CAPACITY BUILDING STRATEGIES FOR WOMEN EMPOWERMENT IN FISH PRODUCTION IN ENUGU-NORTH SENATORIAL ZONE OF ENUGU STATE, NIGERIA

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Abstract

The study assessed capacity building strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria. The study adopted survey research design. Four research questions guided the study. The population for the study was 27 agricultural extension agents in Nsukka and Igboeze-North Agricultural zones in Enugu-*North Senatorial zone, Enugu state. The researchers made use of the entire population because of its manageable size. A four (4) point rating scaled questionnaire containing 37 items was used for data collection. The instrument was validated by three experts from the Department of Agricultural and Bio-resources Education, University of Nigeria, Nsukka. Cronbach alpha method was used to determine its reliability co-efficient and the following reliability co-efficient of 0.79, 0.85, 0.74, and 0.82 were ascertained from the respondents for the four research questions. Mean and standard deviation were also used for the analysis of the data collected from the respondents through the help of three research assistants. The researchers recommended that universities and colleges of education should train more women on fishery and enough extension agents that will stand as sources of help to the fish production participants among others.*

Key Words*: Capacity building, women empowerment and fish production*

Introduction

Fish is essential creature that lives in water. Hence, it is an aquatic animal. Fish provide food and livelihood for millions of people worldwide (FAO, 2014). The implication is that fish is used as food and as a source of income to the people. Welcomme, Cowx, Coates, Bene, Funge-Smith, Hails and Lorenzen (2010) observed that fish contribute significantly to food and economic security by providing primary sources of animal protein, essential nutrients, and income. Secondly, apart from human consumption according to Lynch, Cooke, Deines, Bower, Bunnel, Cowx, Nguyen, Nohber, Phouthavong, Riley, Rogers Taylor, Woelmer, Youn and Beard (2016) fish can also be used in feed for livestock and aquaculture operations. The authors noted that sun dried dagaa *(Rastrineobola argentee)* is used as chicken feed when not sustainable for human consumption. Furthermore, the elastic substance found in fish is used for shoe, bag and bead making. Some scales of fish are also used for local bead making.

Based on the nutritional and economic value of fish, some women in the study area engage in fish production to empower themselves. The truth of the matter is that fish production empowers individuals especially women economically in their different locations. Lynch, et. al. (2016) noted that the food and

income benefits of fish afford opportunities of empowering individuals where other buttress ventures are limited. Hence, fish production is a means to poverty reduction. According to Wearatunge, Bene, Sriwardane, Charles, Johnson, Allison, Nayak and Badjeck (2014) fish production is particularly important in poverty prevention for marginalized populations including the rural poor women.

In Enugu State, fish farmers especially women do not produce enough fish needed by the population. Okafor (2004) stated that fish producers at various levels of experience rarely produce enough fish to sell to their immediate communities. As a result of inadequate supply of the product, Ihekoronye and Ngoddy (1992) observed that animal proteins are too expensive for the teaming population of consumers. This is because many fish farmers end up at subsistence level or fold due to losses (Udogu, 2013). To enhance the situation of fish production in the area of the study, women make use of certain capacity building strategies that help them produce more to meet the demand.

Capacity according to Okeke (2009) is the ability of a person, an institution or organization to perform a given task effectively, efficiently on a continuing basis with reduced dependence on external resources. On the other hand, capacity can be described as the strategy or an action that an organization takes to ensure that it has the resources needed to succeed (Dane, 2010). Capacity in this study is the ability of women to possess all the necessary skills, attitude, knowledge and resources required to produce fish for consumption and marketing. However, the ability of the women to produce enough fish depend on the level at which they are enhanced through capacity building.

Capacity building is a process through which individuals or group's abilities are enhanced to identify and solve their problems for better result. Catholics Relief Services (2011) noted that capacity building is a catalyst for social transformation and an avenue for people's empowerment especially women groups in order to create the social spaces and conditions necessary for planned change in the productive life of the community. Capacity building is geared at increasing the ability of women for a change in the development processes. According to UNDP (1991) capacity building focuses on series of actions directed at helping participants in the developmental process to increase their knowledge, skills and attitudes needed to bring about the desired developmental change. In view of the above, it is obvious that capacity building is very necessary for the success of any developmental project.

Evidence from the personal interaction of the researchers with some fish producers indicated that women make use of capacity building strategies in fish production. Strategies in this study simply mean the art of managing fish enterprise. For instance, women make us of planning, production and marketing strategies for their empowerment in fish production. Yet, some women come into fish production business only to drift out after a while. Hence the need to ascertain the capacity building strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria.

Purpose of the Study

The main purpose of the study was to assess the capacity building strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria. Specifically, the study sought to:

1. Determine the planning strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria.

2. Examine the production strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria.
3. Ascertain the marketing strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria.
4. Determine the constraints to capacity building strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?

Research Questions

The following research questions guided the study:

1. What are the planning strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?
2. What are the production strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?
3. What are the marketing strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?
4. What are the constraints to capacity building strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?

Research Method

A descriptive survey research design was adopted for the study. The study was carried out in Enugu-North Senatorial Zone of Enugu State, Nigeria. The population of the study was 27 agricultural extension agents in Nsukka and Igbo-Eze North agricultural zones. The instrument used for the study was a structured questionnaire titled 'capacity building strategies for women empowerment in fish production (CBSWEFP). The questionnaire was made up of four clusters with 37 items. It has a four (4) point rating scale of Strongly Agree (4 points), Agree (3 points), Disagree (2 points) and Strongly Disagree (1 point). Cluster 1, 2 and 3 elicited information on the planning, production, and marketing strategies for women empowerment in fish production while cluster 4 elicited information on the constraints to capacity building strategies for women empowerment in fish production. The instrument was face validated by three experts in the Department of Agricultural and Bio-resources Education, University of Nigeria, Nsukka. Cronbach alpha method was used to determine its internal consistency which yielded reliability co-efficient of 0.79, 0.85, 0.74 and 0.82. Mean and standard deviation were used for the analyses of the research questions.

Results

The results for the study were obtained from the research questions answered by the respondents and presented in tables one, two, three, and four.

Research Question One: What are the planning strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?

Table 1: Mean ratings of responses of the respondents on the planning strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria.

S/N	Items Statement	Remark
1.	Choosing a conducive environment for the construction of the fish-pond	Agree
2.	Budgeting for the fish production	Agree

3.	Clearing of the site for the construction of the fishpond	Agree
4.	Sitting of fish pond in nearby community water borehole	Agree
5.	Sitting of fish pond in secured environment in the community	Agree
6.	Make rules and regulations for successful fish pond management	Agree
7.	Identify sources of credit for fish production enterprise	Agree
8.	Decide on the type of fish to rear (cat or tilapia fish)	Agree
9.	Identify relevant material input and their locations (feeds, fingerlings etc)	Agree
10.	Identify human resources needed for fish production	Agree
11.	Identify relevant records to keep for effective fish production enterprise	Agree

Data in Table 1 indicated that all the 11 items had their grand mean values ranged from 2.84 to 3.36. The table revealed that the mean values were above the cut-off point of 2.50 showing that all the respondents agree to the 11 items as the planning strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu state, Nigeria. The table also revealed that the standard deviation ranged from 0.42 to 0.91 which indicated that respondents were close to one another in their responses.

Research Question Two: What are the production strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?

Table 2: Mean ratings of responses of the respondents on the production strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria.

S/N	Items Statement	Mean	S.D	Remark
1	Filling of fish pond with clean water	3.32	.66	Agree
2	Fertilization of fish pond with organic or inorganic fertilizers	3.31	.69	Agree
3.	Treatment of fish pond for the required PH level	3.25	.83	Agree
4.	Stocking of fish pond with fingerlings	3.34	.76	Agree
5.	Feeding of fingerlings twice a day (morning and evening)	2.73	.70	Agree
6.	Harvesting of the matured fish	3.20	.46	Agree

Data in Table 2 indicated that the 6 items had their grand mean values ranged from 2.73 to 3.34. The table revealed that the mean values were above the cut-off point of 2.50 showing that all the respondents agree to the 6 items as the production strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria. The table also revealed that the standard deviation ranged from 0.46 to 0.83 which indicated that respondents were close to one another in their responses.

Research Question Three: What are the marketing strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?

Table 3: Mean ratings of responses of the respondents on the marketing strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria

S/N	Items Statement	Mean	S.D	Remark
1.	Carrying out market survey for the sales of fish products	3.34	.48	Agree
2.	Advertise for the sales of fish products to attract customers	3.25	.83	Agree
3.	Transport the fish products to the market	3.33	.70	Agree
4.	Arrange the fishes in sizes	2.84	.54	Agree
5.	Fix appropriate prices according to sizes	2.64	.73	Agree
6.	Keep production and sales records for the fish enterprise	3.15	.83	Agree
7.	Balance farm account at the end of sales to ascertain profit or loss	3.35	.87	Agree

Data in Table 3 indicated that the 7 items had their grand mean values ranged from 2.64 to 3.35. The table revealed that the mean values were above the cut-off point of 2.50 showing that all the respondents agree to the 7 items as the marketing strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria. The table also revealed that the standard deviation ranged from 0.48 to 0.87 which indicated that respondents were close to one another in their responses.

Research Question Four: What are the constraints to capacity building strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu State, Nigeria?

Table 4: Mean ratings of the responses on the constraints to capacity building strategies for women empowerment in fish production.

S/N	Items statement	Mean	S.D	Remark
1.	Illiteracy among women farmers	3.33	.46	Agree
2.	Inadequate numbers of trained extension agents	3.33	.69	Agree
3.	Perishability of the fish product	2.64	.73	Agree
4.	Unstable market structure for marketing of fish products	3.34	.76	Agree
5.	Inadequate processing facilities	2.73	.70	Agree
6.	Inadequate storage facilities	3.31	.69	Agree
7.	Lack of initial capital	3.13	.47	Agree
8.	Land ownership system	3.32	.66	Agree
9.	Irregular power supply	3.33	.49	Agree
10.	Poor communication network	3.31	.63	Agree
11.	Inadequate security to the fish ponds site	3.20	.67	Agree
12.	Inadequate water supply	3.31	.44	Agree
13.	Bad roads for the transportation of harvested and processed fish products	2.92	.68	Agree

Data in Table 4 indicated that all the 13 items had their grand mean values ranged from 2.64 to 3.34. The table revealed that the mean values were above the cut-off point of 2.50 showing that all the respondents agree to the 13 items as the constraints to capacity building strategies for women empowerment in fish production in Enugu-North Senatorial Zone of Enugu state, Nigeria. The table also revealed that the standard deviation ranged from 0.46 to 0.76 which indicated that respondents were close to one another in their responses.

Discussion of the Findings

The findings in table 1 showed that all the items in table 1 were agreed upon by the agricultural extension agents as the planning strategies for women empowerment in fish production. The findings of this study were in agreement with Eze (1999) who noted that planning has to do with preparations for what needs to be done in

the future. Olaitan (2008) also noted that planning is the identification of various resources and activities to be involved in carrying out of project with appropriate budget and time schedule.

The findings in table 2 revealed that the production strategies for women empowerment in fish production include: filling of fish pond with clean water, fertilization of fish pond, treatment of fish pond for the required PH level, stocking of the fish pond with fingerlings, feeding of fingerlings twice a day and harvesting of the matured fish. The findings of this study were in accordance with Swift (2007) in a study on aquaculture, who disclosed that fish production is the process of rearing fishes for the purpose of improving acceptance in the market, boosting farmers profit and safeguard endangered fish.

The findings in table 3 showed that all the 7 items were agreed upon by the respondents as marketing strategies for women empowerment in fish production. These findings are in accordance with Meade (1998) who observed that marketing is an integral part of the post-harvest activities in the fisheries sub-sector. The marketing strategies include: carrying out market survey for the sales of fish products, advertise for the sales of fish products to attract customers, transport the products to the market, arrange the fishes in sizes, fix appropriate prices according to sizes, keep production and sales records and balance farm account at the end of sales to ascertain profit and loss.

The result presented in table 4 revealed that all the 13 items outlined as the constraints to capacity building strategies for women empowerment in fish production were agreed upon by the agricultural extension agents. The constraints include: illiteracy among women farmers, inadequate numbers of trained extension agents among others. The findings of the study were in accordance with Osunde and Omoruyi (1999) who observed that the ability of the rural women to participate effectively in development-oriented programme is constrained by illiteracy and other factors such as excessive workload, problems of health, lack of social amenities, lack of time, teenage pregnancy, organizational problems, cultural patterns, customs and male attitudes. Olinga and Lubyayi (2002) also revealed that among the Katosi Women Fishing and Development Association which is an association of rural women in Katosi (Uganda) who got together to improve their general socio-economic standards of living; initiating and promoting women's income-generating activities through the provision of credit led to success; but was limited by high illiteracy levels among women.

Conclusion

Based on the findings of the study, researchers confirmed that agricultural extension agents in Enugu north Senatorial Zone were highly agreed that planning, production and marketing strategies are capacity building strategies for women empowerment in fish production. The researchers through data collection and analysis also discovered a number of constraints to capacity building strategies for women empowerment in fish production.

Recommendations

Based on the findings of the study, the following recommendations were made;

1. Enugu state government should employ more extension agents to educate women farmers on innovative approach fish farming.
2. State governments should endeavour to assist women in fish production by giving them the initial capital and soft loan with little or no interest rate.
3. Government should construct boreholes in every community to assist the fish production farmers especially women to

have access to fresh and clean water all year round.

4. Adequate fish processing and storage facilities should be provided by state government to avert post harvest losses encountered yearly among women fish farmers.
5. Adequate security personnel should be provided by community leaders and local government to watch over and scare thieves away from their fish ponds sites.

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