

Short note**Crafts and gears used in reservoirs of Marathwada region, Maharashtra**V.B.Sakhare^{1,*} and S.G. Jetithor²

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Abstract

It was analyzed the fisheries arts in reservoirs of Marathwada region, Maharashtra, it was compared the different kinds of fisheries arts considering efectivity, materials, mode of use, and fisheries efforts for different sites.

Keywords: fisheries, reservoirs, Marathwada.

The rapid development of fishing technology in India during the recent years has the paved the way for increased production availability of new synthetic materials, evolution of new designs of fishing gears and crafts and avoidance ignorant harmful fishing techniques etc. Selection of fishing methods and gears are influenced by various factors such as physiography of the water body, nature of fish stock, characteristics of the raw material from which gears are fabricated and standard of living (Choudhary, 1992). Therefore, variation in application of gear can be observed in different reservoirs, which have characteristics of their own due to unique nature of the water resources of the region.

In India details about crafts or gears used in fresh water fishery sector was documented by Manna *et al.* (2011), Bhattacharya *et al.* (2005), Sharma (2001), Gurumayum and Choudhary (2009), Behra *et al.* (2001), Bhanot (1973), Joseph and Narayanan (1965), Goerge (1971), Devi (1997), Khan *et al.* (1991), Ahirrao and Mane (2000), Valsanghar (1993), Sakhare (2007), Mali and Bondhare (2012), Baiju and Hridaynathan (2002), Joshi *et al.* (2013) and George (2002). However, the detailed account on crafts and gears used in reservoirs of Marathwada region is scanty. Hence, in the present paper, an attempt has been made to record the information on fishing crafts and gears used in the reservoirs of Marathwada region, Maharashtra.

Information on fishing crafts and gears were collected from selected 10 reservoirs of Marathwada region (Table 1). Data are collected from the field directly for the period of July 201 to June 2012. Fishing methods means the manners in which the fishes are captured. Fishing gears is the implement development for the purpose of fishing. The history of fishery began when man had to be content with what food nature could provide. Fishing and hunting can be traced to be of the same origin. Fishing craft is a carrier of floating plate form by which fishermen go to the fishing grounds along with equipment and back along with the catches to

the shore. Fishing gear is the tool used for catching the fish. There are endless varieties of fishing gears used all over the world.

Marathwada region with an area of 64,798 sq. kms comprises seven districts, viz. Aurangabad, Jalna, Parbhani, Nanded, Beed, Hingoli and Osmanabad. This region is formed a part of the Nizam's dominion of Hyderabad prior to reorganization of states in 1956. It is also known as Aurangabad division for official and administrative purposes. The divisional headquarters are located at Aurangabad. It is the smallest division in respect of both areas and population as compared to other divisions of Maharashtra.

The Marathwada region presents a variety of land surface. Several hill ranges are scattered all over the region. Important rivers of the region are Godavari, Manjara, Purna, and Dudhna. Several small and medium rivers are constructed across these rivers. The climate of the region is tropical-monsoon type, controlled by several winds. The region lies in rain-shadow of south-west monsoon and receives an average rainfall of 35".

Table 1: Selection reservoirs in Marathwada region, Maharashtra

Sr.No.	Name of the Reservoir	District	River	Year of construction
1	Siddheshwar	Hingoli	Purna	1962
2	Majalgaon	Beed	Sindphana	1986
3	Manjara	Beed	Manjara	1991
4	Harni-Katgaon	Osmanabad	Harni	1964
5	Vishnupuri	Nanded	Godavari	1984
6	Wan	Beed	Wan	1966
7	Masoli	Parbhani	Masoli	1981
8		Jalna		
9	Terna	Osmanabad	Terna	1970
10	Chandani	Osmanabad	Chandani	1965

Brief discussion of individual crafts and gears are given below:

Crafts:

Coracle: - It is a saucer shaped country craft commonly used in Vishnupuri reservoir of Nanded district. Coracles are prepared by wrapping HDPP sheet over the split bamboo frame with the help of coal tar as an external covering. Coracles are inexpensive and durable. It is also a versatile craft used for laying and lifting of nets, besides navigation and transport of fish and other materials. The coracles are made of locally available leather (Figure 1).

Thermocol raft:- These are primitive crafts used for fishing in Terna and Chandani reservoir. It is nothing but a platform of 6 x 3 feet size with a depth of 4-10 inches. This is prepared from thermocol and covered by a plastic covering. The raft is commonly used for drag net and gill net operation (Figure 2).

Rubber tube platform:- In some shallow water reservoirs like Chandani and Harni (Katgaon), the fishermen were observed to rely on another kind of improvised materials. They showed considerable ingenuity in fabricating makeshift rafts out of discarded old rubber tubes. A woolen platform is placed over the rubber tube and tied tightly with rope. It is used for hook and line operation and also for setting and hauling of gill-nets (Figure 3).



Fig.1: Coracle used in Vishnupuri Reservoir of Nanded.



Fig.2: Fishing with Thermocol raft in Terna Reservoir



Fig.3:Rubber tube platform used in Chandani Reservoir

Gears:

1. Rod and line: - It is an ordinary fishing device and is popular with fishermen who cannot afford to have other nets. It consists of a rod, nylon twine and hook. The nylon line is tied to a rod on one side and to the baited hook on the other side. The nylon line is also provided with a wooden float. It is also used by the children who help their parents in improving their income. Rod and lines are operated near the shore of the reservoir. Cockroaches, snails, earthworms, insects or other small organisms are used as bait for the capture of carnivorous fishes (Figure 4).



Fig.4: Rod and line used by fisher children

2. Gill-nets:- Gear used for fishing in reservoirs of the region and mostly surface gill-nets. Gill-nets are having floats made up of soft wood, fixed at regular intervals where as stone pieces of pebbles are used as sinkers which are attached at intervals in the foot rope. The nets are payed off in the evening and hauled up next morning. If sufficient catch is not obtained, the same nets are payed at another location. Mesh size of the gill-net varies according to the quality of nylon used for their fabrication. Good quality nets are prepared from the Garware nylon which is considered a good quality nylon yarn. The price of this type of nets ranges between Rs. 1000 to 1250/- per kg of webbings. Apart from this, low quality nylon nets are also used which are popularly known as 'Disco nets'. The cost of which varies from R. 300-600/- per kg of webbings. The quality of nylon yarn used for the preparation of this type of nets is very poor.

3. Cast net: - It is commonly known as 'Chhatri jal'. It is circular net of varying mesh sizes. At the apex of the net a long thin rope is attached and at the periphery circular pockets are made by folding the net inwards. The pockets are provided with sinkers. The free end of the central rope is tied to the fore finger of the left hand. The net is then roughly folded in three equal portions, the fold near the rope is held by left hand, the middle one is kept free and the last one is near the periphery, is lifted up over the head and thrown to a distance reachable by the attached rope. The net falls on the reservoir bed in a circle, trapping the fish in the area and ultimately into the pockets. The net is opened in the shallow waters throughout the years especially for small sized fishes (Figure 5).



Fig.5:Cast net operated in shallow waters of Wan Reservoir

4. Drag net: - This net is operated in the marginal areas of reservoirs where the depth of water is more than 4 meter and there is no current. It comprises the packed nets wing, ropes, sinkers and floats. The nets are made up of cotton or nylon and the ropes of cotton. The length, depth and size of mesh may vary from place to place. The area of the fish and the type of the fish to be caught determine the overall feature of the drag net. The drag net is operated by taking one end of the net by a boat in a semicircular fashion and bringing it back near the shore. The other end remains on the shore. A batch of 8-10 people had the ropes attached to both the ends of the wings and exert efforts to pull up the net to the margin of the reservoir. Some fishermen scare the fish to drive them into the area encircled by the net. After the net had surrounded the fishes, the working people at both the ends drag the wings to the shore. In this way, the fishes are driven into the pocket and are hauled up to the shore. This drag net is used in the marginal areas of the reservoir where the depth of water is not more than 4m and there is no current. Summer is the ideal time to operation by the drag net, when the water level goes down.

5. Seine (Shore) net: - The use of this category of net ensures good quality of fish as the uninjured fish are, after encircling and pursuing the net, taken out of water soon afterwards. As the net is moved

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