
THE ATTITUDE OF FISHER FOLKS TOWARDS AGRICULTURAL EXTENSION SERVICES IN NIGER DELTA, NIGERIA

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ABSTRACT

The fisher folks of Niger Delta have little knowledge about the importance of agricultural extension services thus they are not fully utilizing their services. The agricultural extension agents play important and critical roles in increasing farmer's knowledge of scientific agriculture, improving their productive skills and influencing them to accept desirable changes in the farm and home management. The attitude of fisher folks towards agricultural extension services in enhancing and promoting fisheries development and management in their areas of operation within the Niger Delta was evaluated. Structured questionnaire was administered to one thousand fishers in four different states of the Niger Delta. The data collected were analyzed using mean, percentage, Likert-format scale and ranking. Data showed that 40% of respondents strongly agreed and 30% agreed that the extension officers enjoyed the confidence of the people, while 20% disagreed and 10% strongly disagreed. Training and Visit System (T&V) (2.03), as a strategy for fisheries development and management was regarded by the fishers as the most effective system. This was followed closely by Small Plot Adoption Technique (SPAT) (1.95), demonstration (1.90), contact group (1.76), integrated rural development (1.45) and literature (1.20). The results further showed that about 50% of respondents disagreed while 40.5% agreed that the extension officers had been able to encourage the citizenry to take to fishing and fish farming. Most of the fishers (50.3%) agreed and 43.2% disagreed that the agencies have succeeded in making fishing practice profitable. The results of the study showed that fishers in the study area were aware of the services of extension officers but the fishers rating of their effectiveness was low.

KEYWORDS

Behaviour, extension officers, fishers, fish farming, fishing

INTRODUCTION

Fish from all sources in the Niger Delta are used for human consumption: a great proportion of the production is absorbed in the domestic markets – while shrimps are usually exported. The fall in fish production has resulted in increased demand for fish

and fish products such that the current level of fish production in the state cannot sustain the populace^[1]. The economic status of a fish farmer or fisher folk also plays a significant role in adoption of new techniques. The power to purchase new implements and extend facilities for improved and higher productivity were dictated by individual financial

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capability^[2]. The supply of fishing nets to Nigerian markets has not been steady owing to the unstable foreign exchange situation, which has been prevalent for sometime now. The requirements of the fishers comprise: nylon netting materials (for the construction of gill nets and cast nets, etc), fishing floats, marker buoys, lead sinkers, and dugout canoes for the artisanal fishermen. Extension agents are trainers, and the quality of training they had received has equipped them to communicate effectively with their clientele. According to Tawari^[1], training is undertaken on continuing basis for the following reasons: Provide an officer an intensive study and practice in specific problem areas, thus increasing his knowledge, improve the professional skills and competence of officers in performing certain duties, create opportunities for officers to exchange ideas and experiences with one another during training, keep the officers abreast of the latest agricultural findings from research. This makes the officers up-to-date in their fields of specialization.

Davies *et al.*^[2] mentioned that the introduction of technological innovations in agriculture and their application to existing farm practices have been the centre of interest to several extension scientists throughout the developing countries. Therefore, the constant periodic training of extension officers if properly and continuously applied to our social, economic, and ecological setting will result in increased rate of adoption of new and current agricultural technologies by farmers, leading to their increased level of productivity. However, this system is a professional system of extension based on frequently updated training of extension workers and regular field visits^[1]. Tawari^[1] reported that the agricultural extension agent plays important and critical roles in increasing farmer's knowledge of scientific agriculture, improving their productive skills and influencing them to accept desirable changes in the farm and home management. In the performance of his numerous tasks as a consultant, programme administrator, salesman of information, organiser of groups and service agent, he is influenced

by several factors. According to Emah^[3], the roles of the extension agents are:

- a) Keeping farmers informed of the latest development and recommendations relating to better technologies of production.
- b) Teaching and advising the farmers on the spot about their production and marketing problems and other felt needs.
- c) Bring back to the research centre farmer's problems for solution.
- d) Providing other direct services for the farmers as may be required by the Department of Agriculture. In addition, they provide professional guidance to rural people in their effort to improve the economic and cultural level of the family and community.

The aim of this study, therefore, is to examine the effectiveness of extension methods used in reaching fishers in the Niger Delta area and the attitude fisherfolks towards agricultural extension services.

METHODOLOGY

STUDY AREA

The study area is in the Niger Delta located between latitudes 4° 2" and 6° 2" North of the equator and longitudes 5° 1" and 7° 2" East of the Greenwich meridian. The states surveyed were Rivers, Bayelsa, Delta, and Akwa Ibom States .

SAMPLING FRAME

The population of fishers for the study was drawn from the fishing communities of Rivers, Bayelsa, Akwa Ibom and Delta States within the Niger Delta area. A list of fishing ports/villages comprising one hundred and fifty (150) from Bayelsa State and fifty (50) from Rivers State was obtained from the headquarters of the Rivers State Agricultural Development Programme (ADP) and was used as part of the sample frame for this survey. From Akwa Ibom State, ten (10) fishing villages/ports and from



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Delta State, forty (40) fishing villages/ports were sampled. The fishing villages and ports were randomly selected.

SAMPLE SIZE

The multi-stage sampling procedure was used in the selection with states as the first stage, communities as the second stage, and the respondents' (fishers) as the third stage. The states were selected using purposeful sampling techniques because they are coastal and fishing states. The fishing ports/villages were selected disproportionately at random from a list of fishing communities obtained from ADP. For Bayelsa State, out of the one hundred and fifty (150) listed fishing villages/ports, fifty (50) were randomly selected and sampled. From Rivers State, out of the fifty (50) listed fishing villages/ports, twenty five (25) were randomly selected and sampled. From Delta State, out of the forty (40) listed fishing villages/ports, twenty (20) were randomly selected and sampled. From Akwa Ibom State, out of the listed ten (10) fishing villages/ports, five (5) were randomly selected and sampled. Therefore, a total of one hundred (100) fishing villages/ports were obtained. From each of the fishing villages/ports or fishing communities, ten (10) fishers were randomly selected. This added up to five hundred (500) fishers from Bayelsa State; two hundred and fifty (250) fishers from Rivers State; two hundred (200) fishers from Delta State; and fifty (50) fishers from Akwa Ibom State. Consequently, sample population of one thousand (1000) fishers were derived from the Niger Delta States.

INSTRUMENT OF STUDY

The instrument for the study was a structured questionnaire, hereafter referred to as instrument divided into two sections. Section A of the instrument (an interview schedule) was designed to provide information on personal characteristics variables which would enhance the testing of the hypothesis of the study and to provide additional information on the

respondents' ability to appreciate the efforts of the agencies in the development and management of fisheries resources within his domain. Respondents were also required to indicate their opinion on the level of participation in organized programmes of the agencies. A Likert format 4-point score sheet was included to enable the fishers (respondents) score the activities of the extension officers of the agencies [3].

The scoring was:

Excellent	-	4
Good	-	3
Fair	-	2
Poor	-	1
None	-	0

Section B of the questionnaire was designed to elucidate the respondents' perception of the activities of the agencies towards the development and proper management of fisheries resources. This is in the form of a modified Likert-type scale rating. The rating was constructed using the jury option technique [3]. This section contains twenty statements relevant to the psychological perception (behaviour/attitude) of respondents as it relates to the agencies. The statements were compiled by consultations with experts in the field and review of literature. The statements were critically evaluated to ensure their relevance and suitability to the attitude category under review. The twenty acceptable statement items were arranged in the Likert-type format, requiring respondents to indicate their sincere feelings and opinions along the given 4 point scale rating as follows:

SA	=	Strongly Agree	=	4
A	=	Agree	=	3
D	=	Disagree	=	2
SD	=	Strongly disagree	=	1
		Total	=	10
Mean	=	10/4	=	2.50

To determine the level of effectiveness, the values of the four responses 1, 2, 3, and 4 of the

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Likert-format were added to get 10. The 10 was then divided by four to obtain 2.5 as the mean. The cut-off point for the mean value was determined by adding the interval scale of 0.05 to the mean therefore, the upper limit of the cut-off point becomes 2.55 and above was regarded as having high level of appreciation for effectiveness. The lower limits of the cut-off point become 2.45, by subtracting 0.05 from the mean. Therefore, respondents with mean scores of 2.45 or less were regarded as having low level of appreciation for effectiveness.

Respondents were categorized as high or low based on their scoring on the Likert-formal scale of values 1, 2, 3, and 4. Respondents who scored below 2.50 were regarded as low, while those who scored above 2.50 were regarded as high, with respect to their personal variables.

The instrument was validated by three experts drawn from the Departments of Agricultural Economics and Extension and Fisheries, Rivers State University of Science and Technology, Port Harcourt.

RELIABILITY

The reliability of the instrument was ascertained through a pre-testing of eighty (80) fishermen from Ogba/Egbema/Ndoni Local Government Area in Rivers State. The test scores were split into two halves of twenty (20) each from forty (40) scores based on even and odd numbering. The scores obtained by each person on one half was correlated with those obtained on the other half using the split-half method of estimating reliability [1]. The reliability coefficient "r" obtained was 0.85. To determine the reliability of scores based on the full length of the instrument, the Spearman-Brown's formula was used thus:

$$\text{Reliability of full instrument ("r")} = \frac{2 \times \text{Reliability on } \frac{1}{2} \text{ instrument}}{1 + \text{Reliability on } \frac{1}{2} \text{ instrument}}$$

----(1) (Source: [1])

The reliability of the full instrument had 0.92, which was very satisfactory, indicating that the instrument was reliable.

RESULTS

The analysis of respondents mean response on the effectiveness of the extension services based on strategies adopted was given in Table 1. From the table, it is observed that T&V (2.03), as a strategy for fisheries development and management was regarded by the fishers as the most effective system. This is followed closely by the SPAT (1.95), the Demonstration (1.90), Contact Group (1.76), Integrated Rural Development (1.45), and Literature (1.20).

The mean response for ADP on strategies indicates that SPAT (2.30) was the most effective, followed by demonstration (2.10), T and V (2.00), contact group (1.50), while literature and integrated rural development share the same point 1.0 respectively. SPDC excelled most in the T and V system (2.50) according to respondents, followed by demonstration (2.20), contact group (2.00), SPAT (2.00), integrated rural development (2.00), and literature (1.50). Respondents considered GRP (Agip) most effective with the T and V system (2.30) followed by demonstration (2.10), contact group (2.10), SPAT (2.00), integrated rural development (1.50), and literature (1.20). Elf was considered to be most effective with SPAT (1.50), contact group (1.50), T&V system (1.30), integrated rural development (1.30), demonstration (1.20) and literature (1.10) followed in that order. Agencies most favoured in terms of strategies in a descending order are SPDC (2.03), GRP (Agip) (1.87), ADP (1.65), and Elf (1.32).

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Table 1.
Analysis of Respondents' Mean Response on the Effectiveness of the Agencies based on Strategies

S.No.	Strategies	Agencies				Means of Means	Ranking
		ADP	SPDC	GRP (Agip)	ELF		
1.	T & V System	2.00	2.50	2.30	1.30	2.03	M
2.	SPAT	2.30	2.00	2.00	1.50	1.95	M
3.	Demonstration	2.10	2.20	2.10	1.20	1.90	M
4.	Contact Group	1.50	2.00	2.10	1.50	1.76	M
5.	Integrated Rural Development	1.00	2.00	1.50	1.30	1.45	L
6.	Literature	1.00	1.50	1.20	1.10	1.20	L
	Means of Means	1.65	2.03	1.87	1.32	-	-

Ranking

Mean Score rating on effectiveness:

2.5 – above = High [H]

1.5 – 2.49 = Medium [M]

The respondent's reaction towards the activities of the extension officers on the attitude scale was summarized in Table 2. About 50% of respondents disagreed while 40.5% agreed that the extension officers had been able to encourage the citizenry to take to fishing and fish farming. However, there was a strong agreement (56.5%) that the extension officers enjoy the confidence of the people (Item No. 1). There was a 50.3% agreement and 43.2% disagreement that the agencies have succeeded in making fishing practice profitable (Item No. 3). The respondent's reaction to adequate implements for extension services show that 58.2% disagree, 23% strongly disagree, while only 8.7% strongly agree and 10.1% agree (Item No. 8). About 59% also disagree that the implements are right now in usable

condition and are in use (Item No. 9). 56.5% of respondents agree that the projects are relevant to the fisheries need of the people (Item No. 13). About 10% of respondents strongly agree and 34.8% agree that the agencies are mindful of pollution in the areas while 37.4% disagree and 17.4% strongly disagree (Item No. 16).

The attitude of respondents to the issue of enough fingerling production and distribution to farmers, 44.4% disagree and 10% strongly disagree while about 39% agree and 6.5% strongly agree (Item No. 18). About 50% of respondents disagree and 13% strongly disagree that the fisheries extension officers from the agencies pay them regular visits while 37.4% agree and zero percent strongly agree (item No. 19).

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Table 2.
Percentage Distribution of Respondents Reaction to Agricultural Development Agencies in Fisheries Development and Management

S.No	Scale Item	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
1	The agency enjoys the confidence of the people	56.5	34.8	8.7	0
2	The agency has been able to encourage the local citizenry to take to fishing and fish farming	1.0	40.5	50.3	8.2
3	The agency has succeeded in making the fishing practice profitable	2.4	50.3	43.2	4.1
4	The agency is well funded to meet her fundamental objectives	2.2	55.2	40.2	2.4
5	The caliber of staff is adequate	60.9	30.4	8.7	0
6	The number of staff is adequate	8.7	17.4	60.9	13.0
7	They have relevant experts for the various programmes of the agency	21.7	56.5	8.7	13.0
8	They have adequate implements for extension services	8.7	10.1	58.2	23.0
9	The implements are right now in usable condition and in use	8.7	27.9	59.1	4.3
10	The implements are not usable because they are damaged	0	34.8	30.4	34.8
11	There is a properly established technical department in the agency to take care of maintenance	0	8.7	56.5	34.8
12	There are many ongoing projects in the area by the agency	28.3	22.4	40.0	9.3
13	The projects are very relevant to the fisheries need of the	19.1	56.5	20.0	4.4

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S.No	Scale Item	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
14	people Some projects have been abandoned due to lack of funds or expertise	8.3	41.7	29.2	20.8
15	They operate laboratory facilities in the area to test water quality	0	27.3	59.1	13.6
16	They are mindful of pollution in the area	10.4	34.8	37.4	17.4
17	They operate a hatchery	10.7	24.3	40.0	15.0
18	They produce enough fingerlings for distribution or sales to fish farmers	6.5	39.1	44.4	10.0
19	The fisheries extension officers pay regular visits to the fishermen and fish farmers.	0	37.4	49.6	13.0
20	The agency is willing to introduce innovations in fishing techniques and fish species	4.8	53.2	30.0	12.0

Table 3 showed that 45% of respondents responded favourably in the attitude scale in favour of development and effective management of the fisheries resources in the agricultural subsector by the extension officers. On the other hand, 55% of the respondents' reaction to the attitude scale item did not favour the effective development of the fisheries resources in the area under survey.

The ranking is based on how highly favoured was the particular item on the attitude scale. Looking at Item No.5, which was ranking first, it will become clear why, because the general perception was that these multi-national companies employ qualified high caliber staff.

Table 3.

Respondent's Reaction to Attitude Scale on Fisheries Development and Management Scale by Ranking

Scale Item	Ranks	Remarks
The caliber of staff is adequate	1 st	**
The agency enjoys the confidence of the people	2 nd	**

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Scale Item	Ranks	Remarks
They have relevant experts for the various programmes of the agency	3 rd	**
The projects are very relevant to the fisheries need of the people	4 th	**
The agency is well funded to meet her fundamental objectives	5 th	**
The agency is willing to introduce innovations in fishing techniques and fish species	6 th	**
The agency has succeeded in making the fishing practice profitable	7 th	**
Some projects have been abandoned due to lack of funds or expertise	8 th	**
The agency has been able to encourage the locals to take to fishing and fish farming	9 th	**
There are many ongoing projects in the area by the agency	10 th	*
They are mindful of pollution in the area	11 th	*
They produce enough fingerlings for distribution or sales to fish farmers	12 th	*
The fisheries extension officers pay regular visits to the fishermen and fish farmers.	13 th	*
The implements are not usable because they are damaged	14 th	*
The implements are right now in usable condition and in use	15 th	*
They operate a hatchery	16 th	*
They operate laboratory facilities in the area to test water quality	17 th	*
The number of staff is adequate	18 th	*
They have adequate implements for extension services	19 th	*
There is a properly established technical department in the agency to take care of maintenance	20 th	*

Key:

- ** - Favourable Attitude - 45%
- * - Unfavourable Attitude - 55%

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Table 4 shows the percentage distribution of respondents' in the agencies to items on the attitude scale. Data show that 40% of respondents strongly agree and 30% agree that the extension enjoy the confidence of the people, while 20% disagree and 10% strongly disagree (Item No. 1). Respondents were also favourably disposed to Items Nos. 2 to 5 but the response for Item No. 4, though favourable was weak on the point that the agencies are well funded to meet their fundamental objectives. Fifty percent of respondents disagree and 10% strongly disagree, while only 20% agree and another 20% strongly agree that the number of staff doing the extension work was adequate (Item No. 6). This response was crucial since it had direct bearing to the effectiveness of the agencies. Items Nos. 7, 9, 10, 11, 13, 14, 16, and 20 had favourable responses while Items Nos. 6, 8, 12, 15, 17, 18, and 19 had unfavourable responses. Thus, we have 65% of respondents responding favourably while 35% responded unfavourably to the attitude scale items.

Table 6 showed the percentage distribution of respondents' in the agencies to items on the attitude scale. Data show that 40% of respondents strongly agree and 30% agree that the agencies enjoy the confidence of the people, while 20% disagree and 10% strongly disagree (Item No. 1). Respondents were also favourably disposed to Items Nos. 2 to 5 but the response for Item No. 4, though favourable was weak on the point that the agencies are well funded to meet their fundamental objectives. Fifty percent of respondents disagree and 10% strongly disagree, while only 20% agree and another 20% strongly agree that the number of staff doing the extension work was adequate (Item No. 6). This response was crucial since it had direct bearing to the effectiveness of the agencies. Items Nos. 7, 9, 10, 11, 13, 14, 16, and 20 had favourable responses while Items Nos. 6, 8, 12, 15, 17, 18, and 19 had unfavourable responses. Thus, we have 65% of respondents responding favourably while 35% responded unfavourably to the attitude scale items.

Table 4.
Percentage Distribution of Respondents' Reaction to the Agencies

S/No.	Scale Item	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1	Remark
1	The agency enjoys the confidence of the people	40	30	20	10	**
2	The agency has been able to encourage the locals to take to fishing and fish farming	45	35	20	0	**
3	The agency has succeeded in making the fishing practice profitable	45	40	15	0	**
4	The agency is well funded to meet her fundamental objectives	20	30	40	10	**
5	The caliber of staff is adequate	40	40	20	0	**
6	The number of staff is adequate	20	20	50	10	*

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S/No.	Scale Item	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1	Remark
7	We have relevant experts for the various programmes of the agency	40	30	20	10	**
8	We have adequate implements for extension services	15	20	55	10	*
9	The implements are right now in usable condition and in use	20	30	40	10	**
10	The implements are adequate	40	45	10	5	**
11	There is a properly established technical department in the agency to take care of maintenance	15	35	40	10	**
12	There are many ongoing projects in the area by the agency	5	40	50	5	*
13	The projects are very relevant to the fisheries need of the people	50	30	15	5	**
14	Some projects have been abandoned due to lack of funds or expertise	45	35	16	4	**
15	We operate laboratory facilities in the area to test water quality	5	40	50	5	*
16	We are mindful of pollution in the area	50	40	10	0	**
17	We operate a hatchery	0	40	50	10	*
18	We produce enough fingerlings for distribution or sales to fish farmers	0	30	50	20	*
19	The fisheries extension officers pay regular visits to the fishermen and fish farmers.	5	30	50	15	*
20	The agency is willing to introduce innovations in fishing techniques and fish species	5	30	50	15	*

Key:

** - Favourable Attitude - 65%
* - Unfavourable Attitude - 35%

Table 5 shows the determination of congruency between fishers role perception and extension officers role performance in terms of whether the perceived or non-perceived roles were performed or not performed as determined from the scores. Mean scores for fishers role perception of the fourteen activities were used and nine was above the mean score (2.0). The highest mean score went to methods and results of demonstration programmes. The least mean score was given to help from agricultural extension officers by mail/literature. On the other hand, the mean scores for extension officers role were recorded above the mean score (2.0). The highest mean score was given to the two roles of (a) extension is a good source of quality information and help (b) how would one rate the training and visit method of extension programmes in your area. The least mean score went to the role, how would one rate the level of financial assistance gotten from the agencies.

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Table 6.

Congruency between Fishers Role Perception and Extension Officers Role Performance

Activities	Fishers Role Perception		Extension Officers Role Performance		D	D ²	rho (p)
	Mean Score	Rank	Mean Score	Rank			
Methods and results of demonstration programmes.	3.40	1.00	3.50	5.00	0.40	16.00	
Extension is a good source of quality information and help.	3.10	2.00	4.00	1.50	0.50	0.25	
Fishers' response to programmes.	2.65	3.00	3.10	9.00	-	36.00	
How would you rate the small plot adoption technique (SPAT) for fish farming.	2.60	4.50	3.55	3.00	1.50	2.25	
Agricultural officers response to request for assistance.	2.60	4.50	3.45	7.00	-	6.25	
How would you rate the training and visit method of extension programmes in your area.	2.56	6.00	4.00	1.50	4.50	20.25	
Pilot fish farms for demonstration fish farms in the locality.	2.50	7.00	3.20	8.00	-	1.00	
Information is accurate and practicable.	2.40	8.00	3.50	5.00	3.00	9.00	
How would you rate the extension human relations.	2.05	9.00	3.50	5.00	4.00	16.00	
Number of meetings held with the fishers a year.	1.55	10.00	2.46	12.00	-	4.00	
Visits by agricultural extension officers or specialists to the farms.	1.45	11.00	2.60	11.00	0.00	0.00	
Special subject matter meetings (e.g. cooperatives, subsidy, etc.).	1.35	12.00	2.65	10.00	2.00	4.00	
How would you rate the level of financial assistance you are getting from the agencies.	1.10	13.00	1.02	14.00	-	1.00	
Help from agricultural extension officers by mail/literature.	0.05	14.00	2.40	13.00	1.00	1.00	

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0.00 117.00 0.74

DISCUSSION

The agricultural agencies enjoy the confidence of the host communities studied without which no meaningful progress can be made by the agricultural agencies in the fisheries development and management programmes. Such confidence must have led to the encouragement of the locals to take to fishing and farming, except that it was supposed to be the result of an active process of impartation. Hence the slight disparity in the response profile as shown by the respondents' response to this item. This shows that the level of impact of impartation is near average by the agricultural agencies.

Item No. 3, which states that the agencies have succeeded in making the fishing practice profitable, had favourable response from respondents' reactions. This means that the agricultural agencies are making positive impact on the fishing communities. Response from respondents' reactions on Item No. 4, that the agencies are well funded to meet their fundamental objectives was also favourable. This presupposes from the perspective of the respondents that the agencies could do better than what was on the ground [4].

Respondents' reaction to Items Nos. 5 and 7 which states that the caliber of staff of the agencies was adequate and that they have the relevant experts for the various programmes of the agencies was favourable. This means therefore, that the agencies are perceived by the respondents to be capable of handling their fisheries needs. However, the respondents' reaction for Item No. 6 was not favourable because they felt the number of staff was not adequate. This means that they do not see extension officers or agents from the agencies for regular interaction [5].

Respondents' reaction to Item No. 8, which stated that they have adequate implements for

extension services were unfavourable. This implies that the agencies have rendered the extension officers ineffective by not equipping them adequately. Respondents' reaction to Item Nos. 9 and 10 is unfavourable. Since these are based on the usable state of implements for service, it therefore means that effective services cannot be rendered due to the poor condition of implements. For the fishermen, these implements could be boats, engine, traps, and nets. The failure in items Nos. 9 and 10 could be attributable to the failure also in Item No. 11, which highlights the lack of maintenance culture in the technical units of the agencies. This factor has been identified as a cog in the wheel of progress for our technological advancement.

Respondents' reaction to Item No. 12 is unfavourable concerning ongoing projects in the areas of operations of the agencies. This means that the agencies are not contributing much into their communities of operations in terms of project execution. However, when it comes to relevance of projects, when executed the response of respondents' was favourable as in Item No. 13. Respondents' reaction to Item No. 14 is favourable, meaning that projects have been abandoned for various reasons, especially lack of funds. This of course will not augur well for the increased production and management of fisheries resources of the Niger Delta region of Nigeria [6].

Items Nos. 15 and 16 attracted unfavourable response from respondents based on the attitude of the agencies to the well being of the environmental condition of the communities. This means that laboratory facilities are not adequate where available and also that pollution of the environment has not been given its deserved priority. Factors such as environmental pollution, fish pests, diseases and parasites have been identified as militating factors against effective increase in fish production in the

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riverine communities of the Niger Delta and Nigeria [1].

Items 17 and 18, which were about operating a hatchery and producing enough fingerlings for distribution attracted unfavourable response from the respondents. This means that the respondents are not feeling the impact of fingerling production by the agencies. Thus, this will adversely affect the production and management of fish farms whose productivity depends on the continuous availability of fingerlings.

Respondents' reaction to Item No. 19, which stated that the fisheries extension officers pay regular visits to the fishermen and fish farmers was unfavourable. Inadequate extension services in some of the Niger Delta states was also identified and reported by Alfred-Ockiya [7].

Respondents' reaction to Item No. 20, which stated that the agency was willing to introduce innovations in the fishing techniques and fish species, was favourable, meaning that majority of the respondents agree and consequently are aware of the agency programmes. It is generally believed that awareness is a criterion for adoption of innovations or new technology [8].

The 55% of the response of the respondents' was not in favour of the effectiveness of the agricultural development agencies with regards to increased fish production and management of fisheries resources while only 45% was in favour within the area under study. This implies that these agencies need to take adequate steps to improve their strategy to make an impressionable impact on their host communities. Consequently, we can infer that the agricultural agencies operating in these areas are not positively impacting the fisheries development of their host communities in the selected Niger Delta states [9].

The percentage distribution of respondents' reaction within the agencies to the items on the attitude scale. The agents of these agencies qualify to

be called extension officers of the agencies. Analysis of their response shows that 35% was unfavourable while 65% was favourable for the development and management of fisheries resources. There are responses which are at variance with that of the fishers and this is probably due to the difference in perception by virtue of location. This is evident in Item No. 16, where the fishers see no effort at controlling pollution, while the agents also account for differences in response for Items Nos. 9, 10, and 11.

CONCLUSION

The quality and effectiveness of the extension training received by an extension worker can make the difference between the success and failure of an extension service. The respondent's reaction towards the activities of the extension officers on the attitude scale revealed that greater percentage of respondents disagreed while 40.5% agreed that the extension officers had been able to encourage the citizenry to take to fishing and fish farming. However, there was a strong agreement (56.5%) that the extension officers enjoyed the confidence of the people. Most of the fishers (50.3%) agreed and 43.2% disagreed that the agencies have succeeded in making fishing practice profitable. The respondent's reaction to adequate implements for extension services showed that 58.2% disagreed, 23% strongly disagreed, while only 8.7% strongly agreed and 10.1% agreed. About 59% also disagreed that the implements were right now in usable condition and were in use, and 56.5% of respondents agreed that the projects were relevant to the fisheries need of the people (Item No. 13). About 10% of respondents strongly agreed and 34.8% agreed that the agencies were mindful of pollution in the areas while 37.4% disagreed and 17.4% strongly disagreed (Item No. 16). The attitude of respondents to the issue of enough fingerling production and distribution to fishers, 44.4% disagreed and 10% strongly disagreed while about

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39% agreed and 6.5% strongly agreed. About 50% of respondents disagreed and 13% strongly disagreed that the fisheries extension officers from the agencies pay them regular visits while 37.4% agreed and zero percent strongly agreed.

The results of the study showed that fishers in the study area were aware of the service of extension officers. However, the fishers rating of their effectiveness was low.

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