
PREFERENCE/SOURCES OF FISHING INFORMATION FOR ARTISANAL FISH FARMERS IN AKWA IBOM STATES, NIGERIA

¹Gbarabe Roland, ³Nne Fortune Okah & ²Etukudoh, Ndarake Emmanuel

¹*Department of Agricultural Economics and Extension, North West University (Mafikeng Campus), South Africa*

²*Department of Rural Sociology and Extension, Michael Okpara University of Agriculture*

³*Department of Soil Science, Rivers State University of Science and Technology, Port Harcourt*

ABSTRACT

Preference/Sources of Fishing Information for Artisanal Fish Farmers in Akwa Ibom States, Nigeria was investigated. Indicated the sources of information used by respondents in accessing information in the study area. The instrument used for the collection of data for this study was a questionnaire designed on four likert type of Strongly agree (4), agree (3), strongly disagree (2) and disagree (1) = $4+3+2+1=10/4=2.5$. The findings showed that (83%) of the respondents used meetings, followed by 75% extension agents source of information while 66% source is from output buyers in the area. The least information sources available to them were Town Crier (100%), Computer (96%), credit agencies (92%) and neighbours (89%). The level of other sources of information could be seen from Table 2 above. Results revealed that fish Farmers need information on methods of fishing, water trend, time of fishing, weather trend, handling, storage and marketing etc. Due to the complexity of the problems facing farmers, there are varieties of information needs of farmers. Major issue is that majority of farmers in Africa are illiterate and therefore need information in a simplest and quickest way to discharge their duties effectively. Informal education is therefore recommended for fish farmers to help them improve on the productivities and activities.

Keywords: Artasanal, Fish Farmers, Information Needs.

INTRODUCTION

Agriculture serves as the backbone of Africa's economy. According to Dulle and Ngalapa, (2014) about 70% of Africans and roughly 80% of the continent's poor live in rural areas and depends on agriculture for their livelihood. Simon and Kereke (2013) and FAO (2010) highlights that millions of people depend on fisheries for a living in Nigeria; it is a source of employment. Fishery activities are executed through two main methods in Nigeria namely artisanal or capture fishery and fish farming or aquaculture. Artisanal fishery is the harvesting of fish from rivers, streams, lakes and ponds by small scale fishermen using both traditional and modern fishing gears. It is the most important of fishery production in Nigeria and accounts for over 90% of her fishery production. Majority of these people are small-scale, artisanal fish farmers eking out a living from coastal and in-shore resources. Artisanal fisheries are small-scale fisheries for subsistence or local, small markets, generally using traditional fishing techniques and small boats. They occur around the world (particularly in developing nations) and are vital to livelihoods and food security (Ogunbadejo *et al.*, 2007).

Characteristics of Artisanal Fishermen

Artisanal fishing (or traditional/subsistence fishing) are various small-scale, low-technology, low-capital, fishing practices undertaken by individual fishing households which involve fishing with calabashes, clap nets and some foul-hooks and some nets, are low and may not require credit. It was observed that the cost of administering such loan packages would be so high as to make the exercise unprofitable. (as opposed to commercial companies) (Garcia, 2009). Many of these households are of coastal or island ethnic groups. These households make short (rarely overnight) fishing trips close to the shore. Their produce is usually not processed and is mainly for local consumption. Artisan fishing uses traditional fishing techniques such as rod and tackle, fishing arrows and harpoons, cast nets, and small (if any) traditional fishing boats. Artisan fishing may be undertaken for both commercial and subsistence reasons. It

contrasts with large-scale modern commercial fishing practices in that it is often less wasteful and less stressful on fish populations than modern industrial fishing.

Needs/Sources of Information

In decades, the information dissemination was solely dependent on one source, in the scenario where the agriculture development projects (ADP) uses the extension agent as a medium of passing information to the fish farmers. Ogola (2015) in the present age of rapid technology revolution, the adoption of an integrated information approach include using Information and Communication Technology (ICT) which consists of radios, televisions, telephones, cameras, videos and farmers groups (Ogola, 2015). New technologies and innovations may emerge that have are to be disseminated to fish farmers. To accelerate the pace at which this information on these new technologies and innovations get to fish farmers, several approaches have been used with the anticipation that these approaches and technical information packages will be suitable to the fish farmers. An effective communication has been seen as a fundamental tool for disseminating information to farmers.

The likes of Osikabor *et al.*, (2011), in the event of information dissemination, various factors need to be considered, namely, fishing gear, water trend, weather trend, methods of fishing, the timing, the appropriateness and relevance of the information, most significantly, the targeted audience (fish farmers). In affirmation, Osikabor *et al.*, (2011) also highlighted the intrinsic attributes of good information as relevance, timeliness, credibility/accuracy, cost-effectiveness, consistency, accessibility and usability (define these attributes) to mention but a few. Nevertheless, all these aforementioned attributes leads to an improved decision making (Ogola, 2015; Osikabor *et al.*, 2011; Oladele, 2006). On the contrary, low accessibility to agricultural information triggers low acceptance of new technologies, which inevitably affects fish farmer's productivity (Ronald, 2015; Jalil and Jalil, 2016). However, in

agriculture, the role of information in enhancing agricultural development cannot be over emphasized. This study explores the credibility of information sources used by fish farmers in selected coastal States of Nigeria with attempt to addressing the inability of fish farmers to identify most suitable sources, worthiness, and access points of information to increase their level of productivity. The worth refers to the value of the information the fish farmers receive, the access points are the various channels through which the fish farmers receive the information and credibility describes the reliability and usefulness of the information

STATEMENT OF PROBLEM

Information dissemination is a critical tool for promoting national development, however fish farmers in many of the developing countries most specifically in Akwa State have poor access to information and this has been identified as one of the most serious constraint to fish farming (Lwoga, 2009). The know-how and technologies that are produced by Agricultural Knowledge and information Systems/Rural Development Institutions (AKIS/RDs), even when relevant, are not widely taken up by farmers, suggesting a lack of effective transfer (FAO, 2010). Obviously, there is a gap that could be filled by improving access to more information. There is the need to encourage the fish farmers to access and possibly use more information as a means of increasing productivity. Also, there are robust empirical (list the empirical finding of Agricultural technologies) findings on fishing technological improvements, but there is dearth of empirical reports on fish farmer's access to information (FAO, 2005). Despite the potentials of coastal States of Nigeria in fish production, data on fish the reverse conceptualization is the focus on farmers' accessed to information According to Lwoga (2009) information flow to farmers is very important factor in developing fish production as well as helping the fishermen in the coastal areas of Nigeria to become updated about new fishing technologies and innovations. The use of information by fish farmers will enhance fishing productivity in several means

through; providing information on climate change; modern practices in fish farming; timely access to market information helps fish farmers to make correct decisions on how to sell their product and buy inputs. For this information to reach fish farmers it will depend on information sources which are relevant, cost effective and exhaustive. The effectiveness of any information source depends most in particular on its selection as an appropriate channel or medium of communication (Oladele, 2011). In Nigeria, various agricultural agencies have been charged with the responsibility to disseminate information among farmers about latest agricultural techniques. In spite of all these efforts by Government the fish farmers still have low accessibility to fish information to increase productivity. Therefore, this research "Influence of Demographic on Accessibility of Information by Artisanal fish farmers in Akwa Ibom States of Nigeria" become necessary and timely because engagement in fish farming is important.

Income generations among households in coastal communities of Nigeria, the rapidly increasing demand for fish and fish products nationally, particularly due to increasing population, increasing per capita income and rapid urbanization in the country, presents opportunities for the coastal poor fish farmers in these communities to participate in and benefit from such growth. Therefore assessing access to information for fisher could serve as a reference medium for improvement on livelihood of the people generally as well will motivate more farmers into the fishing industry. Access to appropriate information and knowledge is known to be one of the biggest determinants of fish production (Ogola,2015).

The major reason for this research lies on the fact that in spite of the emergence of a pool of information sources available to fish farmers, it's still a problem to the fish farmers the issue of knowing the information worth, its access and usage of information will make greater positive result. It will be a basis for influencing policy makers to develop fish farming polices and information system that

focus on fish farmers to improve their productivity. Also the findings will contribute to a better understanding of sources of information used by fish farmers in coastal states. The research will also create awareness on the problems facing fish farmers in accessing information and the recommended solutions to the problems, and contribute to available literature on coastal fish farming. Therefore, the general objective of this study is to identify the access points and information sources used by Artisanal fish farmers in Akwa Ibom States of Nigeria

SPECIFIC OBJECTIVES

- a) To determine the source of information for Artisanal fish farmers in the Akwa Ibom State.
- b) To determine the preference for source of information of fish farmers in Akwa Ibom State.

DEFINITION OF TERMS

The following are some of the terms used in the study and their operational meanings are, therefore, provided:

- Artisanal fishing is a small-scale fishing for subsistence or local, small markets, generally using traditional fishing techniques and small boats. They occur around the world (particularly in developing nations) and is vital to livelihoods and food security
- Adoption: It refers to the artisanal fish farmer's decision on whether or not to apply new techniques or technologies.
- Innovation: It is an idea or practice perceived as new by the artisanal fish farmers.
- Communication: It is the exchange of information through verbal or non-verbal means

METHODOLOGY

Study Area

The study was carried out in the Coastal State (Akwa Ibom) which is in the Niger Delta of Nigeria in West Africa.



Figure 1: Map of Nigeria showing study area (Bayelsa, Rivers and Akwa Ibom States)



Fig. 2: Map of Akwa Ibom State showing its Local Government Areas

It is a home to extraordinary biodiversity and its Mangroves swamp is of immense importance to the people of the region and vital for their sustenance as it provides these communities with different

ecosystem goods such as sea foods, fisheries, fuel, wood, agricultural products and ecological services such as fertile alluvial plains and coral reefs.

RESEARCH DESIGN

The study was designed to use quantitative method in its analytical approach. This method was used because set of predetermined questions was used to collect data from the sample size in the study population. The data to be gathered will be quantitative in line with the specific research objectives of the study. Quantitative research methods are more reliable and objective because it enables respondents to express themselves in a directive manner. It also reduces and restructures complex problems to a limited numbers (Saunders and Lewis, 2000). Also in quantitative analysis, results are based on quantities rather than interpretations which simplify and clarify the work.

Population of the Study

The population of the study was all full time fish farmers in Akwa Ibom State of Nigeria.

Instrumentation

The instrument used for the collection of data for this study was a questionnaire. The first part (A) of the questionnaire is designed to generate about the respondents sources of fishing information on Yes or No likert typewhile the second part (B) addressed the preference for sources of information by artisanal fish farmers in Akwa Ibom States of Nigeria designed on four likert type of Strongly agree (4), agree (3), strongly disagree (2) and disagree (1) = $4+3+2+1=10/4=2.5$. Therefore, score which is equal to or above 2.50 is accepted while score below 2.50 is rejected as the preferred source of information. .

Sampling Procedure and Sample Size

The multi-stage sampling technique was used in the selection of the sample of which it was in three stages. In the first instance, out of thirty one Local Government areas, eight Local Government Areas were purposively selected, and in the second stage three local government areas (Eket, Mbo and Ibeno) were be purposively selected from the state due to their more riverine nature, after which a random sampling was used on the basis of online Raosoft calculation making a sample size of 53 respondents out of 420 fish farmers.

Table 1: Composition: Total Population of Artisanal Fishermen

State	No. LGA	Population Size	Sample Size
Akwa Ibom	31	420	53
Total	31	420	53

Source: Sample size of Akwa Ibom state ADPs, 2013

DATA COLLECTION

The data for this study was obtained from primary sources based on structured questionnaire. It helps in dealing with respondents who are uneducated artisanal fish farmers. Data collection methods are the tools used to collect the required data for the research (Dawson, 2002).

Validity and Reliability of Instrument

Validity is to ensure that the instrument for data collection measures what it is supposed to appraise. The instrument was subjected to face-validation and close examination by experts in the field of Agricultural extension both in South Africa and Nigeria to enable them evaluate the extent to which the statements appraise the highlighted issues of the study as well as the extent to which they deliver the intended meaning to all respondents.

Reliability is to establish the uniformity of the data collection instrument. Reliability signifies the issue of constancy of measures,

that is the ability of a measurement instrument to measure the same thing each time it is used (Singh, 2007)

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Reliability is to establish the uniformity of the data collection instrument. A pre-test of the instrument was carried out in Mbo, Ibeno and Eket using the split-half method of reliability. A high reliability coefficient was targeted to ensure good uniformity of the instrument and remove vagueness. Reliability signifies the issue of constancy of measures, that is the ability of a measurement instrument to measure the same thing each time it is used (Singh, 2007)

DATA ANALYSIS

A Descriptive and inferential statistical analysis was employed using the measures of mean as well as frequencies.

RESULTS

Section A

Where do you Source(s) for fishing Information? (Please, indicate as appropriate)

Serial Number	Sources	Answer	
		Yes	No
1	Video	32(60%)	21(40%)
2	Telephone	13(25%)	40(75%)
3	Output buyers	35(66%)	18(34%)
4	Extension agents	40(75%)	13(25%)
5	Co operatives	24(45%)	29(55)
6	Community leaders	10(19%)	43(81%)
7	Journals	7(13%)	46(87%)
8	Meetings	43(83%)	10(17%)
9	Fellow farmers	34((64%)	19(36%)
10	Neighbours	6(11%)	47(89%)
11	Posters	10(19)	43(81%)
12	Television	18((34%)	35(66%)
13	Radio	12(23%)	41(77%)
14	Farmers groups	34(64%)	19(36%)
15	Laptop	3(6%)	50(84%)
16	Credit agencies	4(8%)	49(92%)
17	Town criers	- (0%)	53(100%)
18	Books	12(23%)	41(77%)
19	Computers	2(4%)	51(96%)
20	Leaflets	7(13%)	46(87%)

The results in Table 2 indicated the sources of information used by respondents in accessing information in the study area. The findings showed that (83%) of the respondents used meetings, followed by 75% extension agents source while 66% source is from output buyers in the area. The least information sources available to them were Town Crier (100%), Computer (96%), credit agencies (92%) and neighbours (89%). The level of other sources of information could be seen from Table 2 above.

Section B

Table 2: Which Source(s) for fishing Information do you prefer?

S/No	Sources of Information This source is preferred because it is easily accessible	Strongly Agree	Agree	Disagree	Strongly Disagree	Total	Mean	Rank
1	Farmers	33(4)=132	12(3)=36	3(2)=6	5(1)=5	179	3.38	B
2	group	11(4)=44	8(3)=24	19(2)=38	15(1)=15	121	2.28	H
3	Radio	7(4)=28	10(3)=30	16(2)=32	20(1)=20	110	2.07	J
4	Television	2(4)=8	11(3)=33	15(2)=30	25(1)=25	96	1.81	L
5	Posters	9(4)=36	8(3)=24	18(2)=36	18(1)=18	114	2.15	I
6	Neighbor	41(4)=164	10(3)=30	1(2)=2	1(1)=1	197	3.71	A
7	Meetings	1(4)=4	2(3)=6	19(2)=38	21(1)=21	69	1.30	P
8	Journals	0(4)=0	1(3)=3	2(2)=2	50(1)=50	55	1.03	Q
9	Comty	2(2)=4	5(3)=15	20(2)=40	26(1)=26	85	1.60	O
10	leaders	12(4)=48	17(3)=51	13(2)=26	11(1)	126	2.38	F
11	Co	1(4)=4	3(3)=9	21(2)=42	28(1)=28	83	1.56	O
12	operatives	23(4)=92	19(3)=57	11(2)=22	0(0)=0	171	3.22	C
13	Computers	5(4)=20	5(3)=15	22(2)=44	21(1)=21	100	1.89	K
14	Ext. Agents	18(4)=72	19(3)=57	10(2)=20	6(1)=6	155	2.89	G
15	Telephone	2(4)=8	3(3)=9	28(2)=56	20(1)=20	93	1.75	M
16	Video	24(4)=96	13(3)=39	10(2)=20	6(1)=6	161	3.04	D
17	Laptop	14(4)=56	26(3)=76	11(2)=22	2(1)=2	156	2.94	E
18	Input	2(4)=8	12(3)=36	21(2)=24	18(1)=18	86	1.62	N
19	dealers	0(0)=0	1(3)=3	20(2)=40	30(1)=30	73	1.38	P
20	Output	5(4)=20	5(3)=15	22(2)=44	21(1)=21	100	1.89	K
	buyers							
	Creditor	2(2)=4	5(3)=15	20(2)=40	26(1)=26	85	1.60	O
	Town criers							
	Leaflets							
	Books							

Key: Comty = community, Ext.= Extension. **Total/53**

From the results on Table 2 Farmers meetings, Extension Agents, Input dealers, Output buyers were the most preferred sources of information used by the respondents in accessing information.

DISCUSSION

Fish farming information can be considered as all published or unpublished knowledge in all aspects of fish farming/and fish culture production. According to Adereti *et al.*, (2006) an individual consciously or unconsciously engages in information search in order to find appropriate information which can fill the information gap there by regaining physiological and psychological balance. In decades, the information dissemination was solely dependent on one source, in the scenario where the agriculture development projects (ADP) uses the extension agent as a medium of passing information to the fish farmers. According to Ogola (2015) the present age of rapid technology revolution, the adoption of an integrated information approach include using Information and Communication Technology (ICT) which consists of radios, televisions, telephones, cameras, video etc. In Table 1, artisanal fishermen did least used Town criers (0%), Computers (4%), Laptop(6%), and Credit agencies (8%). This could be due to the following level of income, geographical location, level of education according to Dulle and Ngalapa (2014) and Ogboma (2010). They pointed out that the selection of an information source largely depends on a those factors. The information sources selected by the respondents in Table 2 are in line with the finding of Meitei and Devi, 2009; Mtega and Benard (2013). They maintained that some information sources used by fish farmers in accessing their agricultural information includes; newspapers, Farmers groups, Radio, Television, Posters, Neighbor farmers, Meetings, Journals, Community leaders, Co operatives, Computers, Extension agents, other farmers, Telephone, Video, Laptop, Input dealers, Output buyers, Credit agencies, Town criers, Leaflets, Books and etc. In addition to the argument above, Dulle and Ngalapa (2014) claimed that fellow farmers, neighbors and farmers' cooperative society were used as preferred sources of information by fish farmers in accessing agricultural information. They further sustained that the sources of information used by fish farmers were due to personal experience, workshops and Seminars, training, friends and neighbors, Ministry of agriculture, magazines of

agriculture, extension officers, local Government officers, Non-Governmental Organizations, libraries of agriculture and posters.

Bozi and Ozcatalbas (2010) also revealed that family members, neighbor farmers, extension services, input providers and mass media were key sources of information for fish farmers. Therefore, in view of the fact that each farmer prefers certain information sources or channels over others, it is important to do a thorough study before opting for an information source or channel to address the information needs of fish farmers in the coastal region. Therefore, information is an indispensable factor in agricultural practices and it is the basis of extension service delivery. It is defined by Adereti *et al.*, (2006) as data that have been put into a meaningful and useful context which is communicated to recipient who uses it to make decision. The overall relative preference sources of information is presented in Table 2, A>B>C>D etc.

Thus, the results indicated that Farmers meetings, Farmers group and Extension Agents sources of information top the list. This therefore means that these sources of information have been more consistent over the years than other access points thus their preference by the respondents. The print media were the least preferred sources of information used by artisanal fishermen in the study area. This study is in line with Bernard, *et al.*, who in their study of preference sources of information used by seaweeds farmers in Ungula in Zanzibar pointed out that print media were the most least preferred sources of information utilized by farmers in obtaining information. According to Dulle and Ngalapa (2014) and Lwoga(2009), may be due to their unavailability, costs and language differences.

SUMMARY AND CONCLUSION

Obtaining information for a business purpose means that you must obtain it from a reliable and trust worthy source. If you wanted information about the population of Korea then using Wikipedia

might not be seen as being 100% reliable and you may not be 100% confident in using this source. However, if you looked at the census information from the Korean Government you could say what the population was at the time that the census was taken. Information that is used for a business purpose needs to be understandable by the end user. In addition, information most consists of data that have been processed and are meaningful to a user. It is data that have been put into a meaningful and useful context and communicated to a recipient who uses it to make decisions.

Farmers need information on methods of fishing, water trend, time of fishing, weather trend, handling, storage and marketing etc. Due to the complexity of the problems facing farmers, there are varieties of information needs of farmers. Major issue is that majority of farmers in Africa are illiterate and therefore need information in a simplest and quickest way to discharge their duties effectively. Information needs arise when a person recognizes a gap in his/her state of knowledge and wishes to resolve that anomaly-as anomalous state of knowledge. The fish farmer cannot be an exception. For information to be of optimum use, it must have the following qualities: relevance, accuracy, timeliness, currency, clarity and must be cost effective.

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