

# On a small scale targeted fishery for White sardine and Goldspotted grenadier anchovy along the Maharashtra coast

Anulekshmi, C., Akhilesh, K.V., Dhanashree, B. and Singh, V.V.

*Mumbai Research centre of ICAR-Central Marine Fisheries Research Institute, Mumbai*

Marine fish landings of Maharashtra during 2014 were estimated at 3.44 lakh tonnes (t) with the pelagic resources contributing a major share (42%).

Of this, more than 60 % were small pelagics namely, Bombay duck, clupeids and anchovies. These fish have been targeted by coastal fishermen using



*Bhiljee* fishery activities at Mumbai



Fishing boats with outboard engine

Fishing boats with inboard engine

Non-motorized boat

traditional fishing methods for their livelihood and sustenance since several decades. Fishing operations which are mainly in the near shore areas are declining due to the coastal pollution and developmental activities. Yet for many of these traditional small-scale fishermen, alternate livelihood options are limited.

In Maharashtra especially in the suburbs of Mumbai city (Versova, Cuffe Parade, Madh, Vasai, Alibaug) an exclusive targeted fishery exists for white sardine, *Escualosa thoracata*. This fishery has been in existence for the past four decades and is conducted by local fishermen. Locally this fish is called *Bhiljee* due to its silvery-white shiny appearance. Nearly 20-50 small motorized or non-motorized canoes (15-20 feet), small boats with inboard/outboard engines (16-26 feet, 1-2 cylinder) conduct fishing in the near shore areas (within 2-5 km) at depths of 2-8 m using special small meshed (18 - 22 mm mesh size) drift gillnets called “*bhiljee jaal*”. Length of the net ranges from 40 -100 m with a height of 1.1 to 1.3 m. Each boat has a crew of 2 - 5 people. Each boat takes 8 -15 nets depending upon the number of crew. They venture into sea early in the morning around 0400 am and set the nets by 0500 am. Net is hauled after 2-3 hours and

catch brought to the shore by 0930 am. Sorting of the fish catch is done at the beach and all family members including women and children participate in the process. Mostly the catch will be exclusively of *E. thoracata*. Occasionally catfishes, flying fishes, fullbeaks, halfbeaks, polynemids and clupeids are also caught which gives the fishermen higher returns. Length of *E. thoracata* landed ranges from 48 -114 mm in total length (TL). Catch depends upon season, area and tide. When the *Bhiljee* catch is low these fishermen use gillnets of mesh size 50, 90, 100 and 140 mm for other fishes. The *Bhiljee* fishery forms the main livelihood avenue for some fishermen during the monsoon season. On a good day, catch may be 30 -50 kg, which is sold at ₹ 100 -180 per kilogram. During monsoon season, the price obtained will be higher due to fishing ban and non-availability of other fishes.

In 2014, the Goldspotted grenadier anchovy *Coilia dussumieri* contributed 4.0 % (14,056 t) to the total marine fish landings of Maharashtra, showing a 43 % increase over the last year. Bag nets were the major contributor to this fishery followed by trawlnets and gillnets. Alibaug in the northern part of Mumbai has been a major hub for small pelagic fisheries since a very long time. *C. dussumieri* locally known as *Mandeli*



Gill net catch at Alibaug

is a small engraulid with a maximum size of 21 cm TL. A targeted seasonal fishery is conducted by local fishermen of Alibaug with a special gillnet of 80 -100 m length with a height of 2 m and mesh size of 25 mm. In peak season nearly 60 boats (18 -25 feet) with inboard engines operate for fishing *Mandeli*. Fishermen venture into sea at 05 00 am and conduct fishing for 3 hours after which they reach landing centre around 11 00 am. More than 90 % of the catch consists of



Marketing of *Mandeli* catch

*C. dussumieri* and by-catch includes *Pellona ditchela*, *Sardinella* spp. and other clupeids. According to the fishermen, winter season is good for *Mandeli* fishery. The catch is sorted on the beach by the fishermen's family. Women exclusively deal with fish sales. Due to demand for fresh fish, most of the catch is sold off on the beach itself. In the landing centre *Mandeli* is sold in baskets each costing ₹ 200-300.