CHAPTER – VI

PROBLEMS FACED BY MECHANISED BOAT OPERATORS

This chapter attempts to present a comprehensive view on the problems faced by the mechanised boat operators as producers of marine fisheries output in Kanyakumari district. The main problems identified by the study are categorised under marine fishery and marketing infrastructure, natural barriers and hazards, marketing, fishery finance, conflict between artisanal and mechanised sector and the state regulations. The problems faced are not similar in all the fishing villages and also the nature and magnitude of the problems varied between the selected villages within Kanyakumari district. A brief discussion on the problems faced by the mechanised boat operators of Kanyakumari district is given as follows.

6.1 Marine Fishery and Marketing Infrastructure

The marine fishery and marketing infrastructures are inevitable determinants of the development of marine fishing industry. Well equipped fishing harbour, fish landing centres, all weather berthing facility, cold storage units, fish processing units, pure water supply, ice factories, freezing points, curing yards, boat repairing centres and refrigerated transport are the vital factors determining the progress of the mechanised fishery sector.

The fishing harbour at Chinnamuttom is the only active fishing harbour in this district, located in the east coast, not able to provide berthing facility to all the existing number of mechanised crafts. The natural harbour at Colachel lacks in minimum facilities needed for a fishing harbour. The activities such as loading the
inputs, unloading the catch and fuelling the crafts are undertaken with the help of Kattumaram and Vallam operators in the Colachel natural harbour. This naturally raises the cost of operation and reduces the number of fishing trips carried out by the mechanised vessels of Colachel and its surrounding villages. The fishing boats in the remote end of Kanyakumari west coast have to travel over 50 km to make use of the facilities of Chinnamuttom fishing harbour. This would be an expensive and time consuming operation.

In Thoothur and its surrounding fishing villages, due to the absence of fishing harbour, the boat operators anchored their boats in the distant sea and used to hire in the services of Kattumaram and Vallam operators for loading the inputs and unloading the catches. This arrangement increases the operating cost and the boat operator’s dependence on the traditional sector to carry out the fishing operations. Moreover, there will be delay in bringing the catch to the shore and the catches brought to the shore passes through many hands before reaching the auction centre. The freshness of the catch will be lost or its quality cannot be maintained as per the expectation of buyers and thus fetches a low price and less returns.

Recently, the Tamil Nadu government took initiatives on the building up of fishing harbours in various fish landing centres throughout the Tamilnadu coast. As a result, three fishing harbours each at Muttom, Colachel and Thengapattinam are under construction in Kanyakumari district. This would be a boon to the boat operators of the fishing villages in the Kanyakumari west coast.
The Muttom boat repairing unit is the only boat repairing centre providing repairing and maintenance services for the boats in the entire coast of Kanyakumari district. Only a few neighbouring fishing villages of Muttom are benefitted from the unit. The boat operators of Thoothur and its surrounding villages find it difficult to obtain the services of the Muttom boat repairing unit. They need to drag the craft for over 40 km to reach the centre for repairing and maintenance work.

The multiday fishing boats used to stay in the deep sea for more than a week and these boats need minimum 3000 litres of pure water per trip to clean the fishing gears and to meet the daily water requirements of the crew members. It is found that pure water is scarce and nearly 65 per cent of the coastal villages in Kanyakumari district are experiencing pure water shortage\(^1\). The boat owners have to purchase pure water from water suppliers. It will be an additional operating expense to the boat operators.

Since mechanised crafts extended their area of operation beyond the traditional fishing grounds to harvest the rich grounds, a substantial increase in catch is expected. Cold storage helps the boat operators to store the surplus catches during glut and releasing them at the time of shortage. This makes the boat owners to earn a stable income from fishing operations. Kanyakumari district has very few cold storages which are run under private sector to cater the needs of the entire mechanised boat operators. But their inadequate holding capacity limits the progress of mechanised fishery sector in this district.
Inadequate berthing and insufficient storage plants have driven most of the mechanised boats out of Kanyakumari district. In view of the enormous fishery potentials in the Wadge bank, State intervention in the establishment of cold storages is the need of the hour. Provision of such facilities naturally bring back the migrated mechanised crafts and attracts more people to invest on mechanised fishing units.

The study found that nearly 10 per cent of the catch was spoiled at the landing centres due to inadequate storage and processing facilities. But bulk of the spoilt fish has been either converted into dried fish or sent to fish meal factories.

Icing or chilling is followed in mechanised crafts to preserve the daily catch. Chilling is the process of reducing the temperature of food, including sea-food, to stem the deterioration of their quality\(^2\). The multiday fishing boats need to carry huge quantity of ice cubes to preserve the catches on board for many days. On average, every multiday fishing boat carries 1800 kgs of ice per trip, but single day fishing boats require nearly 350 kgs of ice to preserve the catch.

Sufficient number of private sector ice factories is located in and around the selected fishing villages of Kanyakumari district. Though the boat operators are getting regular supplies of ice in adequate quantities, the high cost of ice imposed an additional financial burden on the boat operators. However, uninterrupted power supply is the main requirement for the smooth functioning of ice factories and regular supply of ice.
In Kanyakumari district, almost all the fish landing centres are connected to a good system of road transport. Refrigerated vans, trucks, pickups etc., are operating frequent services in these villages to dispose a large part of the landing made by mechanised crafts. The widespread use of ice and refrigerated transportation minimised the fish spoilage. The following table (Table no 6.1) briefly accounts the extent of minimum needed marine infrastructure and marketing facilities supplied to cater the needs of the mechanised sector in the selected fishing villages of Kanyakumari district.

**Table no 6.1**

_Distribution of Marine Fisheries Infrastructure and Marketing Facilities in the selected Fishing villages of Kanyakumari District_

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Infrastructure</th>
<th>Kanyakumari</th>
<th>Colachel</th>
<th>Thoothur</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fishing Harbour</td>
<td>AC</td>
<td>UAIA</td>
<td>UAIA</td>
</tr>
<tr>
<td>2</td>
<td>Cold Storage</td>
<td>AV</td>
<td>UAIA</td>
<td>UAIA</td>
</tr>
<tr>
<td>3</td>
<td>Pure Water</td>
<td>AV</td>
<td>AV</td>
<td>AV</td>
</tr>
<tr>
<td>4</td>
<td>Ice Factory</td>
<td>AV</td>
<td>AV</td>
<td>AV</td>
</tr>
<tr>
<td>5</td>
<td>Fish Processing Units</td>
<td>AV</td>
<td>UAIA</td>
<td>UAIA</td>
</tr>
<tr>
<td>6</td>
<td>Peeling Shed</td>
<td>UAIA</td>
<td>UAIA</td>
<td>UAIA</td>
</tr>
<tr>
<td>7</td>
<td>Oil Extraction Units</td>
<td>UAIA</td>
<td>UAIA</td>
<td>AV</td>
</tr>
<tr>
<td>8</td>
<td>Boat Repairing Centre</td>
<td>AC</td>
<td>AC</td>
<td>UAIA</td>
</tr>
<tr>
<td>9</td>
<td>Refrigerated Transport</td>
<td>AV</td>
<td>AV</td>
<td>AV</td>
</tr>
</tbody>
</table>

**Source:** Survey data

AV – Available, AC – Accessible, UAIA – Unavailable and Inaccessible.
Available implies that the infrastructure facility is located within the geographical boundary of the fishing village. Accessible means the facility is not available within the village but can be enjoyed by the boat owners within a short distance from their origin. The term ‘unavailable and inaccessible’ describes the facilities are completely absent in the respective villages and are not afforded to enjoy within a short distance.

The table no 6.1 illustrates that most of the minimum needed marine fishery infrastructure facilities are either available in or accessible to the mechanised craft operators of Kanyakumari fishing village. The facilities of the Chinnamuttom fishing harbour and the Muttom boat repairing centre are accessible to the boat operators of Kanyakumari, since these facilities are located within a short distance from Kanyakumari fishing village and so; it is easier for the boat owners to make use of these centres for their regular fishing operations.

The boat operators of Colachel and Thoothur fishing villages are not afforded to enjoy most of the minimum needed marine infrastructure and marketing facilities. This became a strong barrier to the prospects of mechanised fishery sector in these villages especially, the villages in the Kanyakumari west coast. Required quantities of pure water and ice blocks are available / accessible at a high cost in all the three selected fishing villages.

Refrigerated motor vans help the craft owners in all the centres to dispense a large part of the catch to the distant markets and processing centres. On the whole, the boat operators of Kanyakumari are enjoying with 78 per cent of the
minimum needed marine fishery infrastructure facilities whereas, the Colachel and Thoothur mechanised boat operators are survived with just 44 per cent of the minimum needed infrastructure and marketing facilities.

6.2 Natural Barriers and Hazards

Rough weather constitutes the most important natural barrier to the progress of mechanised fishery sector of Kanyakumari district. High tides normally occur in Kanyakumari coasts during the months of July and August. On many occasions, after struggling for many hours in the turbulent sea, the fishermen return to shore by losing their craft and gears\(^3\). Frequent cyclonic depressions and disturbances particularly between October and December cause interruptions to the boat owners to carry out their routine fishing operation. During this period the boat operators hardly get very few fishing trips and their income is not even sufficient to meet the operating expenses. The local money lenders will be the only source of financial support to the boat owners during these seasons.

Shallow continental shelf is yet another natural barrier to the mechanised fishery sector in this district. Moreover, the continental shelf of this region has vast stretches of rocky sea bed, over which trawl nets could not be operated. However, this will be a common marine feature in the coasts of Indian sub-continent. But these causes severe damage to the crafts and gears which has direct bearing on the fixed costs especially on replacing the fishing gears and repairing the crafts.
6.3 Marketing

The growth of fish production and the overall development of the fisheries sector largely depend upon an efficient marketing system. In fish marketing, efficiency is defined as the fishermen’s share in the consumer’s rupee. The fishermen’s share will be lower in less value fish (sardine) and longer marketing channels. Higher marketing efficiency is achieved from high value fish (seer) and when the fish is directly sold to consumers\(^4\). The present study covers only the system followed by the mechanised sector in the sale of fish. Price spread or marketing efficiency is not part of the present study. In all the landing centres, catches are usually disposed by auctioning system and then transported to interior markets. A small fish market is situated at every landing centre. The important markets for fresh fish within the district are Vadassery, Monday market, Friday market, Marthandam and Kaliakkavilai. Part of seer fish that caught was packed in ice and sent to Trivandrum, Changanassery and Kottayam markets in Kerala and Tirunelveli in Tamil Nadu. The bulk of the cured fish was transported to Tuticorin for exports\(^5\).

Prior to independence, substantial quantity of dry fish was exported from Tamil Nadu. The introduction of new processing and storage techniques coupled with tremendous demand for prawn in the European market led a phenomenal growth in the export of marine fish products. It is very important to note that apart from foreign exchange earnings the exports are mainly responsible for increasing the net earnings of fishermen\(^6\).
The auctioneer, wholesaler, retailer and fish vendor are the key intermediaries in fish marketing. The auctioneer sometimes advances money to the boat owners and in turn gets the right to auction his entire catch. There is a virtual barrier to the entry into this profession, which is mainly inherited by the local fishermen or association. Auctioneers charge certain percentage of the sale value of catch as commission for their service. The auctioneer’s commission in the selected villages ranges between 3 and 5 per cent.

In the auctioning system of sale, the buyers participate in bidding. The open bidding is done by verbally declaring the bids of all the perspective buyers for a particular fish lot. As a rule fish lots are awarded to the highest bidder.

In the neighbouring Kerala state, the Kerala State Co-operative Federation for Fisheries Development Limited (MATSYAFED) regulates auctions at fish landing centres through primary fishermen co-operative societies especially, in the non-mechanised sector. The member fishermen sell their catch to potential buyers only through the auctioneer employed by the society. This ensures a better price and immediate payment to the fishermen.

The Matsyafed has also started fish retailing outlets called ‘fresh fish point’. These retail outlets purchase fish directly from fishermen or fishermen co-operative societies and sell to consumers at reasonable prices under modern, hygienic conditions. These retail outlets aim to remove the involvement of middlemen in fish marketing thereby ensuring higher returns to the fishermen.
Auctioning is the common mode of sale found practiced in almost all the fish landing centres of Kanyakumari district. The baskets of fish landed for auction are properly iced and packed to avoid spoilage. Credit sale and irregular payments are the major marketing constraints in the mechanised fishery sector of Kanyakumari district.

In fact, the boat owners receive competitive price for their catch. But the problem arises when there is a glut in the market or comparatively less number of bidders for fish lots. Under these situations, the boat operators will get low net return or a net loss.

About 25 per cent of the landings by mechanised crafts are marketed by local retailers. The major portion of the landings is cleared by the fish merchants from other districts of Tamil Nadu and from Kerala state for processing and exporting.

To solve the problems in marketing, the fish marketing through fishermen co-operative societies should be encouraged. The Tamil Nadu Fisheries Development Corporation (TNFDC) should involve in buying and selling fish like the Matsyafed functioning in Kerala. In addition to this, the government should announce support price for certain species of fish to avoid price fluctuations. The support price policy should be effectively implemented through a government agency equipped with adequate storage, processing and distribution facilities.
6.4 Fishery Finance

The funds needed for the setting up and maintenance of mechanised fishing unit is raised from own sources of funds and borrowed funds. The first category includes the funds raised from household savings and disposal of existing assets. The second category consists of funds borrowed from scheduled commercial banks, co-operative societies, private financiers, local money lenders and the friends as well as relatives.

A major constraint to the growth of deep sea fishing is inadequate finance (Varambally.1988). The boat owners were not access to adequate formal credit due to their inability to produce required collateral security against the proposed loan. Also, there are certain complicated legal formalities and procedures followed in the formal credit sector.

In the absence of formal credit, the boat operators used to borrow from non formal sources. In the past, there were two types of moneylenders supplying credit to the mechanised fishing units. They are the trader cum moneylenders and professional moneylenders. The primary interest of the trader cum moneylenders is fish trading. But to them, money lending is a strategy adopted to bring in as many boat owners into their fold. The professional moneylenders, whose main occupation is lending money for interest, and the volume of credit in both cases depends upon the expected catch\(^9\). The table 6.2 illustrates the major sources of credit and their respective share in the total credit advanced to the mechanised boat operators in the selected villages of Kanyakumari district.
Table No. 6.2  
Major Sources of Borrowings and their Contribution to the Total Credit Advances to the Mechanised Boat Operators in Kanyakumari District

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Sources of borrowings</th>
<th>Kanyakumari</th>
<th>Colachel</th>
<th>Thoothur</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nationalised Banks</td>
<td>21</td>
<td>18</td>
<td>13</td>
<td>17.4</td>
</tr>
<tr>
<td>2</td>
<td>Private financiers</td>
<td>8</td>
<td>10</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Money lenders</td>
<td>24</td>
<td>30</td>
<td>32</td>
<td>28.6</td>
</tr>
<tr>
<td>4</td>
<td>Friends and relatives</td>
<td>47</td>
<td>42</td>
<td>46</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Source**: Survey data.

**Note**: Figures represent percentages.

In all the selected villages, the local moneylenders and the friends and relatives occupied the prime source of credit. Private financiers play only a limited role in advancing credit to the boat owners (9 per cent). A comparison on credit and advances made by various sources indicate that the scheduled commercial banks make up only a small portion (17.4 per cent) of the total credit requirement of the boat owners. The share of moneylenders in the total credit advances was 28.6 per cent. The friends and relatives contributed most part of the lending (45 per cent) in the mechanised fishery sector of Kanyakumari district. The rate of interest is normally low and adequate quantity of credit is also availed in the case of borrowings from friends and relatives.

The boat operators utilised the credit money for various fishing and non-fishing activities. Purchase of craft, gear and repairing craft are the main items
investment expenditure. The credit utilisation pattern of mechanised boat operator households, in the selected villages of Kanyakumari district is shown in table No. 6.3.

Table No. 6.3
Pattern of Credit Utilisation in the Boat Operator Households in Kanyakumari District

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Utilisation of Credit</th>
<th>Kanyakumari</th>
<th>Colachel</th>
<th>Thoothur</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Purchase of craft and gears</td>
<td>65</td>
<td>63</td>
<td>68</td>
<td>65.4</td>
</tr>
<tr>
<td>2</td>
<td>Repairing craft and gears</td>
<td>6</td>
<td>9</td>
<td>7</td>
<td>7.3</td>
</tr>
<tr>
<td>3</td>
<td>Construction / maintenance of house building</td>
<td>9</td>
<td>5</td>
<td>8</td>
<td>7.3</td>
</tr>
<tr>
<td>4</td>
<td>Purchase of land</td>
<td>5</td>
<td>8</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Household expenditure during lean season</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Medical expenses</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Expenditure on education</td>
<td>-</td>
<td>4</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source*: Survey data.

*Note*: Figures represent percentages.

The table 6.3 reveals that the boat owners utilised the borrowed funds mainly for creating fishing assets especially for purchasing and repairing crafts and gears. On average 72.7 per cent of the borrowed capital was utilised for these purposes. The investment on non-fishing assets such as construction and maintenance of house building and purchase of land or house site accounts for
13.3 per cent of the borrowed capital on average. Altogether, 86 per cent of the barrowed capital was used for investment purposes.

Remaining 14 per cent of the borrowed capital was used for meeting the household expenditure during lean season and to meet the medical and educational expenditure. However, in Kanyakumari fishing village, despite their large spending on education; no boat owner used the borrowed capital for meeting the expenses on education of their children and thus, it is found that the boat owner households mainly used their family income or savings to meet their household expenditure and expenditure on health and education. Creating and maintaining the fixed assets was their main intention behind borrowing and major source of investment fund was from non formal sector.

The investigation brought out the fact that most of the mechanised boat operators have credit default. In most cases, they have repaid mainly the interest accumulated on their borrowed capital, the principal amount remains unpaid. Some boat owners are not even paid the interest due. The major reasons raised on credit default are the mounting operating cost especially, the fuel cost and decline in catch per unit effort. But decline in catch might be offset by rise in price of fish.

Providing loans on easy and liberal terms by the formal sector is the only solution to relieve the boat operators from the clutches of money lenders and the state of indebtedness. Extending subsidy linked credit to eligible borrowers would attract more investors into the mechanised fishery sector which may increases the
marine fishery output as well as the income and social well being of the boat operator households.

6.5 Conflict between Artisanal and Mechanised Sector

The Kanyakumari coast was characterised by the availability of a wide array of fish species. The kattumaram and the vallam were the main crafts used in this region. The introduction of mechanised crafts in the early stages erupted tensions and clashes between the fishermen groups with regard to the utilisation of marine resources. The early incidents of clashes between fishermen groups in Kanyakumari district is well narrated by Ajantha Subramanian (2003). When mechanised gillnetters were first introduced through the Colachel Fishermen Cooperative society, their substantial catches generated considerable tensions on the coast and finally exploded into a clash at sea in 1959. On the one side were the artisanal fishers of Pudur, the next biggest fishing village, east of Colachel and the Colachel’s merchant elite: on the other side the gillnetter owners of Colachel. During the clash, considerable damage was done to the mechanised crafts. As a result, many fishermen who acquired gillnetters through the society either lost their crafts to disrepair or sold them to Kerala fishermen. Some of the owners shifted operation to the harbours of Quilon and Cochin. Others however shifted to trawler units in the late 1960s.

When Colachel trawler boats began operating in Kanyakumari in 1967, 24 villagers together filed a court case against the trawler owners, but the case was dismissed. Having failed to get their grievances through legal channels, the
villagers finally attacked on Colachel in the early 1970. This attack targeted all the visible signs of wealth of trawler owners.

The Kanyakumari villager’s enforcement of the monsoon trawl ban caused a chain of reaction among the fishermen groups, particularly in the villages with motorised crafts. In 1993, the motorised craft operators burned down three trawler units of Colachel. In August 1994, they seized 7 Colachel boats and took them to their village. In 1995 came the biggest confrontation of all. A series of attack continued thereafter. Nowadays the clashes and conflicts between the artisanal fishers and mechanised boat owners are less but still tensions exist among coastal villagers with regard to the utilisation of the common marine resources.

6.7 State Regulations

In the early stages, mechanisation in the fisheries sector imposed severe strains and hardships upon the traditional fisheries sector. In order to conserve the marine fisheries resources and to protect the interests of different sections of people engaged in marine fishing particularly, those who engaged in the traditional fishery sector the state government has implemented the Tamil Nadu Marine Fisheries Regulation Act, 1983.

The act provided two principal clauses that restrict the operation of mechanised crafts. The first directs that no owner or master of a mechanised fishing vessel shall use such a fishing vessel for fishing operation in the sea within three nautical miles from the coast line of the state. The second determines that the mechanised fishing vessel shall leave the notified place of berth only after
5.00 a.m and report back at the notified place of berth concerned not later than 9.00 p.m.\textsuperscript{10}

To regulate and control the operations of deep sea fishing vessels, the Tamil Nadu government has laid down the following conditions\textsuperscript{11}.

(i) Every deep sea fishing vessel shall be equipped with life saving appliances, fire fighting equipments and shall have full complement of crew.

(ii) No deep sea fishing vessel shall operate at depths of 25 fathoms or less.

(iii) Fishing within 100 meters below a river mouth is prohibited.

(iv) No fishing gear of less than 10 mm mesh size from knot to knot in respect of nets other than trawl nets shall be used.

(v) The number of fishing vessels, which may be operated in any specified area, shall be decided by the authorised officer.

(vi) All fishing vessels below 15 meters length and engine capacity less than 120 HP are to be registered.

(vii) Fishing licenses are issued to vessels which are registered.

(viii) No deep sea fishing vessel shall conduct pair trawl fishing operations.

These conditions virtually have negative impact upon the operation of the mechanised boats. Therefore it is pointed out that the government has given up the interests of the mechanised boat operators to protect the interests of a large number of economically backward traditional craft operators.
The new deep sea fishing policy of the Government of India, 1991 proposes to set up joint venture enterprises, in collaboration with foreign fishing companies in deep sea fishing. The policy emphasised the exploitation and utilisation of deep sea fishery resources within the Exclusive Economic Zone. This has resulted in the exploitation of marine resources of the Indian Coast by big entrepreneurs with foreign collaborators. This becomes a threat to the fishing operation of domestic mechanised craft operators.

**SWOT Analysis**

The problems and prospects of mechanised fishing in Kanyakumari district is better explained with the help of SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis. SWOT analysis involves identifying the strengths and weaknesses and examining the opportunities and threats which may affect an organisation or industry.

**Strengths**

Kanyakumari coast is blessed with two monsoons, the South West Monsoon and North East Monsoon. Besides, the rich fishing ground Wadge Bank is located in approachable distance.

The confluence of Arabian Sea with the Indian Ocean and Bay of Bengal is a unique feature of Cape Comorin. This results in the inflow of multiple varieties of fish population from various regions into the fishing grounds of Kanyakumari coast.
Confluence of rivers with sea is an indication of the existence of rich marine fishery potentials. The rivers Kuzhithuraiyar, Valliyar and Pazhayar are joining with sea in the Kanyakumari west coast.

The existence of submerged and intertidal rocks in the continental shelf of Kanyakumari coast provides shelter to a wide variety of marine organisms.

Mechanised fishing crafts can venture into far and deep sea to exploit the fishery potentials which are untapped by the country crafts and motorised crafts. Mechanised crafts can put greater fishing effort by reducing the time spend in to and fro trips.

Fish catch for longer number of days in a year by controlling the seasonality factor and diversify the catch composition by harvesting unconventional species.

Unlike the traditional and motorised crafts, the mechanised crafts can produce large quantities of fishery output to add on the nation’s Gross Domestic Product.

There is constant and continuous increase in the demand for marine fishery products in the domestic as well as in the export market.

Higher prices and high valued marine species have lead the mechanised fishing units enjoy sufficient revenue to cover up the costs and earn net returns.
All the fish landing centres in Kanyakumari district are connected with road transport system. Refrigerated vans, pickups, trucks etc., are operating frequent services to dispose a large part of landings.

Widespread use of ice and refrigerated transportation have minimised the fish spoilage. A large part of the spoilt fish is either converted into dried fish or sent to fish meal factories.

Mechanised crafts of this district are large in size and capable to carryout multiday fishing operations. These have sufficient capacity to hold the entire catch and as much men materials required for multiday fishing operations. Most of the mechanised crafts in this district are installed with modern mechanical and scientific communication and fish finding equipments.

The gillnet units satisfy the sustainability principle of the fisheries management policy. The mesh size of gillnets are comparatively larger than the trawl nets.

**Weaknesses**

The facilities and services of the existing fishing harbour at Chinnamuttom are inadequate and are benefitted to a limited number of fishing villages in the east coast. Lack of all weather berthing and inadequate fish landing centres are the major constraints.

The facilities for post harvest fishery activities such as storing, freezing and processing/curing are completely absent in most of the landing centres. A few
private sector cold storages located in this district are running with limited capacity.

The boat operators of west coast have to depend largely upon the traditional craft operators for loading the inputs and unloading the catches.

There will be delay in bringing the catch to the shore and the catches that brought to the shore passes through many hands before reaching the auction centre. The quality of catch cannot be maintained as per the expectation of the buyers.

There is no auction shed in Thoothur and its surrounding villages. The landings are auctioned on open space under unhygienic conditions.

The services of the boat repairing unit at Muttom is inadequate and only a few villages of the east and west coast are benefitted out of it, but most of the boat operators of west coast are not access to the services of the boat repairing unit.

Outmigration of fishermen from the marine fishing villages causes crew shortages. Many multiday fishing boat operators of Colachel hire in the services of north Indian physical labourers.

Formal credit extended to boat operators is inadequate and untimely. Besides, complicated legal formalities and procedures involved in getting loan from formal sector financial institutions. Local money lenders play an important role in advancing credit to the boat operators.
The net returns are comparatively less in gillnet units. The non interference of State in fish marketing and absence of minimum support price policy make some boat operators to suffer with low returns or sometimes negative returns.

Catch per unit effort declines and cost of operation increases. The rise in fuel cost is the main reason for the mounting operating cost. Pure water shortage and high cost of ice will impose additional financial burden on the boat operators.

The mechanised crafts are not permitted by law to undertake multiday fishing operations. The single day fishing practices raise the fuel cost, cost of depreciation as well as the daily maintenance cost.

**Opportunities**

Enlarging the size and extending the facilities of the existing fishing harbour at Chinnamuttom and the new fishing harbours under construction at Colachel, Muttom and Thengapattinam encourages the fishermen to invest on mechanised fishing units and induces the migrant boat operators to return and settle down in their native district.

Granting fuel subsidy and availing formal credit with flexible terms and conditions provide opportunities to enlarge the existing fishing grounds and identify new fishable locations.

Investment on mechanised crafts can be encouraged by relaxing the existing rigid terms and conditions involved in the registration of mechanised
crafts and adopting lenient procedures and formalities in the renewal of boat registration.

The terms and conditions lay down by the Tamilnadu Marine Fisheries Regulation Act 1983, on the operation of the mechanised crafts have to be relaxed. The mechanised crafts can be permitted to undertake multiday fishing operations.

The new deep sea fishing policy of Government of India (1991) should be reviewed and modified to protect the interest of the domestic deep sea fishing vessel operators.

A well organised fish marketing agency should be established, which directly involved in purchasing and sale of marine fishery output. This ensures the boat owners a fair return for their investment and the consumers could get fish in hygienic conditions at an affordable price.

Special attention should be paid on imparting necessary technical knowhow on the preparation of exportable ‘sashimi grade tuna’ (tuna in chilled form).

The sustainability principle of the marine fisheries management policy should be strictly followed. This provides opportunity to conserve and regenerate the scarce marine resources from depletion and extinction.

Establishing additional number of post harvest fishery infrastructure such as cold storages, freezing points and processing or curing units in the fish landing
centres might help the boat operators to enjoy a fair return by controlling the price fluctuations. The capacity of the existing cold storages, freezing points and processing units should be enhanced.

**Threats**

The Tamilnadu Marine Fisheries Regulation Act, 1983 has imposed several restrictions that limit the operation of the mechanised fishery sector in Kanyakumari district.

The new deep sea fishing policy of Government of India, 1991 has resulted in the encroachment of the marine resources of the Indian coast by foreign fishing enterprises.

In the past, frequent conflicts and clashes erupted between the traditional and mechanised craft operators. The attitude of the much bigger artisanal class towards the mechanised class is still conflicting.

The Marine Product Export Development Authority (MPEDA) Act, 1972 proposed rigid eligibility conditions on the registration of agencies exporting Sashimi grade tuna.

Natural barriers such as high tides, frequent cyclonic disturbances and depressions, shallow continental shelf and vast stretches of rocky sea bed causes severe damages to the crafts and gears.
The deep sea fishing involves much risk and insecurity of life and property. The rescue operations and relief measures implemented are undependable and insufficient.

The analysis indicates that the mechanised fishing industry is operating under severe limitations and constraints in Kanyakumari district. There are some internal problems and external threats that limit the progress of the industry. But, the industry enjoys certain internal benefits and there are opportunities to counter the existing problems and check the threats through Government intervention and community participation.

REFERENCES


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