

Light fishing - conflicts and concerns in Maharashtra

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Technological intervention in the Indian fishing industry are intended to increase marine fish production of the country. Crude light fishing methods practiced in Mandapam was reported for catching silverbellies (Sekharan 1955, *Indian J. Fish.*, 1955; Anon., 1957, *Indian J. Fish.*). Fishing experiments with light attraction for pelagic fishes using purseseines was conducted by Fishery Survey of India (Ninan and Sudarsan, 1988, *Occasional papers of Fishery Survey of India No. 5*) who reported that no aggregation was noticed in the areas where water turbidity was high and strong current (above 2 Knots) was present. Mohamed (2016) reviewed light fishing practices in India and suggested restrictions in power of lights used, area of operation, mesh size for exploitation etc (*Marine Fisheries Policy Brief No. 4, 2016, ICAR- CMFRI*).

In Maharashtra, the use of lights designed for fishing was limited earlier, and mostly confined to squid fishing boats (squid jigger) along the coast. Currently, high power light-emitting diode (LED) lights ranging from 2000-6000 watts are used by purse-seine net operators with the help of power generator, and almost all kinds of pelagic fish such as mackerel, tuna, seer fish, sardine, moon

fishes, pelagic sharks etc. which are attracted to the light get netted.

Single boat light fishing operation is accomplished by a single boat, where high power LED lights are mounted on-board on purse-seiners. In some cases, submerged light bulb costing over ₹ 1 lakh is also used to attract fish when boat is anchored. This kind of operation is handled by single boat owner. Two boat light fishing operations are also observed where one specially fitted light providing vessel illuminates the sea. Once sizable fish congregate around the vessel, the purse seine net is operated by the second boat to encircle and capture the attracted fish resources. The light



Specially fitted light providing vessel

illumination time depends upon the abundance of the fish resources in the region. This fishing practice was first observed in Raigad district of Maharashtra where the specialized vessel powered metal halide lamps of 1000 W and 4000 W with diesel generator (Total light capacity ranging from 20 to 30 kW). The profit shared between the owners of light provider boat and purse seine boat is in the ratio of 40:60. For this specific purpose as light providing vessel, few fishers have converted their traditional crafts

10-15m OAL (Over All Length). This system is being slowly adopted by the fishers of neighboring villages.

As per Marine fisheries census records (2010) Maharashtra has 435 numbers of purse-seiners . Following Karnataka and Goa, purse-seine fishers of Maharashtra are also adopting light fishing which has raised concerns as juvenile fish are caught along with mature fish and conflicts with the small-scale fishers arise. Hence appropriate regulations are of paramount significance.