

## TRADITIONAL FISH DRYING AND STORAGE TECHNIQUES USED BY THE TRIBAL'S OF BASTAR REGION (CHHATTISGARH)

Ajay Banik

*Sos in forestry and wildlife, Bastar Vishwavidyalaya, Jagdalpur (C.G.)*

[ajaybanik07@gmail.com](mailto:ajaybanik07@gmail.com)

**Abstract:** Traditionally fishing has been the one of the core of subsistence life throughout most of the tribal's of Bastar region. Tribal's depend mainly on the food products available naturally from the forests for their survival and living, fishes are one of the main food product in their diet. Investigations are described to show the traditional fish drying and storage practices used by the tribal's of Bastar region.

**Keywords:** Bastar, Chulla, Jungle, Mongri, Sukuwa, Traditionally, Tribal's

### INTRODUCTION

Fish is an extremely fragile food item and required preservation for future uses. Since ancient times people knew many ways which are ideal for keeping fish for the longest possible period. Several preservation methods are followed over the world for preserving fish. Aim of all these methods is same to extend the shelf-life of fish so that the fish can be used in future properly. There are several old ways, which are still used to today, including the method of drying, salting, smoking etc. Tribal peoples of Bastar known since ancient times, drying is an ideal way to save the fish for the longest possible period, namely "SUKUWA" or "Dried fishes". The paper deals with the various indigenous methods used the tribal's of Bastar for preserving the fish for the future; by documenting the traditional fish processing practices, we can preserve the traditional culture and native techniques of the tribal's of Bastar for the utilisation and acquaintance of the future generations.

### Study area

The Chhattisgarh state is spread over in an area of 135,187 km<sup>2</sup> which constituted 4.1% of land area and 8.4% of forest cover of the country. Bastar is the southernmost district of the Chhattisgarh state; it is situated about 600 meters above sea level. The district has an average population of 1,411644 as per the 2011 census. Of the total population 86 % are rural population in which more than 70 per cent are tribal people.

### MATERIAL AND METHOD

The present study was under taken to assess the drying and storage processes of the fishes used by the tribal's living in forest areas of Bastar region. To achieve the objective, the standard surveys were conducted around the district. Data on the various methods of fish processing and preservation methods employed by tribal's in Bastar region were obtained through interviews conducted on the tribal fishermen as well as through visits, surveys and studies carried

out and observation made on the fish processing methods and the fish processors. The study analyses and deals with the different traditional knowledge aspects of fish harvesting processes viz; drying and storage utilized by the rural & tribal peoples around the forest villages of the Bastar region.

### RESULT AND DISCUSSION

In Bastar traditional fish preservation methods have been practiced from centuries, Tribal's of Bastar has the knowledge of many traditional techniques for fish preservation. Among the observed fish processing practice, mainly women's were involved in the processing works around the district. Fish bruise easily and so should be handled carefully. Therefore the processing sequence starts from grading the fish by species and size. The fishes were sorted out manually by species as well as on the basis of physical damage. The fish were washed primarily to clean the fish and remove accumulated unwanted things as well as removing accumulated slime on the surface of the body. The fish species were scaled manually. Tools for scaling such as table knife were moved over the body of the fish from tail fin towards the head pulling out the scales. Also the fins were cut away with a knife.

#### A. Drying of fishes

In Bastar for the preservation of fishes, drying is mainly used as a traditional method. The drying method is considered as one of the cheapest and easiest ways to prepare and save the fishes for future use purposes in Bastar among the tribal's. The principle of drying is firstly to reduce the amount of water that contains in the fish which is necessary for the growth of bacteria and microorganisms that cause corruption and damage to the fish and secondly tribal's can save the dried fish until needed in the seasons in which the presence of fish is little as well as the dried fishes are easiest way of convey to remote areas of the jungle. This practice is used from the ancient times and it starts from the moment fishes were catched. After catching, fishes were generally carried out in bamboo utensils (Bans Dhuti) which

helps in rinsing the extra water from the fishes or carried in the utensils made up of big leaves to the drying area, generally Teak (*Tectona grandis* L.) and Sal (*Shorea robusta* Gaertn. f.) species are used to make leaf utensil known as "Dona" in Bastar. After that fishes were dried according to the following traditional ways.

### **1. Sun drying**

In Bastar, sun drying is the most widely used method for the fish preservation by the tribal's. This method is also considered as the least expensive method of preservation. In sun drying, the process is carried out by exposing fishes directly under the sun. This is usually done in the open air using solar energy to evaporate the water content in the fish. Natural air carried away the evaporated water from fish body. This process generally takes about 3-4 days during summer season and during rainy season it depends upon the time required to complete the drying of the fishes.

### **2. Heat drying or Janjhi**

This method is locally known as "Janjhi" among the tribal's. In this method in the kitchen of the tribal house, the fishes were hanged above the mud chullas (stoves), either hanged on the roof or with the bamboo sticks or poles for drying. In this method year round drying of the fishes is done. The fishes dry with the heat generated by the chullas in the kitchen gradually with time.

### **3. Smoking Process**

Fish smoking is relevant in the villages of Bastar, in that it prolongs the shelf-life of the fish, enhances flavour and increases utilisation of the fish. Smoking is considered as an ideal way to save the fish; Moreover, many tribal people prefer the taste of smoked fish because it gives the fish a good flavour and a distinctive colour. Traditionally, fish is not cleaned before smoking, but large fish (e.g. Catfish or Mongri) is normally cut into portions.

The fishes were placed on a metal net over the cylindrical mud chulla or stove. Firewood from varied trees generally Aam (*Mangifera indica* L.) were used to generate the smoke, used to smoke and cook the fish. The fish were turned at intervals to ensure uniform smoking and cooking of the fish.

### **4. Salting**

Salting of fishes was done immediately after fishes were caught, scaled, gutted and washed. The salting was done by placing "Khada namak" (crude solar salt) in the gut cavity and outside the fish. The fish were arranged in bamboo mat called as "Chatai", and more salt were sprinkled on the fishes. The salted fishes were covered and left for a day. After salting the fish were removed and spread out to dry in the sun.

### **B. Storage**

As Bastar is an interior tribal area, still in backward condition situated at the southern most place of the Chhattisgarh state, therefore the tribal's still don't

have the capability to afford modern storage equipments and machines for storing the food. Therefore after drying, fishes were stored traditionally in the houses of the tribal's. The dried fishes are known as "SUKUWA" in Bastar, they are one of the main sources of protein food for the tribal's.

Generally two traditional ways were used in Bastar by the Tribal's for storing the fishes in which the first way is the utilisation of bottle shaped bamboo containers known as "Machli Dhuti", which were used to store the dried fishes. In this technique the dried fishes were kept in the Bamboo bottles and were hanged on the roofs of the houses of tribal's. It is estimated that the dried fishes kept in the dhuti's are preserved safe for 1-2 years and can be used for the future purposes or can be used to be sold in the haat's or markets. Another way for storing dried fishes is to keep them stored between many layers of dried leaves especially of *Bauhinia malabarica* Roxb. known as "Chipta" in Bastar by the Tribal's. Generally in both the techniques about 3-4 kilograms of fishes are stored safe for about 1-2 years.

### **ACKNOWLEDGMENT**

I take this momentous opportunity to express my heartiest gratitude, indebtedness and regards to HOD/Associate Professor, School of Studies Forestry & Wild life, Bastar Vishwavidyalaya, Jagdalpur (C.G). I would also like to thank the villagers who lended me their knowledge and cooperation during the study work. My thanks also remain due for those who had helped me knowingly and unknowingly in various ways to complete my research work successfully.

### **REFERENCES**

- Bala, B.K. and Mondol, M.R.A.** (2001). Experimental Investigation on Solar Drying of Fish Using Solar Tunnel Dryer. *Drying Technol.*, 19: 427-436.
- Caurie, M.; Lee, T.C. and Chichester, C.O.** (1977). Underutilization of Food Technology Resulting in Losses of Available Food in West Africa. International Center for Marine Resource Development, University of Rhode Island, Kingston, Rhode Island, USA.
- FAO.** (2001). Example of successful in agriculture and rural development in the south. Sharing innovative experience, 5: 240-254.
- James, D.** (1983). The Production and Storage of Dried Fish Fisheries Report 279, FAO, Rome, Italy.
- Pradhan, A.; Nag S.K. and Patil, S.K.** (2011). Traditional fishing techniques of tribes in Bastar region of Chhattisgarh. *IJTK.*, 10(2): 386-387.
- Tahy, C.; Vogel, C. and Christiansen, P.** (1982). Preserving Food by Drying. Peace Corps, Washington, D.C. USA.