

Traditional Fishing Methods in Western Vidarbha Region of Maharashtra

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ABSTRACT

Fish capturing is one of the oldest practice of mankind and fish has been also one of the most important food items of the human beings from the ancient time. In fact, the success of fisheries in a country depends on proper catch of its fish fauna. In India millions of people of fishermen community have been depending on fishing for their livelihood. In Maharashtra, some of the tribes are traditionally engaged in this occupation. These fishermen are broadly grouped as specialists or indigenous groups who depend completely on fish and other aquatic resources for their subsistence, subsistence fishers or opportunists who depend partly on fish, and groups who have recently entered the fishing industry. The present paper reveals the description of some of the methods like Wapha, Daab and Ghug and their construction, installation, harvesting and catch.

KEY WORDS

Traditional Fishing Methods | Traps | Wapha | Daab | Ghug | Vidarbha

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Introduction

Western Vidarbha region is blessed with a large number of wetlands like reservoir/barrages, waterlogged and small rivulets/streams. This area comes under the vicinity of the river Tapti and Godavari. The rivers like Purna, Penganga, Morna, The traditional fisher folk are all those men, women and children who earn a livelihood by involving in harvesting, handling, processing and marketing of fish and fish products. Fishermen being inhabitant in and around the water bodies they are the “natural custodians” of water and largely depend upon the natural wealth of their habited not only for their basic need but also for amenities of life. Art and Science of fish harvesting have been evolved from the fisher communities and passed on from generation to generation. Traditional knowledge and practices can play a great role in enhancing our understanding for devising fishing techniques. This area has a least number of traditional fishing tribes for example Bhoi and Andh but people from other communities have also involved in direct fishing and its marketing. The tribes have acquired knowledge and gained skills to maintain their sustainable existence (Chavan *et al.*, 2004) and to protect landscapes, ecosystems and species traditionally with the course of development (Kothari and Bhatt, 1998). Indigenous traditional knowledge is the community based knowledge which is passed by generations over many countries.

Traps are passive fishing gears and are designed in such a way that the fish can enter voluntarily into the passage but the same passage becomes a non- return device and the fish get trapped (Pravin *et al.*, 2011). Trap fishing operations are economical and have

energy related advantages over active fishing methods. The idea of catching fishes without much effort might have probably resulted in the development of traps. Traditional fishing arts have been developed over the years to adapt to local body conditions; the species of fish desired and targeted size. The most successful fishing methods of an area or a region are those that have stood the test of time. Fishing with traditional gears is eco-friendly in comparison to the destructive fishing like chemical poisoning, dynamiting, electro-fishing, use of small mesh-sized nets *etc.*, which has imbalanced the aquatic biota damaging not only the water environment but also fishes and their prey-bases and ultimately the aquatic food chain. Therefore, to exploit the fishery resources, new eco-friendly fishing method is utmost urgent. So, in this respect priority should be given to the indigenous traditional knowledge. Because, traditionally, local communities worldwide are extremely knowledgeable about natural resources on which they are so immediately dependent. Unfortunately, much of this wealth of knowledge is today becoming lost as traditional cultures become eroded. Traditional knowledge can play very useful role in rescuing disappearing knowledge and returning it to local communities. So, traditional knowledge should be conserved as a part of living cultural ecological system, helping to maintain a sense of pride in local cultural knowledge and practices and reinforcing link between communities and environment, so essential for conservation. There are various traditional fishing methods highlighted by various authors in the north eastern states (Gurumayum and Choudhury, 2009; Kalita *et al.*, 2010; Pranjal

and Sharma, 2013; Samajdar and Saikia, 2014; Chanu, *et al.*, 2015)

Material and Methods

Western Vidarbha is composed of five districts viz. Akola, Amravati, Buldhana, Washim and Yavatmal. This study was carried out on rivers Morna, Adan, Penganga, Katepurna, Nirguna and Van which are the tributaries of river Purna and flowing through some of the talukas of Washim and Akola districts. The area was exclusively browsed from August 2018 to December 2019 for conventional fishing methods of the area. Various types of participatory research tools such as interviews and site observation were carried out to collect the information of construction, installation and operation of the traps. Photographs of the traps and their catch were taken by using the digital camera. Similarly specimens were collected and brought to laboratory for preservation. The fishes were identified by using Day (1986) and Talwar and Jhingran (1991).

Results and Discussion

Selection of fishing methods and gear are influenced by various factors such as physiography of water body, nature of fish stock, characteristics of raw material from which gear are fabricated and standard of living (Chanu *et al.*, 2015) The village fishers and fisherwomen beside dewatering and fish poisoning (plant derivatives), used different conventional fishing traps which are Wapha (Flow diversion), Daab (Pot) and Ghug for harvesting the small fishes. These traps are unique in their catch that can not be employed by other gears and hence for complete documentation of fish diversity these methods are of unique importance.

Wapha

Construction, Installation and Operation:

The flow of clear running shallow water where the width of the rivulets is less (about 20 ft.) is diverted by bunding it with the small stones, sand and litter. A mat of plant Nirgudi (*Vitex nugindo*) of size 10 ft X 4 ft is spread and its one end is kept spread and inserted in the sand and other end which is channelized is put in to the porous tin. Then large stones are kept in the tin to fix it. It is installed in evening hours and harvested in early hours of the morning. Shoals of fishes coming along with water are trapped in the tin. This is the seasonal trap used in winter months when water is not turbid.

Catch: The catch contains mostly the striped loaches (*Nemacheilus botia*) and *Channa punctata* and rarely prawns and crabs. The catch depends on the density of the shoal.



Wapha



A fisherman interlacing a mat

Constructing the Wapha



Nemacheilus botia

Channa Punctata



Harvesting the wapha



Shrimp (unidentified)



Macrobrachium rosenbergi



Crab

Daab (Pot traps)

Construction, installation and operation: It is a large metallic pot or bowl with wide mouth baited with crushed bread, crabs or small fishes and the mouth of the pot is covered with thin cloth with a hole in center where bait is placed. It is installed at shallow and clean water and pebbles are placed over it to make it heavy and not be disturbed due to flowing water. Fishes enter the trap through the hole for bait and get trapped. Periodically the pot is checked and trapped fishes are collected.

Catch: The catch mainly contains the fishes like *Rasbora doniconius*, *Puntius sophore*, *Barilius sp. etc.*



Daab



Fisherman installing the Daab



Rasbora doniconius



Harvested fishes

Ghug

Construction, installation and operation: The river or rivulets is penned with the stems of plants and bamboo and netted with the muslin cloth. In the center of the rivulet the net is channelized as V shape and provided with a basket which is interlaced with the stems of Nirgudi or split bamboo. This basket is covered with fine net or muslin cloth. Fishes coming along with the flow are trapped in the basket.

Catch: *Mastocembelus armatus*, *Ompok bimaculatus*, *Mystus bleekeri*, *Rasbora doniconius*, *Puntius ticto*, Crabs, Shrimps, etc.



Ghug



Fisherman harvesting the Ghug



**Mastocembelus armatus, Rasbora doniconius,
Channa sp.,**



Crab and Shrimps

The present study reveals that the trap “Daab” is used all through the year while Wapha and Ghug shown a distinct seasonal pattern. These traps are generally found in operation in the shallow depth areas. The success of these fishing techniques depends on various factors like selection of site, time, efficiency of materials used and availability of fish, etc. (Srivastava *et al.*, 2002; Dutta and Bhattacharjya, 2009). Traditional fishing techniques will vary considerably in detail from region to region, but an analysis of the range of techniques employed show that the techniques and tools used depend on the type of habitat being exploited (Bhilave, 2018).

Conclusion

Selection of fishing methods and gear are influenced by various factors such as physiographic features of the water body, nature of fish stock, characteristics of the material from which gear are fabricated and standard of living. Fishing activities follow seasonal pattern, therefore, variation in application of gear can be observed in different rivers, which have characteristic of their own due to unique nature of the water resources of the region.

The traps used in different parts of the country are highly diversified. Some traps are alike with same principle and some structural modifications. In compliances with rapidly changing livelihood and resource limitation, use of these gears in tribal communities is rapidly decreasing and hence details of such tools and practices demands immediate documentation. This area needs further study to investigate some more traditional methods and traps of the local tribal folk.

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