5 lakhs respectively. The average outstanding debt per indebted household in Mallipattinam and Keechankuppam worked out at Rs. 11,456 and Rs. 1,825 respectively. Although many fishermen are in dire need of credit they could not get it from the formal or informal capital market as they are unable to fulfil the conditions imposed.

The details of credit extended by different agencies and the aggregate outstanding cash dues of fishermen at Mallipattinam and Keechankuppam are given in Table 8. Fish traders and money lenders are the most important source of credit for the fishermen in both the places. Fish traders some time act as money lenders and advance loan to fishermen mainly to do transaction of fish caught by such loanees and they used to recover part of the loan when buying the catch at price fixed by them.

TABLE 8. Loan advanced by different agencies

| Source of credit | Amount advanced (Rs) | |
|------------------|----------------------|-------------------|
| | Mallipattinam | Keechankuppam |
| Bank | 6,180 (1) | 69,000 (28) |
| Fish trader | 5,32,800 (56) | 75,000 (31) |
| Money lender | 53,500 (5) | 60,000 (24) |
| Others | 3,58,400 (38) | 46,000 (18) |
| Total | 9,50,880 (100) | 2,50,000 (100) |

Figures in paranthesis indicate percentage.

The role of institutional agencies in providing credit is negligible and more than 54% of the loan amount at Keechankuppam and 61% at Mallipattinam were advanced by fish traders and professional money lenders. The interest rate charged by them are comparatively high and the fishermen could not come out of the vicious circle of indebtedness.

Table 9 indicates the extent of credit supplied by different agencies to fishermen households of various income groups at Mallipattinam and Keechankuppam. Here also money lenders and fish traders form the major source of finance to the lower income groups (Rs. 10,000 and below per annum). Families in the income range of Rs. 50,000 and above per annum mostly avail loans to purchase the mechanised boats.

Mode of marketing

The mode of disposal of fish at the landing centre is auctioning. Fish being a perishable commodity, its auctioning provides maximum competition among the buyers and enable quick disposal. Both Mallipattinam and Keechankuppam landing centres are primary fish markets. However, some fishermen at Keechankuppam landing centre at times sell their catches at the adjoining mechanised landing centre at Nagapattinam. Here the number of traders participating in the auctioning is comparatively more and this enable the fishermen to realise better price than at Keechankuppam. The fish is generally auctioned by traditional auctioneers or middlemen on commission basis, who also

take the responsibility for realising the sale proceeds from the traders. Most of these auctioneers are generally fisherwomen.

The system of disposal of marine fish at the landing sites by weight has not been found feasible or practical because of the great rapidity with which this perishable commodity has to be handled. Hence the sales are carried out not by weight, but by measures of heaps, lots or the size of catch. Wholesalers, retailers and bulk consumers participate in the auctioning. About 25 to 35% of the marine fish landed at Mallipattinam and Keechankuppam is marketed close to the landing centres by retailers who carry the fish either by headloads or by bicycles. The traders from Kerala also used to purchase fish here. For despatch to distant markets by trucks, fish is packed in baskets, in leaf mats or old tea chests with layers of ice. The refrigerated vans of several processing plants also visit Mallipattinam and Nagapattinam centres for collecting and transporting the exportable varieties.

Conclusion and policy implications

The study indicates that majority of fishermen along Thanjavur coast live in temporary structures like huts and kutcha houses. The average annual income of a fisherman household works out to Rs.11,778 at Mallipattinam and Rs. 8,074 at Keechankuppam, the per capita income being Rs. 2,356 and Rs. 1,615 respectively. The literacy rate works out less than 20% in both the centres which

TABLE 9. Supply of credit by different agencies to fishermen of various income groups

| Income groups | Mallipattinam (Rs) | | | | | Keechankuppam (Rs) | | | | |
|-----------------|--------------------|------------------|----------------|-----------------|------------------|--------------------|----------------|----------------|---------------|-------------------|
| | Bank | Fish traders | Money lenders | Others | Total | Bank | Fish traders | Money lenders | Others | Total |
| Less than 5,000 | - | 34,000 (4) | 2,000 (3) | - | 36,000 (7) | 6,000 (2) | 5,000 (13) | 2,000 (3) | - | 13,000 (18) |
| 5,001 - 10,000 | - | 5,000 (4) | 5,000 (5) | - | 10,000 (9) | 31,000 (7) | 22,000 (30) | 18,000 (15) | - | 71,000 (52) |
| 10,001 - 15,000 | 1,180 (1) | 78,800 (27) | 3,000 (2) | - | 82,980 (30) | 7,000 (1) | 30,000 (25) | 23,000 (22) | - | 60,000 (48) |
| 15,001 - 20,000 | - | 60,000 (4) | 8,000 (1) | 3,000 (1) | 71,000 (6) | 10,000 (3) | 8,000 (2) | 7,000 (1) | - | 25,000 (6) |
| 25,001 - 50,000 | 5,000 (2) | 95,000 (12) | 2,500 (1) | 2,50,000 (3) | 3,52,500 (18) | - | - | 8,000 (2) | 10,000 (2) | 18,000 (4) |
| 50,001 - 75,000 | - | 2,50,000 (3) | 18,000 (6) | 1,05,400 (2) | 3,73,400 (11) | - | - | - | 13,000 (3) | 13,000 (3) |
| 75,001 - 1 lakh | - | 10,000 (1) | - | - | 10,000 (1) | - | - | - | 23,000 (1) | 23,000 (1) |
| Total | 6,180 (3) | 5,32,800 (55) | 53,500 (19) | 3,58,400 (6) | 9,50,880 (83) | 69,000 (15) | 75,000 (72) | 60,000 (44) | 46,000 (6) | 2,50,000 (137) |

Figures in brackets indicate the number of families which have availed loans.

is far below the state average of 46% (1981 census). The working population is 30% at Mallipattinam and 32% at Keechankuppam as against 36% for Tamil Nadu as a whole. The study further indicates that the traditional fishermen do not possess sufficient fishing equipments for efficient operation throughout the year. Lack of different type of resource-specific gears suiting to different seasons tend to large scale underemployment and low income. The availability of credit facilities in these villages is very poor. The role of institutional agencies in supplying credit is negligible as 54% to 61% of the loan amount is provided by private money lenders. A critical look at the expenditure pattern of fishermen household revealed that 58% and 85% of the family budget of Mallipattinam and Keechankuppam are towards food expenses. The spending priorities attached with education and medical purposes are very low clearly revealing the social and economic backwardness of fishermen families. On the basis of present study the following suggestions are given for the comprehensive development of traditional fisheries sector.

The number of annual fishing days per worker reveals that the level of employment for hired labourers as well as those not having sufficient equipment is low and they are very much underemployed. The seasonal nature of fishery and the risk and uncertainties associated with marine fishing entangled the fishermen in the low income trap. The alternative employment opportunities are very meagre and the opportunity cost of fishermen's labour is almost zero. Complementary and supplementary occupations like aquaculture, poultry and livestock and the establishment of cottage industries could help to a large extent in the economic improvement of fishermen.

The poor economic condition coupled with the less availability of finance from the institutional agencies compel them to sustain with less equipped fishing implements which in turn results in lesser returns. The commercial banks and fishermen co-operatives should formulate liberal credit policies keeping in view the peculiar nature of fishing enterprises. Majority of the fishermen are not in a position to hypothecate anything valuable or to fulfil the usual terms and conditions of the loans. All branches of nationalised banks along the coastal belt should have separate funding schemes to provide loans to fishermen. In the traditional sector the cost escalation of catamaran logs was considerable during the last few years. The fishermen who

are only at a subsistence level of operation found it difficult to replace the old logs with new ones. The manifold increase in price of catamaran logs was mainly due to the involvement of middlemen. Hence the State Fisheries Department in consultation with the Forest Department can think of supplying through fishermen Co-operatives at reasonable price atleast those logs available in the government owned forest.

Lack of marketing infrastructure facilities is another factor responsible for lesser returns to fishermen. It may not be possible to start ice plants, freezing plants and other storage facilities in each fishing village. The Government can provide these facilities atleast for a cluster of villages together through the Fishermen Co-operative Societies. Steps may be taken by local Governmental agencies for providing motorable road and bus stop near the landing centre which will be immensely helpful to improve the fish marketing. The literacy rate among fishermen is very poor and activities of National Adult Education Programme (NAEP) and State sponsored "Arivoliyakkam" should be further intensified in the coastal region.

Extensive and comprehensive area development programme for the entire coastal belt is required to improve the socio-economic condition of marine fishermen. Vast stretches of coastal land near the shore line is now lying fallow without proper utilization. This can be utilised for aquaculture and also mixed planting of casuarina, cashew and coconut depending on soil condition. Just like town planning in the cities, each fishing centre/village require comprehensive programme for its development. The immense scope of aquaculture development and tourist attraction of several spots of coastal belt should be given priority in the programmes. Allotment and development of housing sites, landing centres, auction sheds, processing plants, aquaculture farms, agriculture and social forestry and other infrastructure facilities in a planned way in each fishing village of the coastal belt will immensely help the overall development of the region. In this connection it is proposed to form a Coastal Zone Development Authority (CZDA) in each maritime state exclusively to look after the comprehensive development of the coastal region.

The Authors are grateful to Ms. V. Thanapathy, V. Sivasamy and A. Kumar, Technical Assistants of C.M.F.R.I., at Nagapattinam and Pattukottai Field Centres for their help in conducting the survey.