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Trade and utilization pattern of marine fishes in Chennai Fisheries Harbour

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Overseas trade opened up commercial interests to the otherwise traditional type of fishery activities, whereby corporate sectors are being steadily enticed to develop modern industrial fisheries. Increasingly more varieties of fish in large quantities are in demand, to which the industry has shown positive response with organized efforts. As a result, a transformed scenario is evident all over, more obviously in urban centers, as witnessed in Chennai, a major fishing centre active with traditional as well as modern fishery, including boat building yard, fish meal plant, fish processing and export establishments.

Chennai metropolis with a population of about 4.5 million people, has a coast line stretching over a

distance of 12 km, dotted with nine hamlets. The area of fishing operation from the base here, extends on the north-south axis over a coastal length of 75 km, which could even exceed further distance, especially, deep into Andhra Pradesh coast in the north on several occasions. Fishermen numbering over 7,000 in the city including all the hamlets carry out the fishing operation with about 2,250 catamarans, 700 canoes and 550 mechanized trawlers which would substantially increase in number with the addition of outstation trawlers visiting Chennai waters during peak fishing seasons. The fishery here, reaches peak during December - February and June - September with lean seasons being April, May and October-November.

The country crafts operating from the hamlets, land and sell the catch at the respective localities, while all mechanized trawlers converge to land and market the catch at Royapuram (Kasimedu) Fishery Harbour, which has the holding capacity of 550 trawlers, including 50 large trawlers. The annual landings at the city centres reach up to 35,000 t, including commercially important groups like seerfish, pomfrets, tuna, sharks, rays, cat fish, perches,

threadfin breams, sciaenids, mackerels, sardines, penaeid prawns, portunid crabs and cephalopods. In addition, trawlers land huge amount of small fishes and invertebrates. Quality items are separated from trash onboard and brought invariably in bamboo baskets ready for the spot sale on landing. Detailed list on important fishery items present in the catch and the system of utilization and marketing at the Chennai fisheries harbour are presented in Table1.

Table 1. Utilization pattern of marine fishes in Chennai Fisheries Harbour

Groups	Form of utilization			Export		Total
	Fresh (%)	Dry (%)	Dry fish meal (%)	Fresh (%)	Dry (%)	
Elasmobranchs						
Sharks	50	35	2	5	8	100
Rays	70	5	25	0	0	100
Skates	3	80	17	0	0	100
Bony fishes						
Sardines and Shads	70	25	5	0	0	100
Anchovies	30	55	5	0	10	100
Wolf herrings	70	25	5	0	0	100
Lizard fishes	80	18	2	0	0	100
Cat fishes	85	15	0	0	0	100
Eels	90	10	0	0	0	100
Flying fishes	15	80	5	0	0	100
Full beaks (<i>Belone</i> sp.)	80	20	0	0	0	100
Half beaks (<i>Hemirhamphus</i> sp.)	85	15	0	0	0	100
Sea horses and Pipe fishes (<i>Hippocampus</i> sp. and <i>Syngnathus</i> sp.)	0	0	10	40	50	100
Soldlerfish and Squirrel fish (<i>Myripristis</i> sp. and <i>Sargocentron</i> sp.)	20	0	70	0	10	100
Barracudas (<i>Sphyraena</i> sp.)	75	25	0	0	0	100
Mulletts	95	5	0	0	0	100
Threadfins (<i>Polynemus</i> sp.)	95	5	0	0	0	100
Sea perches (<i>Lates</i> sp. and <i>Ambassis</i> sp.)	90	10	0	0	0	100
Groupers (<i>Epinephelus</i> sp.)	80	20	0	0	0	100
Tiger perches (<i>Therapon</i> sp.)	95	5	0	0	0	100
Bull eyes (<i>Priacanthus</i> sp.)	2	0	98	0	0	100
Cardinal fishes (<i>Apogon</i> sp. and <i>Archamia</i> sp.)	80	20	0	0	0	100
Whitings (<i>Sillago</i> sp.)	90	10	0	0	0	100
White fishes (<i>Lactarius</i> sp.)	75	25	0	0	0	100
Cobia (<i>Rachycentron</i> sp.)	80	20	0	0	0	100
Carangids (<i>Caranx</i> sp., <i>Decapterus</i> sp., <i>Megalaspis</i> sp., <i>Scomberoides</i> sp.)	70	20	0	10	0	100
Black pomfrets (<i>Parastromateus</i> sp.)	70	20	0	10	0	100
Moon fish (<i>Mene</i> sp.)	0	2	98	0	0	100
Dolphin fishes (<i>Coryphaena</i> sp.)	30	70	0	0	0	100
Red baits (<i>Dipterygonotus</i> sp.)	20	80	0	0	0	100
Snappers (<i>Lutjanus</i> sp.)	65	35	0	0	0	100

Threadfin breams (<i>Nemipterus</i> sp.)	95	5	0	0	0	100
Silverbellies (<i>Gazza</i> sp., <i>Leiognathus</i> sp. and <i>Secutor</i> sp.)	20	70	10	0	0	100
Mojarrus (<i>Gerres</i> sp.)	80	20	0	0	0	100
Grunters (<i>Pomadasys</i> sp.)	95	5	0	0	0	100
Croakers (<i>Johnnieops</i> sp., <i>Johnius</i> sp., <i>Kathala</i> sp., <i>Protonibea</i> sp. and <i>Otolithus</i> sp.)	90	10	0	0	0	100
Pig face breams (<i>Lethrinus</i> sp.)	80	20	0	0	0	100
Goat fishes (<i>Parupeneus</i> sp., <i>Upeneus</i> sp.)	75	25	0	0	0	100
Moony (<i>Monodactylus</i> sp.)	5	15	80	0	0	100
Spade fishes (<i>Ephippus</i> sp.)	0	10	90	0	0	100
Sickle fishes (<i>Drepane</i> sp.)	10	80	10	0	0	100
Butter fishes (<i>Scatophagus</i> sp.)	75	20	5	0	0	100
Coral fishes (<i>Chaetodon</i> sp.)	80	20	0	0	0	100
Rabbit fishes (<i>Siganus</i> sp.)	75	20	5	0	0	100
Ribbon fishes (<i>Eupleurogrammus</i> sp., <i>Lepturancathus</i> sp. and <i>Trichiurus</i> sp.)	20	80	0	0	0	100
Tunas (<i>Thunnus</i> sp., <i>Euthynnus</i> sp. and <i>Katsuwonus</i> sp.)	75	25	0	0	0	100
Mackerel (<i>Rastrelliger</i> sp.)	80	15	5	0	0	100
Seerfish (<i>Acanthocybium</i> sp. and <i>Scomberomorus</i> sp.)	80	20	0	0	0	100
Sail fishes (<i>Istiophorus</i> sp., <i>Makaira</i> sp.)	10	80	10	0	0	100
Sword fishes (<i>Xiphias</i> sp.)	5	60	35	0	0	100
Pomfrets (<i>Pampus</i> sp.)	90	10	0	0	0	100
Drift fishes (<i>Ariomma</i> sp.)	40	60	0	0	0	100
Scorpion fishes (<i>Pterois</i> sp.)	15	80	5	0	0	100
Flat heads (<i>Platycephalus</i> sp.)	40	60	0	0	0	100
Indian halibut (<i>Psettodes</i> sp.)	80	15	5	0	0	100
Flounders (<i>Pseudorhombus</i> sp.)	20	75	5	0	0	100
Tongue soles (<i>Cynoglossus</i> sp.)	60	30	10	0	0	100
Sucker fishes (<i>Echeneis</i> sp.)	2	10	88	0	0	100
Tripod fishes (<i>Pseudotriacanthus</i> sp.)	5	5	90	0	0	100
Trigger fishes (<i>Canthidermis</i> sp., <i>Odonus</i> sp. and <i>Sufflamen</i> sp.)	0	5	95	0	0	100
Box fishes (<i>Lactoria</i> sp., <i>Tetrosomus</i> sp.)	0	5	95	0	0	100
Puffer fishes (<i>Arothron</i> sp.)	1	9	90	0	0	100
Porcupine fishes (<i>Diodon</i> sp.)	0	20	80	0	0	100
Sun fishes (<i>Mola</i> sp.)	0	15	85	0	0	100
Shrimps						
a) Penaeid shrimps						
Shrimps (big size) - <i>Fenneropenaeus</i> sp. and <i>Metapenaeus</i> spp.	10	0	0	90	0	100
Shrimps (small size) - <i>Metapenaeus</i> spp., <i>Parapenaeopsis</i> spp., <i>Metapenaeopsis</i> spp., <i>Trachypenaeopsis</i> spp., <i>Solenocera</i> spp.	90	0	0	10	0	100
b) Non-peneaid shrimps						
<i>Acetes</i> spp.	60	20	0	20	0	100
<i>Macrobranchium</i> spp.	80	10	0	10	0	100
c) Other Shrimps						
	60	20	20	0	0	100
Lobsters						
Spiny lobsters (<i>Panulirus</i> sp.)	15	0	0	85	0	100
Sand lobsters (<i>Thenus</i> sp.)	10	0	0	90	0	100
Crabs						
a) Portunid crabs						
<i>Charybdis</i> spp.	95	0	5	0	0	100

<i>Portunus</i> spp.	80	0	0	20	0	100
<i>Podophthalmus vigil</i>	95	0	5	0	0	100
<i>Thalamitta</i> spp.	60	0	40	0	0	100
<i>Scylla</i> spp.	50	0	0	50	0	100
b) Other crabs	15	20	65	0	0	100
Stomatopods						
<i>Oratosquilla</i> spp.	2	0	98	0	0	100
<i>Harpisquilla</i> spp.	2	0	98	0	0	100
Molluscs						
a) Gastropods (<i>Murex</i> sp., <i>Conus</i> sp., <i>Trochus</i> sp., <i>Strombus</i> sp.)	0	0	0	0	100	100
b) Bivalves						
Cockles (<i>Anadara</i> sp.)	85	5	10	0	0	100
Mussels	20	0	5	0	75	100
Oysters (<i>Meretrix</i> sp., <i>Solen</i> sp., <i>Pinna</i> sp.)	25	30	35	0	10	100
Others	0	0	0	0	100	100
c) Cephalapods						
<i>Sepia</i> sp.	40	5	0	50	5	100
<i>Loligo</i> sp.	60	5	0	35	0	100
<i>Octopus</i> sp.	0	0	100	0	0	100
Echinoderms						
Sea urchin (<i>Salmacis</i> sp., <i>Fibularia</i> sp.)	0	0	100	0	0	100
Sea stars (<i>Astropecten</i> sp.)	0	0	100	0	0	100
Sea lilies (<i>Tropiometra</i> sp., <i>Lamprometra</i> sp.)	0	0	100	0	0	100

The catch is marketed either in fresh or dry form for domestic consumption as well as export and also sold for fish meal production. Marketing of catches actually commences at the landing sites and the method of disposal varies with different components. Exportable items like larger prawns are directly procured from trawlers by agents of export houses at fixed rate, invariably with lumpsum advance payments prior to each fishing season. In the case of items like small prawns, fishes and other invertebrates, they are auctioned in divided quantities affordable by retailer and the price offered depends upon the demand and supply position of the day.

There exists an established marketing network across the sprawling city and peripheral area. Spread over the city, there are 41 organized fish markets, with facilities like over-head roofs, platform, drainages, electricity and drinking water. Among the markets, five are large whole sale trade centres and the rest are retail markets. In the wholesale market, at Chintadripet, catches are largely auctioned while catches brought from neighboring outstation centres are disposed of at other main centres, important ones being at Saidapet and Triplicane.

Of the estimated marine landings of 35000 t at the city centres, 80% and 16% are consumed in fresh and dry conditions respectively. Household consumptions account for 65 %. Hostels, restaurants and institutions together share 35 % among domestic demands. Most of the consumers of fish in fresh condition are within 20 km radius from the landing centre and only about 5% consumers are beyond 40 km distance. About 85 % of fishes purchased in fresh conditions are consumed on the same day, 14 % on the next day and only 0.5% are taken to the city. Over 15,000 t arrive from outstations, mainly from Tuticorin and Rameshwaram within Tamilnadu as well as from Kerala, Karnataka and Andhra Pradesh. Of the dry fish stocks, about 9000 t are sold to distant towns like Villupuram, Trichy, Madurai, Salem, Vellore, Coimbatore and Erode. Dominant among dried items are sardines, ribbon fish, flying fish, silver bellies, tuna and *Acetes*. Fish meal manufacturers utilize 14 % of the catch, which include cheaper quality fishes and invertebrates. These items are sold in fresh condition or dry form to merchants for fish meal plants located nearby or periodically to wholesale merchants. Exports accounts for about 4 % of the catches. Popular export items fetching very high prices in overseas markets include penaeid prawns, lobsters and tuna.