

Marine fisheries of the north-east coast of India during 2008

K. G. Mini, P. L. Ammini, N. Rudramurthy, Lata Khambadkar and S. Subramani
Central Marine Fisheries Research Institute, Kochi

The north-east region of India comprises of the states of West Bengal and Orissa. There are about 100 landing centres distributed in these two coastal states, of which most of them record seasonal fishing. The estimated marine fish landings in this region was 4.83 lakh t in 2008, which formed about 15% of the

total 'all India landings'. There was a sharp increase of about 27% in the fish landings in 2008 as compared to 2007. This is mainly due to the significant increase in the number of crafts and gears operated in this region. The state of West Bengal accounted for the largest share in the landings (62%)

and the remainder (38%) was from Orissa. The major harbour in the region is the Paradeep Fishing Harbour. This is situated in the state of Orissa and it accounted for 76% of the state's total landings in 2008.

The proportion in weight of the total marine fish landings accounted by pelagic fish has risen from about 53% in 2007 to over 56% in 2008 (Fig. 1). Demersal fish production also showed an increase from 30% in 2007 to 32% in 2008. Crustaceans accounted for 14%, while molluscs accounted for 1% of the total marine fish landings during 2008. The relative proportions of these two groups have remained more or less similar over the previous year.

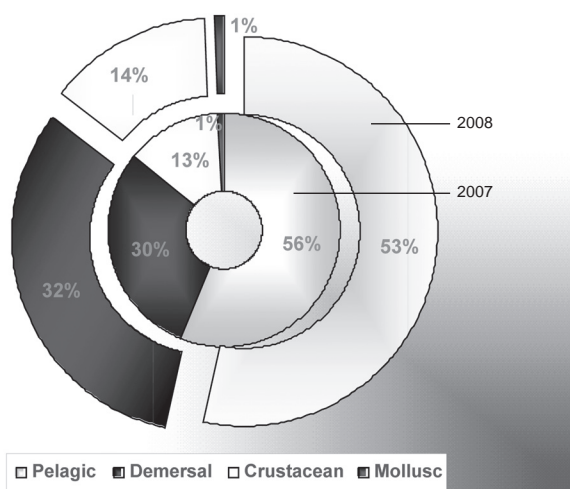


Fig. 1. Groupwise contribution to marine fish landings in the north-east region of India during 2007 & 2008

During 2008, in West Bengal, about 111 species were landed of which 43 species come under pelagic and 44 species under demersal. In the case of Orissa, about 169 species were landed of which 60 are pelagic and 72 demersal. In the year 2007, the total number of species landed at West Bengal and Orissa were 105 and 166 respectively.

Fishing season

The seasonwise marine fish landings showed considerable variations in this region. The fishing season begins by July and extends upto February. The most productive season was October-December and the lean season was from April to June. During January-March, landings increased from 18%

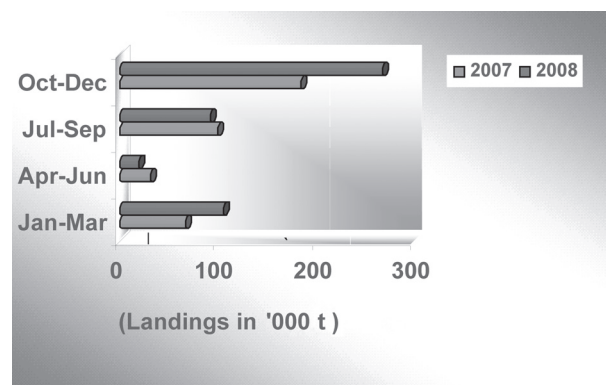


Fig. 2. Seasonwise landings in the north-east region during 2007 & 2008

in 2007 to 22% in 2008 (Fig. 2). The landings increased from 48% in 2007 to 55% in 2008 during October - December, while from April to June and July to September it decreased from 8% to 4% and from 26% to 19% respectively.

The north-east region is cyclone prone and is worst affected by cyclones and floods during the south-west monsoon. Cyclones may also occur in May in the inter-monsoonal period. During every year, the cyclones and strong southern winds disrupt the fishing operations in this region.

Sectorwise contribution

During 2008, the mechanised and motorised sectors contributed 80% and 15% respectively, while the non-mechanised sector accounted for the rest 5% of the total landings. The types of crafts commonly used by the fishermen in the mechanised sector are trawlers, gillnetters and bagnetters. Trawlers and gillnetters conducted multiday fishing. Plank-built boats, canoes and catamarans are used in the artisanal sector. The major gears used in the mechanised sector are trawl-net, gillnet, fixed bagnet and hooks and lines. Gillnets, bagnets and hooks and lines were the important gears in the motorised sector. Shoreseine and ringseine operations were also reported from this region.

In the mechanised/motorised sector, among the various gears employed, gillnet contributed 39%, trawl-net 35% and bagnet 11% of the landings. The other mechanised and motorised gears contributed about 6% and 4% respectively (Fig. 3).

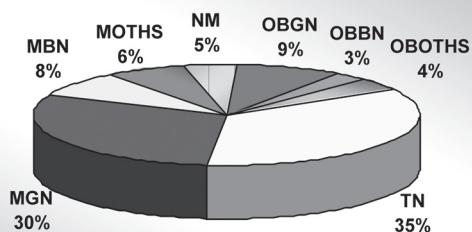


Fig. 3. Sectorwise landings in the north-east region

TN - Trawl net, MGN - Mechanised gillnet, MBN - Mechanised bagnet, MOTHS - Mechanised others, NM - Non-mechanised, OBGN - Outboard gillnet, OBBN - Outboard bagnet, OBOTHS - Outboard others

Most of the trawlers conducted multiday fishing and accounted for 89% of the total trawl landings. The trawl landings showed a 5% increase in 2008 as compared to 2007. The catch per unit effort (CPUE) for trawlers decreased from 3468 kg in 2007 to 3455 kg in 2008. Similarly the catch per hour (CPH) also decreased from 61 kg to 57 kg in 2008. The CPUE of mechanised gillnetters showed an increase of 471 kg in 2008 compared to that of 2007. In the case of artisanal units, CPUE increased from 61 kg in 2007 to 69 kg in 2008.

The trawl landings were dominated by croakers (18%), penaeid prawns (15%), ribbonfishes (11%), other carangids (5%), other clupeids (5%) and goatfishes (4%). Gillnet units were operated from mechanised and motorised crafts and the landings were constituted mainly by hilsa shad (29%), other clupeids (9%), catfishes (7%), Bombayduck (7%) and ribbonfishes (5%). The contribution from gillnet towards total landings was about 1.51 lakh t in 2007 and it increased to 1.88 lakh t in 2008. As compared to the year 2007, all the gears showed marginal improvement in landings during 2008. The bagnet landings from the mechanised boats experienced a reduction of nearly 2000 t during 2008 and the same gear in the motorised sector, showed an increase of 3500 t. Contribution from the artisanal sector remained more or less equal to 5%. The landings by hooks and line were about 15,829 t in 2008 which showed 1% increase as compared to 2007.

Major resources

Among the important groups, hilsa shad was the major component of landings during 2008 and it accounted for 0.54 lakh t forming 11.3% of the total north-east region landings. The other important groups from this region were croakers (11%), penaeid prawns (7%), Bombayduck (6.5%), ribbonfishes (6.4%), other clupeids (6.1%), non-penaeid prawns (6%), catfishes (5.7%), carangids (4.9%) and pomfrets (4.7%). Among the major resources landed, except Bombayduck, all others showed an improvement in the landings during 2008 as compared to 2007 (Fig. 4).

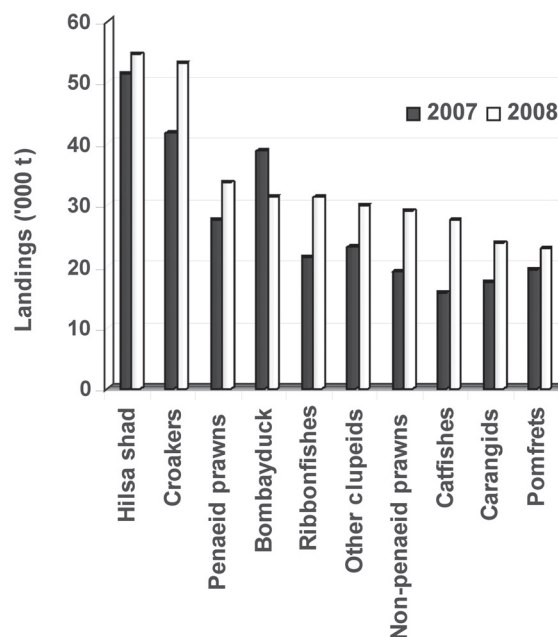


Fig. 4. Major groups landed in the north-east region

Hilsa shad was caught mainly by multiday gillnetters (95%). Croakers were landed by multiday trawlers (67%), bagnetters (14%), gillnetters (13%) and about 3% by non-mechanised units. Penaeid prawns were mainly caught by trawlnets (89%) and about 7% by bagnets. In the case of ribbonfishes, the landings were by trawlers (64%) and by gillnetters (32%). Other carangids were abundant in trawl landings. Goldspotted granadier anchovy and hairfin anchovy are common anchovies of this region and are landed by trawlers. Non-penaeid prawns were mainly caught in bagnets along with their predators, *Harpadon nehereus*. Catfishes, pomfrets and horse mackerel were landed by gillnets.