

# Fish Species Availability In The Fish Landing Centers Of Patuakhali, Bangladesh

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**Abstract:** An investigation was carried out on the fish species availability in the fish landing centers of Patuakhali district from March, 2012 to December 2012 to know the present status of freshwater, brackish water and marine species variety and their relative abundance in Patuakhali, the coastal district of Bangladesh. Almost all the major fish landing centers (seven) were surveyed using questionnaire. A total of 138 inland and marine water fish and crustacean species were observed. Out of 138, 126 species belongs to finfish and rest 12 species to crustacean. Amongst the fin fish species, 61 were freshwater, 10 exotic and 55 marine water species. Twenty one fish species were found both in marine and freshwater. Eighteen species were detected as endangered (Ompok pabda, Tenulosa toli, Sperata aor, Chitala chitala, Puntius sarana, Rita rita, Nandus nandus, Notopterus notopterus, Wallago attu, Channa marulius, Labeo bata, Pangasius pangasius, Puntius ticto, Osteobrama cotio, Labeo calbasu, Chanda nama, Bagarius bagarius and Rasbora rasbora). On the basis of abundance, carp species, Tenulosa ilisha, Lates calcarifer, Trichiurus haumela, Penaeus monodon and Scylla serrata were recorded most abundant.

**Key words:** Species, Fish landing center, marine water, fresh and brackish water, crustaceans, fin fish, exotic fish.

## INTRODUCTION

In Bangladesh, fisheries sector has an important and potential contribution in the agro-based economic development, poverty elevation, and employment generation, supplying of animal protein and earning the foreign currency (Shah, 2003). On the basis of fish species number and abundance, Bangladeshi fisheries resource is one of the largest and diversified natural resource of the world. There are 289 freshwater (Hossain, 2012) and 475 marine species (BOBP 1985) are available in the water area of the Bangladesh. Fish landing center is a place where different types of fish and fisheries commodities are accumulated from different sources like river, beel, haor, pond, gher, estuaries and sea (BFDC 2001). The fishes are transferred from the fish landing centers to consumption markets via different channel. Fish landing center plays a vital role in quick and smooth disposal of fresh fish. Fish are transported to different parts of the country and also to other countries through landing center (Hye, 2003).

Recent estimates suggested that worldwide 20% of all freshwater fish species are extinct, endangered or vulnerable (Moyle, 1992). As a result, fish stocks particularly those dwelling inland open water areas, have gradually become endangered. In Bangladesh, about 54 freshwater species are critically or somewhat endangered (IUCN Bangladesh, 2000). Patuakhali is recognized as a fisheries zone of Bangladesh. Many varieties of fish species are available in the fish landing centers of this district. Both inland (freshwater and brackish) and marine water fish species are found in the landing centers of Patuakhali district. To our knowledge until now no work has been done on the species availability in the fish landing centers in Patuakhali district though it is very important for the fisheries resources of this district. Study about the species availability helps to know the present status of freshwater, brackish water and marine species variety and their relative abundance in the respective water bodies. It also helps to identify the species which are extinct or about to be extinct and to take the necessary measures if required. On the view of this, the survey was carried out to study the fish species availability in the fish landing centers of Patuakhali district.

## MATERIALS And METHODS

### Study area

The study was carried out in Patuakhali district of Bangladesh. All the major fish landing centers of this district were included in this study. The fish landing centers are located at Mohipur, Patuakhali sadar, Bauphol, Golachipa, Kuakata sutki polli, Kuakata bazar and Mirzagonj.

### Data collection and analysis

In order to collect data on fish landing center, field visits were made in the major fish landing centers of Patuakhali from March to December, 2012. Every fish landing centers were visited at least three times to get the seasonal variation data of fish species. Large fish landing centers (Mohipur, Kuakata bazar, Kuakata sutki polli and Patuakhali sadar) were visited four times every two months interval. In addition relevant information was also collected from primary and secondary sources. The primary data were assembled through field survey at the upazilla level using a

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questionnaire. The questionnaire form was filled in by interviewing the organizers, aratdars (assembler) and fishermen directly from the field. All the collected data were analyzed and the species observed in the landing centers were grouped in different categories.

## RESULTS AND DISCUSSION

### Species composition

Both inland (Fresh and brackish) and marine water species were found in the fish landing centers of Patuakhali district. A total of 138 freshwater, brackish water and marine water fish and crustacean species were available. Out of 138, 126 species belonged to fin fish and the rest 12 species to crustacean. Amongst the fin fish species, 61 were fresh and brackish water species (Table 1), 10 exotic species (Table 2) and 55 marine water species (Table 3) were available. Brackish and marine water species were abundant in Patuakhali district because it is close to the Bay of Bengal. It is the central market of fish and fisheries commodities in the central south region of Bangladesh. All the marine water species were not found in the fish landing centers of Patuakhali district because a number of marine fish species are not eaten by the Muslims or Hindu communities. These fishes were not available in the market as the fishermen did not carry those in the market and disposed them in the sea.

### Crustacean

A total of 12 crustacean species were found in the fish landing centers of Patuakhali district (Table 4). Fresh water pleomonids are referred to as prawn and marine penaeids and pleomonids are called shrimp (FAO, 1985). In Bangladesh, 36 shrimp species are available. From the point of view of economic importance, bagda (*Penaeus monodon*) is the remarkable species which is now being cultured in Patuakhali. In case of crab, there are 12 species available in coastal area and coastal mangrove forest (Islam, 1990). Mud crabs (*Scylla serrata*) are cultured from the mangrove forest. It is also cultured in Patuakhali district now a days. Table 4 shows the commercially important crustaceans available in the fish landing centers in Patuakhali district.

### Exotic species

Ten exotic fishes were found in the fish landing centers of Patuakhali district. There are 25 exotic species available in our country and cultured in the closed water bodies as a result exotic fishes are found all the year round and they have a good market demand in this district. (Table 2)

### Endangered species

There are some species that were available at least 5-10 years ago but now they are endangered or about to extinct. According to the Red list of IUCN-Bangladesh (2000), 54 species are somewhat threatened (vulnerable, endangered and critically endangered) though the list is 12 years old. Eighteen species were detected critically or some what endangered. Table 5 shows the list of endangered fish species recorded from Patuakhali district. It is very essential to conserve those species otherwise they will completely extinct.

### Variation in species abundance

During the survey, it was observed that some fish and crustacean species were abundant and some were less abundant in the fish landing centers in the Patuakhali district. Table 6 shows the variation in abundance in species in fish landing centers of Patuakhali.

## CONCLUSION

A total of 138 inland and marine water fish and crustacean species were observed. Out of 138, 126 species belongs to finfish and rest 12 species to crustacean. Amongst the fin fish species, 61 were freshwater, 10 exotic and 55 marine water species. Twenty one fish species were found both in marine and freshwater. Some species were detected as endangered species. Considering consumers' preferences and market value and to conserve species diversification of different fish, these threatened species should be protected from being extinct. Remarkable changes were observed in many natural fish population. To conserve the valuable native endangered species some management measures such as more new policies and strategies should be taken by the government and development organizations.

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**Table 1: Inland water fish species available in fish landing centers of Patuakhali district**

Local name	English name	Scientific name	Distribution
Bhetki/ Koral	Barramundi/Seabass	<i>Lates calcarifer</i>	Estuaries and rivers
Kalo bujuri	Tengra mystus	<i>Mystus tengra</i>	Rivers
Tengra	Striped dwarf catfish	<i>Mystus vittatus</i>	Estuaries and rivers
Golsha tengra	Gangetic tengra	<i>Mystus cavasius</i>	Rivers and estuaries
Rui	Indian Major carp	<i>Labeo rohita</i>	Rivers and estuaries
Catla	Calta	<i>Catla catla</i>	Rivers and estuaries
Mrigal	Mrigal	<i>Cirrhinus cirrhosus</i>	Rivers and estuaries
Tara baim	One –striped spiny eel	<i>Macrogathus aculeatus</i>	Rivers and estuaries
Baim/Guchi	Striped spiny eel	<i>Macrogathus pancalus</i>	Rivers and estuaries
Bele	Tank goby	<i>Glossogobius giurus</i>	Rivers and estuaries
Magur	Air breathing catfish	<i>Clarius batrachus</i>	Closed water body
Boal	Freshwater shark	<i>Wallago attu</i>	Rivers and estuaries
Pabda	Pabdah catfish	<i>Ompok pabda</i>	River and closed water body
Koi	Climbing perch	<i>Anabas testudineus</i>	Rivers
Shol	Banded snakehead	<i>Channa striata</i>	Rivers and estuaries
Gazar	Giant snakehead	<i>Channa marulius</i>	Rivers and estuaries
Taki	Spotted snakehead	<i>Channa punctata</i>	Rivers and estuaries
Cheng	Asiatic snakehead	<i>Channa orientalis</i>	Closed water bodies
Bheda/Meni	Mud perch	<i>Nandus nandus</i>	Rivers and estuaries
Aor	Long-whiskered catfish	<i>Sperata aor</i>	Rivers and estuaries
Foli	Grey featherback	<i>Notopterus notopterus</i>	Rivers and estuaries
Chital	Humped featherback	<i>Chitala chitala</i>	Rivers and estuaries
Ilish	Hilsha	<i>Tenualosa ilisha</i>	Estuaries and rivers
Chandana ilish	Toli Hilsha	<i>Tenualosa toli</i>	Estuaries and rivers
Tit punti	Ticto barb	<i>Puntius ticto</i>	Rivers
Jat punti	Spotfin swamp barb	<i>Puntius sophore</i>	Rivers
Sarpunti	Olive barb	<i>Puntius sarana</i>	Rivers and estuaries
Shing	Stinging cat fish	<i>Heteropneustes fossilis</i>	Rivers and estuaries
Chapila	Indian river shad	<i>Gudusia chapra</i>	Rivers and estuaries
Khalisha	Striped gourami	<i>Colisa fasciatus</i>	Rivers
Mola	Indian carplet	<i>Amblypharyngodon mola</i>	Rivers
Dhela	Cotio	<i>Osteobrama cotio</i>	Rivers
Kalibaas	Black rohu	<i>Labeo calbasu</i>	Rivers
Darkina	Rasbora	<i>Rasbora rasbora</i>	Rivers and estuaries
Kakila	Needle fish	<i>Xenentodon cancila</i>	Rivers and estuaries
Chanda	Elongate glass perch	<i>Chanda nama</i>	Rivers and estuaries
Pangus	River pungus	<i>Pangasius pangasius</i>	River/estuaries
Ek thota	Halfback	<i>Hyporhamphus limbatus</i>	Rivers and estuaries
Potka	Gangaetic puffer fish	<i>Tetraodon patoca</i>	Tidal rivers and estuaries
Churi	-	<i>Trichiurus mutica</i>	Estuaries and rivers
Kuli	Dusky sleeper	<i>Elotris fusca</i>	Estuaries and rivers
Tapasi/muni	Paradise threadfin	<i>Polynemus paradiseus</i>	Estuaries and rivers
Lakhua	Indian threadfin	<i>Polydactylus indicus</i>	Estuaries
Khorsola	Corsula mullet	<i>Rhinomugil corsula</i>	Estuaries and rivers
Parsia	Goldspot mullet	<i>Liza parsia</i>	Estuaries
Poa	Pama	<i>Otolithoides pama</i>	Estuaries and rivers
Somudra koi	Tripletail	<i>Labotes surinamensis</i>	Estuaries and rivers
Rup chanda	Chinese pomfret	<i>Pampus chinensis</i>	Estuaries
Tular dandi	Gangetic sillago	<i>Silloginopsis panijus</i>	Estuaries and rivers
Kuicha	Gangetic mud eel	<i>Monopterusuchia</i>	Rivers and estuaries
Kani magur	Canine catfish eel	<i>Plotosus canius</i>	Estuaries and rivers
Ghagra	Gagora catfish	<i>Arius gagora</i>	Estuaries and rivers

Rita	Rita	<i>Rita rita</i>	Estuaries and rivers
Bata	Bata labeo	<i>Labeo bata</i>	Rivers
Phasa	Gangetic hairfin anchovy	<i>Setipinna phasa</i>	Estuaries and rivers
Choukka	Indian pella	<i>Pellona ditchela</i>	Estuaries
Kachki	Ganga river sprat	<i>Corica soborna</i>	Rivers
Bagha air	Gangetic goonch	<i>Bagarius bagarius</i>	Estuaries and rivers
Silong	Silond catfish	<i>Silonia silondia</i>	Estuaries and rivers
Salbaim	Zig Zag eel	<i>Mastacembelus armatus</i>	Rivers
Chaka	Squarehead catfish	<i>Chaca chaca</i>	Rivers

**Table 2: Exotic fish available in the fish landing centers of Patuakhali district**

Local name	Scientific name
Grass carp	<i>Ctenopharyngodon idella</i>
Common carp	<i>Cyprinus carpio</i>
Silver carp	<i>Hypophthalmichthys molitrix</i>
Thai sarpunti/Raj puti	<i>Banbonymus gonionotus</i>
Tilapia	<i>Oreochromis mossambica</i>
Thai pungus	<i>Pangasianodon hypophthalmus</i>
Nilotica	<i>Oreochromis niloticus</i>
Bighead carp	<i>Aristichthys nobilis</i>
Mirror carp	<i>Cyprinus carpio var. specularis</i>
Black carp	<i>Mylopharyngodon piceus</i>

**Table 3: Marine water fish species available in fish landing centers of Patuakhali district**

Local name	English name	Scientific name
Chitra/Bistara	Spotted butterflyfish	<i>Scatophagus argus</i>
Java	-	<i>Siganus javus</i>
Tular dandi	Lady fish	<i>Sillago domina</i>
Med	Gaint sea cat fish	<i>Katengus typus</i>
Lal poa/Vola	Silver jew	<i>Johnius argentatus</i>
Konkon	-	<i>Pelamys chiliensis</i>
Churi	Ribbon fish	<i>Trichiurus haumela</i>
Phasa	Anchovies	<i>Thryssa mystax</i>
Datina/Sada datina	Silver bream	<i>Pomadasys hasta</i>
Kani magur	Canine eeltail catfish	<i>Plotosus lineatus</i>
Rup chanda	Chinese pomfret	<i>Pampus chinensis</i>
Cheowa	Torpedo trevally	<i>Taenoides anguillaris</i>
Shaplapata/Haush	String ray	<i>Himantura uarnak</i>
Bhangan	Mullet	<i>Mugil cephalus</i>
Rekha	Four barred finger fish	<i>Corius quadrifasciatus</i>
Loitta	Bombay duck	<i>Harpadon nehereus</i>
Foli chanda	Silver pomfret	<i>Pampus argenteus</i>
Maitya	Jack and pompanos	<i>Cybium guttatum</i>
Lakhua	Indian salmon	<i>Polynemus indicus</i>
Sada poa	Silver jew	<i>Otolithes argentatus</i>
Gongonia	Grunting toadfish	<i>Allenbatrachus grunniens</i>
Amadi	Pointed tail anchovy	<i>Coilia dussumieri</i>
Kukurjiv	Sole	<i>Cynoglossus macrostomus</i>
Kamot hangor	Requiem shark	<i>Carcharhinus gangetica</i>
Bom maitta	Tuna	<i>Euthynnus affinis</i>
Bata	-	<i>Mugil cephalus</i>
Ghagra bele	-	<i>Gobius personatus</i>
Ghagra	Gagora catfish	<i>Arius gagora</i>
Somudra koi	Tripletail	<i>Labotus surinamensis</i>
Bhut bele	-	<i>Paragobiodon echinocephalus</i>
Somudra chela	-	<i>Thryssa purava</i>
Potka	-	<i>Chelonodon patoca</i>
Lambu/Bara poa	Long jewfish	<i>Sciaenoides brunneus</i>
Foton maach	King mackerel	<i>Scomberomorus guttatus</i>
Ruppan	Thread fun bream	<i>Nemipterus japonicas</i>

Moori	-	<i>Caranx speciosus</i>
Choukha	Indian pellona	<i>Pellona indica</i>
Kawa	Hard tail	<i>Megalapsis cordyla</i>
Shankhachil	Banded eagle ray	<i>Aetomylaeus nichofii</i>
Katabukha	Beardless sea catfish	<i>Batrachoccephalus mino</i>
Kuli	Duckbill sleeper	<i>Butis butis</i>
Kamila	Indian pike conger	<i>Congresox talabonoidis</i>
Haturi hangor	Hammerhead shark	<i>Eusphyra blochii</i>
Tak chanda	Common pony fish	<i>Leiognathus equulus</i>
-	Shovelnose ray	<i>Glaucostegus typus</i>
Dahuk	Walking goby	<i>Scarteloas histophorus</i>
Ilish	Hilsa shad	<i>Tenualosa ilisha</i>
Chandan ilish	Toli shad	<i>Tenualosa toli</i>
Tuna	Yellowfin tuna	<i>Thunnus albacores</i>
Ramchosh/Taposi	Paradise threadfin	<i>Polynemus paradiseus</i>
Khorsula	Corsula	<i>Rhinomugil corsula</i>
-	John's snapper	<i>Lutjanus johnii</i>
Bhetki/Koral	Seabass	<i>Lates calcarifer</i>
Barguni	Jarbuga terapon	<i>Terapon jarbuga</i>
Rupsha	Skipjack tuna	<i>Katsuwonus pelamis</i>

**Table 4: Crustaceans available in the fish landing centers of Patuakhali district**

Serial No.	Local name	English name	Scientific name
Prawn			
1	Golda chingri	Fresh water prawn	<i>Macrobrachium rosenbergii</i>
2	Chatka chingri	-	<i>Macrobrachium malcolmsonii</i>
3	Gura chingri	Spider prawn	<i>Macrobrachium tenuipes</i>
Shrimp			
4	Bagda chingri	Giant tiger shrimp	<i>Penaeus monodon</i>
5	Chaka chingri	Indian white shrimp	<i>Penaeus indicus</i>
6	Chapra chingri	Oriental shrimp	<i>Penaeus orientalis</i>
7	Horina chingri	Brown shrimp	<i>Metapenaeus monoceros</i>
8	Chali chingri	Yellow shrimp	<i>Metapenaeus braviicornis</i>
Crabs			
9	Shela kakra	Mud crab	<i>Scylla serrata</i>
10	Zaji kakra	Blue swimmer crab	<i>Neptunus pelagicus</i>
11	Sataru kakra	Swimmer crab	<i>Neptunus sanguinolenta</i>
12	Sagor kakra	Horseshoe crab	<i>Carsinoscorpius rotundicand</i>

**Table 5: Endangered species detected in the Patuakhali district**

Local name	English name	Scientific name
Pabda	Pabdah catfish	<i>Ompok pabda</i>
Chandana ilish	Toli Hilsha	<i>Tenualosa toli</i>
Aor	Long-whiskered catfish	<i>Sperata aor</i>
Chital	Humped featherback	<i>Chitala chitala</i>
Sarpunti	Olive barb	<i>Puntius sarana</i>
Rita	Rita	<i>Rita rita</i>
Bheda/Meni	Mud perch	<i>Nandus nandus</i>
Foli	Grey featherback	<i>Notopterus notopterus</i>
Boal	Freshwater shark	<i>Wallago attu</i>
Gazar	Giant snakehead	<i>Channa marulius</i>
Bata	Bata labeo	<i>Labeo bata</i>
Pangus	River pungus	<i>Pangasius pangasius</i>
Titpunti	Ticto barb	<i>Puntius ticto</i>
Dhela	Cotio	<i>Osteobrama cotio</i>
Kalibaus	Black rohu	<i>Labeo calbasu</i>
Chanda	Elongate glass perch	<i>Chanda nama</i>
Bagha air	Gangetic goonch	<i>Bagarius bagarius</i>
Darkina	Rasbora	<i>Rasbora rasbora</i>

**Table 6 Abundance of fresh marine water and crustaceans species at the fish landing center in patuakhali district  
(Chronologically abundant from the top)**

Freshwater species	Marine water species	Crustacean
<i>Hypophthalmichthys molitrix</i>	<i>Tenualosa ilisha</i>	<i>Macrobrachium rosenbergii</i>
<i>Labea rohita</i>	<i>Lates calcarifer</i>	<i>Penaeus monodon</i>
<i>Oreochromis mossambica</i>	<i>Mugil parsia</i>	<i>Scylla serrata</i>
<i>Pangasius hypophthalmus</i>	<i>Trichiurua haumela</i>	<i>Metapenaeus monoceros</i>
<i>Cirrhinus cirrhosus</i>	<i>Harpadon nehereus</i>	<i>Macrobrachium malcolmsonii</i>
<i>Channa punctatus</i>	<i>Sillago domina</i>	-
<i>Catla catla</i>	<i>Chelotodon Patoka</i>	-
<i>Mystus vittatus</i>	<i>Himantora uarnak</i>	-
<i>Mystus tengra</i>	<i>Polynemus paradiseus</i>	-
-	<i>Euthynnus affinis</i>	-
-	<i>Polynemus indicus</i>	-