

Full Length Research Paper

Women involvement in the fishery activities of two coastal communities in Sierra Leone

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Women make up an important part of the fishing sector and play critical roles, particularly, in small-scale fisheries and increasingly in capture fishing and other activities. However, the roles of women are often undervalued due to the lack of attention to gender roles in fisheries, especially in Africa. This research was therefore motivated to investigate the roles of women in two coastal communities of Sierra Leone. Structured questionnaires were administered to 200 randomly selected women involved in fisheries activities in Goderich and Tombo (the two largest fish landing communities in Sierra Leone). Results obtained showed that married women between ages between 20 – 50 years were more actively involved in fisheries activities in Goderich and Tombo. Findings of the study showed that 100% of the women were involved in the processing and marketing of fish and fish related products. Most of the respondents affirmed that the fisheries have increased their income, while others said that it reduced their expenditure on food supply and other household needs. Profits made according to 60% of the respondents ranged from Le 400,000 to Le 500,000 (\$52.3 – \$65.4), while 40% make close to Le 600,000 (\$78.4) on monthly basis. Woods for fish smoking in Goderich and Tombo were mangrove (93.6%) and forest woods (6.40%). Constraints identified by the respondents in the two communities were poor state of the landing sites and poor fish handling, inadequate cold room and smoking kilns, poor access to credit, high labour and processing inputs cost, high illiteracy and poor toilet facilities. The low level of respondents' education prevents women from taking part in decision-making that affects their livelihood in the communities.

Key words: Coastal communities, Goderich, Tombo, women, fishery activities, livelihood, constraints and Sierra Leone.

INTRODUCTION

Agriculture, which embraces quantum of practices that provides livelihood and sustenance to many globally, has been recognized as engine of growth and poverty reduction in countries where it is the main occupation of the poor (World Bank, 2008). African women according to

Odili et al. (2012) have the highest female participation rate in agriculture of all regions in the world. It is also important to note according to FAO (2011) that women comprise about 43% of the global agricultural labor force, especially in developing countries. Their contribution to

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agricultural output is undoubtedly extremely significant, as women produce 60- 80% of food in agriculture. This important role however is difficult to quantify with some level of accuracy (FAO, 2011). According to Ekong (2003), women play a pivotal role in the food security because of their strategic position in the household and productive work they do outside the home. Alamu and Mdahili (1994), Alamu (1992) and Ijiff (1990) reported that these dynamic women work long hours daily in household chores, fishing, fish processing, packaging, preservation, storage, marketing of fish and other income generating non-fisheries activities. Odili et al. (2012) reported that women are more commonly occupied in subsistence and commercial fishing from small boats and canoes in coastal or inland waters; but are rarely involved in commercial offshore and long distance fisheries. Although their contributions remain largely invisible and undocumented, they are important workforce in the fishery sectors globally.

The fisheries sector is a source of fish food and livelihood for significant proportion of people living in the coastal communities (Akinrotimi et al., 2007). Fish is the cheapest form of animal protein in the diet of the majority of coastal dwellers in Sierra Leone. Thus, the sector provides the nutritional needs as well as employment opportunities of the people because an entire family unit comprising men, women and children find employment in the sector. According to Akinrotimi et al. (2007), the sector supplies animal protein necessary for growth and income for many households in these rural communities. The roles of women in the sector are diverse; and according to Olufayo (2012), they take part specifically in fishing, processing and marketing. Women are integral part of fishing business all over the world and by tradition the managers of small-scale farms including fishponds and are responsible primarily for the post-harvest activities like processing and marketing of fish (FAO, 1996). Besides the role of being homemakers, women are becoming more involved in diverse fishing activities ranging from processor/trader to boat owner. Traditionally, the physical harvest of fish is a man's job but as women are now getting more involved, some women occasionally resort to pre-harvest activities of net mending and repairs. In the post-harvest sector, their predominant role is in purchasing, processing and marketing. Women according to Odili et al. (2012) spend prolong hours daily in fishing related activities for which they receive very little or no assistance from NGOs or other organizations. They are directly and vigorously involved with their capital in the coordination of the fisheries chain, from production to sale of fish. Their role is however not limited to fish processing and marketing but include participation in actual production in most types of aquaculture brackish-water or freshwater fishpond. They participate in various stages of fish farm development (planning, construction and actual operation) and in fish feed formulation.

In Sierra Leone, economic activities undertaken by women contribute immensely to the upkeep of many families and households. This contribution becomes more important considering the low level of salaries of many people in the country. According to the frame survey of the artisanal fisheries of Sierra Leone (IMBO/MFMR, 2003), about 85% of fish processors and traders are women with influence extending beyond the traditional spaces of food processing and marketing. Christensen (1997) reported that fish traders assist fishers with loans to buy canoes and other equipment. Notwithstanding the role and huge contributions of women, they have continued to be marginalized all over the world, more importantly in development issues (Chando, 2002), a situation that has led to underperformance of the agricultural sector in many developing countries. This study therefore was carried out assess and document information on the diverse roles and activities women in the artisanal fishing sectors of Sierra Leone and to identify the constraints faced by them in the fish supply chains of the two coastal communities of Tombo and Goderich.

METHODOLOGY

Study area

The study was carried out in Tombo and Goderich, two artisanal fishing communities in the Western district of Sierra Leone. The climate of Tombo and Goderich are mainly tropical and has distinct dry and wet season. The temperate of the area range between 21 to 23°C for the greater part of the dry season (Gwenne-Jones et al., 1978). A combination of field survey using two hundred structured questionnaires following the method described by FAO (1999), oral interview, personal observation and photographs were used to source for information on fish related activities at the study locations and women were the target groups. The questionnaires were administered to retrieve demographic, socio-economic information and information relating to constraints encountered by women. The medium of communication was *Krio* (adapted pidgin English) interpreted to English by the researchers. Data obtained from completed questionnaires were collated and analysed using Microsoft Excel programs to obtain frequency and percentages. Charts and tables were developed and used to explain the various variables of interest.

RESULTS AND DISCUSSION

Demographic information of respondents

The socio-economic characteristics of the respondents at the two landing sites are shown in Table 1. The age of the women who were actively involved in fisheries activities in Goderich and Tombo fell within the age bracket of 20 to 40 years (64%). This age group agreed with what was reported by Obande et al. (2004) on the role of women in artisanal fisheries along the lower Benue River. The result of this study is also in agreement with the work of Olowosegun et al. (2004) who explained

Table 1. Socio-economic characteristics of respondents.

Variable	Goderich (%)	Tombo (%)
Age		
20-30	31	25
31-40	37	39
41-50	20	15
50 and above	12	21
Marital Status of Respondent		
Single	24	12
Married	46	82
Divorced	17	3
Separated	3	2
Widowed	10	1
Number of children		
1	10	28
2-5	59	61
Above 5	26	4
None	5	7
Highest educational qualification		
No Education	36	48
Primary	58	35
Secondary	5	17
Vocational	0	0
Islamic	1	0
Tertiary	0	0
Experience (Years Spent Selling Fish)		
Less than 1 year	3	2
1-3 years	35	13
3-5 years	20	10
5 and above	42	75

that women in this age bracket are active, agile and full of vigour. FAO (2016) reported age range of 16 to over 50 years for women smoking fish. The age gap of the two communities is an indication that a high proportion of the age group fell within the working class of able-bodied women, who are married, a fact that supports the notion that women have to work hard to support their husbands and or totally cater to the welfare of their families. We observed that involvement of women in fisheries activities at the two study locations waned as they advanced in age. Women with age above 50 years were not actively involved in fisheries activities at the two locations and this accounted for 21% of the sampled population (Table 1). Akinrotimi et al. (2011a) observed the same trend among women in some fishing communities in Niger Delta, Nigeria. Fisheries activities is certainly not for older folks due mainly to the fact that it is energy sapping. Older folks had the responsibility of helping the younger women

with domestic chores such as taking care of children. There were many married women than singles, divorced, widowed and separated respectively in the study areas. This situation probably accounted for the age group who were involved in fisheries activities. In terms of the literacy level in the two communities, the study results showed that 63% and 52% of the respondents in Goderich and Tombo respectively had some form of formal education (primary and secondary education). Ability of rural and coastal women to manage their business and home effectively has been premised on the attainment of certain level of education. The number of women with education in Goderich and Tombo were more than what Olowosegun et al. (2004) reported for women in Kainji lake basin, Nigeria. The results of this study is however at variance with Williams (2006) who affirmed that women in fishing communities are usually not well read.

Table 2. How use fishers' income they earned.

Variable	Goderich (%)	Tombo (%)
Bread winner of family		
Yes	69	76
No	31	24
Number of children sponsored in school		
1-5	61	78
6-10	6	6
11-15	2	2
None	31	14
Monthly Expenditure – Family spending		
Le 100-200,000	31	65
Le 300-400,000	42	27
Le 500 and above	27	8
If respondents live in rented apartment (Rented Apartment)		
Yes	68	73
No	32	27
How much the Respondent pay for rented monthly(Money pay on rented apartment)		
Le 10-20,000	73.52	82.19
Le 21-30,000	14.71	12.33
Le31-40,000	11.76	5.48

Respondents use of income earned

The various uses of income generated by respondents from their fisheries business is presented in Table 2. Result obtained from the study indicated that 69% of the respondents at Goderich were breadwinners of the family while at Tombo it was 76%. Respondents also affirmed to use part of the money they earn for education of their children. This study discovered that money spent on family monthly amounted to between Le 100,000 - 200,000 (Le 7,650 equal \$1.00) that is 31 and 65% for Goderich and Tombo, respectively. At Goderich 27% of the respondents spent above Le 500,000 while the rate was 8% for Tombo. Younger women were observed to be more involved in the business of processing and marketing than older women and this is in agreement with the work of Wokoma (1991), Shalesha and Stanley (2000), Ekundayo and Kolo (2011) and Ajayi et al. (1989). Further, this result is also in agreement with that of Odulate et al. (2011) who reported that women in the coastal wetland areas of Ogun state Nigeria participate more in fish marketing than other fishery activities. According to FAO (2016), women are believed to be mostly responsible for skilled and time-consuming onshore tasks, such as making and mending nets, processing and marketing catches, and providing services to the boats. This is however not the case in

Sierra Leone where women are rarely found in net making and mending – these are purely male dominated engagement (Figure 1).

It is obvious that women need daily income to take care of their family in Sierra Leone, for instance where most women are head of the family, daily income is the option. Cliffe and Akinrotimi (2015) in their study noted that fisher women engage in coastal fisheries activities to meet their daily need which includes feeding, taking care of their children and lending a helping hand to support their husbands. Cliffe et al. (2011) based on their work in some rural communities of Niger Delta in Nigeria pointed out that women longing to meet daily needs were responsible for their involvement in fisheries.

Sources of respondents business capital

Funding is crucial in any fishery activity; information on sources of finance for respondents' fishery activities is presented in Table 3. As shown in the table, fish mummies and mongers have various sources of funding which include loans from cooperative society, personal savings and borrowed money from moneylenders. At Tombo, the co-operative society often help their members to purchase fish on condition that they will sell and refund the money with small interest. However, as can be seen

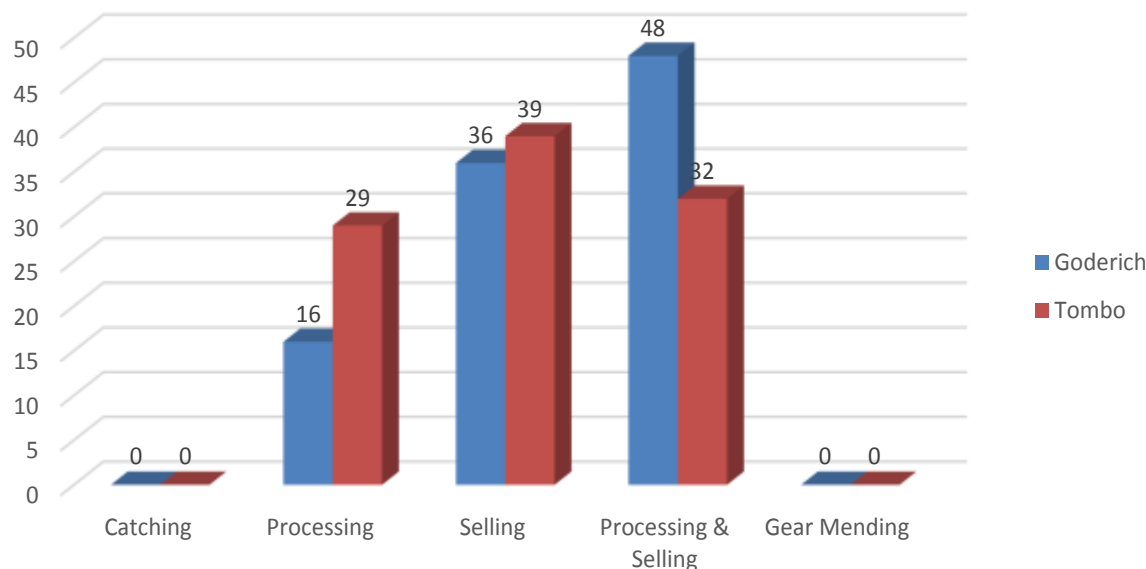


Figure 1. Fisheries activities of respondents.

Table 3. Sources of respondents finance.

Variable	Goderich (%)	Tombo (%)
The initial capital involved in fisheries activity (Sources of capital)		
Own funds	65	64
Borrowed	35	36
Others	0	0
Borrow Money from customers		
Yes	9	18
No	91	82
If respondents offer money in advance for fish?		
Yes	14	17
No	86	83
If respondents lend money to Boat owners		
Yes	0	0
No	100	100

in Table 3, most of the respondents at the two communities said that they raised the initial capital for their business (65% at Goderich and 64% at Tombo). Some of the respondents however said they obtain loan from moneylenders (35% at Tombo and 36% at Goderich). While others agreed to down payment option by their customers, this according to them freed them from the embarrassment of not meeting deadlines and the inordinate demand of randy male fishers. Initial capital outlay, poor technology and labour intensiveness according to FAO (1988) are some of the constraints

affecting women fishers. Women in the coastal communities of Goderich and Tombo muted that finance, inadequacy of processing facilities and poor condition of the landing sites are major constrains they face in the business. Cliffe and Akinrotimi (2015) who mentioned lack of finance, poor transportation network, criminal activities, lack of fishing gears and lack of cooperative society as some of the problems faced by artisanal fisher women corroborated the findings of this study. Ben-Yami (2001) agreed that access to credit and insurance is very important for small-scale fisheries development.

Table 4. Respondents assets base.

Variable	Goderich (%)	Tombo (%)
Ownership of fishing gear		
Yes	0	0
No	100	100
If respondents partner have fishing gear		
Yes	0	0
No	100	100
If respondents have any household assets		
No asset	61	82
Asset(House, Lands etc)	39	18
Names of Asset		
Cars	0	0
Houses	34	32
Bicycles	0	0
None	66	68

According to Ben-Yami (2001), lack of access may constrain fishing efforts and production of small-scale fishing communities thus hindering them from increasing their production and from reaching a higher social status. The use of poor smoking facilities and techniques, which have often led to high density of smoke emission, poses great health risk (FAO, 2016).

Respondents' assets base and involvement in cooperative society

According to the respondents, the fishing business, notwithstanding some of its setbacks is highly lucrative. Some of them affirmed that besides helping to support with the care of the home and payment of children school fees, they have been able to acquire lands and build houses from their business (Table 4).

The place of co-operative society in the development of fishery trade has received considerable attention in recent years. Co-operative society aims to save the interest of small entrepreneurs in the trade from clutches of intermediaries' exploitations and promote the trade. Ostrom (1990) noted that Cooperatives in the small-scale fisheries sector helps in maximizing long-term community benefits to deal with the threats of fisheries mismanagement, livelihood insecurity and poverty – harsh realities for many of the world's small-scale fishers. In this study, none of the respondents interviewed at Goderich were involved in co-operative society but at Tombo 37% of the respondents agreed to be actively involved in co-operative society (Figure 2). Those who were involved adduced reasons for their joining the cooperative

societies which include but not limited to child education, marriage, naming ceremony, business and other reasons.

More than 60% of the respondents earn profit from daily sales of fish. Normally, women that sell fresh fish do not buy in large quantities because of gross lack of means of preservation and electricity to power the few available freezers at the landing sites. Co-operative societies are expected to overcome some of these shortcomings by empowering fisherwomen and promote responsible fisheries by facilitating microfinance and access to appropriate equipment and technologies (FAO, 2012). There are documented roles of women involvement in co-operative societies and specific examples are the TRY Oyster Women's Association operating in the Greater Banjul areas of the Gambia, and the Isabela Women's Association Blue Fish in Ecuador (FAO, 2012). These societies ensure that the interests of their members, viz-a-viz access to credit and equipment are taken into account, especially by encouraging decentralized resource management (FAO, 2005).

Conclusion

The findings of this study as in other studies showed that women play highly significant role in fisheries activities and coastal household economies. It was also evident that women fisher folks in Sierra Leone who endure most of household care challenges are poor and needed a boost to perform their domestic obligations. The poverty of women fisher folks in the country is all encompassing, ranging from poor access to health, education, and

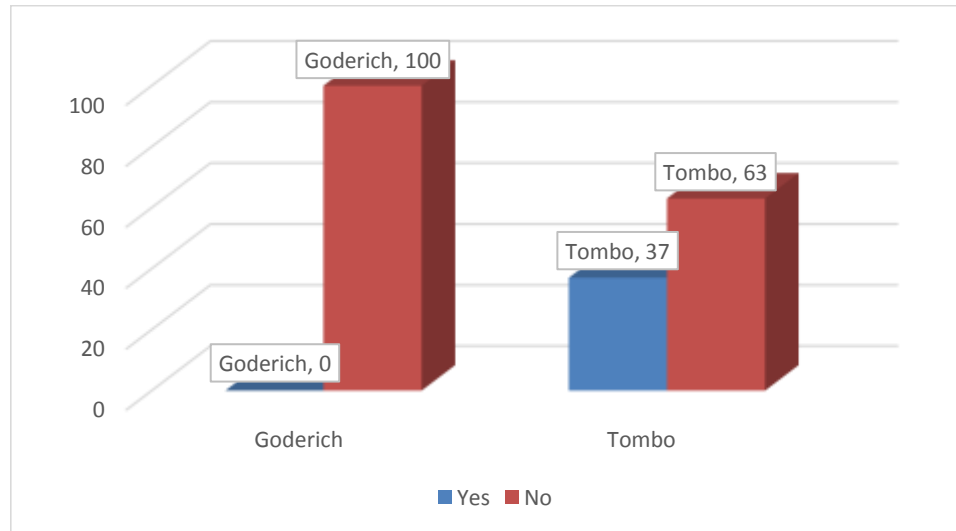


Figure 2. Respondents involvement in co-operative society.

financial capital to political marginalization. In view of the important role of these women in not only post-harvest subsector but also household nutrition and living standards, it is important to provide them with access to physical and capital resources for developing their industry and meeting their needs and aspirations. Appropriate training and semi - formal education will also help to improve the efficiency, profitability and sustainability of their activities. Skills development in value added processing techniques, establishment of cooperative society, marketing and fund raising is very important as it would help women to improve their productivity and the quality of their products. Finally, it is important to create awareness on gender issues, such that the policies and programs of government and other development agencies improve the quality of life for women in fisheries.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

- Ajayi TO, Ajinla AO, Udolisa REK, Bolade EO, Omotoyo NO (1989). Diagnostic Survey of small-scale capture and culture Fisheries in Lagos State, Nigeria NIOMR. Tech. Pap No 56, 158 p.
- Akinrotimi OA, Edun OM (2011a). Consumer disposition towards oyster consumption in selected fishing communities of River State, Nigeria. *Continental Journal of Agricultural Economics* 5:41-46.
- Akinrotimi OA, Onunkwo DN, Cliffe PT, Anyanwu PE, Orokotan OO (2007). The role of fish in the nutrition and livelihoods of families in Niger Delta, Nigeria. *International Journal of Tropical Agriculture and Food Systems* 1:344-351.
- Alamu SO (1992). The role of women fishmongers on commercial fish handling and marketing in Jebba Lake Basin, 1992 Annual Report. NIFFR, New Bussa pp. 152-162.
- Alamu SO, Mdahili M (1994). Socio-economic survey of women in artisanal fisheries in Kainji Lake Area: A case study of Wawu. NIFFR, 1994 Annual report. NIFFR, New Bussa pp. 195-203.
- Ben-Yami M (2001). Integration of traditional institutions and people's participation in an artisanal fisheries development project in southeastern Nigeria In: *Understanding the cultures of fishing communities: a key to fisheries management and food security*. FAO Fisheries Technical Paper/ No. 401, Rome, FAO 2001.
- Chando CM (2002). Gender roles in fishery planning and projects: The case study of coast region in Tanzania. M.Sc. Thesis, University of Tromsø Norway. Downloaded August 26, 2018 from citeseerx.ist.psu.edu/viewdoc/download.
- Christensen CM (1997). Involvements of rural women in agriculture. An innovation approach. *The ICLRM Quarterly* P 23.
- Cliffe PT, Akinrotimi OA (2015). Role of Women in Fishery Activities in Some Coastal Communities of Rivers State, Nigeria. *International Journal of Agricultural Research* 10:24-32.
- Cliffe PT, Akinrotimi OA, Ibemere IF (2011). Promoting women participation in aquaculture as a viable tool for poverty alleviation in the rural areas of Nigeria. *Global Approaches Extension Practise* 7:98-108.
- Ekong EE (2003). *Introduction to Rural Sociology*. Uyo Dove Education Publisher Nigeria pp. 203-205.
- Ekundayo T, Kolo RJ (2011). The Role of women in Fisheries Activities in some Selected Fishing Villages in the Southern Zone of Kainji Lake Basin, Nigeria. National Institute for Freshwater Fisheries Research, New Bussa. Department of Fisheries Technology Federal University of Technology, Minna.
- Food and Agriculture Organization (FAO) (1988). *Women in Fishing Communities. Guidelines. A special target group of development projects*, Rome, FAO, 63p En, sp.
- Food and Agriculture Organization (FAO) (1996). *The state of world fisheries and aquaculture*. Rome Italy. In: S. B. William (2002). *Making each and every African fisher count: Women do fish*. Retrieved from <http://hdl.handle.net/20.500.12348/2237>
- Food and Agriculture Organization (FAO) (1999). *Guidelines for the routine collection of capture fishery data: Prepared at the FAO/DANIDA expert consultation, Bangkok, Thailand, 18-30 May 1998*. FAO Fisheries Technical Paper No. 382, FAO, Rome, Italy pp. 1-113.
- Food and Agriculture Organization (FAO) (2005). *Increasing the contribution of small-scale fisheries to poverty alleviation and food security*. FAO Technical Guidelines for Responsible Fisheries No. 10. Rome. 79 p. www.fao.org/docrep/009/a0237e/a0237e00.htm.

- Accessed September 25, 2018.
- Food and Agriculture Organization (FAO) (2011). The role of women in agriculture. ESA Working Paper No. 11-02 March 2011 Agricultural Development Economics Division. Prepared by SOFA Team and Cheryl Doss www.fao.org/economic/esa
- Food and Agriculture Organization (FAO) (2012). Cooperatives in small-scale fisheries: enabling successes through community empowerment In: International Year of Cooperatives website <http://www.fao.org/3/ap408e.pdf>
- Food and Agriculture Organization (FAO) (2016). Promoting gender equality and women's empowerment in fisheries and aquaculture. Retrieved from www.fao.org/3/a-i6623e.pdf.
- Gwenne-Jones DRG, Mitchell PK, Harvey ME, Swindell K (1978). A new Geography of Sierra Leone. Longman Group Ltd, London P 45.
- Ijiff AM (1990). Socio-economic conditions in Nigeria fishing communities. Programme for Integrated Development of Artisanal Fisheries in West Africa, Cotonou, IDAF poisson. FAO LIBRARY AN: 306187. www.fao.org/docrep/015/an070e/an070e.pdf
- IMBO/MFMR (2003). Frame Survey of the Artisanal Fisheries of Sierra Leone. Statistics Unit, Ministry of Fisheries and Marine Resources (MFMR), Jomo Kenyatta Road, Freetown. Unpublished.
- Obande RA, Tihamiyu LO, Itodo SO (2004). The Role of women in Artisanal Fisheries along the lower Benue River. Proc. FISON, 29th November – 3rd December 2004. pp. 123-126.
- Odili OE, Nwabeze GO, Tafida AA, Chilaka M (2012). Contribution of women to fisheries development in Nigeria: A review. In: Proceedings of the 27th Annual Conference and Biennial General Meeting of the Fisheries Society of Nigeria. Held in Bayelsa, 25 – 30 November 2012. pp 435-438.
- Odulate DO, George FAO, Idowu AA (2011). Role of women in fisheries in coastal wet land areas of Ogun State Southwest Nigeria. Proceedings of the Environmental Management Conference, September 12-15, 2011, Federal University of Agriculture, Abeokuta Ogun State, Nigeria.
- Olowosegun T, Sanni AO, Sule AM, Bwala RL (2004). Contribution of women to fisheries development in Kainji lake basin. Proc. FISON, 29th November – 3rd December 2004. pp. 91-97.
- Olufayo MO (2012). The gender roles of women in aquaculture and food security in Nigeria. In Proceedings of the 16th International Institute of Fisheries Economics and Trade Conference Jul 16.
- Ostrom E (1990). Governing the commons: The evolution of institutions for collective action. New York, Cambridge University Press.
- Shalesha A, Stanley VA (2000). Involvement of rural women in Agriculture. An innovation approach Naga. The ICARM Quarterly 23(3):13-17.
- Williams SB (2006). The socio-economic potentials of women in riverine small-scale fisheries in Nigeria. Department of Agricultural Economics, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria.
- Wokoma K (1991). Role of Fish Mammies in fishing communities. Proceeding of fisheries Development Extensions Training Course 11th Nov- 6th Dec. 1991 Uyo, Akwa Ibom State, Nigeria pp. 218-221.
- World Bank (2008). World Development Report 2008: Agriculture for Development. Washington, D.C.: World Bank Publications. In. The Role of Women in Agriculture. ESA Working Paper No. 11-02, 48p. Retrieved from "<http://www.fao.org/economic/esa>"