

M. Sc. IV Sem.  
Paper Elective Paper II  
Fishery Science, Capture Fishery

**Present and future prospects of marine fishery in India**

Presently India is the second largest fish producing and second largest aquaculture nation in the world after China. The total fish production during 2017-18 (provisional) is registered at 12.61 million metric tonnes (MMT) with a contribution of 8.92 MMT from inland sector and 3.69 MMT from marine sector. The growth in marine fisheries certainly has led to significant increases in the production/yield, food security, employment generation, domestic and export earnings

The marine fishery potential in the Indian waters have been estimated at 5.31 million metric tonnes constituting about 43.3% demersal, 49.5% pelagic and 4.3% oceanic groups. Marine fisheries contribute to food security and provide direct employment to over 1.5 mn fisher people besides others indirectly dependent on the sector. There are 3,432 marine fishing villages and 1,537 notified fish landing centres in 9 maritime states and 2 union territories. Marine Fisheries contributes to food security and provides direct employment to over 1.5 mn fisher people besides others indirectly dependent on the sector. There are 3,432 marine fishing villages and 1,537 notified fish landing centres in 9 maritime states and 2 union territories.

Man mostly depended on hunting and gathering for subsistence until the Neolithic period. The fishing developed as part of this basic subsistence activity but has witnessed considerable technological advances in modern times or present times in methods of capture or exploitation and utilization of aquatic products (example fin fish, shell fish and aquatic weeds). The fish production from the sea sector increased at a rapid rate with the expansion of mechanized fishing fleets, development of efficient methods of fishing and improvement in processing, preservation and transportation of fish catches, product and by-products. Although new fishery resources were discovered, intensive fishing efforts began to show their effects on the resource base and the increase in production or yield, particularly of the more valuable products has steadily declined. Overfishing and depletion of stocks have become a living reality.

Marine fisheries, largely practised as coastal fisheries are an open access, multi-species, multi-gear regime. Unrestrained expansion of fishing efforts and extensive use of non-selective fishing gears have led to increase on several groups of fishes. Over exploitation of the coastal resources by artisanal and small mechanised fishing sector over the years, especially up to 50 meters has been leading to reduction of catch per unit effort, with annual production levels showing a plateau.

The Indian marine fish harvest mostly centres around coastal waters up to 10 meters depth and about 90% of the total catch comes from up to 50 meters depth. The marine fisheries resources are mainly constituted by the pelagic fin fishes (all those fishes which live most part of their life in the surface or subsurface waters) numbering about a dozen major groups and species. The pelagic fishes (Oil sardine, Hilsa, Bombay duck, ribbon fish, mackerel, seer fishes, Tunas, Anchovies, Wolf herring, Mulletts) are highly migratory and generally show shoaling behaviour. The demersal fin fishes (those fishes which live most part of their life on the bottom or sub-bottom layers) are contributing by about 15 major groups and species, crustaceans comprising about 5 groups and cuttle fishes and squids.

### **Problems of Inshore fishery**

The major issues in the sector are excess coastal fishing capacity and over exploitation, unregulated open access fisheries, discards at capture of juveniles and sub adults, coastal pollution and environmental and habitat degradation, biodiversity loss to both natural processes of climate change and anthropogenic pressure, increasing fishing costs and reduced profitability, poor infrastructure at fishing harbours and landing centres and linkages for domestic marketing. The fleet size and mesh size are also creating a major problem for the inshore fishery. The risks include beach closures, harmful algal blooms, water temperature, oxygen depletion and species invasion (introduction of exotic/alien species), among others. In the Indian context, small increment of the sea surface water temperature has been observed to be influencing pelagic fish species like sardine, and mackerel to be moving north wards and higher incidence of the species on the east coast. It is predicted that further rise in temperature might lead to bleaching of corals, affecting the coral-associated fish communities. Over fishing also leads to conflicts between different fleets and sectors and finally to law and order problem.

## **Problem of Off shore fishery**

Various problems are reported in the field of off shore fishery-

1. Financing of off shore fishing vessels.
2. Inadequate trained/experienced manpower in India for undertaking off shore fishing.
3. Targeted interest for the exploitation of prawns rather than fishes.
4. Lack of market promotion for non-conventional resources.
5. Inadequate infrastructure facilities for offshore vessel management and processing, distribution and marketing for domestic market.

Dr. Amitabh Chandra Dwivedi, Assistant Professor  
Department of Zoology, N.G.B. (D.U.), Prayagraj, U. P.