ISSN 0254-380 X

भाकृअनुप
ICAR

समुद्री मात्स्यिकी सूचना सेवा
MARINE FISHERIES INFORMATION SERVICE

No. 120 MARCH, APRIL 1993

तकनीकी एवं विस्तार अंकावली
TECHNICAL AND EXTENSION SERIES

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

भारतीय कृषि अनुसंधान परिषद
INDIAN COUNCIL OF AGRICULTURAL RESEARCH

PRICE STRUCTURE OF MARINE FISHES LANDED AT THE MADRAS FISHERIES HARBOUR WITH SPECIAL REFERENCE TO SHELLFISHES

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Introduction

Madras is one the important mechanished fish landing centres along east coast. The fishery resources from the inshore waters of Madras have been traditionally exploited by indigenous gears viz., shore seine, boat seine, *Ara valai, Mani valai, Eda valai, Pannu valai* etc. The increasing landings of the fishing trawlers at Kasimedu in recent years have resulted in rise of fish production and thereby better economy for the fishermen. The mechanised fishing vessels operate at distant fishing grounds at depth upto 60 metres. An average catch of 18,712 tonnes of fish and shell fishes are landed by mechanished trawl fishing and traditional gill net fishing vessels along Madras coast during 1985-'89. The fishing Harbour at Kasimedu has eastern breakwater 1085m, northern breakwater 830m, and wharfwall 495m with a large berthing capacity of 500 mechanised boats and 50 large trawlers. Besides the mechanised vessels, traditional crafts are also operated from the Kasimedu Harbour base.

Although data of catch, effort and biological parameters are collected on a regular basis, but no data are available on the price structure of commercially important prawns, lobsters, crabs, cephalopods and other quality fishes. Since such information is highly essential for the better evaluation and prudent exploitation of the valuable resources, a brief account of the price structure of prawns and other shell fishes, and quality fin-fishes from Madras area during 1988-'90 is given in this account.

Prawns contribute about 6% to the trawler landings at Kasimedu. The commercial species of big prawns, lobsters, quality fishes like seer fish, pomfrets and cuttle fish and fishes like thread-fin breams, sardines, mackeral and trash fish including all the other varieties are auctioned from 6 to 9 AM and 2-30 to 5-30 PM. Except the prawns and lobsters which are auctioned on per kg basis, all the other varieties are auctioned mostly per basket of about 30 kg. The prawns and lobsters form an important commodity by virtue of their delicacy and higher price they command in the sea food export trade and thus determine the economy of fishing. The price pattern is related to several factors viz., the quality of fish landed, the demand from the consumers and the size and freshness of the lot. The Fishermen Co-operative Society at Kasimedu fishing centre exerts authority over the auctioning and collects Rs. 0.25 paise per basket of fish and prawns brought here. The catch is sorted out into fish, prawns, lobsters and other shell fishes according to their value before they are auctioned. Three types of fishing vessels operate during day, night and long trips. In the case of

night and long trips fishing vessels, the catches are brought in iced condition. If the catch is poor, it is auctioned as a lot without sorting.

Export varieties of prawns landed by trawlers are *Penaeus monodon, P. semisulcatus, P. indicus, Metapenaeus monoceros* and *M. affinis*. Smaller species like *Metapenaeus dobsoni, Parapenaeopsis maxillipedo, P. stylifera, Metapenaeopsis stridulans, M. mogiensis, Trachypenaeus sedili, T. granulosus, T. curvirostris* and *Solenocera crassicornis* occur in fairly good quantities during certain months of the year and they cater to the local markets.

Lobsters and crabs contribute about 1-2% of the fishery. The landings are constituted of spiny lobster mainly *Panulirus homarus* and mud lobster represented by *Thenus orientalis*. The commercial catches of crabs are by *Portunus sanguinolentus, P. pelagicus, Podophthalmus vigil* and *Charybids* spp. which includes mainly *C. lucifera, C. natator* and *C. cruciata*. The cephalopods which formed 6% in the total fish landings mainly consists of *Sepia aculeata, S. pharonis, S. inermis, Loligo duvucelii, L. uyii* and *Doryteuthis sibogae*.

Price structure

The size range of the different fishes and shell fishes, price structure and price relative ie, the price in 1990 compared to that in the base year, 1988 (obtained by dividing in the price in 1990 by that in 1988 and expressed in percentage) are given in Table 1. It is seen that there is very high rise in prices in 1990 in the case of lobsters, prawns, crabs, squids, mackeral, shark, tunas and lesser sardines with average increase of 100-133%. The price rise is less in the other groups, seer fish, pomfrets, barracudas, threadfin breams, anchovies, carangids and oil-sardine with a rise of 33-76%.

TABLE 1. *Average range of annual price in Rs./kg at the landing centre and size range in total length (mm) for selected prawns, lobsters, crabs, cephalopods and quality marine fishes at madras Fisheries Harbour during 1988, 1989 and 1990.*

Species	Size range in total length (mm)	1988	1989	1990	Price relative (%)
1	2	3	4	5	6
I. PRAWNS					
1. *Penaeus monodon*	136-310	130-150	165-185	220-250	1.67
2. *P. semisulcatus*	103-225				
3. *P. indicus*	86-197	70-80	90-100	110-130	1.26
4. *Metapenaeus monoceros*	93-186	50-65	75-85	95-115	1.81
5. *M. affinis*	73-168				
6. *M. dobsoni*	46-117	12-16	18-20	20-25	1.64
7. *Parapenaeopsis maxillipedo*	44-115	10-14	16-18	19-23	
8. *P. stylifera*	51-103				
9. *Metapenaeopsis maxillipedo*	43-100				
10. *M. mogiensis*	41-98				
11. *Trachypenaeus sedili*	44-101				
12. *T. granulosus*	45-100				
13. *Solenocera crassicornis*	58-98				
14. *Parapenaeus longipes*	48-89				

1	2	3	4	5	6
II. LOBSTERS					
A. Spiny lobster					
1. *Panulirus homarus*	111-290				
2. *P. ornatus*	105-265	70-80	125-130	170-180	2.33
3. *P. polyphagus*	110-280				
B. Mud lobster					
Thenus orientalis	111-170	60-70	95-100	130-140	2.07
III. CRABS					
1. *Scylla serrata*	70-170	20-25	25-30	35-40	1.65
2. *Portunus pelagicus*	120-170				
3. *P. sanguinolentus*	100-180	5-8	10-13	15-18	2.27
4. *Podophthalmus vigil*	115-175				
5. Other crabs	—	2	3	4	2.00
IV. CEPHALOPODS					
A. Sepia					
1. *Sepia aculeata*	50-140				
2. *S. pharonis*	8-240	16-18	18-20	20-25	1.35
3. *S. inermis*	50-80				
B. Loligo					
1. *Loligo duvaucelii*	40-165				
2. *L. uyii*	30-60	7-9	8-10	15-18	2.12
3. *Doryteuthis sibogae*	70-160				
V. MARINE FISHES					
A. Seer fish					
1. *Scomberomorus commerson*	400-1350				
2. *S. guttatus*	290-1450	30-35	40-45	40-50	1.36
3. *S. lineolatus*	350-1200				
B. Pomfrets					
1. *Pampus argenteus*	160-320				
2. *P. chiensis*	130-315	17-20	22-25	30-35	1.73
3. *Parastromateus niger*	125-320				
C. Perches					
Lates calcarifer	200-400	20-25	28-30	40-45	1.86
D. Thread fin breams					
1. *Nemipterus bleekeri*	90-140				
2. *N. japonicus*	80-305	18-20	23-25	25-30	1.47
3. *N. peroni*	100-200				
4. *N. metaptas*	80-190				

1	2	3	4	5	6
E. Carangids					
1. *Carangoides chrydophrys*	100-220	10-15	18-20	20-25	1.76
2. *Caranx ignobilis*	80-200				
3. *C. sexfaciatus*	75-210				
4. *Decapterus russelli*	80-220				
5. *Megalaspis cordyla*	100-340				
6. *Scomberoids commersonianus*	120-290				
F. Mackeral					
Rastrelliger kanagurta	100-250	7-10	10-15	18-20	2.11
G. Barracudas					
1. *Sphyraena barracuda*	100-250	15-20	20-25	28-30	1.61
2. *S. jello*	90-265				
H. Cat fishes					
1. *Arius dussumieri*	300-550	5-8	8-10	10-15	1.85
2. *A. jella*	250-460				
3. *A. tenuispinis*	310-510				
I. Sharks					
1. *Chiloscyllium indicum*	450-850	6-8	8-10	12-15	2.00
2. *Stegostoma fasciatum*	350-650				
3. *Carcharhinus limbatus*	500-750				
4. *C. longimanus*	450-600				
5. *C. melanopterus*	300-550				
6. *Galeocerdo cuvieri*	400-700				
7. *Rhizoprinodon acutus*	450-700				
8. *Scoliodon laticaudus*	300-1800				
J. Tuna					
1. *Euthynnus affinis*	250-700	4-5	5-6	8-10	2.0
2. *Katsuwonus pelamis*	220-660				
3. *Thunnus albacares*	200-650				
K. Lizard fish					
Saurida tumbil	120-240	6-8	8-10	12-15	2.0
L. Anchovies					
1. *Thryssa dussummieri*	90-160	2	3	5	1.92
2. *T. mystax*	80-150				
3. *T. purava*	70-140				
M. Oil sardines					
Sardinella longiceps	60-200	—	3	4	1.4
N. Lesser sardines					
1. *Sardinella gibbosa*					
2. *S. sirm*	55-210	2	3	4	2.0
3. *S. albella*					

In addition there is seasonal variations in the prices (Table 2) Feb-May when the catches are less the prices of prawns, crabs, quality fishes, squids and cuttle fishes as well as miscellaneous groups are distinctly higher than in the period June-Jan. when higher fish catches obtained.

TABLE 2. *Daily price range in Rs./kg during February-May and June-January periods for the different species of prawns, lobsters, crabs cephalopods and marine fishes*

Species	Feb.-May (Rs.)	June-Jan. (Rs.)
A. PRAWNS		
Penaeus monodon	136-310	
P. semisulcatus	230-250	220-238
P. indicus	115-130	110-123
Metapenaeus monoceros		
M. affinis	110-115	95-100
M. dobsoni		
Parapenaeopsis maxillipedo	22-25	20-22
P. stylifera		
Metapenaeus stridulans		
M. mogiensis		
Trachypenaeus sedili	20-23	19-20
T. granulosus		
Solenocera crassicornis		
Parapenaeus longipes		
Other prawns		
B. LOBSTERS		
Panulirus homarus		
P. ornatus	175-180	140-160
P. polyphagus		
Thenus orientalis	120-140	90-110
C. CRAB		
Scylla serrata	32-40	23-30
Portunus sanguinolents	14-20	10-13
P. pelagicus	14-20	10-13
Podophthalmus vigil		
D. CEPHALOPODS		
Sepia aculeata		
S. pharonis	19-25	14-18
S. inermis		
Loligo duvaucelii		
L. uyii	13-18	9-14
Doryteuthis sibogae		
E. FISHES		
Scomberomorus commerson	42-50	
S. guttatus		
S. lineolatus		
Pampus argenteus		
P. chinensis	31-35	28-32
Parastromatues niger		
Lates calcarifer	41-45	33-40
Nemipterus bleekeri		
N. japonicus		
N. metopias	24-30	19-26
N. peroni		
Carangoides chrydophrys		
Caranx ignobilis		
C. sexfasciatus		
Decapterus russelli	18-25	13-17
Megalaspis cordyla		
Scomberoides commersonianus		
Rastrelliger kanagurta	17-20	14-16
Sphyraena barracuda	26-30	23-25
S. jello		
Arius dussumieri		
A. jella		
A. tenuispinis	12-15	9-11
Chiloscyllium indicum		
Rhinlodon typus		
Stegostoma fasciatum		
Carcharhinus limbatus		
C. longimanus	13-15	10-12
C. melanopterus		
Galeocerdo cuvieri		
Rhizopriodon acutus		
Scoltodon laticaudus		
Euthynnus affinis		
Katsuwonus pelamis	7-10	6-8
Thnnus albacares		
Saurida thumbil	12-15	9-11
Thryssa dussumieri		
T. mystax	5	3
T. purava		
Sardinella longiceps		
S. gibbosa	5	3
S. sirm		
S. albela		

Supply of prawns to Madras markets depends on the local catches and price structure of fresh prawns. It is well known that there is a correlation between demand, supply and cost of any commercial product. In the case of prawns, there is a heavy demand for species such as *P. monodon, P. semisulcatus, P. indicus, M. manoceros* and *M. dobsoni* for export purpose. The small size prawns are not exported and they

mainly cater to local consumption. The lack of sufficient prawn holding capacity in trawlers appears to adversely affect a regular supply to the industry and thereby the income to the primary producers. If the holding capability could be raised, prawns could be carried over for sale of processing at times when fresh prawns are not readily available which could ensure a better price return to the fishermen.

It is desirable to sort out according to kind and quality to increase fish consumption. Large fishes like seer mainly *Scomberomorus commerson, S. guttatus, S. lineolatus* and pomfrets mainly *Pampus argenteus* and *P. chinensis* being first class table fishes, fetch better prices than other fishes. The fishes of lower quality must be separately sorted out for conversion into fish meal and fish mannure. Special care is necessary in selecting fresh and good varieties of fish for distant markets.