

STUDY OF DISPARATE SECTORS IN FISHERIES

S. G. RAJE, V.V. SINGH AND ARPITA SHARMA

*Mumbai Research centre of Central Marine Fisheries Research Institute,
148, Army Navy Building, M.G. Road, Mumbai - 400 001.*

ABSTRACT

Fisheries employ a number of people and fisheries industry is truly an amalgamation of various disparate sectors. Fisheries play an important role in Indian economy and it provides employment to a number of people. For planning of integrated development of fisheries industry and resource management, a considerable amount of information is required. In this paper a study of the disparate sectors with regards to the nature of work, number of workers, sex-wise participation, earning type and earning in Indian Rupees in the year 1991-92, 1992-93, 1993-94 and 1999-2000 has been done in a selected fishing village. The geographical locale where the study has been done is Versova fishing village which is a major fish landing centre in Mumbai. The study has revealed that there are a number of disparate sectors in fisheries and in this fishing village on an average, a boat owner provided employment to 30.60 people in the year 1994 and to 19.25 people in 1999. Though this number has shown a decreasing trend with the advancement of years, it is however, seen that a number of people are employed in various disparate sectors in fisheries. It is necessary to highlight this and in any developmental planning, all these sectors should be given equal importance.

Keywords : Disparate sectors, Fisheries, Employment

INTRODUCTION

Fisheries industry is an amalgamation of many subsectors, which within themselves are very significant. Fisheries have an important role in Indian economy through employment generation. This sector provides employment to 5.8 million fishers with an equally impressive number engaged in ancillary activities associated with it (Sinha 1998). In addition to the activities directly related to fisheries other related activities are very important and in their integrated working, their contributions are of utmost importance.

For any planning activity, it is necessary to keep every sector in mind and plan accordingly. Sathiadas and Kanagam (2000) have also reported that the post-harvest operations of fish provide more employment to labour than the production sector.

It is true that employment empowers people and fisheries provide employment. It can be seen in any fishing village that fishery and related activities are the major employment - related activities of its traditional as well as migrant populations.

The objectives of the study were

1. to locate disparate sectors of fisheries industry to study the nature of work in a fishing village, and
2. estimate sex-wise participation, earning type and average earning of workers in these sectors.

MATERIAL AND METHODS

The geographical locale of the study was Versova a fishing village in Mumbai, which is a major fishing centre in Greater Mumbai. As regards the socio-economic and demographical characteristics of the fisheries of Maharashtra, it has been reported by Tewari (1999) that they belong to the middle socio-economic group. Preliminary studies on socio-economic and demographic indicators at Versova fishing village also revealed the same. Frequent village visits, and discussions with the fishers, workers, key persons, fishery scientists and members of fishery co-operatives form the basis of information for locating the disparate sectors in fisheries.

In order to collect information as to suffice the objectives of the study, an interview schedule was formulated. The information included a brief about them sex-wise participation, the nature of work and earning in the years 1991-92, 1992-93 and 1993-94. As separate statistics for each category of workers were not available, an estimation regarding the number of workers was necessary. This was done by counting the number of workers on three consecutive days. The reason for selecting three days was due to manageability. To have a proper representation, interview was conducted

on at least 5-10% of the workers in each category. In addition to the estimation, detailed discussions with the fishes and the authorities of the fishery co-operatives, workers and key persons also formed the basis of information. The co-operative society registers boats of every fisher and keeps a record of these. This was also noted down. It has to be emphasized that in the present study, the disparate sectors existing in Versova fishing village have been studied, and boat owner and his immediate family members who themselves are the major part of the fishery work force are not included as the study focuses on disparate sectors in fisheries.

RESULTS AND DISCUSSION

From the study, it was found that fisheries provided employment to a number of people disparate sectors in fisheries were also located. These can be classified into four broad sectors as detailed below :

1. Employment generation directly through fishing activities
2. Employment generation through allied activities
3. Employment generation through co-operative societies
4. Employment generation through miscellaneous activities

The nature of work of each worker and sex-wise participation in each sector are discussed in the following text and the information as regards to their earning type, earning in the years 1991 to 1994 and 1999-2000 is detailed in tables 1-4.

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Table 1 : Employment generation directly through fishing activities.

Type of Worker	Sex of the worker	No. of workers in 1993-94	No. of workers in 1999-2000	Type of Earning	Earning in (Rs)	Earning in (Rs)	Earning in (Rs)	Earning in (Rs)
					1991-92	1992-93	1993-94	99-2000
					in average			
Boat crew members								
a. Tandel	Male	394	433	Wage/season	21,000	24,000	28,500	52,312
b. Khalasi	Male	2466	3300		16,000	18,000	22,000	36,857
Catch Unloader and Net maintainer	Male	55	20	Rupees per day	60	75	90	100
	Male							
Fresh fish hawkers sellers and dryers	Female and Male	622	702	Rupees	75	115	150	150
Prawns peeling in-charge	Female and Male	27	32	Marginal profit per kg.	2.00	2.75	3.25	5.0
Workers in fish drying	Males and Female	35	95	Rupees per day	20	35	50	90
petty merchants for dry fish	Male	11	3	Profit/kg through wholesale merchant	0.75	0.90	1.50	4.5
Prawn peelers	Female	1115	1125	Peeling rate/kg	0.60	0.75	1.35	6.0

Employment generation directly through fishing activities:

Boat owners :

They are actual owners of the boat and their boats are registered with the co-operatives. They are responsible for supervision, day to day management of the boat and the fishing activities like unloading fish drying, net repairing and fulfill the requirements of the crew members like boat repair, food requirements and other essentials. At present, the boat owner usually hires the crew members for fishing in the sea. Boat owners are mostly males, but there are female boat owners also.

Boat crew members:

These are males who are actually responsible for catching the fish and bringing it to the landing centre. The boat owners hire the crew members. During the fishing season, many crew members get employment at Versova. It has been observed that at Versova, most of the crew members are not fishers from Versova; they belong to nearby places in Maharashtra and some even to different states. There are two categories of these crew members, which are called 'tandel' and 'khalasi' in the local language. 'Tandel' serves as the crew leader and there is one 'tandel' on each boat. 'Khalasis' work with 'tandel' and their number on a boat depends on various factors like size of the boat, type of fishing, etc. They get their wages per fishing season basis and are hired per fishing season basis.

Catch unloaders and net maintainers:

Boat owners employ catch unloaders,

who are males, to unload the catch once it is landed. Net maintainers mend the fishing net. They are given fish instead of wage in terms of cash. Presently, catch unloading is done by crew members themselves so their number has reduced.

Fresh fish hawkers, sellers and dryers:

Women dominate this work force. Female members of fisher as well as other communities purchase fresh fish of different varieties directly from the boat owners and sell in various localities, market places and also on the roadside or after drying.

Prawn peeling in-charge and fish dealers:

These are usually women from fisher community. These women work as prawn peeling in-charge. Some males are also engaged in this work. They buy prawns from the boat owners, get the prawns peeled from the prawn peelers and send the peeled prawns to the factories. Before becoming prawn peeling in-charge, they worked as fish dealers, where they purchased quality fish like prawns, etc. in bulk from boat owners and sold in wholesale market at a marginal profit. But now, most of them work as prawn peeling in-charge. These women also provide advance finance to the boat owners.

Workers in fish drying:

Workers in fish drying are males and females. They take the fish from the boat owners, dry them and sell them in the wholesale market and other places.

Petty merchants for dry fish:

Merchants, who are from Versova

Table 2 : Employment generation through allied activities.

Type Worker	Sex of the worker	No. of workers in 1993-94	No. of workers in 1999-2000	Type of Earning	Earning in (Rs) 1991-92	Earning in (Rs) 1992-93	Earning in (Rs) 1993-94	Earning in (Rs) 99-2000
					in average			
Workshop Manpower	Male	27	29	Rupees per day	35	45	55	95
Private mechanics	Male	32	35	Annual rate	150	1,800	2,000	3,000
Water pump repairers	Male	4	7	Rupees per pump	30	40	50	90
Injector tester	Male	1	1	Rupees injector	10	15	20	80
Electricians	Males	5	5	a. Installation charge per boat	600	700	800	1500
				b. Repair charges	40	50	75	125
Carpenters	Male	35	47	a. Const- ruction rate				
				i. 40' boat	27,000	37,000	45,000	68,300
				ii.60' boat	45,000	55,000	75,000	1,30,000
				b. Repair charges				
				i. Simple type Rs/ft	18	25	30	42
ii. Tongue and groove type Rs/ft.	25	35	45	45				
				c. Daily wage per day of worker	40	50	60	125
Iron Smith	Male	6	6	Daily wage	40	40	60	100
Small spare part dealer	Male	7	10	Per month	20,000	27,000	32,000	44375
Winch repairer	Male	0	1	As per work	-	-	-	55
Spicer Otter Board	Male	0	3	Per spicer	-	-	-	125
	Male	0	2	Per otter board setting/ repair	-	-	-	350

fishing village, purchase dry fish from boat owners workers in fish drying and others. They are males and they sell dry at the wholesale market and to big merchants. Petty merchants for dry fish are reducing in number as fish drying activity is getting lesser. This is because the fishes are sun dried and for this lot of open space is needed. The open spaces are reducing due to the increased pressure on land. Dol netters have shifted to trawlers to catch quality fish. As the quality fishes are not dried, the drying activity has reduced. So, labourers working for dry fish merchants are also becoming few.

Prawn peelers:

Prawn peelers and suppliers generally employ women in the peeling work. These women are mostly migrates from different states (mostly from Andhra Pradesh). Piece rate wage system is adopted here.

The earning of the various people engaged in these have been given in Table 1.

Employment generation through allied activities.

Manpower at workshops.

There are seven workshops at Versova fishing village. All repair work related to boats is done here. The male workers, who are employed here, are paid according to their skill and experience. The charges are as per the job undertaken.

Private mechanics:

There are nine private groups, who undertake engine - related repair works. These groups charge a fixed amount from

the boat owners for the entire season and they are males.

Water pump repairers:

There are four water pump repairers. They are all males, who attend to this work and charge depending upon the work. However, they get regular work due to the big fleet size at Versova.

Injector tester:

There is one male injector tester in the village. He charges according to the work. His work is to test the injector, which is used in the engine.

Electrician:

Five male electricians are engaged in the fitting and repairing work of batteries and dynmo. Their charges depend upon the nature and magnitude of work.

Carpenters:

There are two types of carpenters. First type is exclusively for the construction and repair of the boats, while the other type attend to miscellaneous work like cabin work, deck maintenance and insulated fish hold jobs. Carpenters are all males.

Black smith:

Three male blacksmiths are present in the village, mainly for making articles like thimbles, anchors, nails, bolts and pulleys, for use on boats.

Small spare part dealers:

At Versova, there are 12 private shop owners who are males and they sell spare parts to the fishers.

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Table 3 : Employment generation through Co-operation societies.

Type of Worker	Sex	No. in 1993-1994	No. in 1999-2000	Earning/	Earning/	Earning/	Earning
				month (Rs) in 1991-92	month (Rs) in 1992-93	month (Rs) in 1993-94	month (Rs) in 99-2000
in average							
General Manager	Male	3	2	1,750	2,100	2,350	4500
Secretary to stopped the Chairman	Male	1	0	2,000	2,100	2,200	Post
Divisional Managers	Male	5	4	1,500	1,700	1,900	3500
Head Cashier	Male	2	3	1,050	1,250	1,350	3600
Accountant	Male	2	3	1,050	1,250	1,350	3600
Supervisor	Male	1	6	1,050	1,250	1,350	2000
Machine operator	Male	1	3	900	1,100	1,200	2500
Sales persons	Males and Female	32	24	900	1,100	1,200	2200
Recovery Person	Male	3	1	900	1,100	1,200	3400
Drivers	Male	18	17	900	1,100	1,200	3000
Office Staff	Male	3	2	850	950	1,100	2500
Cashier	Male	22	21	800	900	1,100	3600
Khalasis	Male	14	18	600	800	1,100	1709
Weighers (Ration shop and wholesale markets)	Male	14	2	600	800	1,100	2550
Workers	Male	5	7	600	800	1,000	2000
Helpers (Ice plant)	Male	10	23	600	800	1,000	1950
Cleaners	Male	19	14	600	800	1,000	2550

Winch repairer:

There is one winch repairer, who is a male and he charges as per the work carried out.

Spicer.

There are two spicers who are males and they charge per spice.

Otter board setter/repairer:

Otter board setter or repairer charges money as per the setting and the repair, and there are two males performing this work.

These are the activities allied to the fishing activities. The earning of the various people engaged in these are given in Table 2.

Employment generation through co-operative societies:

Many persons are employed in three co-operative societies. These societies run transport network, ice factories, diesel pumps, fish stalls, grain shops, departmental stores, spare part shops, diesel and oil tankers, ferry boat, etc.

Apart from the fixed monthly salary, employees are also entitled for various incentives, rewards, bonus, etc. For their regular work. The earning and sex-wise participation of various people engaged in these activities are given in Table 3.

Employment generation through miscellaneous activities:**Helper:**

Each boat owner engages one or two male helpers for transporting, sorting and

drying the fish. The boat owner provides them with food, clothing and other facilities, and their wages are fixed for a season as per their experience and skills.

House maids:

These women help women fishers in the household work and sometimes, in drying the fish. They are also provided with essential facilities and get wages according to their skill and experience.

Labourers with petty and wholesale dry fish merchants:

These labourers are males and have migrated from different states. They work in groups and work on daily wages for petty merchants and wholesale dry fish merchants. Their work includes collecting dry fish, filling gunny bags with dry fish to store in godowns and also loading on trucks.

Head loader:

Head loaders, who are males, transport fresh fish in baskets from the landing centre to cold storages, drying place and market, load it on trucks, carry crushed ice from factory to landing centres and other related work. They charge according to the weight of the load and the distance.

Engine and Shaft levelers:

There are six males, who are engaged in the job of leveling the engine and shaft of the boats. They charge as per the job.

Net menders and repairers:

They are males and females who work with the fishers for making new nets and repairing the damaged nets; they work on time-basis and are given daily wages.

Basket makers:

Males and females of twelve families are engaged in preparing baskets of different capacities. These baskets are made of bamboo and are used for storage and carrying of fish. Carrying capacity of these baskets differs from 1 kg - 50 kg. With the advent of plastic crates, the basket making activity and thereby the people involved are becoming fewer.

Wooden spike makers:

Wooden spikes are made from the material obtained from coconut or palm trees. There are two males in the village who do this work. These spikes are used in the operation of the 'dol' net and price of the spikes is fixed according to its length and breadth. As dol netting reducing, the spike making activity is also reducing.

Wooden needle and gauge maker:

The needles are made from bamboo and are sold in dozens, while gauges are prepared from teakwood. A set of gauge consists of 32 numbers of different sizes. There is one male who does this work in the village and charges money for the number of sets made. Fishers also make these on their own.

Fibre glass patchers:

There are seven males in the village who are employed in this work. Their work includes filling the leaks of the boats with fiberglass patches. The rates for fixing patches depend upon the portion of the boat where the leak is. The charges are calculated on running foot basis.

Jerry can and plastic crate sellers:

Jerry cans of various capacities are used on boat and landing centre for fisheries operation for carrying diesel, drinking water, etc. Jerry can sellers who are males sell them to fishers at a marginal profit. Plastic crates are usually bought directly from companies.

Crush ice collectors sellers:

The slabs of ice to preserve fishes are crushed in the crushing machine. Here, male and female adults and children (mostly boys) help in crushing the ice in return are given small amounts of ice they also collect discarded and spilled crushed ice. They sell this ice at the landing centres.

Tea suppliers:

When the landing centre is humming with activities, the tea suppliers who are males have brisk business.

Roti (bread) makers:

Women fishers, other workers and outsiders but from roti makers. To meet this demand, four women from the fishing community have started this fisheries. They charge as per the orders and pieces bought.

Drinking water sellers:

This work has been recently started by four women, who provide drinking water at the landing centre to the fishers etc. where they sit with water cans of different capacities.

These are the miscellaneous activities related to the fishing activities. The earning of the various people engaged in these are given in Table 4.

Table 4 : Employment generation through miscellaneous activities.

Type of Worker	Sex of the worker	No. of workers in 1993-94	No. of workers in 1999-2000	Type of Earning	Earning in (Rs)	Earning in (Rs)	Earning in (Rs)	Earning in (Rs)
					1991-92	1992-93	1993-94	99-2000
in average								
Helper at Boat	Male	470	650	Wage per season	3750	4,500	6,000	10,450
House maids	Female	350	600	Wage per season	4000	6,000	7,000	9321
Labourers with dry fish merchants	Male	220	20	Wage per day	35	40	50	66
Coolies	Male	150	202	Rate/basket and distance	3.40	5.00	5.50	10.50
Engine and shaft levelers	Male	6	6	Per job	200	300	500	828
Net menders and repairers	Male and Female	705	585	Per day for 8 hours Per day for overtime for 4 hours	22	32	42.5	100
Basket makers	Female and Male	95	11	Per dozen 5 kg 30 kg 50 kg	85 225 350	135 275 450	160 375 550	200 325 605
Wooden spike makers	Male	6	2	Price/spike of different size	45	80	90	175
Wooden needles & gauge makers	Male	1	None	Rate for one set	150 50	175 60	200 75	-
Fiber glass makers	Male	14	16	Average rate per feet	15	20	22	35
Jerry can sealers	Male	2	2	Average profit	13	17	18	25
Crush Ice collectors	Male Female Children	6	43	per boy per day	10	15	21	32
Tea suppliers	Male	11	14	per day	45	80	115	198
Roti (Bread) makers	Female	3	5	Per piece	1	1.50	2.50	3.00
Drinking water suppliers on the landing centres	Female	-	4	Per 30 lit water can per 70 lit. water can	-	-	-	2.0 4.0

It is seen that in fisheries, disparate sectors co-exist. Women's participation is mostly in the marketing activities of fresh and dry fish. They are also engaged in fish drying. Prawn peeling in-charge and prawn peelers are also women. House maids, drinking water sellers, roti (bread) makers are all women. In the work of net mending and repairing both males and females are engaged. In the process of basket making women and men both are involved. In the fishery co-operative society women participation can be seen, but to a small extent. There are some females boat owners but they do not go for fishing in the sea. These are some of the activities in which participation of women exists. Other activities are performed by males. Records maintained by the fishery co-operatives at the village showed that from years 1994-1999, the number of boat owners have increased from 241 to 425. The total number of boats being 475 with 278 trawlers, 68 hand trawlers, 10 gill netters, 27, Dol, netters, 47 dug out canoes motorized, and 45 dug out canoes. The study also shows that a total of 7,387 and 8,183 people were employed in the year 1994 and 1999 respectively. It is seen that in the year 1994 a boat owner provided employment to

30.6 persons and to 19.25 persons on an average in the year 1999. In these figures the boat owner and the immediate family members are not included. Though the number has decreased from 30.6 to 19.25, it is still seen that a number of people earn their livelihood from fisheries and the disparate sectors in fisheries. Thus in addition to fishing it is necessary to give importance to the disparate sectors in fisheries.

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