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## THE MUD BANK PRAWN FISHERY OF KERALA - DECLINING TREND\*

The mud bank fishery, locally known as *chaakara* fishery is a unique phenomenon along the Kerala coast during the south-west monsoon period. The duration and the location of the fishery show slight variations from year to year. During the rainy season concentrations of mud occur in different areas very close to the shore, providing much calmer seas for operations of fishing boats in comparison to the stormy surf of the monsoon seas of the surrounding localities. Various theories have been put forth concerning the origin of the mud bank by several investigators. The point relevant here is that it is an annual occurrence providing calm areas for operation of fishing crafts and supporting good fishery for prawns and other fishes during the heavy swell of the monsoon period. The most important such bank occurs along

the stretch of coast from Purakkad to Thottappally, the exact location changing from year to year. The peak period of the fishery also changes from one year to the other.

The fishery of this area during the *chaakara* season plays a vital role in the economy of this entire coastal belt and hence it was under investigation for the past several years. Fluctuations in the magnitude of the fishery has been noticed over the years. But a study of the fishery in recent years indicates a steady decline and this is examined here. Nearly 500 dug out canoes locally known as "Vanchi" or "Vallam" operate daily in this area during the peak of the fishery. The boat seine known as "thangu vala" is the main gear used for the fishing operations. It is a triangular net made of nylon or cotton thread with maximum width in the middle and narrowing towards

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\* Prepared by N. S. Kurup, CMFR Institute, Cochin

both ends. Recently a type of gill net "mathichala vala" made up of 6-7 pieces of nets made of nylon or cotton thread is also being increasingly used.

As the fishery commences, a temporary fishing village is established on the shore at the region where the mud bank is located. Thousands of fishermen and people associated with the fishery assemble at the mud bank region. Boats from distant places also assemble at the area. Most of the fishermen who come for fishing are not permanent dwellers of this region, but come from far off places for fishing with hired crafts and gears. At times proper management of the fishery becomes difficult on account of shortage of food and required infrastructures for fishery such as crafts and gears, amenities for preservation, marketing facilities and transportation. During days of bumper catch each fisherman earns upto Rs. 150/- depending on the variety of prawn or fish landed. The price of the prawns also varies according to the quantity landed each day varying from Rs. 3.50 to Rs.10.00 for the smaller varieties which are commonly landed in large quantities.

The prawn fishery is supported chiefly by *Metapenaeus dobsoni* (Poovalan chemmeen). *Parapenaeopsis stylifera* (Karikkadi chemmeen) and *Penaeus indicus* (Naaran chemmeen) also occur in smaller quantities. In the case of *M. dobsoni*, sizes ranging between 90-105 mm dominate in the fishery. However, the general trend of the prominent modes were to shift from a higher length range at the beginning of the season to a lower size group towards the end of the season.

The total catch at 1,186.9 tonnes in 1972 rose to the maximum of 4,284.8 tonnes with a catch rate of 95.2 kg per unit of effort in 1973 (Table I). A significant fall in the total prawn catch was recorded during 1974, landing only 444.0 tonnes. In 1975 there was

an increase to 1,171.4 tonnes with CPUE 19.9 kg. But in 1976 it again decreased to the 1974 level and in subsequent years the fishery suffered a serious set back in this area. The estimated total catch amounted to 154.6 tonnes, 69.8 tonnes and 29.2 tonnes and catch per unit effort at 3.4 kg, 1.4 kg and 1.6 kg respectively during 1977, 1978 and 1979.

**Table 1.** Trend of production of prawns in the mud bank fishery at Purakkad-Thottappally area during 1972-'79

Years	Prawn catch in tonnes	Fishing effort in hours	CPUE in kg
1972	1,186.9	75,505	15.7
1973	4,284.8	45,009	95.2
1974	444.0	10,680	41.6
1975	1,171.4	58,819	19.9
1976	489.9	47,169	10.4
1977	154.6	45,367	3.4
1978	69.8	49,040	1.4
1979	29.2	18,346	1.6

From this it is quite clear that the fishing is showing a regular decline from 1973 onwards. It is all the more alarming from the point of view that it is the traditional indigenous fishing sector which is affected due to the failure of this fishery. In the years in which the fishery fails the condition of the entire population of fishermen who depend on and look forward to this fishery is deplorable. The point of concern is that although the formation of the mud bank is taking place regularly every year with variation in exact location, the fishery is getting poorer every year. So it looks as though the formation of the mud bank and the fishery in these waters are not interdependent. In view of the habits of these prawns of utilising the adjoining estuaries and backwaters of the area as their nursery grounds to a large extent, the increasing amount of exploitation of their young ones in the fishery in the inside waters may probably be one of the reason for the failure of the prawn fishery in the inshore and mud bank areas.

