

## **Extension Services and Artisanal Fishing in Ogu/Bolo Local Government Areas of Rivers State, Nigeria.**

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### **Abstract**

*This research work was carried out in Ogu/Bolo Local Government Area (LGA) of Rivers State to ascertain extension services on artisanal fishermen and women in the area. A sample size of 140 artisanal fishers and structured questionnaire were used for the study. The data were analyzed using frequency counts, mean and percentage while T-test was used to test the hypothesis at 0.05 probability level. The results showed that majority (57.14%) of the artisanal fishers were married while few (28.57%) were single while those within the age range of 31-40years were 42.86% while those within 21-30years were 28.57%. The experienced farmers (31-40years) and (21-30years) constitute 32.14% and 28.57% respectively of the entire population. Fishers with secondary education as the highest qualification were 42.86% while those with HND/DEGREE qualification were 21.43%. In terms of household size, 50% of the respondents had 6-10 persons per household, 28.57% had 1-5 persons per household while those with above 10 persons per household were 21.43%. Respondents source of production information were mainly from friends/relations (3.14) and extension workers (3.00). The respondents were aware of the various technologies disseminated to them. The respondents agreed to have benefited from the extension services disseminated to them except non access to micro credit facilities. Constraints from the finding were that technologies were complex to comprehend and utilize, there was high cost of inputs, insufficient information and among others. It was recommended that extension packages that revolve around the information needs of artisanal fishers and micro credit facilities should be provided to artisanal fishers to enhance their access to needed information and modern fishing technologies.*

**Keywords:** *Extension Services, Artisanal Fishing, Ogu/Bolo, Fishers*

### **Introduction**

Extension services are similarly a common feature of the administrative structure of rural areas, having the responsibility in partnership with the farmers of directing programmes and projects for positive change. According to Chigozie (2012), it is a voluntary out- of-school educational programme which uses the basic principles of teaching and learning to reach rural and urban clientele to improve their knowledge, skills and attitudes in their livelihood. It is a discipline which seeks to develop professional competencies essential to the operation of a system of services which assist rural people through educational programmes of improved farming methods and techniques, increased production efficiency and income, level of living and achievement of a more fulfilling rural life. Extension is multidisciplinary because it combines educational methodologies, communication and group techniques in promoting agricultural and rural development. It includes technology transfer, facilitation, and advisory services as well as information services and adult education. It is dependent for success on

other agricultural development processes such as marketing and credit services, not to mention economic policy and physical infrastructure.

Fisheries extension brings to the fishers, fish farmers and fish processors that form of educational assistance best suited to their needs (Kelsey and Hearne, 1966). Fisheries extension agent disseminates improved fisheries/technologies through training, demonstrating and extending farmers advisory services to the local stakeholders. Training is an important tool of extension which facilitates the process of teaching, informing or educating to improve the knowledge, skills and changing the attitude of an incumbent for doing a specific job properly. Training of fisher folks help to making skilled manpower.

Artisanal fishing (or traditional fishing) entails various small-scale, low technology, low-capital, fishing practices undertaken by individual fishing households (as opposed to commercial companies) many of whose households are of coastal or island ethnic groups (Bene, *et al.*, 2007). Despite the enormous fishery potentials in Nigeria, local fish production, especially over the past two decades has failed to meet the country's demand (FDF, 2003). Fish catch from artisanal fisheries has decreased while fish imports have on the contrary increased from 61 to 217 metric tons in 1995 (FDF, 1996); 648,197 metric tons in 2001; 681,152 metric tons in 2002; 663,180 metric tons in 2003 and 648,033 metric tons in 2004 (FDF, 2004) and 740,000 metric tons in 2007 (FDF, 2008).

Stagnation and decline in capture fisheries contribute in no small way to the characterization of the fishing communities and indeed the fisher folk as the poorest of the poor (Bailey, 1995). Innovations on improved practices are disseminated to the target audience (fisher folks) through different methods by a number of institutions and government agencies responsible for creating awareness and facilitating the adoption of these innovations. However, most of these innovations have been observed not to reach the end users as a result of ineffective information dissemination system (Ozowa, 1995 as cited by Okwu, Obinne and Umeh, 2006). This is further confirmed in a study by Centre for Tropical Agriculture (1996), where inadequate access to agricultural information has been highlighted as one of the serious limitations to agricultural advancement in West Africa. Recent research have shown that artisanal fishing activities in Rivers state has had significant reduction due to inadequate information, lack of awareness on the use of modern fishing gears, inadequate market outlay which negatively affected artisanal fishers especially in the area of fish marketing which unfortunately reduced their interests in fishing activities.

Considering the significance of fish in Rivers State, this study was designed to ascertain the level of extension services and artisanal fishing in Ogu/Bolo Local Government of Rivers state focusing on selected fishers in the study area. The specific objectives were to:

- (i) Determine the socio-economic characteristics of artisanal fishermen and women in Ogu/Bolo Local Government area of Rivers State;
- (ii) Determine the sources of fisheries information to artisanal fishermen and women;
- (iii) Identify the technologies disseminated to artisanal fishermen and women by extension agents;
- (iv) Ascertain the benefits of extension service to artisanal fishermen and women in the area, and
- (v) Identify the constraint of the adoption of fisheries technologies by artisanal fishermen and women.

## Hypothesis

There is no significant difference between fishermen and women in the benefits of extension services in the study area.

## Methodology

This research work is carried out in Ogu/Bolo Local Government Area (LGA) of Rivers state. The Local Government area shares boundaries with Eleme LGA to its North, Tai LGA to the northeast, Gokana LGA to the East, Bonny LGA to the South and Okrika LGA to the West; with the Rivers State capital Port Harcourt located to its Northwest. Ogu/Bolo LGA is located on the latitude of 4.6477400 and longitude of 7.1864800. The LGA covers an area of 89km<sup>2</sup> and is home to 74,683 people (FGN gazette No.24, 2006). The Ogu-Bolo LGA is home to the Ogu-Bolo people of the Wakirike ethnic group which include 4 main towns: Ogu, Bolo, Wakama and Ele. According to the indigenes, Ogu-Bolo LGA is an economically viable area with over 300 small villages and fishing settlements, thus the main economic activity in Ogu/Bolo LGA is reliant on the fishing industry and farming activities for sustainability of life, yet it is faced with great level of underdevelopment according to research.

Twenty (20) registered artisanal fishers randomly selected from each of the seven (7) major communities in the Local Government to give a sample size of one hundred and forty (140) fishers formed the study population. The data were analyzed using frequency Counts, mean and percentage, likert scale with the mean 2.5 benchmark on four point category “Strongly Agree”, “Agree”, “Disagree” and “Strongly Disagree” while T-test was used to test the hypothesis at 0.05 probability level.

## Results and Discussion

The socio-economic characteristics of the respondents are as contained in Table 1. The table showed that 71% of the artisanal fisher folks were males while only about 29% were females meaning that male dominates artisanal fishing in the area. The male dominancy in this source of livelihood implies the laborious nature of fish farming operations right from capturing from the wild using diverse equipments to marketing which their female counterparts cannot easily undertake/contend with. This finding corroborates with that of Okwu *et al.*, (2011) who opined that males dominated artisanal fish capture because it involves a lot of labour and risks which female counterparts cannot contend with. On the marital status, 57.14% were married. This suggests that there may be high demand for food and additional income as the family size increases. The dominance of married households implied that appreciable number of the households were likely to seek information to diversify their livelihood strategies because of its immense benefit of ensuring food security, income generation and reduced vulnerability within the household. Majority of the artisanal fishers were between the ages of 21-30 and 31-40 years because fishing activities requires adequate attention and a lot of sense of responsibility which is in line with the findings of Okwu *et al.*, (2011). In terms of age, the result obtained shows that those involved in fish capture are in the active age bracket this disagreed with the assertion that young people in the rural communities are mostly pursuing tertiary education between the ages of 20-30 years and pay much attention to their studies and have little or no time for other serious activities. Result indicated that 42.86% of the respondents had school certificate, 21.43% with Diploma certificate while 7.14% attended tertiary institution meaning that they are literate. Okunlola (2009) and Agbamu (2006) stated that educational level is one of the factors that influence adoption of new technology by farmers. The information on the innovations of fish farming is somehow complex and this need some high level of education to practice and the more educated an individual is, the easier it will be for him or her to decode and process information. The study further found

that 50% of the respondents had family size of 6 to 10 members while 28.57% and 21.43% had 1 to 5 members and above 10 members respectively. It is conjectured that rural- urban migration of youths to cities in search of job opportunities may have contributed to low family size of the respondents as opined by Jibowo (1992).

**TABLE 1: Distribution of respondents by socio-economic characteristics**

<b>Item</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>A. Gender</b>	100	71
1. Male	40	29
2. Female	140	100
<b>Total</b>		
<b>B. Marital Status of respondents</b>	40	28.57
1. Single	80	57.14
2. Married	20	14.29
3. Divorced		
Total	140	100
<b>C. Age class of the respondents (years)</b>	10	7.14
1. 20 years and below	40	28.58
2. 21-30	60	42.86
3. 31-40	20	14.28
4. 41-50	10	7.14
5. >50	140	100
Total		
<b>D. Fishing experience of the respondents</b>	10	7.14
1. 10 years and below	20	14.29
2. 11-20	40	28.57
3. 21-30	45	32.14
4. 31-40	25	17.86
5. 41-50	140	100
Total		
<b>E. Level of education of the respondents</b>	20	14.29
1. Primary	60	42.85
2. Secondary	30	21.43
3. ND/NCE	10	7.14
4. BACHELOR/DEGREE	20	14.29
5. No education	140	100
Total		
<b>F. Household size of the respondents</b>	40	28.57
1. 1-5 Members	70	50.00
2. 6-10 Members	30	21.43
3. Above 10 members	140	100
Total		

**Source: Field survey 2016**

Table 2 revealed that the respondents got their information from friends/relations, television programme, radio and through extension visitation implying that majority of the farmers have access to extension activities which is supposed to be a major source for disseminating

information to respondents on new technologies. The finding corroborates the study by Ejembi, Ejembi and Okwuoche (2006) which found high use of face-to-face methods to receive information by farmers compared to mass media method. This is contrary to the assertion that most Agricultural Extension Programmes in Nigeria are tilted towards food crop and livestock production.

**Table 2: Sources of Production Information of the Respondents**

Sources	SA	A	SD	D	Mean
1 Radio	50	40	20	20	2.86
2 Television	30	40	20	20	2.57
3 Friends/Relation	60	50	10	10	3.14
4 Newspapers	20	30	40	40	2.21
5 Extension workers	60	40	20	20	3.00

Source: Field Survey 2016

Over all Mean = 2.76

Table 3 shows that the respondents were aware of the various new/modern technologies disseminated to them except light luring fishing facilities. Okunlola [2009] stated that awareness is the first stage of adoption before the respondents develop interest in the technology and later decide on adoption. The consequence is that most of the farmers could not adopt the technology they disagreed about since they were not aware of the innovation.

**Table 3: The New/Modern Tools Disseminated to the Respondents by the Extension Experts**

New Technologies	SA	A	SD	D	Mean
1 Twenty-metre open-deck Senegales fishing Canoe	60	40	20	20	3.00
2 Automated baiting machine	60	30	20	30	2.86
3 Fish finding Equipment	50	40	30	20	3.07
4 Nine metre fiberglass lobster fishing boat	50	40	30	20	2.89
5 Powered-fishing trap	40	50	30	20	2.79
6 Light luring fishing facility	10	20	60	50	1.93
7 Seven metre wooden rowboat fishing herring	55	45	10	30	2.89

Source: Field Survey 2016

Table 4 shows that the respondent benefited from the extension services disseminated to them except non access to micro credit facilities. This result is in line with the assertion that sources of credit are not enough as compared to the volume of funds required for effective investment and expansion in the fishing business (Hulme, 1997). The views of the respondents corroborate with the comments of Hulme and Mosley (1996) that there is strong and positive correlation between microcredit and improved production. The level of awareness of these technologies gave a lot of influence on adoption of technology and fish production.

**Table 4: Benefits of Extension Services to the Respondents**

Benefits of Extension Services		SA	A	SD	D	Mean
1	Marketing and market trend	60	45	25	10	3.11
2	Use of modern fishing gears	60	30	20	30	2.86
3	Job opportunities	60	50	10	20	3.07
4	Increased fish production	70	50	10	10	3.29
5	Access to micro credit facial	30	10	50	50	2.14
6	Poverty reduction	60	50	10	20	3.07
7	Reduced rural-urban migration	50	30	30	30	2.71

Source: Field Survey 2016

Over all Mean = 2.89

Table 5 shows the constraints of farmers on adoption of fisheries technologies. From the result, the technologies were complex to comprehend and utilize, high cost of inputs, insufficient information and among others. The consequence is that most of the farmers could not adopt the technologies, since they were not aware of the innovation. Okunlola (2009) stated that awareness is the first stage of adoptions before the respondents develop interest in the technology and later decide on adoption.

**Table 5: Constraints of Farmers on Adoption of Fisheries Technologies**

Constraints of farmers		Frequency	Percentage (%)
1	Complex to utilize	60	42.85
2	High cost of inputs	70	50
3	Culturally incompatible	20	14.29
4	Wrong timing	50	35.71
5	Insufficiently information	80	57.14
6	Poor extension contacts	40	28.57

Source: Field Survey 2016

Mean=38.1

### Conclusion and Recommendations

Based on the findings, artisanal fisher folks in Ogu/Bolo Local Government area of Rivers State, Nigeria were mostly married adult males in active age range and with moderate level of formal education. There was very high application of modern technologies in artisanal fisheries in the study area disseminated to them except light luring fishing facilities. This could be due to moderate to high level of education of the fisher folks. Respondents got their information from friends/relations, television programme, radio and through extension visitation. The result implied that majority of the farmers have access to extension activities but there is need for more awareness in these areas of technologies where they are yet to adopt. The major constraints of farmers on adoption of fisheries technologies were insufficient information, high cost of inputs and complex nature of the information to be utilized. Based on the findings the following were recommended;

1. Extension packages that revolve around the information needs of artisanal fisher folks should be provided in fishing communities.
2. Adult literacy programs should be provided for the artisanal fisher folks to boost their production and
3. Micro-credits should be provided to artisanal fisher folks to enhance their access to needed information and modern fishing technologies.

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