

A PRELIMINARY REPORT ON LANMADAW FRESH FISH MARKET, RANGOON, BURMA

by
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A preliminary study of fish marketing at the Lanmadaw Fresh Fish Market, Rangoon, was conducted on the initiative and under the guidance of U Khin, Director of Agriculture and concurrently Officer-in-Charge, Fisheries Bureau, Union of Burma.

The purposes of the study were primarily:

1. To prepare a background for further study of the fish market;
2. To find ways and means for the development of fresh fish marketing in Rangoon;
3. To form a model for the study of marketing of fish and fish products in the other parts of the country.

There are three fish landings within the limits of the Rangoon Municipality, viz., at Lanmadaw, Kemmendine, and Pazundaung Quarters. The study was confined to the Lanmadaw Market only for the following reasons:

1. The other two landings were comparatively much less important, their total volume of business being only a fourth or fifth of that at Lanmadaw;
2. Limited facility of the Fisheries Bureau

This study was more or less a part-time work of the Fisheries Officer and two of his Assistants as it could be conducted only when they were at Headquarters and not occupied with other duties.

It was by restricting the work to one market that they were able to intensify their efforts so as to get some results. Of course, there were many points, such as arrivals of fish by districts and by species, potentialities, socio-economic data etc., which were at first intended to be studied but later abandoned.

Methods and their limitations.—Information and data were collected by interviewing selected fish agents, by random sampling, by actual observation, and from Deputy Commissioners.

In selecting fish agents for interview, their experience as well as reliability was given first consideration. Information from one source was always checked with those from several others. But as it was impractical to get the actual figures from them, only rough estimates were obtained.

Random sampling technique was employed to get rough data for average daily handling of fish at the market. Fish arrivals at the market vary with month, tide, weather, and other causes. Variation due to the first two factors whose occurrence is regular and cyclical could be taken care of by stratification according to months and tide-days, but that due to the other causes of irregular and unforeseen occurrence had to be left out. Six days (2 high, 2 medium, and 2 low-tide days) were selected in a month. On those days two fieldmen were stationed at the market gates during regular transaction hours. While counting the total number of fish baskets (all of one size only) which passed out of the gates, they stopped every twentieth basket and recorded the amount, species, and the price of fish in that basket.

The amount of fish (W) handled at the market on a sampling day was calculated by multiplying the total number of baskets counted by the mean weight of fish in the sample baskets. The Standard Error of the mean weight, except for very few cases, was found to vary between .15 and .36. The Standard Error times the total number of baskets was taken as the limit of error in calculating W. The result was found to be less than 500 viss¹. Therefore 1,000-viss was taken as the unit for expressing W. The number of samples will have to be increased if a smaller unit is desired. Average daily handling of fish at the market for a month was calculated as $\frac{\sum W}{6}$. In

addition, an allowance of + 500 viss was made to include the amount of fish supplied on contract to the army, which are packed in boxes and, therefore, not recorded in the sampling. But figures for the months of June, July, and August, 1953, were calculated from the data given by the Fish Marketing Co-operative Society Ltd. (See below)

Average monthly wholesale prices of fish by species was found by $\frac{\sum p}{n}$, where p was the price of one kind and n the number of different prices of that kind recorded during the month. For lack of space, only wholesale prices during the 12 months from September, 1952, to August, 1953, are given here.

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¹ 1 viss = 1.65 Kg.

Supply of fish.—The main supply to the market is from the inland fisheries of the neighbouring districts. Arrivals of marine fishes from the Tenasserim coast are mostly during the dry season and are rather irregular. Supply of fresh fish from the following districts are regularly tapped for the market.

November, 1952, up to April, 1953, would have increased if the communications in Maubin District during the last dry season were as good as during this season. Normally, the figure for November used to be bigger than that for October.

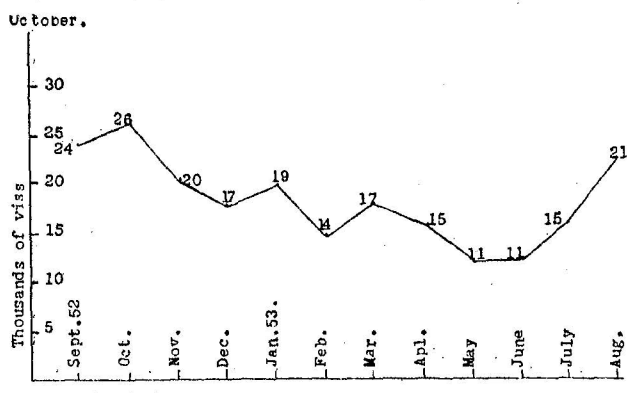
Assembling of fish—Lanmadaw Fresh Fish Market is located very near the business centre of

Table I. Sources and their importance.

Serial No.	Name of District	Revenue in Kyats as of 1951-52		Approximate annual production in Viss. (Round fresh weight)
		Leased fisheries	Open fisheries	
1.	MAUBIN	307 835	5 928	2 500 000
2.	PYAPON	149 231	11 198	2 400 000
3.	MYAUNGMYA	133 776	2 195	1 050 000
4.	PEGU	149 610	50	940 000
5.	INSEIN	66 109	2 378	750 000
6.	HANTHAWADDY	84 706	3 280	900 000
Total				8 540 000

There are other irregular sources such as Amherst, Tavoy, and Mergui Districts (Tenasserim Coast), where the approximate annual production is 2,024,000, 480,000, and 3,574,000 viss, respectively. Thus the approximate total annual production from all these sources is about 15,000,000 viss of which only about 6,400,000 viss reach the market as fresh fish.

The average amount of fish handled daily at the market by months in thousands of viss is shown by the following graph. Figures for the months from



the city and also close to the jetties for the inland waterway launches. It is the chief reason for assembling of fish at the location. Details of transportation of fish from the sources to the market are given in Table II.

The market place is an irregular-shaped enclosure having an area of about half an acre¹. Forty-two fish stalls (thirty of which are 10' x 24'6" and the other twelve 8'6" x 18') line the two sides of the main path-way which is 17' in width.

Ordinary balances with pan on one side for weights and cane basket on the other for fish are used in the market.

There is no cold store for the market at present. Iced fish are stored in wooden boxes, as transported, in two godowns nearby, usually for a night before disposal. Live fish are kept in wooden tubs, also as transported, at the market place, but for a longer period if necessary.

The wooden boxes are of three sizes with usual net capacities of 80 to 60, 60 to 40, and 40 to 30 viss, depending on the length of journey. The wooden tubs, also of three sizes, have usual net capacities of 45 to 40, 35 to 30, and 25 to 20 viss, depending on the length of journey.

¹ 2.5 Acres = 1 Hectare.

Table II. Details of transportation.

Serial No.	Sources Districts	Means	Usual time of arrivals	Average cost per 100 viss	
				Live fish Kyat	Iced fish Kyat
1.	MAUBIN	Launch and Motor-boat	11 a.m. to 1 p.m.	3.94	2.50
2.	PYAPON	-do-	2 p.m. to 3 p.m.	5.38	3.80
3.	MYAUNGMYA	Launch	7 p.m. to 10 p.m.	8.20	5.48
4.	PEGU	Motor-truck	4 p.m. to 10 p.m.	15.38	8.33
5.	INSEIN	-do-	11 a.m. to 2 p.m.	2.30	1.25
6.	HANTHWADDY	Launch and row-boat	8 a.m. to 2 p.m. 4 p.m. to 6 p.m. and 10 p.m. to 3 a.m.	4.74	3.00

Five ice-plants supply 30,000 to 60,000 lbs of ice daily at K. 2.50 to 3.00 per 100 lbs to the fish agents, who again distribute it to fish suppliers in the districts at K. 3.75 per 100 lbs.

Distribution of fish.—Distribution of fish from the Lanmadaw market covers rather a wide area, reaching as far as Kyauktan (18 miles) in Hantawaddy District and Mingaladon (12 miles) in Insein District.

At about 3 a.m. every day fish agents begin preparations at the market while the retailers also arrive in groups. Actual transactions start about half an hour later and continue up to about 7 a.m. The market is busiest between 4 and 5 a.m. Business resumes at about 11 a.m. and closes down at about 4 p.m. Activity during that period, compared with that in the morning, is much slacker.

Sale of fish is not by auction in lots as in the neighbouring countries. A fish agent names his price according to the quality of his ware and also his judgement of the supply position in the market. It is generally a seller's market, because of general shortage of supply and also because of the holding power of the agent who is financially strong *vis-a-vis* the majority of buyers who are small retailers earning a precarious living on their small daily profits.

There are about one hundred agents or over doing that wholesale business. About three hundred fish hawkers from about thirty-five retail markets come everyday to Lanmadaw for wholesale buying.

Commission rates taken by the agents vary. When loans have to be advanced by agents to suppliers, the rate is 25 pyas¹ per viss, but when no loans are taken, it is from 8 pyas to 13 pyas per viss, depending on the volume of fish supply.

Fixation of wholesale prices, weighing of fish and making accounts for the suppliers are practically

in the hands of the agents, thus opening the way for malpractices.

The total gross profit of all the agents, before June, 1953, in their own estimates was about one million Kyats. But they are of widely varying capacities, a big agent getting about one lakh and a small about three thousand. A big agent employed three clerks at K. 300 to 200, a mediocre, one or two, and a small agent no clerk. The rent of one stall is K. 37 per month. The actual monthly expenditure of the agents could not be calculated for lack of proper records. But it is a negligible fraction of the gross profit in the case of a big agent. It is about K. 60 in the case of a small agent. Thus, the net profit in the case of the former can be roughly taken as one lakh while in that of the latter about two thousand. Anyway, one hundred fish agents or over with three independent organizations among them is an indication of keen competition and very profitable venture despite the risks in giving advances.

Average wholesale prices of some popular fishes at the market for the period from September, 1952, to August, 1953, are shown in Table III.

Financing.—The amount of loan issued by Government to fishing units (Kyats 150,000 as of 1952-53) is not enough even to start the initial operation. So the fishermen have to turn to the fish agents, who generally advance the money. A big agent advances as much as 2 lakhs of Kyats or a small one about ten thousand. No interest is taken on the advance, but only a condition to sell all the fish through the agent is imposed on the fishermen.

The majority of the retailers do not pay cash when buying and it is part of the agents' job to collect bills regularly from them.

¹ 100 pyas = 1 kyat. One U.S. dollar = 4.76 kyats.

Table III. Average Wholesale Prices, 1952-53

Serial No.	Name of fish	Price per viss in Kyats.
1.	Pa-zoon-gya (<i>Peneus</i> sp.)	5.00
2.	Pa-zoon-dok (<i>Palaemon</i> sp.)	3.00
3.	Nga-tha-lauk (<i>Hilsa ilisha</i> ,)	4.40
4.	Nga-zin-pya (<i>Ilisha sladeni</i> ,)	3.24
5.	Nga-mwe-do (<i>Rhynchobdellidae</i>)	2.14
6.	Nga-myet-san-ni (<i>Labeo rohita</i> ,)	1.92
7.	Nga-thine (<i>Catla catla</i> ,)	2.67
8.	Nga-gyin (<i>Cirrhina mrigala</i> ,)	3.35
9.	Nga-be-byu (<i>Amblypharyngodon mola</i> ,)	1.44
10.	Nga-phe (<i>Notopterus</i> sp.)	2.23
11.	Nga-bat (<i>Wallagonia attu</i> ,)	2.37
12.	Nga-Khu (<i>Clarius batrachus</i> ,)	2.95
13.	Nga-gyaung (<i>Mystus aor</i> ,)	2.06
14.	Nga-zin-yine (<i>Mystus cavasius</i> ,)	1.67
15.	Nga-nu-than (<i>Callichrous</i> sp.)	2.50
16.	Nga-myin-yin (<i>Pseudotropheus goonwaree</i> ,)	3.73
17.	Nga-dan ()	2.15
18.	Nga-yant (<i>Ophicephalus striatus</i> ,)	2.39
19.	Nga-bye-ma (<i>Anabas testudineus</i> ,)	2.39
20.	Nga-pot-thin (<i>Sciaena</i> sp.)	1.29
21.	Ka-bi-lu (<i>Mugil macrolepis</i> ,)	2.54
22.	Ka-kuyan (<i>Eleutheronema indicus</i> ,)	2.96
23.	Ka-ka-dit (<i>Lates calcarifer</i> ,)	2.95
24.	Ka-tha-hmyin (<i>Epinephelus</i> sp.)	2.91
25.	Ka-tha-bo (<i>Glossogobius giuris</i> ,)	1.75

There is considerable risk in giving advances to the fishermen, but not so much in giving credit to the retailers. Many agents have suffered severely by the loss of advances, some to the extent of total failure.

Co-operative Fish Marketing.—A fish marketing co-operative, organized by the Co-operative Department, has begun functioning since June 1, 1953. The Fisheries Officer is a member of the Supervisory Committee of Fishery Co-operatives

as well as the Executive Committee of the marketing society. About 240 fish producers' co-operatives from Maubin, Pyapon, Pegu, Insein and Hantawaddy Districts have joined the marketing cooperative. The method of operation at the market of the society is practically the same as before, the only difference being fixing retail ceiling prices of fish every week. Formerly, two different commission rates were charged, i.e. 6% for those who took loan from the society and 3% for those who did not. But

since October 1, 1953, only one rate, 4%, is taken. The society receives loans from the Government, paying 6½% interest, and takes 12½% on the loans to the member societies.

The financial position of the marketing co-operative as of August 31, 1953, is as follows.

Admission fees from member societies ..	.. K.	5,875
Shares from member societies ..	.. K.	114,700
Loan from the Government ..	.. K.	1,500,000
Total capital ..	.. K.	1,620,575
Amount of loans already issued to 172 member societies ..	.. K.	692,200
Net profit for the period from June 1, 1953, to August 31, 1953, is ..	.. K.	13,091.84

Conclusion.—Results of this pilot study should be of considerable help in planning for further study of fish marketing which, of course, will have to wait till this Fisheries Bureau is adequately staffed.

At one time much hope was entertained that shortage of fish supplies in the Rangoon market could be made good by those coming from the Tenasserim Coast, but it was found later that the irregularities of Tenasserim supplies are due not so much to transportation difficulties as to the special preference of the consumers for fresh-water fish. An intensive educational campaign will be necessary to make the marine fishes generally acceptable to consumers in this area.

Potentiality of market development in respect of fresh-water fishes is not considered to be great, though there is still room for improvement. Transportation of fish and other related facilities can be further developed. A cold store is badly needed for the market to stabilize the widely fluctuating prices of fish in Rangoon.

There are 1598 leased fisheries (as of 1951-52) in the six neighbouring districts. About 240 of them are now members of the marketing co-operative and they are receiving very substantial loans from the society. The rest, of course, are still dependent on the fish agents. They will have to be brought under the co-operative system in due course.