

# Maharashtra's Three Main Fish Landing Centres

## Authors

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## Focal Points at a Glance

Among the coastal States on the West Coast of India, Maharashtra has a prime place in respect of fish production. While this is the general scenario, the authors enlighten us on a focally specific picture, telling us about specific zones of fishing concentration, the crafts and gears used, and fishing areas and seasons. An informative contribution.

The marine fisheries sector in India has witnessed a phenomenal growth during the last five decades both quantitatively and qualitatively. Among the maritime States of India, Maharashtra is one of the leading States in fish production. Maharashtra has a total of 720 km of coastline with 0.89 lakh sq.km of continental shelf. The major gears being operated from the State are trawl nets, purse seines, gill nets, *dol* nets and hook and lines (Singh and Kuber, 1998). There are 406 marine fishing villages across five coastal districts of Maharashtra, with a total of 65,313 fisher households in the State. The total marine fisher population in Maharashtra is 3,19,397. A total of 23,508 crafts are employed in marine fishing, of which 13,053 are mechanised, 3,382 are motorised and the rest non-motorised. Gillnetters and *Dol* netters account for 53%. 4219 trawlers formed 32% of the mechanised crafts (Anon, 2006).

## Introduction

The annual fish production of Maharashtra ranged from 1,16,283 t in 1961 (FISHSTAT, 2004) to 3.19 lakh t during 2007 (CMFRI, 2008). The major landing centres of Maharashtra such as New Ferry Wharf, Sasoan Docks and Versova are situated in Mumbai and they account for nearly 60% of Maharashtra's fish landings (Annam and Sindhu, 2005). To get a better insight of the fishery of the State the fishing crafts and gears from these landing centres are described. The fishing area of these landing centres and fishing seasons thereof are mentioned.

## New Ferry Wharf

**Fishing crafts and gears:** Fishing from New Ferry Wharf Landing Centre is mainly carried out by shrimp trawlers, which belong to fishermen from south Gujarat. The trawlers operated are 12.5-15 m plank-built boats in overall length (OAL) fitted with 95-120 bhp engines and with fish holding capacity of 1.5-2 tonnes. The trawl nets are 23-25 m in length with 20-25 mm cod end mesh size. The size of the otter boards used for the net is 76x165 cm while the weight of each otter board ranges from 55-80 kg. The net has a footrope of 24 m and head rope of 18-22 m.

The operation of *dol* nets an indigenous fishing technique practised along the northwest coast (Setna, 1949 and Gokhale, 1957). *Dol* nets operated from New Ferry Wharf are 9-10 m long with the cod end mesh size of 10-12 mm. They are operated from fixed structure of ropes locally called 'sus' which is anchored at the depth of 5-10 m. *Dol* nets are essentially fixed bag nets operated, by taking advantage of tidal currents. A strong tidal current is very essential which keeps the mouth of the net open. The net functions as a filter to retain fish and the strong tidal current prevents the fish from escaping. The boats are both non-mechanised as well as mechanised. The mechanized boats are fitted with 10-15 bhp engines.

**Fishing area and season:** The trawlers operated from New Ferry Wharf are those registered at ports of Gujarat State. However, a few from neighbouring ports of Mumbai also unload their catch here for marketing. About 1,000 to 1,200 trawlers are operated from this centre during the fishing season. These trawlers undertake voyage trips lasting for 6-10 days of fishing. It takes 1-2 days of steaming time to reach the fishing grounds and the actual trawling hours are 45-60 hrs/ trip. The fishing area extends from south of Saurashtra coast to Ratnagiri covering an area (17°-21° N and 71°-73° E) of approximately 8°



25,000 sq. km. The depth of operation extends from 30-100 m, but generally they carry out trawling in waters beyond 40 m depth.

The *dol* nets are operated in the waters along Mumbai harbour at the depths of 5-10 m. The operations are carried out throughout the year and they continue even in monsoon months. The *dol* netters bring the catch of ebb as well as flood tide. Each *dol* net boat generally operates two nets and brings the catch after two tides.

Generally the fishing season for trawling starts in late August and continues till the end of May of the next year. During the period from 10<sup>th</sup> June to 15<sup>th</sup> August trawling is suspended on account of monsoon ban imposed by the State government of Maharashtra. At New Ferry Wharf *dol* net fishing continues throughout the year but during monsoon period, it is intensified due to lucrative price offered for the catch.

### Sasoon Docks

**Fishing crafts and gears:** Shrimp trawlers operated from Sasoon docks are 12.5-15 m plank built boats in overall length (OAL), fitted with 95-120 bhp engines and with fish holding capacity of 3-4 tonnes. These trawlers are somewhat wider than those from other regions. The trawl nets are 23-25 m in length with 20-25 mm cod end mesh size. The *dol* nets operated from Sasoon docks are 10-35 m long with cod end mesh size of 5-12 mm. Apart from these two gears, purse seiners are also operated from this centre from boats of 15 m in OAL.

**Fishing area and season:** About 700-800 trawlers operate from Sasoon docks (Singh and Kuber, 1998). These trawlers undertake fishing voyage trips lasting for 4-10 days. It takes 1-2 days steaming time to reach the fishing grounds and the actual trawling hours are 45-60 hrs/trip. The fishing area extends up to Ratnagiri. The depth of operation extends from 20-90 m, but generally they carry out trawling in waters beyond 40 m. The *dol* nets are operated along the shipping channels at the depths of 5-10 m. The *dol* netters bring the catch of ebb as well as flood tide.

Generally the fishing season for trawling starts in late August and continues till the end of May of the following year. During the period from 10 June to 15<sup>th</sup> August trawling is suspended on account of monsoon ban imposed by the state government of Maharashtra. However, *dol* net fishing continues throughout the year.

### Versova

**Fishing crafts and gears:** From Versova landing centre, trawlers as well as *dol* nets

are operated. The Trawlers used are 14-16 m in OAL fitted with 90-99 bhp engines. The trawl nets generally take 3-4 hauls during daytime and 3 hauls during night. The trawl net is about 24-26 m in length, having mesh size of 20-25 mm at the cod end. The net has a head rope of 18-22 m and a foot rope of 24 m with an iron chain of 50-55 kg attached to it. The otter boards are of the size 68 x 140 cm or some times of 76 x 165 cm, weighing 55-80 kg.

The size of *dol* nets operated at Versova is larger than those operated at New Ferry Wharf. In the past 5-7 years, some of the *dol* net boats have been converted into trawlers. They are without any mechanical winch and the net is hauled manually. Such trawlers are therefore called 'hand trawlers' which are operated in shallow waters of 5-15 m depth. These trawlers, 8-9 m OAL, have 23-30 bhp engines. They take 3 hauls of two and a half hours or 4 hauls of 2 hours each. The net used is generally 18-23 m in length with 18-23 mm at the cod end. The net has a footrope of 14.5 m and a head rope of 14 m in length. The otter boards have dimension of 40 x 75 cm or sometimes 48 x 68 cm, and their weight ranges from 15-45 kg/otter board.

Functional and structural details of *dol* nets operated from Versova have been described by Rajc and Deshmukh (1989). At Versova, for *dol* net fishing, larger boats operate 3 nets, while smaller ones operate only 2 nets. The *dol* nets generally take 4 hauls according to the tide status. The crafts used for the operation of the *dol* nets are motorised boats with 8.5-9 m OAL with 25-40 bhp engines each. The nets used are 30-35 m in length with the mesh size of 80-82 mm at the net opening and 10-14 mm at the cod end.

The distance between the fishing ground and the landing centre takes 2-6 hours of steaming. For this season the fishermen collect the catch for 3-4 tides and bring it on every alternate day instead of bringing the catch after every tide. In order to get catch from maximum number of tides and to save fuel on returning to landing centre every day, the fishermen at Versova also have a co-operative practice of bringing the catch from 3-4 boats in a single boat and this boat is called as 'carrier boat'.

**Fishing area and season:** Trawlers operate in 20-40 m depth, parallel to coastline from Vasai in the north and Murud-

Janjeera in the south. Some trawlers undertake 2-3 days of fishing. Hand trawlers leave the Versova creek early morning and return by afternoon or evening. They operate the net in very shallow waters in the depth range of 3-10 m. The *dol* nets of Versova are operated at 25-30 m depth in the open sea parallel to the coastline off Versova. The depth of operation as well as the number of nets operated depends upon the sea going capacity of the crafts. Generally, large sized *dol* net crafts (14 m OAL) use three nets simultaneously in depths varying from 15-20 m in the beginning of fishing season, but later on they operate the same nets in 25-30 m depth area. Smaller crafts use 2-3 nets in depths of 15-20 m only. Fishing activity at Versova by *dol* nets begins at the end of September or early October and lasts till end of May or first week of June. The *dol* net fishing is totally suspended from June-August being monsoon time due to inclement weather conditions.

During the period from 10<sup>th</sup> June to 15<sup>th</sup> August trawling is suspended on account of monsoon ban imposed by the State government of Maharashtra. Therefore, trawling activity commences in late August or after Narial paurnima, a traditional festival where offerings are made to the Sea God before venturing into the sea. However, majority of the trawlers undertake fishing from September to end of May of the following year.

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