

Marine fisheries of the north-east coast of India during 2009-2010

K. G. Mini, Somy Kuriakose, P. L. Ammini, S. Haja Najeemudeen, M. B. Seynudeen,
M. R. Beena, Lata Khambadkar and Sindhu K. Augustine

Central Marine Fisheries Research Institute, Kochi

The states of Odisha and West Bengal constituting the north-east coast of India has a coastline of 638 km. The coastal area is cyclone-prone and is worst affected during the south-west monsoon. The total number of marine fish landing centres in north-east coast is 132, of which 73 belonged to Odisha. According to Marine Fisheries Census 2010, there are 3.95 lakh fisherfolk directly engaged in actual fishing, fish seed collection and fishing allied activities in this coast.

The estimated marine fish landings in this coast was 6.44 and 6.50 lakh t for 2009 and 2010

respectively, contributing about 15% of national marine fish production. There is a quantum jump in the landings over the past decade from 2000 onwards and reached its peak in 2010 (Fig. 1), though the rate of increase was negligible during 2010, as compared to 2009. This increase can be attributed to the high efficiency fishing craft and gear together with the increase in number and size of crafts, introduction of multiday fishing and extension of fishing grounds.

West Bengal with an estimated landings of 3.59 lakh t had a share of 55% in the total marine fish

landings in this coast during 2010. The landing was fairly stable between 2009 and 2010. In Odisha, the estimated landings was 2.87 lakh t in 2009 which showed a slight increase of about 4000 t in 2010. Paradeep Fishing Harbour contributed nearly 70% of Odisha's total landings during this period.

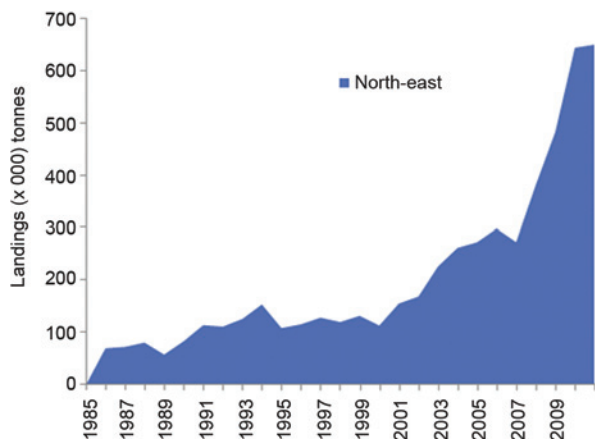


Fig. 1. Marine fish landings of the North-east coast during 1985- 2010

Major resources

Almost 74% of the landings from north-east coast during 2010 was accounted by the ten species/group viz., penaeid prawns (14.9%), hilsa shad (12.9%), croakers (11.8%), Bombayduck (6.2%), ribbonfishes (6.2%), carangids (5.4%), anchovies (5.0%), catfishes (4.6%), pomfrets (4.0%) and non-penaeid prawns (2.9%) (Fig. 2). The dominant species in the marine fish landings were the same during 2009 and 2010. Only a few changes in the ranking occurred in 2010. Penaeid prawns landings reached about 97,000 in 2010, growing by 3.1% in relation to 2009. Hilsa shad landings also increased by 5% compared

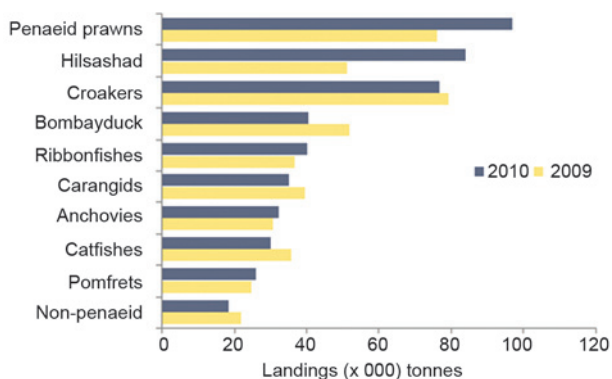


Fig. 2. Dominant species/ groups landed in north-east coast

with previous year. In 2010, hilsa shad landings amounted to 84,000 t representing an increase of 5% as that of 2009. Bombayduck, carangids, catfishes and non-penaeid prawns landings have showed slight decrease during 2010.

Pelagic fishes remained the largest contributor (50%) in the region, with production of about 3.2 lakh t in 2009 and 2010 with hilsa shad from West Bengal being the major resource. Demersal fishes contributed 33% of total landings in this coast, accounting for 2.1 lakh t in 2009, and showed a decline of 2% in 2010. During 2009 and 2010, crustacean landings made up 1.0 and 1.2 lakh t respectively of the total landings of the coast. As in 2008, molluscs contribution to the total landings of the north-east region remained at the level of 5000 t (1%) in 2009 and 2010 (Fig. 3). A total of 195 species were landed in the coast, out of which 86 species come under demersal and 74 under pelagic group.

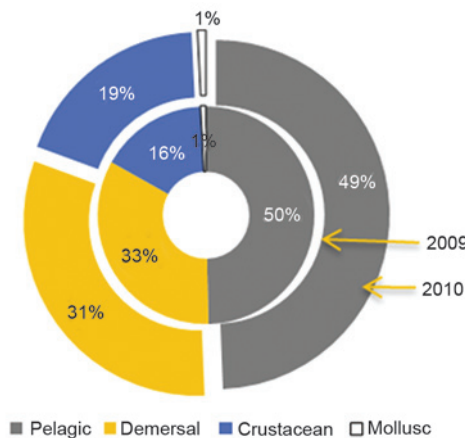


Fig. 3. Major components in marine fish landings of north-east coast

Contribution by sectors

During 2009 and 2010, the mechanised sector contributed the lion's share of 84 and 86% respectively to the marine fish landings. The motorised sector accounted for about 12.5% during both the years. In the case of non-motorised sector, the share was only 1.5% in 2010, compared with 3.3% in 2009. Among different types of gears operated along the coast during 2009-10, more than three fourth of the landings was by trawl nets and gillnets. The major share to the landings was by multiday trawlers contributing about 3.6 lakh t to the total landings in 2010. The percentage contribution of various gears for the Year 2010 is given in Fig. 4.

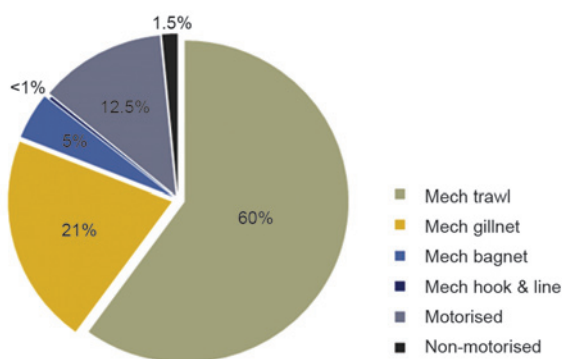


Fig. 4. Contribution of various gears during 2010

The trawl landings was mainly constituted by penaeid prawns followed by croakers, ribbonfishes and carangids during this period (Fig. 5). The penaeid prawn landings increased both in terms of quantity (0.66 to 0.89 lakh t) and percentage contribution (19% to 25%) to the trawl landings. The other three groups contributed about 16%, 8% and 7%



Fig. 5. Major resources caught and gearwise breakup during 2010

respectively during both the years. The important gear next to trawl net was gillnet. The contribution by gillnet landings was 28% during both the years. About half of the landings was represented by hilsa shad in 2010 followed by pomfrets, catfishes, croakers, Bombayduck, other clupeids, other sardines and wolf herring. Bagnets contributed 9% towards the total landings during both the years, represented mainly by Bombayduck followed by non-penaeid prawns, penaeid prawns, croakers, *Coilia* sp. and crabs.

In the north-east coast, a major share of gillnet landings occurred along the coast of West Bengal, while major share of trawl landings occurred along the coast of Odisha. The gillnet and trawl net landings made up 44% and 38% respectively of total landings of West Bengal during the period. The gillnetters and trawlers do multiday operations along West Bengal coast. Crafts with length ranging from

100 to 170 m and engine power varying between 90 and 120 hp operated at a depth range of 20 to 40 m. The catch per hour of trawl net was about 36 kg during both the years. In the case of mechanised gillnet, the catch per unit effort has gone up by 576 kg in 2010 as compared to 1353 kg in 2009.

The motorised crafts in West Bengal are fitted with inboard engines. The catch per unit effort by inboard gillnet also increased from 232 kg to 363 kg during the same period. In the case of Odisha, the largest contributor was trawl net (86%) and the rest was made up by gillnet, bagnet and hooks and lines. Ring seine operations occurred in Ganjam District of Odisha.

Fishing seasons

As in the past, significant variations have been noticed in the season-wise fish landings of this region. Fishing starts from July and ends in February. With reference to the landings, the most productive season

identified was October-December and the period April-June was observed as the lean period (Fig. 6).

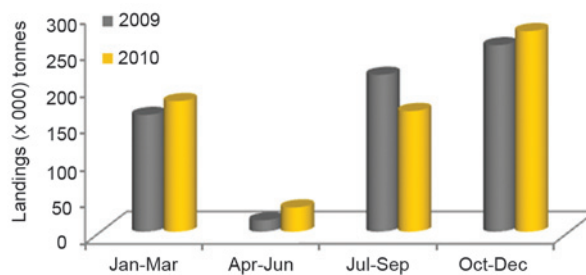


Fig. 6. Season-wise marine fish landings along north-east coast of India

During the period January-March, 12% increase in 2010 was noticed as far as landings for 2009 was concerned. The landings for 2010 showed an increase of 8% compared to 2009 landings for the period from October-December. The landings for July-September showed a decrease of 23% in 2010 from the landings for the same period in 2009.