



## Traditional Fishing Gears in Marathwada Region of Maharashtra

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### Abstract

One of the oldest human practices is fishing and fishes are a major source of nutritious food for people across all over the world. Many villages in India, fishing remains a main source of income. Some fishing communities in Maharashtra traditionally engage in fish capture using traditional methods. In the Marathwada region of Maharashtra various traditional fishing gears are commonly used. Many freshwater resources, including as lakes, rivers and reservoirs, are endowed in this region. Freshwater fishing is a major practice for fishermen in the Marathwada region. Numerous varieties of fishing gear are available in various locations and they change in size and shape from one place to another. Commonly used gears for fishing include hook and line, gill nets, drag nets, scoop nets and cast nets.

**Keywords:** Gears, Maharashtra, Marathwada, Traditional fishing

### Introduction

Fishing capabilities include the ability to catch aquatic animals in addition to fish. When humans were mainly engaged in gathering food from nature, whether by hunting on land or fishing in water bodies, it was considered as profession for a long time. For the past 70,000 years, people have been capturing fishes. Fishing not only provides food for humans, but also it ensures nutritional security and livelihood to a large portion of the rural society. Traditional fishing is simpler to implement, less energy-intensive and is better for the environment. Traditional fishing gears have great cultural and economic significance important in India, especially region like Marathwad. Indigenous communities have developed fishing techniques that are tailored to the geographical and ecological circumstances of their area. Specific fishing communities, such the Koli, Gond and Dhiwar, have been using and improving these traditional fishing gears for many years. The different types of traditional fishing gears are operated in Marathwada region of the Maharashtra are as follows.

### Cast Net

Cast net is also known as 'fake jali' or 'Chhatri jal'. It is a type of falling gear and the fishing is done by quickly moving the gear to cover the fish. Usually it is made of polyamide multifilament or polypropylene and has conical shape with a strong rope attached to the top; when spread out, it forms a circle. Several lead or iron weights are attached to the margin to sink it during operation. The length of the gear usually ranges from 2 to 4 m and weight is about 4 to 5 kg. The cost of the net is Rs. 1,200.00, depending upon the size of net. It is a single-handed operated net with different mesh and pocket sizes, designed to catch targeted fish species (Bhakta *et al.*, 2016). It is mostly commonly operated in ponds, lakes, rivers and reservoirs. As shown in figure 1, this net is particularly used for catching small fishes and prawns in the Marathwada region, Specific examples include the Godavari River and reservoirs like Wan and Siddheshwar.

### Gill Net

Gill net is one of the most widely used fishing gears. It is a passive gear. The mesh size varies according to the body

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Figure 1: Cast net operated in Wan Reservoir at Nagapur

depth of the targeted fish. It is used at all depths, from shallow to deep waters. Monofilament and multifilament nylon materials are used for the manufacturing of gill net. They are vertical walls of netting set out in a straight line, with floats and sinkers are attached to the head ropes and foot ropes. Gill nets with various mesh sizes, ranging from 16 mm to 250 mm and length ranges from 50 to 200 m are recorded (Kokate *et al.*, 2016). The weight of the gear is about 8 to 12 kg in Marathwada region of Maharashtra. The gear has a lifespan of about 4 years. As shown in figure 2, in Maharashtra's Marathwada region, gill nets are mostly operated in rivers and reservoirs, such as the Lendi river in Nanded district and the Siddheshwar reservoir in the Hingoli district. Mainly catla, rohu, mrigal and common carp these fishes are captured in this region.



Figure 2: Gill net operated in Lendi River at Nanded

#### Drag Net

Drag net, also known as 'seine net' is a form of fishing gear that operate as an encircling net known as a seine. Each drag net forms a wall-like structure and is mostly used for fishing in ponds, lakes, rivers. To keep the net vertical, there is a foot rope with sinkers and a head rope with floats (Waghmare, 2019). While the ropes are usually made of cotton, the nets can be designed of either cotton or nylon. The size, depth and type of the water body all affect the drag net's length. The average length of net is between 10 and 20 m, with a depth of 1.5 to 2 m. It has fine mesh sizes *i.e.*, 20 to 50 mm and the net weighs around 12 kg. It requires the efforts of a large team of fishermen for operation. This net is used in places

where the rivers, lakes or wetlands are more prominent. It is commonly operated in reservoirs, particularly in the summer when the water recedes. Fishermen normally avoid areas with submerged tree stumps. As shown in figure 3, in Marathwada region, it is operated in Manar reservoir of Nanded district and the Siddheshwar reservoir of Hingoli district. Fishes such as catla, rohu, mrigal, murels and common carp are commonly captured in this region.



Figure 3: Drag net used in Manar Reservoir at Nanded

#### Scoop Net

Scoop net is also refers as 'jali' used manually in shallow water. It is a conical shaped bag net tied to a triangular bamboo frame. One pole of the bamboo frame is extended by about 1 m to operate the net (Bose *et al.*, 2019). The frame is immersed in water and pushed forward a short distance along the bottom before being lifted up. Length of net is about 13 m, mesh size is extremely small (*i.e.*, 10 mm) and weight is around 10 kg. Only water can pass through it. Figure 4 shows in Marathwada region, this net used in the Nathsagar reservoir of Paithan, small fishes such as catla, rohu, mrigal and common carp as well as fresh water prawns like giant freshwater prawn and Godavari river prawn are captured using this net.



Figure 4: Scoop net operated in Nathsagar Reservoir at Paithan

### Hook and Line

Hook and line refers to tying a rod with local fiber, cotton thread, or nylon twine with a hook attached to the end. Hook and line fishing is reported to be a very popular and common fishing method in the Marathwada region. Small fishes, molluscs flesh, frogs and earth worms are used as bait to capture carnivorous fishes and prawns (Sakhare and Jetithor, 2013). The length of the hook and line varies depending on the depth and location of the water body. The size of the fish typically captured using this method is around 2 kg. Hook and line is mainly used to capture riverine fishes. Figure 5 indicates in Marathwada region, it is used in Bindusara river of Beed district. Fishes such as murrels, magur, knife fish, freshwater shark (*Wallago attu*) and singhi are captured using hook and line.



Figure 5: Hook and line used in Bindusara River at Beed

### Conclusion

In Maharashtra's Marathwada region, traditional fishing gear is selected based on several factors, including the characteristics of the water bodies, the nature of the

fish stock and the properties of the materials used in gear construction. Further research is required to gain a comprehensive understanding of certain traditional fishing practices in this region. Therefore, it can be reported that in the present study it has been tried to summarize the so far fishing gear is available in Marathwada region. There is no destructive fishing in this area and fishermen are utilizing traditional fishing gear which contributes significantly to the wetlands, lakes, rivers and reservoirs fisheries sustainability.

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