

T HE GENDER ROLES OF WOMEN IN AQUACULTURE AND FOOD SECURITY IN NIGERIA

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ABSTRACT

Women are recognized as agents of changes and development .Their involvement in aquaculture is one issue that needs to be addressed when dealing with rural communities and poverty alleviation among the rural women .The major way to ensure that women utilize their full potentials in profitable aquaculture is to provide capacity building support which would eventually lead to poverty alleviation among them .The role of women in adopting new aquaculture technology has been restricted and often ignored because of the socio-cultural taboos against them. This paper enlightens women on the different stages of production in aquaculture that they could be involved in, as fishers for home consumption, they contribute significantly to the nutritional needs of their families. The idea is to empower the women with modern technologies in aquaculture to generate enough revenue to sustain their families and save the society from menace of fish scarcity. When women are involved in aquaculture production, it will go a long way in achieving the millennium development goals of eradicating extreme poverty, hunger and empowering women in Nigeria.

INTRODUCTION

Women play a major role in aquaculture production around the world as labourers and managers of the production process; their roles are very much restricted and often ignored. The gender roles of women in aquaculture production are recognized in three ways or stages of production: fishing, processing and marketing. One of the major problems is the socio-cultural taboos against women who strive to earn their living in rural areas and this given rise to gender bias in aquaculture activities.

Nigeria has a population of about 140 million with a growth rate of 2.5 percent [1]. She was classified as one of the poorest country in the World [2]. There is need however to fashion out a reliable and tested policy aimed at alleviating poverty from the country. One way to ensure that women utilize their full potentials in profitable aquaculture is to provide capacity building support for them which would eventually lead to poverty alleviation and sustainable food security among the rural women in the country.

This paper presents an overview of the role of women in the field of aquaculture production. It examines their current roles in aquaculture as a tool for poverty alleviation, identifies specific obstacles which obstruct their participation in aquaculture production, and looks at the impacts of gender roles in promoting or hindering women's involvement in fisheries research, development and management. Lastly the paper discusses programmes which would effectively

involve women and develops recommendations that will ensure the effective participation of women in aquaculture in order to alleviate poverty.

PRESENT STATUS OF WOMEN IN AQUACULTURE IN NIGERIA

The role of women in the national development has begun to attract attention in recent years. In order to develop social standards of women and to enhance their participation in all economic activities, there is need to equip them with quality education in the area of latest technology in agriculture and industry.

The women involvement in other fisheries sectors is diverse. It has increased significantly with the emergence of fish processing as a growth area within the manufacturing sector in the past years in Nigeria. The expansion in the industry during this time has largely been attributed to the contribution of women workers.

Women form the core of the industrial fisheries labour force through their involvement in post-harvest or processing activities. This mode of involvement conforms to perceived gender biases in development, where women are largely employed in areas pertaining to traditional labour divisions.

ROLES OF WOMEN IN AQUACULTURE

Women participate not only in the traditional fisheries sectors of fish processing and marketing, but also in the non-traditional sectors of aquaculture, fisheries research, education and extension. Women dominate the subsistence fishing sector, with increasing involvement in the local commercial fishery.

As fishers for home consumption, women contribute significantly to the nutritional needs of the family. In addition, the commercialisation of previously subsistence target species results in women actively participating in the market economy.

Participation of women in aquaculture in Nigeria is increasing daily and this has contributed to household food security in the following ways:

- i. Increased availability of fish market
- ii. Provides employment
- iii. Helps to provide food of high nutritional value, especially for vulnerable groups such as pregnant and lactating women, infants and pre-school children.
- iv. Provides highly digestible protein that are rich in sources of fat and water-soluble vitamins, minerals and fatty acids.
- v. Provides a focal point for agricultural diversification and increased sustainability, by providing a source of water.
- vi. Increases farm sustainability through construction of ponds, which also serve as small-scale, on farm reservoirs.
- vii. Reduces some social, cultural and economic constraints women are going through in performing their household roles.

Women also contribute significantly to the artisanal fisheries sector , especially through small-scale village based commercial activities. This increased participation can be attributed to the growing commercialisation of non-fish species, especially shellfish.

POVERTY AND FOOD SECURITY

Women generally are responsible for household food security, they key managers of household resources producers and provides for the household. They are really facing a lot of economic, social and cultural constraints in performing their household activities

Poverty is generally considered as being one of the major causes of food insecurity in Nigeria and Poverty eradication is essential to improve access to food.

The World Bank defines poverty as a "multidimensional phenomenon, encompassing inability to satisfy basic needs, lack of control over resources, lack of education and skills, poor health, malnutrition, lack of shelter, poor access to water and sanitation, vulnerability to shocks, violence and crime, lack of political freedom and voice".

It is estimated that about one-fifth of the world's population is currently living in extreme economic poverty; defined as living on less than US\$1 per day [3].

Poverty in Nigeria can be explained in terms of occupation of heads of households; the poverty assessment study of 1995 showed that 87% of the poor were in agriculture and they basically live in the rural area (4) where they have small land on which to sustain their rapidly growing families and they lack basic inputs.

In general terms, aquaculture can benefit the livelihoods of the poor either through an improved food supply and/or through employment and increased income. However, at present little or no hard statistical information exists concerning the scale and extent of rural or small-scale aquaculture development within most developing countries and LIFDCs, nor concerning the direct/indirect impact of these and the more commercial-scale farming activities and assistance projects on food security and poverty alleviation. Despite the lack of information concerning the role of rural aquaculture, there is one sure benefit of consuming fish, and that is the nutritional and health benefit to be gained from its valuable nutritional content.

Food fish has a nutrient profile superior to all terrestrial meats. It is an excellent source of high quality animal protein and highly digestible energy, as well as an extremely rich source of omega-3 polyunsaturated fatty acids (PUFAs), fat soluble vitamins (A, D and E), water soluble vitamins (B complex), and minerals (calcium, phosphorus, iron, iodine and selenium). In fact, if there is a single food that could be used to address all of the different aspects of world malnutrition, it is fish - the staple animal protein source of traditional fishers [6].

Table 1 – Poverty of Household Head

Occupation of Household Head	1980	1985	1992	1996	2004
Agriculture and Forestry	31.5	53.5	47.9	71.0	67.0
Manufacture/ Processing	12.4	31.7	33.2	49.4	44.2
Production and Transport	23.2	46.6	40.8	65.8	42.5
Administration	45.0	25.3	22.3	33.5	45.3
Professional/Technical	17.3	35.6	35.7	51.8	34.2
Students and Apprentice	15.6	40.5	41.8	52.4	41.6
Clerical/Related	10.0	29.1	34.4	60.1	39.2
Sales Workers	15.0	36.6	33.5	56.7	44.2
All Nigeria	27.2	46.3	42.7	65.6	49.1

Source: NCS 2004

ROLE OF AQUACULTURE IN NATIONAL FOOD SECURITY

Food insecurity remains one of the most visible dimensions of poverty and is generally the first sign of extreme destitution. “Food security”, defined by FAO as “a condition when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life, this concerns not only food production and distribution but also has social, economic and institutional dimensions.

Discussing the role of aquaculture in food security is difficult due to inadequate information to access fish consumption data disaggregated into aquaculture and capture fisheries. Considering the role that aquaculture is currently playing in providing fish (aquatic food) to the world and the envisaged increasing role it will play over the coming decades, it is appropriate to consider fish from capture and culture.

Fisheries and aquaculture make an important contribution to the animal protein supplies of many communities in Nigeria and developing world generally and also as a source of micro-nutrients, minerals and essential fatty acids.

Aquaculture ,the farming of aquatic organisms in controlled environment was introduced to Nigeria in the early 50s and the fish production through aquaculture has risen steadily to over 45,000 metric tonnes in 2004 [5].

FAO estimates that fish provides 22 percent of the extreme importance of fish to food security and nutrition may be illustrated by protein intake in sub-Saharan Africa. This share, however, can exceed 50 percent in the poorest countries (especially where other sources of animal protein are scarce or expensive). In West African coastal countries, for instance, where fish has been a central element in local economies for many centuries, the proportion of dietary protein that comes from fish is extremely high.

Fish is a source of food nutrients such as vitamins, minerals, protein, lipids which are needed in the body for a healthy growth and a productive life.[6] estimated that the amount of high value

proteins (meat, milk and eggs) in a diet of both rural and urban populations of Nigeria was 150,000,000 tonnes in the year 2000.

Table 2: Nigeria Fish Supply by Sectors (1996 – 2000) in Metric Tonnes

Sectors	2000	2001	2002	2003	2004	2005	2006	2007
Artisanal	417,066	433,537	450,965	446,230	434,830	490,595	51,8537	504,227
Aquaculture	25,720	24,398	30,664	30,677	43,950	56,355	84,533	85,087
Industrial (Inshore)	23,308	28,378	30,091	33,882	30,421	32,595	33,778	26,193
Offshore	1,375	206	1,229	4,924	1,889	1,925	882	2,158
Total	467,469	4886,519	512,949					

Source: Federal Department of Fisheries, Lagos (2008).

The fish production does not naturally exhibit its full potential in contributions to the gross domestic products of the country that can alleviate poverty. [7] stated that alleviating poverty is a moral imperative and a prerequisite for environmental sustainability while as earlier stated , poverty is both a cause and a result of environmental degradation. Thus, expansion of the role of the private sector in artisanal fisheries could be seen as path to rurally based economic growth where such growth leads to reduced poverty and the subsequent improved use of the environment.

Table 3: Fisheries Contributes about 2% to GDP or N116 Billion (US\$ 1 Billion) to Nigeria's Economy

Component	Capital Investment	Output
Industrial Fishing	N55.0 b	N12.3 b
Artisanal Fishing	N16.5 b	N86.9 b
Ornamental Fish	N0.03 b	N0.3 b
Aquaculture	N7.0 b	N16.5 b
Totals	N78.53 b	N116.0 b

Total Fisheries Output = N116 billion (US\$ 1 billion, 2008)

Table 4: Incidence of Poverty in Nigeria (%), 1980-2004

	1980	1985	1992	1996	2004
All Households	27.2	46.3	42.7	65.6	54.4
Rural Households	28.3	51.4	46.0	69.8	63.3
Urban Households	17.2	37.8	37.5	58.2	43.2

Sources: National Consumer Survey; 1980, 1985, 1992, 1996 and 2004 as appeared in NCS (2005)

RECOMMENDATIONS AND CONCLUSION

To realize and utilize the full potential of women in aquaculture for poverty alleviation in Nigeria, the government, the farmer and research institution have mutual roles to play.

Nigeria needs to critically evaluate and reform her Federal and State Fisheries Institutions and Educational Facilities by encouraging investors to establish commercialized fish farms with modern facilities so that more fish can be made cheaply available and employment opportunities generated to provide jobs for the jobless.

The government needs to empower the farmers by encouraging financial institutions to make adequate loans available to practicing and prospective fish farmers at low interest rates and with adequate period of moratorium;

Women fishers should organize themselves into viable cooperative bodies; arrange for and undergo regular short term training or courses to update their practical knowledge, to add to their acquired experience, attend conferences and seminars organized by Ministry of Agriculture;

They should communicate regularly with government and research bodies through government extension agents and services concerning their needs and problems they are facing and endeavour to pay back loan granted on as when due, consciously and generously fund fish farms so as to encourage financial institutions to fund fish farming.

Research bodies should carry out more problem-solving research in order to improve on the traditional fish farming practice, seek for more effective ways of disseminating research findings to farmers. They should liaise with the extension agents for effective feed in and feedback mechanism; use students to interact with them during the students' industrial farm training.

In conclusion, women are major contributors in agriculture and her work ranges from crop production, livestock production to fishing activities. From household and family maintenance activities to small scale trades. Despite such a huge involvement, her role and dignity has not been well recognized. Women's status is very low by all social, economic and political indicators ,thus, there is need to involve women in fish production in Nigeria if food poverty especially animal protein in quantity and quality is to be arrested.

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