

## exploitation of juvenile fishes

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Mangalore Fisheries Harbour is one of the major marine fish landing centres of Karnataka, contributing more than 40 % of the total marine fish landed in the state. Bull trawling or pair trawling is done along the coastal districts of Karnataka with peak operations during the post-monsoon (September to November) period. The pair trawls target pelagic and semi-pelagic schooling fishes, like carangids, scombroids, clupeids, pomfrets, squids, etc. and the catch mainly consist of juveniles, including those of high value fishes.

During the post monsoon phase of 2016 landings by the bull trawl continued showing the same trend. On 2nd November 2016, nearly 15 tonnes of juveniles of carangids, comprising mainly of *Atule* sp. was captured off Mangalore by 24 bull trawlers. These trawlers had operated off shore (36-40m depth) for a duration of 24 - 48 hours. The total length (TL) of the individual carangids landed ranged from 46 to 102 mm. The modal class (60-70 mm) as well as the mean size (71.16 mm) of the *Atule* sp. was much lower than the length at First Maturity



bull trawl landings

( $L_m = 173$  mm) reported (Reuben *et al.*, 1992, *Indian Journal of Fisheries* 39(3,4): 195 -234). The fish locally known as '*Chemmann*' is consumed fresh as well as after being dried in the sun. As the size of fishes in this huge catch was too small for favour of domestic consumption, the entire catch was taken by fish meal plants for a meagre amount of ₹ 3 per kilogram, whereas the adult fishes of the same species fetch ₹ 35 - 60 per kilogram. The bulk catch

made by the bull trawls result in insufficient preservation leading to poor quality of the catch on reaching the harbour which fetches lower prices in the market as compared to catch made by regular trawlers.

The indiscriminate capture of juveniles by bull trawls leads to growth overfishing and will have an adverse effect on the fishery. Operation of bull trawl in Karnataka was not prohibited till recently and this type of fishing was carried out regularly along the coast. The Mangalore Research Centre of ICAR-CMFRI during its regular Stake Holders Meet, has created awareness among the trawl net operators, especially those practicing pair trawling on the harmful effects of large scale exploitation of juveniles and have urged the fishermen to refrain from such type of destructive fishing activities.

Several fisher groups too started expressing concerns on such unsustainable fishing practices and some members of the Trawl Boat Owners Association voluntarily decided to stop this kind of fishing in the near shore waters as well as tried to convince other operators to stop such activities. However, this movement by a few fishers did not achieve much success and concerned stakeholders from several quarters urged the Department of Fisheries, Government of Karnataka to take up some actions to control bull/pair trawling activities. After several deliberations, the order (No: AHF 158 Dep. of Fish. Sch. 2016, Bengaluru dated 15-11-2016) to ban bull trawling within 12 nautical miles (territorial waters) zone of Karnataka Coast from 16<sup>th</sup> November 2016 under the Karnataka Marine Fisheries Act, was issued by the Fisheries Department.