

# AN APPRAISAL OF THE EFFICIENCY OF FISH MARKETING SYSTEM IN LAKE CHAD BASIN

BY

Bolorunduro, R. I<sup>1</sup> and Sule, O. D<sup>2</sup>

1. National Agricultural Extension Research Liaison Services,  
Ahmadu Bello, University  
Zaria.

2. National Institute for Freshwater Fisheries research  
Zonal Office,  
P. M. B 293  
Maiduguri  
Borno

## ABSTRACT

Fish products from the lake Chad Basin play important role in meeting fish protein need of Nigeria, contributing not less than 25% of the total domestic fish supply is significant in determining the availability of processed products and reduction of post-harvest losses. Processors, marketers and consumers are the major actors in appraising a marketing system. The study probed into the activities of these factors in Lake Chad Basin. Results show that most sellers (47.5%) are within the age range of 30 - 39 years. Desires for more earnings made the markets to diversify their business activities to food stuff trading (37.5%), dried meat/livestock sales (37.5%), farming (12.5%), and transportation (12.5%). 62.5% of traders dispose off their products mostly in the mornings and evenings, 70% of the products are sold smoked while 50% of products are sold to individual consumers. From the study, Lake Chad Fish products have a long chain of distribution. There is also a high degree of buyers and sellers concentration in the primary fish markets and secondary (urban) markets. The products have a vertical regional movement with southern traders (82.5%) dominating the business, thus making the products popular all over Nigeria. Product differentiation with imperfect pricing policy are common occurrence. Lake Chad Fish marketing system has distortions that impedes its efficiency. Recommendations are made on how to ensure a better efficiency of the marketing system.

## 1.0 INTRODUCTION

An efficient marketing system plays a major role in economic development marketing - the exchange of goods and services through the use of money links together production and consumption in a dynamic relationship whereby changes in either been about a corresponding change in the opposite side. The process and consequently the system of marketing differ from country to country and from region to region with their varied social, economic, legal and political environment. According to Dansin (1989), the processes involved in the distribution of goods from their points of production to those of consumption are arranged, manipulated and controlled by men.

In Nigeria as in most developing countries, the marketing systems are not making their full contribution to agricultural development and often constitute an impediment to rapid progress. Both logistic and institutional problems constitute basic handicaps. The logistic problems include poorly developed facilities for transportation, storage handling and processing and inefficient communication media. Institutional problem counters on the weak position of producers. Chandipo et al (1981). A lot of intermediaries or middle men are involved in the marketing system and this constitutes a chief deficiency and renders the systems ineffective and inefficient.

One of the most important problems facing Nigeria is the need for increased food production to meet the demands of the country's fast growing population. Food marketing in general, in Nigeria appears inefficient both in economic and operation. The fisheries sub-sector is worst. Post harvest losses are processing losses (from processors) and marketing losses (from seller and buyers). These have been estimated at not less than 30% (FAO, 1983, Tobor 1991). This figure is alarming for a nation that presently meets only 60% of her total fish protein needs and spends scarce foreign exchange in importing frozen and canned fish to supplement the deficit.

The study was carried out to identify the distribution channels of Lake Chad Fish products, the constraints endemic to the system, and appraise the efficiency of the marketing activities using organisational structure, product variety and quantity and price differentiation at whole sale and retail levels.

## 2.0 METHODOLOGY

Structured questionnaire were administered to 120 randomly selected fish marketers in Doro Baga fish market (60 marketers) and Baga Road fish market in Maiduguri (60 marketers). The sample size was based on the choice of at least 10% of the estimated population

of 1100 professional fish markets (Bonga, 1997). Doro-Baga is one of the major primary markets for Lake Chad Fish, while the Maiduguri market is a significant secondary metropolitan market in the basin. Respondents in the study include whole sellers, and technique adopted was interviewing equal number of the 2 categories; of marketers at the implying stations. The questions were simple descriptive and quantitative Statistics tools of frequencies were used in analyzing the data.

### 3.0 RESULT & DISCUSSION

#### 3.1 Personal Characteristics of marketers

Most of the fish sellers interviewed (47.5%) were within the age range of 30 - 39 years (Table 1) 25% were within the 40 - 49 years age group. The economically active age group of most fisher folks are within the 30-49 years age group. Therefore 72.5% of Lake Chad Fish marketers are in the economically active age group.

Males (54.2%) dominated, with 45.8% of the respondent being females. For marketing experience. 75% of marketers has between 1 - 10 years experience while 25% had over 10 years experience.

Results also show that only 35% belonged to cooperative societies. The importance and benefits of cooperatives can not be overemphasized. There is therefore, a need to form the marketers to viable cooperatives. Table 1 also shows that the Ibo fish sellers constituted the majority (52.2%) of the marketers. Majority of them are large scale buyers (merchants) that move huge lorry load of dried-smoked fish into southern markets.

#### 3.2 Products sold and disposal pattern.

Table 2 shows that smoked fish constitute not less than 80% of the products sold with sundries (15%). With such huge sales volume smoked, fish products, (Banda) are popular all over the country.

Retailers (33.3%) and Hawkers (37.5%) are the major buyers of the products for further sales in the country. (Table 3). From Doro and Maiduguri fish markets, 66.6% of smoked and sundried products are transported to southern and northern markets with lorries, especially, the popular 911 lorry (Table 4). The implication of this is that, disposal time is lengthened and couple with bad road conditions further post harvest losses are incurred with additional transport costs to markets. Consumers eventually are made to pay higher cost for fish bought. Four major destinations for Lake Chad smoked and sundried products were identified during the survey (Table 5) while Onisha and Enugu markets received about 41.5% of the products Lagos/Ibadan axis receives 16.7% with Kano.Kaduna axis receiving 25%. The immediate Maiduguri and Potiskum axis receives 16.7% of the products which are consumed mostly in the north-eastern zone.

#### 3.3. Marketing costs and final sales

Some of the measurers of marketing efficiency are cost of product, the pricing policy, the product varieties, and the distribution channels of a commodity. Table 6 is a reflection of the attempt made to determine the cost of

Lake Chad Fish products along the marketing chain. For products having the southern markets as destination, transport cost, processing cost and other incremental costs, make the prices of fish products purchased in Doro-Baga and Maiduguri, to soar by as much as 150% of the initial value at the primary markets. A transportation cost of N30,000 - 37500 is incurred on a full load 911 lorry that can accommodate 120 - 150 tobacco carton of smoked fish.

#### 3.4 Business integration by marketers

Based on table 7, all the marketer, interviewed have integrated into other business to earn additional income. Food stuff and dried meat/livestock tradition is the major other activities the marketers are involved with 75% of them are involved in this. *Farming of farm processing and transportation activities* were patronized by 25% of the respondents.

#### 3.5. Estimation of marketing losses

Post-harvest losses in Nigeria has been estimated to be at least 30% of the total domestic fish volume. Handling losses, processing losses, and marketing losses are the sources of wastage. From this study, three major sources of marketing losses were discovered - - - insect pest menace, fragmentation at packaging and transporting, and would growth. This were variously estimated by marketers to be within 6 - 10% of total spoilage in marketing (Table 8).

### 4.0. CONCLUSION AND RECOMMENDATION

Traditional fish marketing is characterized by constraints imposed on production efficiency of fisherman, the quality of fish product (as a result of poor handling), the buying and selling activities of fish marketers, the channels of distribution and the ultimate consumption of the fish products. The attendant problems associated with the processing and handling, transportation, storage and pricing system, reflect a serious set back to the technical and economical efficiencies of Lake Chad Fish marketing system. Based on the above, the following are recommended, measures to improve the overall efficiency of Lake Chad fish marketing system.

1. Fish marketers, should be formed into co-operative groups with higher bargaining power, marketers in co-operative group will be able to work together to improve the technical efficiency of the marketing. Stalls, protective selling racks, and efficient packaging are things that will lead to reduced wastage. This can be done through co-operative organizations.
2. Effective extension education is necessary at every stage of the functional activities in the fish marketing for overall efficiency. Capture methods, landing processing and preservation, grading, transportation, market retail sales all need to be improved upon.
3. Comprehensive planning based on more research findings and adequate and consistent data are needed to deal with the cyclical problems associated with traditional fish marketing.

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**TABLE 1: PERSONAL CHARACTERISTICS OF MARKETERS**

Age range	Frequency	%
<20		
20 - 29	10	8.3
30 - 39	57	47.5
40 - 49	30	25.0
50 - 59	20	16.7
<60	3	2.5
<b>GENDER</b>		
Male	65	54.2
Female	55	45.8
<b>MARKETING EXPERIENCE (Yrs)</b>		
1	45	37.5
6- 10	45	37.5
<10	30	25.0
<b>MEMBERSHIP OF COOPERATIVE</b>		
Yes	42	35.0
No	78	65.0
<b>ETHNIC GROUPS</b>		
Hawsa/Fulani	10	8.3
Kanuri	10	8.3
Ibo	65	54.2
Idoma	15	12.5
Yoruba	20	16.7

**TABLE 2: PRODUCTS SOLD BY MARKETERS**

Products	Frequency	%
Smoked only	72	60
Fresh/live	-	-
Sundried only	18	15
Smoked and Sundried	24	20
All types	6	5

**TABLE 3: DISPOSAL PATTERN OF FISH PRODUCTS TO CONSUMERS BY FISH SELLERS.**

Diposal pattern	Frequency	%
Hawkers	45	37.5
Organized Retailers	40	33.3
Individual Consumers	30	25.0
Institutional Consumers	5	4.2

**TABLE 4: MODE OF TRANSPORTATION OF FISH PRODUCTS**

Transport	Frequency	%
Bus	20	16.7
Lorry	80	66.6
Van	20	16.7

**TABLE 5: DESTINATION OF PRODUCTS CONSUMER CENTERS**

Destination	Frequency	%
Maiduguri/Potistum	20	16.7
Kano/Kaduna/Jos	30	25.0
Onisha/Enugu	50	41.5
Lagos/Ibadan	20	16.7

**Table 6: AVERAGE MARKETING COSTS INCURRED ON PRODUCTS AND FINAL SALES DETERMINATION**

Destination	Average Buying Price/Carton (N)	Average Transportation cost/carton (N)	Average additional processing/carton (N)	Road incidental/carton (N)	Total cost incurred/carton	Profit margin of cost incurred (50 - 70%)	Average Selling Price/Carton (N)
* Onisha/Enugu							
* Lagos/Ibadan	1800	250	250	20	2320	1160-1624	3480-3044
Smoked fish	700	250	50	20	1020	510-714	1530-1734
* Kanu/Jos/							
* Kadun	1800	120	100	10	2030	1015-1421	3045-3451
Smoked	700	120	30	10	860	430-602	1290-1462
Sundried							
<b>ESTIMATED COST OF TRANSPORT 911 LORRY LOAD OF FISH</b>							
Lorry Capacity	=	120	-	150	Carton of Fish		
To Southern Market	=	250	-	120 or 150	= 30,000 - 37,500		
Northern Markets	=	14,400	-	18,000			

**TABLE 7 DEGREE OF INTEGRATION IN OTHER BUSINESSES BY FISH SELLERS.**

Business	Frequency	%
Food stuff trading	45	37.5
Dry meat/livestock trading	45	37.5
Farming/off farm processing	15	12.5
Transportation	15	12.5