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## ROLE OF WOMEN IN FISHERIES AND FISH PROCESSING: A GLOBAL VIEW

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### ABSTRACT

*Women are the majority of the third World population. They are considered subservient to their male counterpart, even in Europe and America where women have greater basic human right. This paper evaluates the various roles of women in Fisheries and fish processing. Statistics from the European Union shows that, of the various fishing sectors, participation of women (in terms of number) was greatest in fish processing, followed by marine aquaculture, marine fishing and inland aquaculture, with no women involved in inland fishing. In Asia and Africa women are basically involved in fish processing and marketing. In Asia (Thailand and Philippines), women are involved in hatchery operations in aquaculture in addition to fish processing. The finding of the review shows that Fish processing in developing countries, principally Africa is not attracting young literate generation who may have better management competence. It further revealed that, in Nigeria women are directly involved in capture fishery, in addition to fish marketing and processing. This is aimed at empowering women economically to meet the pressing needs of the family. The paper*

*further assesses the problems of women in fisheries and fish processing namely, access to financial resources, education, support services and the need to ensure food security. Possible ways of improving women's participation in fisheries were highlighted.*

**Keywords:** Role, Women, Fisheries, Fish processing

### INTRODUCTION

In West Africa just like most similar regions, the bedrock of the coastal and riverine population is constituted by communities that have been in existence for several generations (Williams, 2000). The author reported that fishing as a skill is handed down from generation to generation. There is therefore no gainsaying that in West African region, fishing plays a pivotal role both in the national as well as in the regional development. The fishers involve their family members in the fishing industry. The women and children are usually the most vulnerable in the society and so they are the most susceptible to poverty. The predominance of women in the small-scale fisheries post-harvest activities, micro-fish retaining, fish processing, fish distribution and marketing, make these women the major player in the socio-economic development of the West African Countries (Williams and Nauren, 1999). In Europe, women were known to have participated in fishing sector since the 19<sup>th</sup> century (Rana and Coho, 2004). Although women in Europe have greater basic human rights than their counterparts in developing nations, they still played an invisible and subservient role and were largely excluded in the Fisheries systems.

In Asia, women participate not only in the traditional fisheries sector of fish processing and marketing, but also in the traditional sector of Aquaculture, fisheries research, education and extension (Aliti, 1997).

**Women in Fisheries and Fish Processing in Africa:** In a recent report in Ghana, about 100,000 tonnes of fish go to waste annually through bad handling and non-hygienic treatment as well as absence of improved technologies for preservation and processing (Mensah, 1997).

#### **Women and Division of Labour in Traditional African Setting**

In the traditional setting, the women participated fully in the life style, dictated by the society, her role being delineated by custom. Since 80-90% of the African women live in rural areas, rural women supply about 80% of the labour force (Williams, 2000). Also in the traditional African society, the division of labour on the basis of sex varies from one ethnic group to another.

Within the household, women have distinct right and obligations to the family and the household. They also have distinct functions as it relates to the market activities (White, 1999). The factor is so glaring in the fishing industry where the women situation is determined by their multiple responsibilities for the care and welfare of their families, household tasks, community and the formal and informal income-generating activities (Williams, 2000).

#### **Economic Potential of African Women in Small Scale Fisheries**

In the modern sector the economic potential of women is dictated by a number of factors which are highlighted below.

**Limited access to resources:** Like their counterparts in Asian countries, knowledge of the participation of women in fisheries sector in the African Countries is slowly evolving (William 2000). The way to rectify the situation would be for government in Africa and Asia to cover

gender question on fisheries and Aquaculture in the regular agricultural censuses (Williams and Nandeesh, 1999). Finding of unpublished study carried out in several fishing communities in the West African region between 1992 and 1998 showed that women are marginalized in planning and policy making and are disproportionately represented among small and resource poor fishers (Williams, 2000). They find it difficult to respond to market incentives and other policy reforms in the expected manner because the constraints these women face daily are definitely more severe than those facing the men who are provided with fishing gears and equipment to go fishing. Only the few established fish mammals have direct access to financial resources (cash), fishing boats and gears. Majority of these women lack the basic education, credit, extension services, technology and information which are critical for shifting patterns of increasing output within their limited resources (Jentoft, 1999). On capital for fish processing, Okorley and Kwatem (2006), carried out a survey in Ghana. The result revealed that, with reference to sources of capital for fish processing enterprises, the response were more in favour of personal savings (49.3%). Only a few women (14.7%) indicated that their capital were from banks. These people were mainly individuals in co-operatives. The low access to bank loans in the study of Okorley and Kwatem is relatively higher than what was recorded for places like Gambia, Kenya and Bangladesh where data gathered from 800 randomly selected households found only 2.8% of women as borrowers of formal credit (Hossain and Afsar, 1989). Women generally need capital ranging from US \$20 - \$4,000 for fish processing (Okorley and Kwatem 2006).

In Nigeria women are directly involved in capture fishery, in addition to fish marketing and processing. This is aimed at empowering women economically to meet

the pressing needs of the family (Araoye, 2002). Such women depend mainly on personal savings and a few on borrowing from cooperative society.

#### **Support systems and Delivery Agencies:**

Studies in Africa have shown that male heads of household and rich farmers are the clients of agricultural extension services (Bond, 1974; Spore, 1993). The same is true in the fisheries sector for example, the experience and knowledge of participation of women in the fisheries sector in the West African Development of artisanal fisheries (WADAF) has confirmed that small-scale fisheries in marginalized in relation to industrial fisheries as a result of strong competition from the industrial fisheries. The methods employed in the disseminating of technical information tend to concentrate information to the better-endowed farmers and the exclusion of poor farmers and women (Satia, 1995). It should be crystal clear that women's ability to participate in extension programmes is limited in the region as a whole because of their lack of education, time constraints because of their dual household and economic activities, as well as the structure of extension programmes. FAO (1989) found that government investment on agriculture represented less than half the sectors contribution to national income..

Thus support systems, if it is to enhance the economic potentials in small-scale fisheries need to be organized in such a way that it will help to bring about social changes in all fishing communities be it in Africa or in Asia or other remote areas of the world where women's activities in the fishing industry are still being discriminated (Williams, 2000). Fisheries extension contact with the women processor was found to be very low (Williams, 2000 ). The major constraints identified as responsible for their current state were inadequate personnel and materials and financial support to give effective and widening coverage of their duties for fish processors (Aliti, 1997 ). To

address the issue it will be important to recruit and train more extension agents especially women in fish processing to take up the challenge (Mensah, 1997 ).

In the survey carried out by Okorley and Kwartan (2006), in Ghana, the study revealed that only 10% of the subjects of the study were receiving extension contact and only 6% claimed to have actually had some training in fish processing from extension agent. Many of the women (77.3%) were getting their information from other fish processors. According to 21.3% of them, their source of information was from the department of fisheries. In the group discussion, it was established that extension agents were not visiting fish processors as often as they should. This situation may not be far from the same in other African countries including Nigeria (Okorley and Kwartem, 2006).

Still on the extension to fish processor, it was argued that the reasons which might account for the relatively low performance of extension service are;

- Financial constraints (inadequate budgetary allocation from government).
- Inadequate material support (input and training materials headed to support the technologies).
- Inadequate and /or untimely credit for fish processors making adoption of some technologies difficult.

Fish processors in Africa need Agricultural extension assistance, which could come from the ministry of Agriculture and NGOs. There should be a direct co-ordination and advisory services among Agriculture ministry, NGOs and farming and research institutions to ensure better monitoring and evaluation and training of personnel where necessary.

**Access to Education:** Women education faced various handicaps dating back to the inception of modern formal education in all developing countries. Girls were discriminated against in favour of boys due

mainly to the prevailing social set up (Williams, 2000). Lack of education among men and women in the rural communities especially those significant constraints on sustainability in West African artisanal fisheries just as it will do on farm production in general. Educated farmers tend to be more likely to adopt modern agricultural practices (Bingswagner, 1989 cited in Williams, 2000). For instance, in 1985, approximately 50% adult women in developing countries were illiterates, although the average is much lower still in the African region where only 36% of the women were reported to be literate (Sivard, 1985).

There are significant gaps between girls and boys education even at primary level where the greatest gains has been made. For example in 1990, about 20% of girls were enrolled in primary school in Nigeria compared to 30% boys, in Senegal, 49% girls were enrolled in primary school compared with 71% boys (World Bank, 1990). We can infer therefore from these studies that literacy and education between female and male have been very slow, thereby slowing down the economic potentials of women in rural areas, in particular women in small scale fisheries. Age and level of education were found to correlate with full-time status of the fish processors (Okorley and Kwatem, 2006). The author observed that age was significantly associated with full-time status ( $r = 0.28$ ) even through the coefficient of correlation was small, thus the older the women was, the more probable she was a full-time fish processor. Educational level on the other hand was negatively and significantly related to the full-time status ( $r = 0.37$ ) and age ( $r = -0.44$ ) of fish processors. This gives the indication that the higher the level of education of a particular fish processors, the more likely she was to be young and less likely to be a full-time fish processor (ILO, 1999). The relatively better educated were more likely to be young and

engaged in other income generating jobs which take some of their time off the fish processing business.

Uwakah *et al* (1991) reported that fish processors were generally poor having great responsibility of large number of dependants when they investigated the role of rural women farmers in Eastern Nigeria. The author further observed that the fish processing in the central region of Ghana is ageing and not attracting the young literate generation who may have the capacity to manage things better. The need to integrate fishing and fish processing into the formal education studies curriculum (Agriculture or vocational) at the junior secondary school levels has become very important (Okorley and Kwartan, 2006). This will help the youth in the coastal towns of the country to learn formally and understand the main occupation in their communities.

#### **Need to ensure food security:**

The priority of ensuring household food security is yet another factors limiting women's potentials because it keeps a proportion of resources "locked" into food and prevent women from shifting their capabilities into non foods. Von Brawn (1989) documented evidence from crop diversification projects in the Gambia, Kenya and Rwanda where small holder make conscious effort to maintain household product alongside newly introduced crops. This strategy by women in crop production is similar to what the women in small scale fisheries do. In times of economic crisis was the case in most of the African countries dating back to 1985, till the turn of the century, women dependent on small scale fisheries for their families survival have reacted to their situation economically by intensifying household food security strategies. For instance, the last decades and a half when many African nations struggled through economic mismanagement, civil conflict and so on, the food situation has remained basically healthy simply because the small-scale farmers and fishers continue to

find a way to produce their own food (Satia, 1995). Declining levels of employment as in currently the case in many of the fishing communities in Africa contribute to growing food insecurity. This is due to increase in prices of imported goods, (fishing nets, gear, etc) and the prices are higher as a result of subsidy removal (Williams,2000).

Finally there is need to define some priority actions to promote the role of women in the economy because it has been shown that women are productive and efficient where they have access to the right technologies and opportunities (White1999).

### **Women In Fisheries: Europe and America Experience**

Women in Europe were known to have participated actively in the fishing sector since the 19<sup>th</sup> Century (Rana and Choo, 2004). Statistics collected from European Union showed that women participate actively in fish processing activities, followed by marine aquaculture, marine fishing and inland aquaculture. Even in the European Union, where women have greater basic human rights than their counterparts from developing countries, the former to a large extent, still play an invisible and subservient role and are largely excluded in the fisheries systems (Williams, 1999). The subordinate status of women in the western world originated from the Greek and Roman civilization, when women were relegated to the roles in the home and were responsible for child bearing while men took over public responsibilities (Rodda, 1993). It was not until the 19<sup>th</sup> Century that women took active actions against the subservient status and sought fairer treatment through women involvement (Rana and Choo, 2004). Women in Europe were known to have participated actively in the fishing sector as far back as 19<sup>th</sup> Century. They worked in the fish processing factories, and during the peak of the herring industry provided the much needed labour. Apart from processing, women were known to

work also as fish mongers (Rodda, 1993). However, women's role in the fishing industry apparently has not changed much with time and still today their presence is still felt predominantly in these two areas.

Statistics from the European Union showed that of the various fishing sector, participation of women (in terms of number) was greatest in fish processing, followed by marine aquaculture, marine fishing and inland aquaculture, with no women involved in inland fishing. See Table 1.

Statistics collected in 1997 from the fish processing industry in various European countries showed that Italy has the highest percentage of women workers (87%) followed by Portugal (75%), France (68%), Germany (55%) and Sweden (52%), while the United Kingdom (51%), Belgium (55%), Spain (55%), Netherlands (61%) and Greece (68%) have a higher percentage of men than women involved in this sector (Rana and Choo, 2004). The author further reported that a survey carried out on women in five European countries that are involved in Marine aquaculture showed that Greece has the highest percentage of females (50%) in the mariculture industry followed by Finland (30%), France (23%), U.K (15%) and Spain (7%). In the academic filed, a study carried out in the institute of Aquaculture in Stirling, Scotland showed that more than 80% of the professional staff are man while women dominate in the technical and administrative fields (Rodda,1993 ).

A few survey carried out in the EU on women and fisheries indicate that inequality between men and women is still rife (Rana and Choo 2005). Men dominate the EU consultant committee on fisheries and aquaculture, which comprise a group of mainly big fishing industries (Gorez, 2000). In spite of their involvement in the fisheries sector, women in fishing families in the Netherlands are not members of fishers' organization mainly because membership is based on boat ownership

and it is primarily the men who own the fishing boats (Quist, 2000). A survey carried out in 1999 by the research department of the ministry of Agriculture and fishery in the Netherlands indicated that:

- Although women participate actively in activities (administrative, book-keeping, accounts, auction) related to fisheries sector, only a few are involved with actual fishing.
- About 60% of the women are involved in decision making regarding investments, finances and labour for the fishing enterprises.
- Despite their participation, women do not receive a salary nor are they insured.
- Although many women have interests in fisheries policies, only a few women have accompanied their husbands to meeting in fisheries organization.
- All the women interviewed agreed that it is not easy for a woman to enter fisher's organization since they are seen as predominantly controlled by men and their husbands did not like them to be present in the meetings.

Subsequent to this survey women were invited to meetings called by fisher's organization. They have since contributed actively to the meetings and there is unanimous agreement to conduct a study on the role of women in fisheries.

A study carried out in Northern Europe presented by Jentoff (1999) on the role of women in fishing communities under pressure showed that during times of crises, women's role were not restricted to the household and their husband's fishing enterprise. They also took on a role in the community, keeping it together and maintaining the spirit and life's meaning

during difficult times (Rodda,1993) During their contribution to the fisheries sector, women's issues, interests and knowledge are disregarded in Fisheries management systems. (Jentoff,1999) attributed the cause to the absence of women in management who have no one to raise issues specific to them.

In Canada and USA women are relatively unrepresented in the fishery work force ,thus helping in strengthening the household economy (Brabjeet *et al*,2008). Latin America Argentina, Brazil and Panama have women actively involved in fish hatchery operations (Shanthi *et al*, 2006). FAO commissioned studies in Argentina,Uruguay and Brazil revealed that women are relatively involved in fish processing activities (Prabjeet *et al*,2008). In the processing industry studied the number of women exceeds the number of male staff. The number of women increased with the degree of complexity of the processing job. Women are considered by plant owners as more capable of carrying out precise tasks (Jesupect, 2004)

#### **WOMEN IN POST-HARVEST ACTIVITIES IN SOUTH PACIFIC AND ASIA**

In the South pacific women clean, dry, salt and smoke fish and are solely responsible for selling of seafood's at markets (Aliti, 1997). The author also observed that in Indo-China, women participate not only in the traditional fisheries sector of fish processing and marketing, but also in the non-traditional sectors of aquaculture, fisheries research, education and extension. Aliti further observed that it will be a landmark in the fisheries industry in Fiji if women are recognized for the important role they play in Fiji Fisheries and are included in the planning and implementation process of this industry.

The advent of commercialization in rural communities has resulted in a greater emphasis on economically viable products (Sahn,1990). This has motivated the evident shifting from the consumption of

local food to less nutritious, imported foods.

Women are the main informal traders throughout the region dominating municipal markets and other roadside and street outlets. If the self-employed category is used as an indicator of informal sector activity, then almost a quarter of pacific women are engaged in informal trade (White,1999 ).

However, another explanation holds that women's immense involvement in the informal sector is a response to poverty. Women also possess an extensive knowledge of traditional post – harvest activities, which is not recognized enough. This is because current fisheries development emphasizes production with the post-harvest sector being given low priority (Aliti, 1997). As a result, women's dominant participation in post-harvest and processing activities was regarded as secondary in fisheries development. It has been argued that post-harvest activities performed by the women in Vanuatu contribute very significantly to the nutritional and income level of households (Jentof,1999). Modern fisheries development, therefore, needs to blend traditional processing knowledge with new strategies.

In spite of pacific women increased participation in the market economy, they are generally regarded as basically involved in subsistence fishing, with minimal defined participation in commercial fishing activities. Commercial fishing, in this context, does not regard essential post-harvest activities as active commercial participation. Neither is women's domestic work viewed as necessary for the success of men's commercial fishing (Williams,2000).

Another major obstacle in the documentation of women's economic participation in the fisheries sector is that their fishing activities are not seen as economically productive. The failure to recognize the mixed subsistence nature of the village fisher results in an under

valuation of their participation. Apart from this, the involvement of women in fisheries sector in 1993 for Fiji, Samoa and Tonga was recorded as only 13-17% of the work force (Aliti, 1997). This low statistical measure of women's economic participation is due to the subsistence sector not being counted. The obvious indifference to women's fishing activities and the non-recognition of their work in the subsistence sector prompted the description of them as invisible fisher folk (white, 1999).

The current industry – oriented fisheries development leaves women's small scale commercial and subsistence activities unmonitored and undeveloped. Wherever women have been incorporated into the industrial sector, this has been gender related types of employment, such as fish processing. Among the major constraints to women's fisheries development are the lack of access to technology and the absence of fisheries extension assistance (Aliti,1997).

The women's involvement in other fisheries sectors in diverse. It has been increased significantly with the emergence of fish processing as a growth area within the manufacturing sector (Jentoft, 1999 ). The total employment (staff and management) for the Pacific Fishing and Canning Company (PAFCO) in 1993 was reportedly over 1,000 with the majority being female production workers paid hourly (Aliti 1997). In addition, women inclusion in the production process made up about 90% of the total workforce in the cannery. This is said to be a replication of the practice of assembly lines, which utilize women's manual skills and efficiency ( Aliti,1997).

## **CONCLUSION AND RECOMMENDATION**

In most fishing communities, women have a major or even an exclusive role in post-harvest fisheries activities. Despite their best efforts, post harvest losses are often very high due to primitive technologies,

ineffective methods and inadequate processing and storage facilities. Thus, improvements in equipment and methods can make a significant difference in the amounts of fish available for home consumption and for sale even without any increase in the size of catches.

The fish processing enterprise in many countries in Africa is ageing and not attracting young literate generation who may have the capacity to manage things better. The majority of the women in fish processing are poor and have a great responsibility of catering for a large number of dependants. A number of factors have been identified to retard the potentials of women in fish processing among which are lack access to education need to ensure food security, limited access to resources etc. A limited resource base refers to women's level of education, illiteracy, skills and knowledge, as well as minimal or no access to land, credit, training, extension services etc. These issues relegate women empowerment opportunities to unskilled or traditional skills. New technology in processing greatly affects women as it usually displaces them as it requires greater skill than they possess. It must be said that women are marginalized in planning and policy making and are disproportionately, represented among small and resource poor fishers. Even in the European Union where women have greater basic human rights than their counterparts from developing countries, the former to a large extent still play an invisible and subservient role and are largely excluded in the fisheries management system. To ensure sustainability of development projects, and fairness to women, more recognition should be given to them for their role and contribution to the fisheries sector.

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**Table 1: Women participation in various Fisheries sectors of the European Union**

Sector	Total No. of Fishers	Total No. of Women	% of Women
Marine Fishing	214,000	12,840	6
Fish Processing	89,500	52,805	59
Marine Aquaculture	50,300	14,084	28
Inland Aquaculture	11,500	1,725	15
Inland Fishing	9,500	0	0
Others	112,000	0	0
<b>Total</b>	<b>486,800</b>	<b>81,454</b>	<b>16.7</b>

Source: Rena and Choo 2006