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Current trends of fish processing in Jabi Lake Area

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Abstract

A survey of the fish processing practices of the fishing settlement around Jabi lake area in the Federal Capital Territory (FCT) was conducted. The main purpose of constructing the reservoir is to serve as the main source of water supply to the FCT, fishing and fish processing became prominent. Fishermen are recording very low fish catch and the level of hygiene in fish handling practices is very low. The processors are majorly involved in smoking and frying which is dominated by 79% of middle aged young men whereas 21% are women. The scale of fish processing in Jabi Lake area is still at the subsistence level. Furthermore, the processors do not package the processed fish products, rather they gather them in baskets and plastic bowls. FCT residents usually procure live and smoked fish from Kado fish Market.

Keywords: Jabi Lake, fish processors, livelihood and fish processing.

Introduction

Nigeria has a number of important inland fisheries including those of Lake Chad, the River Niger, Lake Kainji, the Upper River Benue, Tiga Lake among others (FAO, 1990). The exploitation of these inland waters for fisheries has contributed significantly to the development of the Nigerian economy. In 2007 fisheries contributed 4.5% to the national Gross Domestic Product. Fish demand in Nigerian is over 2.50 million metric tons annually, of which domestic fish production is put at about 511,000 tons. Efforts to increase national fish production include the exploitation of other water bodies for fisheries like the Jabi Lake.

Jabi Lake is a man-made reservoir of water from the foot of Katampe rocks. It is located within Kado and Jabi districts of the Federal Capital Territory (FCT). It was constructed in 1981 as the first source of water supply to the capital city. Due to increases in urbanization the initial intention of meeting the water need of FCT residence for which the lake was created was dropped as the lower Usman Dam was constructed in Bwari for the purpose of servicing the water needs of the Federal Capital Territory (FCT Water Board, 2005). Ever since the initial objective was no longer feasible, fishing activities gained prominence in the lake.

The practice of fish processing in the FCT at its present urbanization status needs to be brought into focus, especially in the evaluation of the different fish processing technologies in use by fish processors in the Jabi Lake area and identifying the major problems affecting the adoption of new processing technologies. Also to be considered is the need to reduce post harvest losses of fish in the area. Processing, packaging and marketing are all area in need of technical assistance.

Material and Method

- **Project location:** Jabi dam project is an earth fills hydraulic structure with length 850m, spillway 30m, and Reservoir capacity 6 million m³. The livelihood of the settlement around the Jabi Lake area revolves around fishing and fish processing. The survey was conducted to monitor and evaluate the fish processing practices of fishermen and fish processors by oral interview and on the spot observations.

Results

The fishermen reported that their diverse customers come from Karimo, Kado, Jabi village, Gwagwa, Mararaba, Nyanya, Jikwoyi and Orozo, but the recent practice is that most people go to Kado Fish Market to buy fish of different types that are brought from different parts of the Country. Private investors are practicing cage culture and earthen ponds fish farms in and around the lake.

Fish species abundant in Jabi Lake: Their various fish species that are in abundance in Jabi reservoir; they include *Hepsetus odoe*, *Tilapia zillii*, *Clarias gariepinus*, *Auchenoglanis occidentalis*, *Petrocephalus bane*, *Oreochromis niloticus*, *Tilapia aureus*, *Mormyrus hasselquisti*, *Raiamas senegalensis*, *Barbus bynni occidentalis*, *Sarotherodon galilaeus*.

Fish handling: Fish are most often scooped out of the canoes with all sorts of plastic containers. The processors buy fish from fishermen at the landing sites of the reservoir. Immediately they sort the fish into various sizes and begin to gut them. Before processing the fish processors salt the gutted fish. The processors discard spoilt fish or in some cases, the spoilt fish are feed to domestic Ducks. The level of hygiene observed by processors is very low.

Fish processing methods practiced: Two different processing methods were practiced among the fish processors at Jabi reservoir. In the western landing site the processors fry the fish with vegetable oil. About 7-10 Kg of small *Tilapia* species are fried on daily bases. A batch of frying operation last for between 10-15 minutes. The shelf life of the fried fish is about 5-7 days. In the Eastern landing site the processors most often smoke the fish. About 2-5 Kg of mostly small *Tilapia* species is smoked on daily bases. Smoking operation last for 48 hours and the fish is sold at least 2-3 days after processing.

Sex and age of processors: In Jabi reservoir fish processing is carried out by both male and female. There are 15 male fish processors in the Western landing site whose age ranges between 23 and 50 years. In the Eastern landing site there are 4 female fish processors whose age ranges between 25 and 53 years.

Scale of Processing: The scale of fish processing in the reservoir is at a very small scale. Moreover the fish productivity of the reservoir is very low that it could not sustain large scale fish processing activities. A visit was embarked to Kado Market to ascertain the source of the fresh and smoked fish sold in the market. Most fish sold in the market are supplied by fish farmers from Ibadan and freshwater fish from Kainji. Live fishes, frozen fish and smoked fishes are sold in the market. The smoked fishes are supplied from Yauri. It was gathered that a greater percentage of fish consumers preferred their fish filleted. Cat fish are largely sold as live fish and they are held in tubs of shallow water till consumers buy them.



Plate 1 & 2: Filleting of fish sold in Kado Market.

- Equipment used:** The fish processing equipment in use by fish processors include half drum smoking kilns and frying pans. The smoking operation is prolonged as a result of inefficient heat transfer and large quantity of fuel wood is used. The quantity of fish smoked ranges between 5 to 10 kg per day. Smoking operation was conducted at the river bank with NIFFR drum smoking kiln, which the female fish processors admired and cherished. This was to raise awareness programme for the female fish processors in the operation of the kiln and improved fish handling practices. The model of the drum smoking kiln can be constructed by the fish processors; its simplicity and efficiency in the utilization of fuel wood accelerate its adoption by local fisher folks.



Plate 3: Half-drum smoking kiln.

Plate 4: NIFFR drum smoking kiln.

Packaging of fish: After smoking the fish are packed in plastic bowls and baskets before they are carried to market. Fried fish are displayed on flat trays and covered with polythene sheets to prevent flies.

Discussion

Fish processing practices in Jabi Lake area is similar to what exists in and around other fishing communities and coastal areas as have been established by other reports around the West African sub region (Oyewo, 2005, Oyewo, 2001) A new trend is the dominance of fish processing activities by 79% of enterprising young men that have adopted this vocation. The 21% female processors engaged in fish processing activities were family members of the fishermen residing within the fishing settlement. This trend differs with earlier reports that indicated the dominance of post harvest fish processing activities by female's folks. The low catch recorded in the lake had created a negative impact on the benefiting settlers as most fish consumers patronized live and processed fish imported to the FCT from different parts of the Country.

With practical training and orientation for the fish processors, significant impact could be achieved in the production of quality fish product around the Jabi lake area.

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