

**Fisheries
economics
and trade
in the west
african
region: a
gender
perspective**

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Abstract

This study examines the status of women and their contributions to the fishing industry in West Africa with a particular emphasis on Nigeria. The existence of varied fish resources in the region can play a significant role in the nutritional and economic well being of the people as it relates to food security and sustainability. With domestic fisheries in the region being predominantly small-scale in nature, social relationships between the actors play as significant a role as purely economic considerations in their exploitation and survival strategies. Men and women do pursue different but usually complementary objectives, but women's roles tend to be poorly understood and underreported while men's roles are better documented, albeit often stereotyped.

Understanding their respective role is important for private and public sector planners and managers alike in the face of globalization of trade in fishery products which affects all levels of national, intra-regional and inter-regional marketing. The women tend to be the fish processors and marketers making significant contributions to domestic, national and regional economies. Details are given on activities and income levels based on gender differentiated field research.

1. Introduction

The African continent has a coastline of some 38,500 km, a continental shelf area of about 1.5 million km² and a total Exclusive Economic Zone (EEZ) area of about 12.3

million km². West African countries possess 53 percent of the shelf area along with 46 percent of the EEZ (Seki and Bonzon 1993). The African continental shelf and EEZ areas make up respectively about 7 and 11.5 percent of the world total.

Fish imports and exports in volume and value across the African Region is shown in Table 1. Although Africa, according to Seki and Bonzon (1993), is a net importer in terms of quantity, the trade balance in value shows Africa as a net exporter, which means that the exported species are valued higher than the imports. In terms of trade, West African countries account for 77 percent of the total exports and 71 percent of the total imports, whereas the percentages for East African countries are nine and five respectively.

Table 1: 1990 Fish trade, by region, in quantity [MT] and value [million US\$]

REGION	Import Quantity	Export Quantity	Balance Quantity	Import Value	Export Value	Balance Value
Western Africa	1,299,282	644,446	-654,836	605.8	1,270.0	664.2
Eastern Africa	47,231	53,246	-6,015	45.9	141.7	95.8
Northern Africa	147,658	18,785	-128,873	89.0	120.7	31.7
Southern Africa	72,334	70,593	-1,741	115.2	107.5	-7.7
Africa Total	1,565,051	787,070	-779,435	855.9	1,639.9	784.0

Source: Seki and Bonzon (1993)

It is estimated that only approximately 15 percent of coastal West Africa's domestic production is exported outside the region as of late, a decrease compared to the late 1980ies (Horemans, 1995). Aggregated market value of intra-regional trade is lower than that of inter-regional trade due to high value species involved in the latter. Between 1991 and 1993 supplies of domestic markets in the region have been ensured to a growing extent by domestic production - 63 percent compared to 52 percent in 1990 (Horemans, 1995). Domestic and intra-regional trade have the added advantage that they supply cheap animal protein to local populations and create substantial secondary employment in the areas of processing and marketing.

Acheampong (1996) pointed out that artisanal fisheries constitutes the most economically significant component of West African fishing industry in terms of its contribution across a range of areas - fish landed employment (directly and indirectly generated), foreign exchange earned and its contribution to meet nutritional needs. Nearly all fish caught by artisanal fishing vessels are landed locally and processed in

various ways for human consumption. Furthermore, bulk industrial imports of frozen small pelagic species (sardinellas, horse mackerel etc.) mostly from the countries of the former Soviet Union and the Netherlands into West African countries, particularly Cote d'Ivoire and Nigeria, enter to a large extent the traditional processing and marketing channels in the countries concerned.

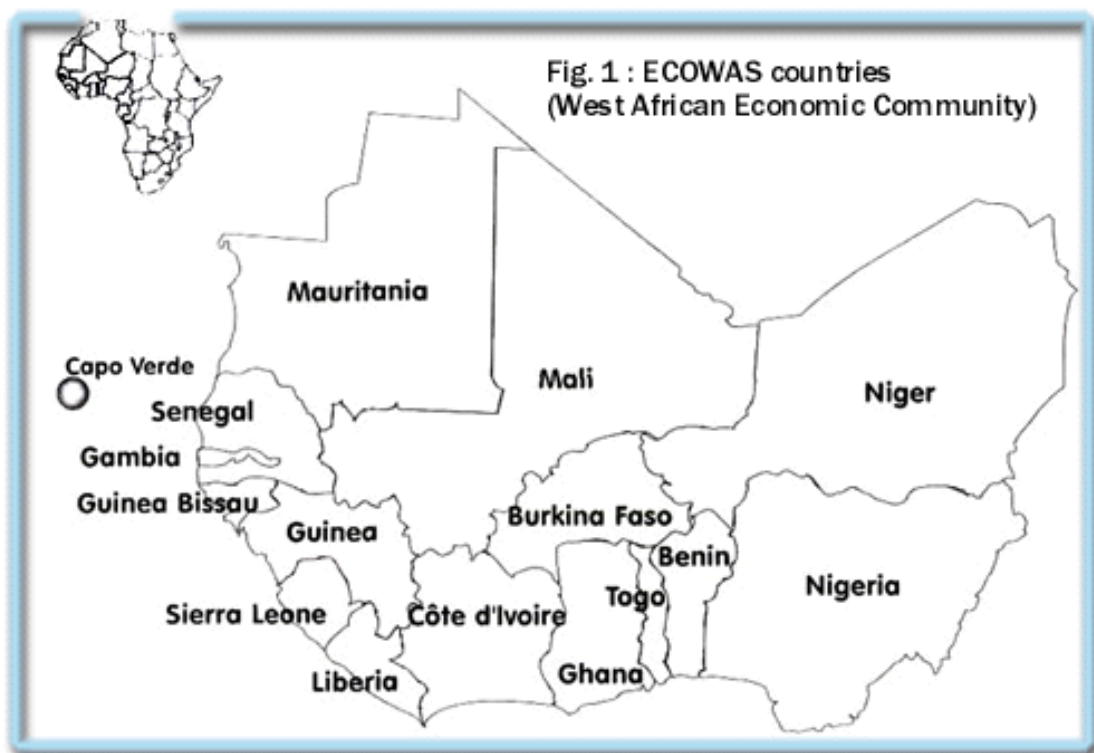
In terms of employment creation, high levels of employment are generated not only in artisanal fishing activities *per se*, but even more by the processing and the distribution of the fish and the provision of fishing related services and the servicing of the processing sector.

Fish as a cheap source of high quality animal protein is of vital importance in feeding the world's growing population, particularly in the developing countries. Fish supplies about 20 percent of animal protein globally and as much as 63.9 percent in some West African diets (Horemans, 1994). Continued access to this source of food will to a large extent depend on the purchasing power of people and their ability to control product flows (e.g. Heinbusch, 1994; Horemans, 1995). It should be noted that reduced dependence on imports as referred to above, have not been matched with the equivalent increase in landings. Combined with continued demographic growth, this trend translates into a diminishing *per capita* fish supply, which was estimated at roughly 10 kg/year in the early 1990ies compared with about 15 kg/year in the early 1980ies (Horemans, 1995). This is of particular concern in the light of growing scarcity and an expected trend for competition with the world's biggest import markets of high value fish products, notably North America, Japan and Europe, with Europe absorbing between 75 and 85 percent of African fishery exports (Lemerancier and Bonzon, 1995).

2. Small-Scale Fisheries in West Africa

Historically, small-scale fisheries have been interwoven with a variety of other social and economic activities, particularly in the agriculture, trading and less so, in livestock and forestry sectors. Governments in the region recognize the importance of these fisheries within their food security policies. Between 1990 and 1995, professional organizations of women fish processors, fish mongers, and fisher folk in many public and para-public areas have cooperated in a positive manner with respect to development programmers.

To quote but one example, a Regional EU sponsored Programmer in the 16 ECOWAS countries (see Fig. 1), aims at improving artisanal post-harvest utilization of catches. The cooperating governments, NGOs, sector institutes and professional organizations, have recognized that much of the future of small-scale fisheries development hinges on the ability of fisherfolk to adjust to a changing context propelled by the antinationalisation of trade. Closely associated with all these factors are the needs of fisher folk in relation to their social and economic role, yet to be fully recognized.



In terms of employment and local economic activity, small-scale fisheries may be treated as a subsector of agriculture. Small-scale fishing can be an important factor in alleviating poverty. This is mainly because high levels of employment are created not only in artisanal fishing, but more so in the processing, preservation, marketing and distribution of the fish products. The resultant effect is the generation of fishing-related services and the servicing of the processing sector. In all likelihood, considering that Seki and Bonzon (1993) estimate five land-based jobs (often by women) for every fisherman in inland waters, and three for every fisher in maritime small-scale fisheries, artisanal fisheries account for some 2 million jobs in the West African sub-region.

In terms of production output, small-scale fisheries account for most of the domestic catches in all but few countries. Table 2 shows that catches have had an upward trend between 1980 and 1992. Nigeria alone contributed somewhat less than a quarter of the total fish production in the West African sub-region.

Table 2: West African fish production, by country, 1980-1994 [MT]

Country WEAR	1980	1985	1990	1994
Benin	F37,853	F36,371	F41,663	F37,000
Burkina Faso	6,500	7,443	7,015	F8,000
Cape Verde	8,837	10,190	7,734	F5,9600
Cote d'Ivoire	85,920	110,662	104,376	74,094
Gambia	13,265	10,712	17,862	22,318
Ghana	231,891	276,049	392,777	336,269
Guinea	F20,000	F30,000	35,000	F44,000

Guinea Bissau	3,777	F3,743	F5,400	F5,250
Liberia	11,791	11,478	6,463	7,721
Mali	88,228	54,184	70,548	62,950
Mauritanie	F21,632	103,300	F80,530	F85,000
Niger	8,892	2,000	3,362	2,200
Nigeria	F261,291	244,490	316,328	282,089
Senegal	232,752	246,010	297,876	F388,042
Sierra Leone	49,187	F53,511	F51,830	63,898
Togo	9,134	15,544	15,800	13,202
TOTAL	1,087,152	1,211,944	1,449,164	1.437,929

(Source: FAO, 1990, 1996; F = FAO estimate)

In West and Central Africa, Nigeria is the most populous country and the one with the largest population of fisherfolk, followed by Ghana and others like Senegal, Mali, Cote d'Ivoire, Sierra Leone, Chad, and Cameroon, to name but a few. A number of publications address selected aspects of the fisheries sector (e.g. Adekanye, 1983; Alamu, 1989,1990; Ayanda, 1991; Chaboud, 1983; Chaboud and Kéb  , 1989; Chauveau and Samba, 1989; Chimbuya, *et al.*, 1993; COFI, 1983, 1985; Hochet, *et al.*, in prep.).

In general, drying, smoking and curing of fish products generate considerable demand for services at various levels and forms. This demand is important because it creates backward and forward linkages in relation to the local economy thereby transforming many of the artisanal fishing communities into thriving centers of local economic activity (e.g. Haakonsen, 1988).

The majority of individuals employed in the processing, preservation, marketing and distribution of artisanal fish catches in the West African region are women. However, their role is poorly understood and documented. Despite FAO's and other organizations' commitment to integrate gender concerns - that is, men's and women's needs - fully into development activities, insufficient progress has been made to date. In particular, because of the important role women play in servicing the artisanal fisheries sector, disregard of gender in policy and planning, and subsequently in operationalisation, is bound to translate into loss of development opportunities (Nauen, 1989).

3. The Gender Concept

The gender concept "refers to the qualitative and interdependent character of women's and men's position in society. Gender relations are constituted in terms of the relations of power and dominance that structure the life chances of women and men. Thus gender divisions are not fixed biology, but constitute an aspect of the wider social division of labour..." Oestergaard (1992). In as much as the interrelations between the roles of men and women come under scrutiny, the concept of gender allows to differentiate between the biologically based, sexual differences between men and women, and their culturally determined, social and economical roles. Only the latter ones can be influenced by policies and changed by different perceptions of a desirable state in the future compared to the current situation in any given society.

When sectoral plans are prepared for fisheries and aquaculture subsector of agriculture, there is generally a paucity of gender-specific socio-economic

information. This is because in most of the nations in the African region, there are no data and where nominal data does exist, there is no systematic method of consolidating and disseminating the gender-disaggregated information. Perhaps worse, concepts underlying most national accounting systems make implicit assumptions about the functioning of the market economy and definitions of economic units which poorly reflect the real situation and thus bias the raw material for planners (Evans, 1992). The same author reports on the case of the 1976 Peruvian Peasant Survey which showed that only 38 percent of the women were involved in agriculture. A rectification of the concept to include also "non-market" production corrected this figure upward to 86 percent. As women account for a large share in subsistence activities, their contribution to the economy tends to be grossly underrepresented.

In common with women universally, most African women have a reproductive responsibility. In other words, they look after the children, carry out the cooking, fetching water and firewood, and do the housekeeping and the washing as well as keep a backyard garden. This paper is, however, primarily concerned with the productive roles of women in fisheries in the West Africa sub-region.

Few women are engaged in capture fisheries in the African region. Nigerian women (Itsekiris, Ijaws, Ilajes, Aworis, etc.) in the coastal and riverine areas do fish in the estuaries rivers streams and inland waters (Houndekon *et al.*, 1990; Okpanefe *et al.*, 1991; BolaJi, *et al.*, 1994; Williams, 1994a, 1994b, 1996). It is also known that women fish for crabs in the lagoons and estuaries in Nigeria, Benin, Togo, Guinea Bissau, Senegal and other coastal countries (e.g. Ijff, 1990). They may be involved in the usually tedious work of collecting mangrove oysters and, with or without their children, glean fish and invertebrates from inshore areas, inland canals and waterways for home consumption or micro-scale trade.

Also, women in Cape Verde, Gambia, Ghana, Guinea, Nigeria, Senegal, and Sierra Leone have been found to be owners of boats, engines and gear and therefore indirectly engaged in fish production activities in the West African sub-region (e.g. Haakonsen, 1988; Houndekon *et al.*, 1990; Zannou, 1993). These women are generally wives, sisters and daughters of fishermen. Some of these women come from small female-headed households.

In addition to the reproductive responsibilities, West African women in general carry much of the burden of the family budget compared to the men. Therefore, almost every woman, especially those who have given birth to children, must as a matter of obligation, entertain business activities which will allow her to look after her own needs as well as those of her children and extended family members.

The situation greatly varies from place to place depending on the man's income, the number of wives, children, the culture and tradition of the community. More often than not the woman must provide part of the needed items for the family's food. The expenses for school and medical care tend to be the responsibility of the man, but when he is unable to supply these provisions, the woman ensures that these expenses are taken care of.

It happens in times like the current economically stressful situation prevailing in the African region that the woman has only herself to count on to support her family. She has no option but be engaged in several profit-generating activities either sequentially or at the same time. Women in fishing communities are as affected as

women in other sectors. This is the reason why this study is putting forward the gender perspective regarding the fisheries economics and trade.

4. Women in small-scale fisheries: a case study from Nigeria

The study investigates Nigerian women's productive roles in fishing communities as a case study- Specifically, the study:

- describes all sources of employment for the women in fishing communities,
- evaluates the daily activities of the women in kind and cash,
- traces their roles in bringing fish from shore to market and recommends ways of enlarging such roles especially with respect to intra-regional trade in fish products.

4.1 Methodology

Mostly secondary data was employed in the discussion of African region. However, in order to overcome some of the conceptual flaws underlying more conventionally collected information, a participatory action research approach was used in addition to primary and secondary data in the case study. This case study was carried out only by the first author. Information gathered were based on individual life histories in addition to open-ended questions from women of different generations in order to determine the way in which women's production and reproductive labour changes in relation to traditional social and economic factors.

The case study looks at seven (7) states in Nigeria, namely Akwa Ibom, Cross River, Delta, Kogi/Kwara, Lagos, and Niger states, because there are numerous women raised in the riverine coastal areas endowed with the ability to undertake capture fisheries activities (fishing). The fishing communities studied are all served by one major river (The Escravos River) reaching from exclusively inland areas on the estuarine and coastal situations on the Atlantic ocean.

These states in Nigeria are noted for their fishing activities. A total sample of 667 women living in fishing communities was purposively selected. Many fishing activities are taking place in all communities considered. These activities have effects on the whole community. The sample covers various aspects of women's economic roles in these fishing communities. Special effort was made to include all economic ventures and attention was given to the scale of operation and method of fishing and fishery related activities. In-depth interviews, formal and informal as well as group discussions were carried out.

For analysis, simple counts and tables of frequencies were used. Percentages were computed, and income levels solicited for and re-computed from supplied information.

4.2 Results and Discussion

4.2.1. Demographic Characteristics of respondents

The ages of the respondents ranged from 17 years to more than 70 years. Out of the entire 667 women, 594 of them (89%) fall within the active age bracket of 20-59 years (Table 3). The majority of them (70%) was married. Others were either divorced (10%), widowed (12%) or single (8%). About 59 percent of the women had between 6 and 10 children, followed by 43 percent that had between one and five

children, while 8 percent had no children yet. The average number of children was seven.

Table 3 : Age distribution of the respondents

Age bracket	Frequency	Percent
10-19	27	4
20-29	133	20
30-39	266	40
40-49	127	19
50-59	68	10
60-69	33	5
70+	13	2
TOTAL	667	100

4.2.2. Sources of Employment

Women's economic activities are closely related to the socio-economic and tradition of the people. In general, fisherfolk are a special breed of people. They devote all their attention to fishing activities, repairing and maintaining their fishing equipment, hence, making great effort in solving their problems connected with the industry. The fishermen in particular migrate with the scarcity of fish in search of fertile fishing grounds, but the women, especially the Itsekiris and Ijaws, wherever they are, found harvest fish and fish products from the main channels of rivers and maze creeks. The women are also considered specialists in post-harvest activities.

Women change their economic activities in line with the economic environment of the community. The variety in activities ranges from fish processing to street food vending and financial management of the fishing industry. Their activities also vary with the season. These are survival strategies, which the women employ as they are concerned about the welfare of their families. Making of traditional alcoholic drinks from local raw materials, mat weaving and fanning of vegetables, pepper, cassava and yams, and backyard raising of livestock are all sources of employment. Women also work as dressmakers, hairdressers, butchers and so on. Furthermore, there are women active in the free professions, who are nurses, teachers, and civil servants.

4.2.3. Major Economic Activities

The people in the study area are primarily fisherfolk. Men, women and children are actively engaged in fishing activities. Fishing is with small-unmotorised dugout canoes. The main gears used are gill nets, traps, hooks and lines. These gears are common across all the fishing communities studied.

Women dominated the fish processing and marketing activities although an appreciable number of them also engaged in fish capture in conjunction with processing and marketing activities. Table 4 shows that 19 percent of the women are engaged in fish capture (only four percent considered it their only occupation), 82 percent are engaged in fish marketing, 72 percent are engaged in processing while 32 percent are engaged in other activities unrelated to fishing. However, only 9

percent of this latter group are engaged solely in other activities with the remaining 23 percent still involved with fish processing and marketing at a secondary level.

Table 4 : Distribution of respondents according to economic activities

State	Fishg. Only	Fishg. Processing & Mktg.	Mktg. Only	Processing & Mktg.	Processing Only	Proc., Mktg. & others	Fishg. &Mktg.	Other activities	Total
Lagos	-	25	30	50	-	40	10	35	190
Delta	10	10	22	15	15	-	10	6	88
Cross River/ Akwa Ibom	8	12	29	50	-	30	-	18	147
Kogi/ Kwara	-	30	-	87	-	33	-	-	150
Niger	9	-	-	12	19	52	-	-	92
Total	27	77	81	214	34	155	20	59	667
%	4	12	12	32	5	23	3	9	100

In all these communities, women are very conspicuous in almost all areas of fishing while the men concentrate mainly on fish capture. Women acted occasionally as financiers for the men fisherfolk. In doing so, they were indirectly involved in fish capture, and pursued one of their strategies to secure access to the raw material for their processing and trading activities. Overall, 91 percent of the respondents (608) are involved with fishing in one form or the other.

4.2.4. Nature of Fish Marketing

As established above, 82 percent of the women are engaged in fish marketing. Fish could be sold live, frozen or processed. Marketing of fresh fish is done by about 10 percent of the women. Since electricity is unreliable, and access to cold storage is hardly affordable, hence, most of the women fisherfolk sell their fish to the middle "men" (mostly women) who take the fish to larger markets e.g. Benin City and Minna. As an alternative to preserving the fish products, fresh fish is processed by producers, processors and marketers alike. Table 5 gives a rundown of the commonest preservation methods. As shown in Table 5, 71 percent of the women smoke-dry using various types of ovens while 25 percent sundry. Only about three percent freeze, and one percent fry and salt.

It was only in Cross River State that sundering was the commonest method because of the lack of firewood and the local availability of drying materials. In some communities in Cross River State, they have giant dryers where a number of people

can dry fish at the same time. Because most fish products are sold processed, women generally play major roles in this respect. Also because products spend much longer time in their possession than with men, they add more value to the original product than any other group of people.

Table 5: Common fish preservation methods (number of cases in sample and percentages)

STATE	Sundrying	Smoke-drying	Freezing	Freezing/salting	Total
Lagos	12	140	1	2	
Delta	15	65	2	-	
Cross River/Akwa Ibon	99	40	8	-	
Kogi/Kwara	33	114	3	-	
Niger	-	86	3	3	
Total	159	445	17	5	626
Percent	25	71	3	1	100

4.2.5. Combining Processing and Marketing Activities with Family Obligations

In many of the fishing communities in the coastal riverine areas, the traditional sources of livelihood have been eroded with the overall decline of agriculture as well as the out-migration of the fishermen which over the years have resulted in marked changes in the type of work women do. More recently, women's labour force participation rates continue to show rapid increase without traditional support of the extended family. It has become more difficult to combine income generating activities and home maintenance activities especially with the limited resources available to many of the fishing households.

However, due to the growing need for cash as a result of the current shift in the region towards a consumer economy, paid employment has become even more critical for women. For this reason, in the fishing communities, adult status as well as feminine identity among the new generation of women are based on motherhood rather than marriage. Given this situation, most poor women start to bear children long before they get married which is often in their teens. Children are therefore considered both a resource as well as an involvement.

The women must combine house chores with their efforts to earn a living. Hence, they always divide their time between these chores and efforts to supplement household incomes. For fish processors, this consideration is a major factor in locating their ovens near their abode. While the fish is on the fire, they go about doing other household chores while constancy checking to make sure the fishes are evenly smoked. Finding an acceptable balance between household chores and income earning activities is even more difficult for marketers who must travel great distances to where they may have to sleep overnight. Alternatively, they may travel shorter distances where market days are more frequent, implying that they would be away from home more often. Children often have to perform support activities of

various kinds under such circumstances and are considered as an essential source of unpaid labour for these women.

In all cases, these dual roles performed by the women are often ignored in calculations of the national incomes and per capita Gross Domestic Product because they are unquantified and sometimes unquantifiable. According to Depauw (1982), even when women are described as entering the fishery as fishers, the domestic/public dichotomy dominates ethnographic descriptions- these women are portrayed as exceptions within the male domain of the sea. They are still women doing men's jobs - women in non-traditional occupations.

4.2.6. From Sea to Table - The Role of and the Benefits to Women

As clearly demonstrated in this study (Table 4), women are involved at every stage in the fishery sector. They go out to sea to capture. They wait at the landing site to buy the fresh fish. They transport the fresh fish to the market to sell, thus adding place utility to the original value of the fish. They engage in processing and preservation of most of the fish thus adding time and form utility. Because of their roles, fish of all types and sizes are found all year round even in places that are in the *hinterland* far away from any river or the sea.

The women's economic benefits (rewards) are quite limited. Because they lack the capital to embark on their businesses on a larger scale, their incomes are low. Because they spend time on household chores and other economic activities, which do not directly generate income in cash, they cannot spend more time on their businesses, hence their returns are small.

Table 6 is a summary of the monthly distribution of incomes earned by the women from each occupation, either as a primary or secondary economic activity. Table 6 shows that fish marketing attracted the highest income. Despite the hazards of fishing, trading in non-perishables commanded a higher income than fishing.

Table 7a shows that about 50 percent of the women earned incomes less than N4,500¹, while about 80 percent earned incomes under N8,500. The average income from primary and secondary occupations amongst the women is N5,157 (\$61). Income-generating activities in kind (activities whose produce end up being consumed in the home and hence go unaccounted for, e.g. backyard farming and rearing of animals) have been quantified in this study.

Table 7b shows that the average of such incomes amongst the women is N963 per month and that more than 50 percent of the women earned above this average. Finally, Table 7c further shows the conversion of hours spent on household chores into monetary value. Here, using a value of N5 per hour (\$0.06) paid to househelps on the average in the fishing communities, the hours of chores were converted to their cash equivalents. The average of such incomes was N633. Given the incomes the women earned from cash-generating activities, it is obvious that the opportunity cost of their time spent on activities in kind and in household chores is definitely higher than the incomes realized from these two activities.

Combining the incomes from all the three sources, on the average, the women made an income of N5,524 (\$65) a month. Table 8 shows that less than 50 percent of them made up to this amount- the modal income group is between N1,000 and N5,000.

Table 6: Average monthly income from each occupation [N]

Occupations	Average monthly Income as primary occupation	Average monthly Income as secondary occupation
Fish processing and Marketing	6,964	3,875
Fishing	4,500	2,070
Fanning	1,000	2,136
Trading	4,756	1,721
Government Service	1,181	-
Tailoring	4,050	-
Others	3,756	2,000

Table 7: Income sources and income per month among the respondents

(a) Cash income [N]

Income bracket	Percent
None	6
501-4,400	50
4,401-8,300	30
8,301-12,200	8
12,201-16,100	5
16,101-20,000	1
Mean = N5,166	100

(b) Income in kind [N]

Income bracket	Percent
None	16
41-1,040	64
1,041-2,040	12
2,041-3,040	4
3,041-4,040	2
4,041-5,040	2
Mean = 963	100

c) Estimated income from household chores

Hours per day	Income [N]	Percent
2-4	191-480	33
5-7	481-770	29
8-10	771-1,060	33
11-13	1,061-1,350	-
14-16	1,351-1,640	5
	Mean = N633	100

Table 8: Total actual income from cash, kind and household chores

Income per Month [N]	Frequency	Percentage
1,001-5,000	46	55
5,001- 9,000	28	33
9,001- 13,000	6	7
13,001- 17,000	3	4
17,001- 21,000	1	1
Mean = N5,524	84	100

4.2.7. Constraints to Expanded Roles for Women

Although the women take more title to the fish products than men, especially from the point of sale, yet they are hardly involved with intra-regional trade. Their involvement is usually on a small-scale basis. Each marketer handles a small quantity, which she sells at the market locations close to her abode. Other women come from other places to buy fish and sell again in still smaller quantities to either other retailing women or to the end customers. The regional trade is reserved for big time marketers who are mostly and usually men.

Women are unable to compete because of many problems which include:

- Loss of income from fish spoilage which occurs from poor handling, inadequate transportation, lack of storage facilities and poor processing technology.
- Low volume of production due to inadequate capital (poor access to credit translating into inadequate control of fishing equipment and other inputs).
- Lack of understanding of the roles, functions and advantages of cooperative society and other forms of social and economic association.
- Inadequate access to formal and informal education.
- Lack of status and recognition of their productive and reproductive roles.

5. Conclusions and recommendations

5.1 Conclusions

This study clearly demonstrated that fishing communities provide different types of employment for women- the driving force behind the economy of the communities under consideration is fishing and its related activities. Women are primarily involved in post harvest activities, but mostly at small-scale and retail levels and for domestic production and supply.

In order to ensure access to raw material for processing, women may acquire ownership or, through credit, gain control over productive assets such as boats and gear. Additionally or alternatively, they will deploy a variety of other strategies to pursue their trading and other economic activities in order to fulfill their specific productive and reproductive roles.

The lack of recognition for their multiple roles as well as a relatively low degree or social organization in search of solutions to their problems are major constraints to their social and economic advancement and creation of new opportunities.

As more men and women move into fishing and related professions for lack of alternative sources of income, the strain on resources may reach a point where any additional investment into exploitation might only accelerate resource depletion. Sustained healthy fishing making a positive contribution to the overall economy thus depends on other economic and social activities being developed. Otherwise, the communities now drawing still a respectable income from fishing may be caught in a poverty trap, as it is already the case in certain regions of Asia and elsewhere. Pauly (1990) coined the term "Malthusian over fishing" for such situations.

A downturn in the fishing industry means a downturn in the economy of the entire community. Given the prevailing economic situation in the country, the women fisherfolk are experiencing hard times. Volumes of catches are already dwindling, spoilage is increasing, while other sources of employment are fast disappearing. The actual income of an average woman in the community is low compared with the onerous task of taking care of usually large families, most especially when the husbands are not doing well in their businesses. In spite of all this, the women still have to divide their valuable time between income-generating activities and household chores that do not attract any cash benefits.

5.2 Recommendations

Given the right opportunities, incentives and facilities, women can be further integrated into any level in the regional trade, from production through processing, preservation and eventual disposal. To arrest the situations, which limit their effective participation despite their abilities and willingness, it is recommended that the following steps could be taken:

1. The provision of capital for the purchase of outboard engines through a cooperative revolving loan fund would allow the fisherfolk to cut down on the time the freshly caught fish taken to move from the fishing ground to the point of sale, thus reducing spoilage. Alternatively or in addition, the simple technology of insulated iceboxes to transport and store fish products from the fishing ground to the point of sale should be introduced to the fisherfolk. In addition, the fisherfolk, both men and women, should be taught better fish handling techniques to prevent bruising resulting in bacterial infection, hence spoilage. Improved processing technology, which would ensure increased quality and quantity of the finished products, should be particularly introduced to women.

2. Most of the fisherfolk are eager to increase their low production and marketing volumes, especially during the high seasons. Unfortunately, they lack the required capital.

Consequently, capital should be made available through a revolving loan scheme to enable them to purchase fishing equipment such as fishing nets, outboard engines, traps etc., commensurate with resource availability and market demand and enhance processing equipment.

3 Only about 30 percent of the fisherfolk belong to cooperative societies. Many claim not to be aware of their existence, yet others ignore their roles and shy away from becoming members. Since one of the surest avenues of receiving help (financial and technical) are the cooperative organizations, information on the benefits of membership and possibly other forms of organization might help fishing communities to become more articulate and effective in pursuing remedies to their problems.

4. Greater access to formal and informal education and training, particularly for the women, is recommended as an important way towards opening new opportunities for them, both socially and economically. With such new opportunities and the recognition that goes with it, these women will be able, in time, to make choices that are not currently opened to them, e.g. in terms of use of their time, number of children, choice of economic activities.

5. Most fishing communities depend at the moment solely on economic activities revolving around fishing. The remaining income-generating activities depend mostly on what the stakes are at the fishing grounds. If the above recommendations are effected, resource base permitting, there would be increased "fishing income". Increased "fishing income" would result in increased activity for transporters, petty-traders, hairdressers, and many others, thus farther enhancing the performance of these roles which are at present the exclusive preserves for women.

5. References

Acheampong, A.K., 1996. Artisanal Fisheries and Food Security in West Africa-European Commission, Stage Report, Oct. 1995-Feb. 1996. VIII/G/3/D(96j), Brussels.

Adekanye, T.O., 1983. Rural Fish Marketing in Africa: Some empirical considerations from Nigeria. *J.Rvr.Dev.* (Korea), 6(6): 77-85.

Alamu, S.O., 1989, Assessment of women contribution to fish handling, processing and marketing in Jebba Lake Basin, *Ann.Rep.Natl.Inst. Freshwater Fish.Res. Nigeria*, 164:170p.

Alamu, S-O., 1990. Assessment of women contribution to fishing industry and fish marketing in Kainji Lake Basin. *Ann.Rep.Natl.Inst. Freshwater Fish.Res. Nigeria*, 184:190p.

Ayanda, J.O, 1991. Economics of fishing and fish marketing in Kainji Lake Basin, *Ann.Rep.Natl.Inst. Freshwater Fish.Res. Nigeria*, 165:172p.

- Bolaji, J., U. Heinbuch and K. Demuyndck, 1994. Interrelationships between Population Growth and Development in two fishing communities in Delta State, Nigeria, DANIDA/IDAF, Cotonou
- Chaboud, C., 1983. Le mareyage au Sénégal. *Doc.Sci.Cent.Rech.Oceanogr.*, Dakar - Tiaroye (87):112p.
- Chaboud, C. and M. Kébé, 1989. La distribution en frais du poisson de mer au Sénégal : Commerce traditionnel et interventions publiques. *Cah.Scie.Humaines*, 25(1/2): 125-143 Chauveau, J.P. and A. Samba, 1989, Market development, government interventions and the dynamics of small-scale fishing sector: a historical perspective of the Senegalese case. *Development and Change*, 20(4): 599-620
- Chimbuya, S., S.E. Mutsekwa and J.E. Reynolds, 1983. Fish marketing and consumption in Zimbabwe. In J.E. Reynolds (ed.). Marketing and consumption of fish in Eastern and Southern Africa: Selected Country Studies. *FAO Fish.Tech.Pap.*, (332):171-186
- COFI, 1983. 15th Session of the Committee of Fisheries, FAO, Rome, 10-19 October. International trade in fish and fishery products. Rome, FAO, COFI/83/9:9 p.
- COFL, 1985. 16th Session of the Committee of Fisheries, FAO, Rome, 22-26 April 1985, Multilateral framework for consultation of international trade in fishery. Rome, FAO, COFV85
- Evans, A., 1992, Statistics- In: L. Oestergaard (ed.). Gender and development: a practical guide. London, Routledge, pp. 11-40
- FAO, 1990. FAO 1988 Yearbook of fishery statistics. Catches and landings. Vol. 66. Rome, *FAO Fish.Ser.*, No. 34, *FAO StaS.Ser.*, N°. 92:503 p.
- FAO, 1996. FAO 1994 Yearbook of fishery statistics. Catches and landings. Vol. 82- Rome. *FAO Fish.Ser.*, No. 46, *FAO Stat.Ser.*, No. 128:680 p.
- Depauw, L., 1982. Seafaring Women, Boston, Houghton Mifflin.
- Haakonsen, J.M.(ed-), 1988. Recent developments in the artisanal fisheries in Ghana- Cotonou, Programmer for Integrated Development of Artisanal Fisheries in West Africa (IDAF), IDAF/WP/21:69p
- Heinbusch, U., 1994. Animal protein sources for rural and urban populations in Ghana. Cotonou. Programmer for Integrated Development of Artisanal Fisheries in West Africa (IDAF), *IDAF Tech.Rep.*, 58:25 p. + annex
- Hochet, A.-M., M. Oualbadet et L. Dara, (en prep.). La peche au Tchad et les "gens du poisson". Aperçu de la pêche au Tchad - fevrier 1996.
- Horemans, B., 1994, La situation de la peche artisanale en Afrique de l'Ouest en 1993. Cotonou, Programme de Développement Intégré des Pêches artisanales en Afrique de l'Ouest (DIPA). *IDAF Tech.Rep.*, 54:40 p.
- Houndekon, B.R., D.E. Tempe man and AM. Ijff, 1990. Round Table meeting on women's activities and community development in artisanal fisheries (projects) in

West Africa, Cotonou, Programme for Integrated Development of Artisanal Fisheries in West Africa (IDAF), IDAF/WP/30:12 p. + annexes

Ijff, A.M., 1990. Socio-economic conditions in Nigerian fishing communities- Based on studies along the Benin and Imo river estuaries. Cotonou, Programme for Integrated Development of Artisanal Fisheries in West Africa (IDAF), IDAF/WP/31:113 p.

Lemercier, P. et A. Bonzon, 1995. Impacts de l'acte final de l'Uruguay Round sur les pêches de l'Afrique subsaharienne. *FAO Circ.Pêches*, 897:69 p.

Nauen, C.E., 1989. Women in West African fisheries. When will they receive the attention they deserve? Manila, *NAGA - The ICLABM Quarterly*, Vol.13(I) April 1989:14-15

Oestergaard, L. (ed.), 1992, Gender and development: a practical guide, London, Routledge, 220 p.

Okpanefe, M.O., A, Abiodun and J.M, Haakonsen, 1991, The fishing communities of the Benin River estuary area: Results from a village survey in Bendel State, Nigeria. Cotonou, Programme for Integrated Development of Artisanal Fisheries in West Africa (IDAF), IDAF/WP/32:74p

Pauly, D, 1990. On Malthusian over fishing. *NAGA ~ The ICLARM Quarterly*, 13(1):3-4

Seld, E. and A. Bonzon, 1993, Selected Aspects of African Fisheries; A continental Overview. Rome, .FAO Fish.Circ., 810(Rev. I): 158p.

Williams, S., 1994a, The Economic Activities of Women in Fishing Communities of Kogi and Kwara States Nigeria, Unpublished Mimeo.

Williams, S., 1994b. The Economic Activities of Women in Fishing Communities of Lagos State, Nigeria. Unpublished Mimeo.

Williams, S., 1996. The Economic Role of Women in Fishing Communities: A Case Study of Koko. IDAF, Cotonou.

Zannou, L.H-, 1993. Women help households by marketing fishery products. Cotonou. *IDAF Newsieuer/LaLetireduDIPA*, March/Mars 1993. 17:22-27.

1[1] At an exchange rate of SI = N85, this is about \$52