

# Pelagic Finfish Resources of India

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India is endowed with a long coastline of 8129 km. Being tropical country, the marine ecosystem bordering Indian sub-continent contain large number of species adapted to wide range of habitats, from mangrove swamps, estuaries, saline lagoons, sea grass meadows, sandy/ muddy/rocky coasts, coral reefs, oceanic islands to deep oceanic realms. These resources are supporting the marine fishery of the country. The water spread of continental shelf is 0.5 million sq. km and of EEZ is 2.02 million sq. km. The annual catchable marine fishery potential of the EEZ is 4.5 million tonnes..

## **Pelagic finfish resources:**

Finfish resources are classified broadly as pelagic and demersal based on their distribution in the water column. Small to large fishes which occupy mainly the surface and subsurface layers of the water column are pelagic resources. Most of them are characterised by their shoaling behaviour. While fishes which are either bottom dwelling or inhabiting mainly along the lower layers of water column are termed as demersal resources.

### **Oil sardine:**

The resource is represented by a single species, *Sardinella longiceps* and distributed widely along the Indo-Pacific region. They form the mainstay of pelagic fishery of India. They occur all along the Indian coast. Till recently their abundance was largely restricted to the coastal waters between Quilon and Ratnagiri with 90% of the fishery from this area alone. However, in recent years, they are emerging as a major resource along the east coast up to Orissa waters towards north.

### **Lesser sardines:**

Nearly 13 species constituted the resource and fishery. They occur along the entire Indian coast but their abundance and fishery confined largely to the inshore waters of Kerala, Tamilnadu and Andhrapradesh. It include 10 species under the genus *Sardinella*, two species under *Dussumieria* and *Esculosa thoracat*. Dominant species are *Sardinella gibbosa*, *S. albell*, *S. fimbriata*, *S. dayii* and *S. sirm*. Species show discontinuous distribution.

### **Wolf herrings (Dorabs):**

They are non-shoaling fishes, abundant along both east and west coast with large abundance along the southeast coast. Two species namely, *Chirocentrus dorab* and *C. nudus* supported the resource and fishery. Large abundance in shallow waters between 10 –30 m depth. They migrate to deeper waters for spawning. They usually form fishery along with other resources.



### **Anchovies:**

Resources and fishery are supported by species belonging to the genera *Stolephores*, *Thryssa*, *Thryssina*, *Coilia* and *Setipinna*. White bait belonging to the genus *Stolephores* constitute nearly 70% of the catch. They are abundant in coastal waters of 5-20 m depth. They concentrated in area between Ratnagiri and Gulf of Mannar. Abundance of other anchovies are relatively large along the coastal waters of Andhra, Tamilnadu, Kerala, Karnataka and Maharashtra.

### **Other Clupeids:**

Widely distributed along the east and west coast, with large abundance along the east coast. Several species belonging to different genera, *Pellona*, *Hilsa ilisha*, *Elops*, *Megalops*, *Anadontosoma* etc. support the fishery.

### **Mackerel:**

Resource is represented by three species in Indian waters. However more than 95% of the stock and fishery was supported by one species, *Rastrelliger kanagurta* alone. *R. brachisoma* and *R. faugni* form sporadic fishery respectively in Andaman, Madras waters. Mackerel is abundant in coastal waters within 25 m depth. Nearly 80-90% of the total mackerel catch is from west coast. However in recent years, their abundance and fishery is on the increase along east coast.

### **Tunas and Billfishes:**

These are typical oceanic fast swimming and highly migratory pelagic fishes and most of them have cosmopolitan distribution. Resource is represented by several species belonging to the genus *Auxis*, *Euthynnus*, *Thunnus*, *Katsuoonus*, *Sarda* and *Gymnosarda*. These are typical shoaling fishes and aggregate in large numbers around any floating objects in open sea. Bill fishes form by-catch in tuna fishery. They are represented by *Istiophores*, *Makyras* and *Xiphias* Spp.

### **Seerfishes:**

These are well relished fishes with very high market demand. Five species namely *Scomberomores commerson*, *S. guttatus*, *S. lineolatus*, *S. koreanus* and *Acanthocybium solandri* supported the resource and fishery. They are abundant in the neretic and oceanic waters of both coasts. But undertake long term inshore migration and form fishery in shallow waters. *S. guttatus* is available in less saline turbid waters of coastal belt.

### **Carangids:**

Carangids are a diverse group of fishes having different body shapes. They are widely distributed along the entire coastal waters of India, Their major abundance confined to shallow waters up to 60 m depth. More than 35 species constituted the resource, with many species showing discontinuous distribution. However, commercial fishery was supported by few species. Horse mackerel and scads dominated the fishery.

### **Ribbonfishes:**

They are abundant along east and west coast with large abundance along the peninsular region. Resource was supported by six species dominated by *Trichiurus lepturus*. Their maximum abundance was reported in deeper waters between 25-75 m depth. They being carnivores, used to follow shoals of small pelagics and Acetes and were fished in large quantities by shrimp trawls.

### **Bombay duck:**

Second largest single species resource and fishery of India supported by *Harpodon neherius*. Resource distribution was discontinuous confined to northern sector of east and west coast. Major share of the resource and almost 98% of the fishery is confined to North West coast ie. Gujarat and Maharashtra coast and the rest from coast of Orissa, Andhra Pradesh and Tamilnadu. They are fished mainly by fixed Dolnetat 15-50 m depth zone. Sizeable quantities were also landed by trawls.

### **Flying Fishes:**

They inhabit off shore waters of 30-40 km away from the shore. Several species belonging to *Parexocoetus*, *Cypselurus* and *Exocoetus* supported the fishery. Good fishery occur along the Coramandal and Gulf of Mannar coast of Tamilnadu and small quantities from Andhra coast.

### **Belonids and Hemirhamphids:**

Good resource of garfishes and half- beaks were available in the Gulf of Mannar nad Palk Bay and support a potential local fishery. Approximate annual exploitable stock of the resource by some workers is 25,000 tonnes. Average production was 179,000 t during 2000-01 and constitutes nearly 7.1% of the marine fish production.

### **Barracudas**

The barracudas are pelagic predatory fishes, distributed in tropical and subtropical oceans and enjoys important position in the marine food web as apex predators. Twenty nine valid species represented the family globally and only ten species have been reported from Indian waters. The barracudas (*Sphyraenidae*: Perciformes) are marine pelagic predatory fishes, distributed in tropical and subtropical oceans (Williams, 1959; Blaber, 1982) and enjoys important position in the marine food web as apex predators (de Sylva, 1963; 1973; Friedlander and de Martini, 2002). Thirty species represented the family globally and only ten species have been reported from Indian waters viz., *Sphyraena acutipinnis*, *S. barracuda*, *S. jello*, *S. putnamae*, *S. qenie*, *S. forsteri*, *S. obtusata*, *S. flavicauda*, *S. chrysotaenia*, *S. helleri* and *S. arabiansi* .

### **Mahi- mahi**

These are carnivores fishes with abundance and distribution mainly towards oceanic waters. Excellent table fishes with fast growth rate. Two species represents the resource and and have good potential for domestication. Major abundance is along the North West coast.

### **Kingfishes**

These are carnivores fishes and were represented by single species. Major abundance is along the North West coast and is excellent table fish with fast growth rate. And so have good potential for domestication.

### **Mulletts**

They in Indian waters were represented by several species. Euryhaline fishes with wide distribution in brckish and marine waters. A potential group of fishes cultured in fresh, brackish and marine environment.