

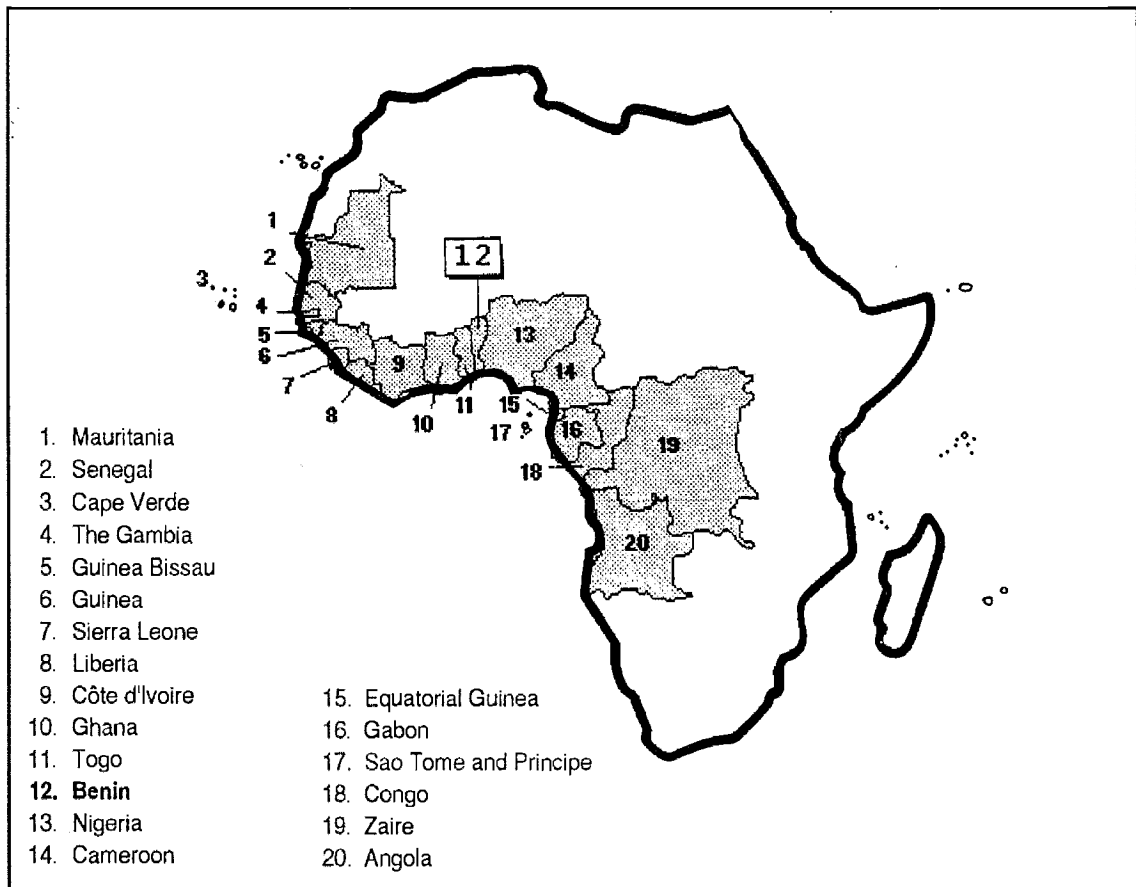
PROGRAMME FOR INTEGRATED DEVELOPMENT OF
ARTISANAL FISHERIES IN WEST AFRICA

IDAF PROGRAMME

Technical Report N°94

November 1996

**Economic Role of Women in Fishing Communities:
a Case Study of Koko, Nigeria**



DANIDA

DEPARTMENT OF INTERNATIONAL DEVELOPMENT COOPERATION OF DENMARK



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Technical Report N°94

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**Economic Role of Women in Fishing Communities:
a Case Study of Koko, Nigeria**

by

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THE VISION FOR IDAF PHASE III

INTRODUCTION

Development strategy during the 1960 and 1970s was based on the philosophy that developing countries lacked improved technology and capital for speeding up their development. Industrialization was promoted in order to capitalize on the abundant fish resources. However, the anticipated expansion of the economy did not happen and the development approach shifted towards an integrated rural strategy where emphasis is put on the community as a whole to upgrade incomes and the quality of life through technical assistance and the active participation of fisherfolk and the community.

In this context, emphasis was initially placed on the Community Fishery Centre (CFC) concept as a means of promoting artisanal fishery development. But it became apparent that the presence of a complex of facilities and services tailored to meet local needs was no guarantee that the structures/facilities would be used or that development would occur. The active participation of fisherfolk and the mobilisation of local and community resources was imperative in order to assure sustainability of initiatives undertaken by development projects and/or the community.

So far and in general terms, the IDAF Programme has worked under the context of abundant or seemingly adequate fishery resources with moderate population pressure. The scenario is however changing (and very fast for that matter) and we would soon face the triple constraints of reduced or depleting fish stocks, degrading environment and increasing population pressure. Like in other sectors, it must be anticipated that just to survive, parts of the population surplus in the fishing communities will enter the artisanal fisheries, which will increase the competition for the resources among the small scale fisherfolk in addition to the prevailing competition between the artisanal and industrial fisheries, with their attendant effect on the environment.

This scenario calls for a continuation of the integrated participatory strategy which remains relevant to the development of artisanal fisheries in West Africa. However, the emphasis needs to be placed on the elements and mechanisms that favour the sustainability of initiatives: responsible fishing, the empowerment processes that ensure the devolution of major resource management and development decisions to the local community, the strengthening of national human and institutional capacities at all levels for a sustainable and equitable fisheries resources management and development, as well as in the follow-up and consolidation of past achievements.

DEVELOPMENT OBJECTIVE

Thus the development objective of the Programme in the present phase III which started on 1 July 1994 is to ensure twenty coastal West African countries a sustainable development and management of their artisanal fisheries for maximum social and economic benefit of their fishing communities in terms of employment, proteins and earnings. This will be done through an integrated and participatory approach in which emphasis will be laid on equity, gender issues, the transfer of technology for development, environment protection, as well as the strengthening of human and institutional capacities.

The immediate objectives are:

1. To identify, assess and disseminate strategies and mechanisms for sustainable management and development of the artisanal fisheries in fishing communities;
2. To improve the competence of national Fisheries Departments staff in development and management planning of artisanal fisheries;
3. To enhance regional technical competence in the fisheries disciplines, particularly in fishing and fish technology;
4. To improve information and experience exchange related to artisanal fisheries within the region;
5. To promote regional and sub-regional collaboration for the development and management of artisanal fisheries

In this context, IDAF will among other things tackle the following major aspects in its work :

- assisting in the elaboration and implementation of a clear and coherent national development policy for the artisanal fishery sector;
- providing advice on management and allocation of resources between artisanal and industrial fishing fleets, both national and foreign;
- involving users in the design and management of on shore infrastructures;
- monitoring the sector's evolution by the setting up of an economic indicator system for the sector adapted to the financial and human availabilities;
- improving fishing technologies in accordance with the available resources;
- increasing the final product's value by improvement in processing and marketing;
- promoting community development in accordance with the lessons learned from Phase I and II and oriented towards the sustainability of actions undertaken;
- reinforce the Programme's information/communication system.

It is anticipated that by the end of the third phase of the Project, the region will have a nucleus of field oriented experts capable to respond to the challenges of the artisanal fisheries sector and to spur development in their individual countries in keeping with the aspirations and needs of fisherfolk.

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LIST OF ABBREVIATIONS

AAWORD:	Association of African Women for Research on Development
CIRDAP:	Center on Integrated Rural Development for Asia and Pacific
CARDER-OUEME:	Le Centre d'Action Régional Pour le Développement de l'Ouémé
DANIDA:	Danish International Development Agency
FAO:	Food and Agriculture Organisation
FSP:	Family Support Programme
ICLARM:	International Centre for Living Aquatic Resources Management
IDAF:	Integrated Development of Artisanal Fisheries in West Africa
ILO:	International Labour Organisation
LGA:	Local Government Area
SIDA:	Swedish International Development Agency
UNDP:	United Nations Development Programme
WHO:	World Health Organisation

PREFACE

The mission on economic role of women in fishing communities in West Africa was proposed by the Integrated Development of Artisanal Fisheries (IDAF) in West Africa in the framework of FAO. The Programme commissioned Dr. Stella Williams of Nigeria to collect field information on the economic role of women in fishing communities of Koko, Nigeria. The purpose of the mission and this report is to:

- describe all the sources of employment for the women in the communities;
- investigate how the women spend their time in the household and in their place of work;
- describe how labour is distributed among the women during the day;
- evaluate the daily activities of the women in cash and in kind;
- determine the daily real income of the women and the various sources of such incomes;
- make recommendation on areas (technical, economic, and institutional) of assistance for the improvement of the socio-economic position of the women.

The study was initiated by Dr. B.P. Satia, IDAF Programme Coordinator. He (was facilitated instrumental) in the creation of a working group of ten professional women who met for the first time in Cotonou in August 1995. The field study was conducted in Nigeria during a period of tense economic and political transition (01 - 29 March 1996). The collection of field data became more and more difficult as the study progressed, due to an increasing scarcity of petrol and kerosene as well as the communities' anxiety over the zero party local government area, council and chairmanship elections (16 to 26 March). The economic environment in the fishing communities was so depressed that members were more interested in the survival of their families and business ventures. In spite of all the constraints, the field study was carried out from 01 - 29 March 1996. Data interim, report writing and documentation was done from 30 March to 14 April 1996. Report submission was on 15 April 1996.

ACKNOWLEDGEMENT

I wish to express my deep appreciation to Dr. B.P. Satia, IDAF Programme Coordinator, who initiated the mission and Mr. A.L. Cruz, FAO Representative ad interim and Staff of the FAO Office in Lagos.

The hospitality extended to the group by Chief Kofi Katey, Chairman, Warri North Local Government (LGA), resident in Koko, his dedication and commitment to the welfare of the fishing communities are very commendable. Thanks are extended to officials of the Warri North Local Government, especially the Deputy Chairman and Principal Officers, for their immense contribution to the success of the study. Special appreciation is also extended to Mrs. A.N. Egere, Community Development Officer based in Koko who devoted so much of her precious time and efforts assisting in the scheduling of interview and the interpretation of the questions to the respondents. Her exemplary dedication to duty contributed greatly to the cooperation of the women in the study area. Special thanks go to everyone of the women interviewed, whose names are listed in Appendix 1, who watched with amusement as the study group consumed not only their words, but the food and hospitalities of the people of Koko Fishing Communities. Particular reference is made here of the President and members of the Ogben Cooperative (Farmers Multipurpose FSP) for their enthusiasm and tenacity in accomplishing the goals of the study.

Finally, I wish to thank the members of the study team: Mrs. Lami Fadiora and Miss Remi Ajayi for their assistance in data collection, as interviewers and facilitators of focus group discussions. Additionally, the cooperation and the patience of the numerous grassroots economic units who actively participated in the Participatory Action Research for Development (PARAD) survey, focus group discussions and other questionnaires are worthy of being mentioned. Last but not the least, Mr. Femi Ogunbamila should be mentioned for the documentation of the report.

EXECUTIVE SUMMARY

Koko fishing community is one of the major fishing communities in Nigeria. Activities within this sector are mainly controlled and affected by women. Because of the prevailing economic situation in Nigeria, many of these fishing communities face numerous problems, such as inadequacy of fish catches, spoilage, loss of income and others.

In this context, this study was aimed mainly at an enumeration of sources of employment for women in the communities, a description of labour and time utilisation by women, a determination of women's daily real income and their daily activities in cash and kind and recommendations for improvement of the women's socio-economic conditions.

The study was carried out through the use of individual interviews, focus group discussions and use of secondary data between March and April, 1996.

The results indicated that:

- women in Koko fishing communities were engaged in various income-generating activities including fishing, fishing-related activities, farming, petty trading, fashion designing, hairdressing, making of soap, powder, and other toiletries, selling of empty drums from the oil industry, mat weaving, oil palm extraction, sale of fire wood, pepper grinding, sale of locally made alcoholic drinks, kerosene, ice cream and government service;
- the women divide their time between household chores and income-generating activities, sometimes spending up to 16 hours between both functions. It is also revealed that women, children and other relatives participate in the daily household chores;
- fish marketing and the marketing of other products is the most lucrative activity in the communities while production earns very small returns;
- the daily real income of women is made up of income from various sources including primary and secondary activities. Also, activities in kind, though these do not directly attract income, are indirect income-generating activities for these women. For most of them, especially the full-time house-wives, activities in kind are the only income-generating activities;
- fisherfolk are aware of their dwindling fortunes due to inadequate capital to expand their businesses, low volume of catches and loss of income due to spoilage. These inadequacies have also negatively affected other sources of employment in the area.

The study highlighted some of the problems confronting the fisherfolk as well as other categories of the working population.

Some of these problems and suggested solutions include:

- Loss of income from fish spoilage.

Technical assistance in the form of training workshops in the areas of fish handling, preservation and processing will go a long way to arrest the situation to the extent that fish spoilage due to poor handling and inadequate processing would be considerably reduced. This

improvement will increase fisherfolk's income, resulting from their sales of better quality fish products.

- Low volume of fish production due to the lack of good working relationship and capital. This is why only 20% of the fisherfolks belong to co-operative societies. Many of the respondents claim ignorance of the roles and functions of cooperative societies, yet it is one of the surest strategies for receiving help (financial, technical and training).

Training in conflict mediation exercise would help to remove distrust and other conflict factors responsible for their lack of good working relationship. Once the conflict situation is remedied, they can come together to solve financial problems which must be undertaken through group credit and savings scheme.

Training workshops on the benefits of co-operative membership is long overdue. It would assist the fisherfolk in their education vis-a-vis advantage in raising required capital and managing the funds for the purchasing of fishing nets, traps, canoes/boats and outboard engines.

- Transport and storage problems can be solved when people are organised into groups that can be trained to build canoes/boats and storage boxes.

Establishing trades co-operative groups according to what they do is essential. Using the laid down rules of co-operative societies, these trade co-operative groups will therefore use their official mandate to raise capital through their co-operatives to build and sell canoes/boats for transportation purposes.

Carpenters and woodworkers trained and resident in the communities would be employed in constructing transportation canoes/boats for the use of the fisherfolk.

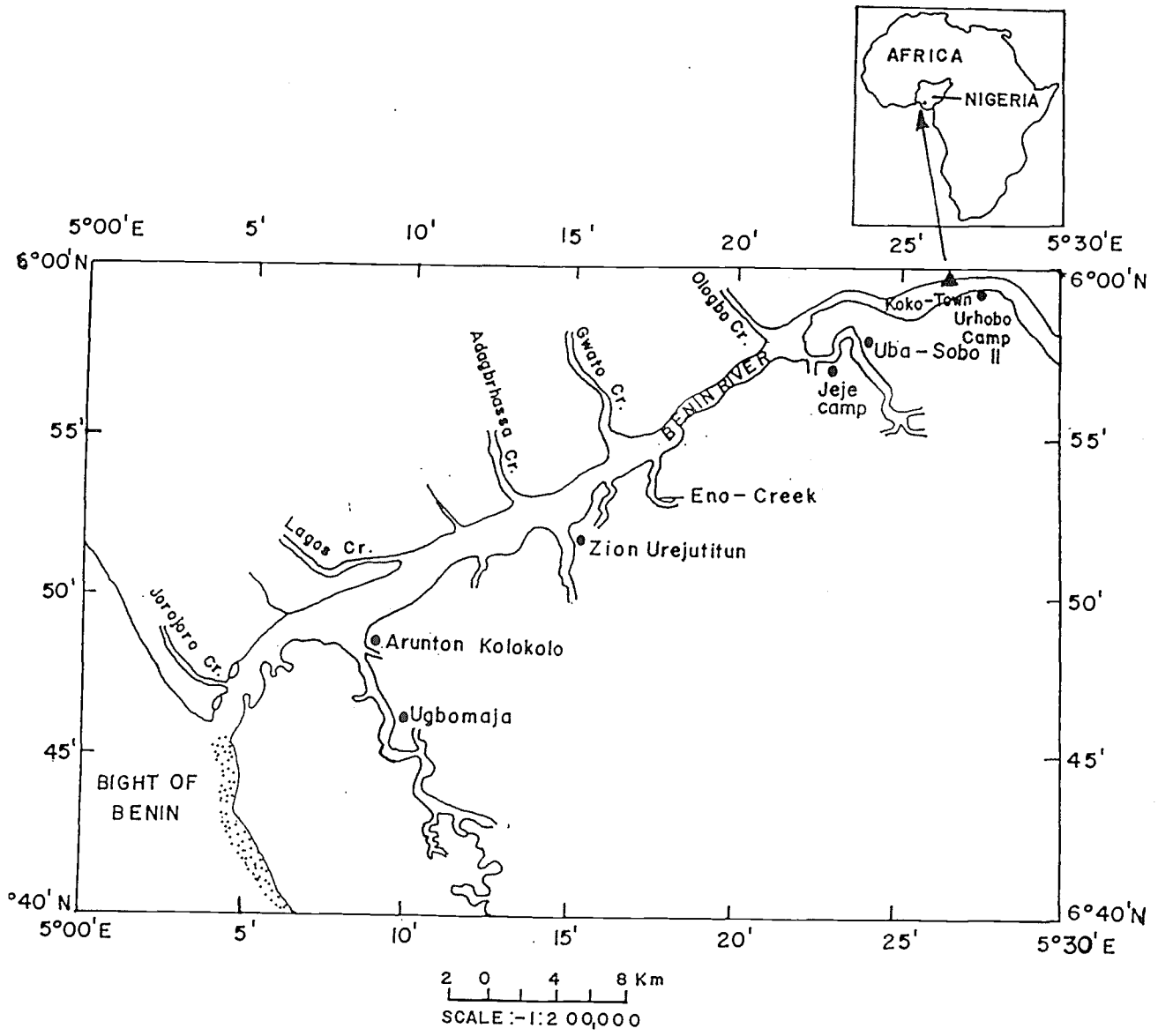
- Following closely with issues of transport and storage problems is the issue of lack of employment opportunities.

Currently there are very few carpenters and woodworkers (only two men) in the fishing communities of Koko. Demand for transport canoes/boats as well as insulated ice boxes for the storage of fish products is a great opportunity for job creation for the unemployed members of the communities. Repairs and maintenance of transport canoes/boats and insulated boxes would be an essential section of the training programme to complement the life span of these activities. Therefore, more people would acquire the skills and be available to carry out orders resulting from the demand for canoes/boats and insulated boxes by the fisherfolks.

Those interested in acquiring this trade need no special skills except that they need minimum education. Their training programme will entail constructing items according to specified measurements. Thus, they need to learn how to carry out measurements, calculations, recording of information and reading instructions given to them.

Service areas with low market demand for small scale enterprises (not fishing-related) such as manual mat-weaving and so on can be improved with decorative designs for local and export markets. These mats, in various sizes, will meet demands for gift items, curios, home floor and wall decor.

Fig. I: Map of Fishing Communities of Benin River Estuary.



1. INTRODUCTION

1.1. General Background of Nigerian Fisheries

Nigeria, with a population of about 88 million (1993 census), is multi-ethnic. It is the largest single consumer of fish and fish products in the African Region. It lies within the tropics between latitudes 4° and 14° north of the equator and longitudes 3° and 14° east of the Greenwich Meridian. It is bounded on the west by the Republic of Benin, on the north by Niger Republic, on the east by the Republic of Cameroun and washed on the south by the Atlantic Ocean. Sandy beaches stretch along most of the country's 800 kilometre coastline which is intersected by the Niger Delta noted for its intricate network of creeks and rivers.

The country which has an area of 913,072.64 square kilometres is well watered by the rivers Niger and Benue and their tributaries. Its climate varies from tropical at the coast to sub-tropical further inland. Two well-marked seasons are: dry season, from November - March; rainy season from April to October. Temperature at the coast hardly rises above 32°C, but humidity may be as high as 95%. The climate is drier further north and extreme temperatures are reputed, sometimes ranging from 36°C to 12°C.

In Nigeria, like all coastal West African countries, fish is the cheapest form of animal protein in the diet of the people for many decades before the economic woes of the 1990s. Therefore, the importance of the fisheries products in satisfying the nutritional needs of the people as well as providing employment cannot be overstated. Entire family units - men, women and children in the fishing communities are engaged in the sector. Most of the coastal fishing is carried out by local fisherfolks from canoes operating from surf-beaten beaches and riverine areas. In Nigeria, women play a crucial role in fish production, processing, distribution and marketing. In addition, some of the women are crucial in financing fish production units. Therefore, the economic role of women in fishing communities is significant and timely.

1.2. The Role of Fisheries in the National Economy

Since the 1960s, the fisheries sector has contributed between 1.11 to 2.4 percent of the Gross Domestic Product (GDP) or 3.0 and 6.0 percent of the Agricultural GDP. This is because fish is a major source of animal protein and has continued to grow in importance over the years, particularly, as a substitute to beef. Recent studies confirm the increasing shift from meat to fish consumption among households in Nigeria (CBN/NISER, 1992). The artisanal fisheries sub-sector constitutes a major source of employment, especially in the southern coastal maritime/riverine areas. The estimated revenue is over five hundred million naira¹. Fish in Nigeria is caught from the sea, inland and more recently from ponds and other artificial culture systems. Artisanal fish catches from all the states in Nigeria rose steadily from about 465,569 metric tonnes in 1980 to 506,790 metric tonnes in 1983. Thereafter began a steady decline, starting with about 326,963 metric tonnes in 1984 to just 184,412 metric tonnes in 1993 (Table 1). Little wonder then that the self-sufficiency ratio in fish production based on a 3.5% population growth rate is given as 28% for 1996 and projected to just 35% in the year 2010 (Table 1).

A downturn in the economy of the country naturally affected all sectors. Consequently, the fishing sector is also being affected by the impact of the worsening economic situation. The artisanal catches which have therefore started dwindling since 1983 got worse with the introduction of Structural Adjustment and has continued unabated as Table 2.1 clearly shows, thus resulting in demand being far below supply (Table 2).

¹ US \$ 1 = 80 naira (October 1996)

Table 1: Nigeria Fish Production (Artisanal by States, 1980 - 1993)

YEARS	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
COASTAL														
Akwa Ibom State	53769 ²	76520	87010	75667	70045	40177	55382	43287	52887	42393	32285	40297	44139	15713
Baie/Delta State	106942	123221	146148	164320	86685	52967	51423	58617	48684	53686	37593	34248	34186	15454
Cross River State	14047	18811	20997	27715	28000	16577	25927	19023	30016	2860	13587	10727	10942	8725
Lagos State	388	304	280	2576	12154	316	233	191	219	18321	17216	18396	21462	1865
Ogun State								8168	13926	278	364	2419	3371	944
Ondo State	12491	14838	15779	15806	8950	3630	8639	16469	39449	11460	13627	13731	12555	13726
Rivers State	86521	90322	107469	90890	40850	27206	18565			42334	55787	18393	57752	33109
SUB-TOTAL	274158	324016	377683	376974	246684	140673	160169	145735	185381	171332	170459	138211	184487	83336
INLAND STATES														
Anambra/Enugu St	4999	4176	4328	2694	2916	2721	7247	7057	6364	6187	5657	6381	5846	2612
Bauchi State	2348	1956	1988	2648	6022	113	29	32	208	405	317	488	405	173
Benue State	15845	12840	13106	14952	7673	633	9478	9478	7675	6860	6756	1421	905	446
Borno/Yobe State	64886	58222	15193	21379	28446	22878	34141	34141	53070	68424	7639	71832	46398	47266
Adamawa/Taraba St	19995	12850	15337	19970	11723	2188	14975	14975	12726	13235	13557	14331	13558	13568
Imo/Abia State	21596	18492	19593	3585	3200	577	805	802	995	13262	1606	1587	1831	902
Karuna State	2995	2669	3732	3424	2071	2255	2214	2214	1637	1355	681	6341	1530	756
Kano/Jigawa State	4658	3852	3803	8105	2255	3020	2314	2341	613	3993	673	1056	838	735
Katuna State										309	554	801	1109	547
Kwara/Kogi State	6932	6260	6051	7689	5325	2936	59	59	144	145	147	185	10	152
Niger State	2894	1232	1296	7980	5470	17	1038	1038	1108	1157	821	1671	1076	1019
Oyo/Osun State	303	75	161	1359	1159	283	284	284	252	389	356	271	231	256
Plateau State	2331	1608	2995	3769	3697	124	44	44	339	377	617	238	238	283
Sokoto/Kebbi State	41629	33635	32994	32262	322	22757	30767	30767	27312	27924	9654	16442	25428	26161
SUB-TOTAL	191401	137567	120377	129016	80270	60502	103303	103233	112465	144822	89035	133845	99483	97676
GRAND TOTAL	465569	481883	498260	506790	326963	201375	263564	248987	297624	315354	219494	261256	283810	184412

Source: Federal Fisheries, Abuja, 1995.

² Unit: Metric Tonnes

Table 2: Supply-Demand Projections and self-sufficiency Ratios in Fish Under 3.2 and 3.5 percent population Growth Rate: 1996-2010 ('000 Tonnes).

	1996	1997	1998	1999	2000	2001	2002	200	2004	2005	2006	2007	2008	2009	2010
1. <u>3.2% Population</u>															
a. Supply	272	292	312	332	352	372	392	412	432	452	472	492	511	531	551
b. Demand	958	989	1021	1053	1087	1122	1158	119	1233	1273	1313	1399	1399	1443	1490
2. <u>3.5% Population</u>															
a. Supply	272	292	312	332	352	372	392	412	432	452	472	492	511	531	551
b. Demand	958	992	1027	1063	1100	1138	1178	121	1262	1306	1352	1399	1448	1499	1551
c. self-sufficiency Ratio	28.39	29.4	30.38	31.23	32.00	32.69	33.28	33.7	34.23	34.61	34.91	35.17	35.29	35.42	35.53

Source: NISER (1995); Economic Background to NARSP.

*This is the proportion (percentage) of overall demand that is met by the available supply of fish.

1.3. The Artisanal Sector

In harvesting fish, shrimps and molluscs in the coastal regions marine, brackish and fresh water artisanal fishermen and women use gill nets, set nets, hook and line, traps, and other types of gears traditionally used in most fishing communities. They carry out their fishing activities using fishing crafts ranging from small unmotorised paddled dugout canoes to the motorised large Ghana-type boats. In general, fishing activities in the Niger Delta are characterised by low unit productivity, intensive labour, relatively low capital, low operational costs and limited gear coverage. Post harvest losses are high while profits are relatively low.

Unfortunately, there are limited research studies that have published quantitative information on the contribution of the fisheries sector to the Gross Domestic Product for Nigeria. However, it has been established that the inshore and offshore waters of the West African coast have rich fish resources available in quantities that can support commercial exploitation to meet at least 45 - 55 percent of domestic fish demand while in Nigeria, domestic fish production is responsible for 90 percent of fish consumed locally (Tobor, 1991). For over two decades now, the nation's population depended on the artisanal fish production as the main source of animal protein. This is due to the production problems in the livestock sector. These problems range from Sahelian drought to desert encroachment, rinderpest outbreaks and animal feed scarcity (Ajayi and Talabi, 1984).

In 1969, FAO published the result of a comprehensive survey on the coastal and estuarine fisheries of the then Western Region, now made up of Lagos, Ogun, Ondo, Osun and Oyo States as well as the then Mid-Western Region, presently composed of Edo and Delta States. The survey results compiled data on 300-600 fishing communities visited including the study area. A total of 91,203 fishermen were identified of which 54.32 percent were engaged in full-time fishing operations (FAO, 1969). Researches by Scott (1966) and Ndaguba (1983), Ssentongo *et al* (1983) indicated that fishing communities and fishermen estimated for Rivers and Cross River States (now Akwa Ibom and Cross River States) more than double the estimated population recorded for the Western and Mid-Western Regions.

Ajayi and Talabi (1984) estimated artisanal fishery potential for Nigeria to fall within the range of 128,000 to 170,000 out of which about 25,000 metric tonnes is *Nemato palaemon hastatus*, the rest being fish (Marioghae 1981). More recently, Okpanefe et al. (1991) carried out a survey of 62 fishing communities including the study area. The study highlighted the fact that fishing took place in every village surveyed, but on quite different levels. For example, in villages located in small creeks, fishing appears to be but one of two or three economic activities.

Bolaji et al. (1994) carried out a population growth and development study of two fishing communities in Delta State. Their study, like the previous studies, concluded that fishing is a primary viable profession of the fishing communities in the study area, hence, the need to manage the fishery resources in a way that it will continue to provide employment, adequate income and food to the increasing population of these fishing communities. Although figures on the growth rate were not given, the authors suggested sensitizing the fisherfolk on the interrelationships between population growth and the fishery resources, with emphasis on the limited nature of resources and its consequent need for conservation.

1.4. Fisheries Catch Disposal

FAO (1969), Talabi (1982), Ajayi and Talabi (1984) indicated that generally, fisherfolk (men and women) market large-sized fishes in the fresh form while fish landed alive are sold alive, for example the catfishes. Fisherfolk only preserve their fish products if there is no possibility of marketing the fish in the fresh form. It is therefore an accepted socio-cultural practice that over 90 percent of the artisanal catches are processed. They are smoke-dried or sun-dried, salted, or fried. Often, the rest of the products is marketed fresh with heavy loss of quality. Major difficulties affecting fish preservation are the design of fishing canoes which make chilling of products on board difficult and, the lack of ice and other preservation facilities at the landing sites since the artisanal fisherfolk hold on to traditional practices. These difficulties are responsible for the poor quality and high losses inherent to fish disposal with regard to fresh form.

2. **METHODOLOGY**

A participatory action research approach was employed in addition to the use of primary and secondary data. Data from the author's previous studies were used to supplement secondary data from published and unpublished sources in addition to data compiled from participatory group discussions. Information gathered is based on individual life histories or through open-ended questions from women of different generations in order to determine the way in which women's productive and reproductive labour, changes in relation to traditional, social and economic factors.

A sample of 88 women was selected. Purposive sampling method was used in order to cover various aspects of women's economic roles in the fishing communities. Special effort was made to include all economic ventures, attention was given to the scale of operation and method of fishing activities by men and women who supply the primary products. In-depth interviews, formal and informal and group discussions were carried out for the qualitative method.

For the analysis, simple counts, tables of frequencies were used. With respect to estimates of income, where applicable, figures were solicited for. In some cases, quantities were converted to the cash equivalent by using existing market prices for such products (e.g. fish, beef and farm products consumed in the home). Tables were used to bring out salient points.

3. **KOKO, THE STUDY AREA**

Koko, a town in the Niger Delta, lies about 60-70 kilometres west of Sapele and Warri. It serves as a port on the Benin River Estuary in the same manner as Sapele and Warri for the Mid-Western Region. The relief is flat and low-lying with a coastal mangrove and rain forest vegetation. The population is about 10,000. The people belong to the mid-western multi-ethnic riverine group. Four ethnic groups identified in the area are: Itsekiri (the most prominent), Ilaje (migrant from Ondo State of the south-western region), Ijaw and Urhobo.

Koko is the administrative headquarters of Warri North Local Government Area. It is well-known for some important features. Historically, it was one of the European settlements in Nigeria because it serves as a gateway to the 62 villages scattered on both the left and right banks of the Benin River Estuary. Access is through the mouth of the Escavos River. As a port for

commercial boats and sea vessels, it has a historical past with trade relationship with Europeans. Finally, it is well located in relation to villages downstream because it has a good road link to Benin City, capital of Edo State and the rest of Nigeria. It is heavily patronised by villages around it, primarily for its hospital.

The importance of the fishing industry in Koko and surrounding villages cannot be overstated. It will remain one of the major fishing towns in coastal Nigeria, especially because it is well-situated along the Benin River Estuary (Fig. 2).

3.1. Demographic Characteristics of the Respondents

3.1.1. Age of Respondents

The age of respondents ranged from 17 to 75 years. Out of a total of 88 women, 67 (76%) fall within the active age bracket of 20-59 years (Table 3).

3.1.2. Marital Status

Majority of the respondents (65%) were married. One of them was abandoned by her husband, while four (5%) were separated, six (7%) were divorced, five (6%) were widowed and the rest (17%) were still single. The natural thing expected of women in fishing communities is to bear children. Six of the unmarried respondents have one or two dependents (Table 4). The social status of the women are enhanced by observing the traditional expectation of bearing as many children as possible, thus, ensuring the provision of an adequate labour force for the family chores. Also, the children are expected to take care of their parents in old age. Thus, about 49% of the respondents had between 5 and 11 children, followed by 40% that had between 1 and 4 children while 11% had no children yet (Table 5).

Table 3: Age Group of Respondents

AGE GROUP	FREQUENCY	PERCENTAGE
10-19	3	3
20-29	23	26
30-39	20	23
40-49	24	27
50-59	9	10
60+	3	3
70+	1	1
N/S ³	5	6
TOTAL	88	100

3 N/S = Not Stated

Table 4: Marital Status of Respondents

MARITAL STATUS	FREQUENCY	PERCENTAGE
Married	57	65
Separated	4	5
Divorced	6	7
Widowed	5	6
Single	15	17
Abandoned	1	1
TOTAL	88	100

Table 5: Number of Children

Number of Children	Frequency	Percentage
0	10	11
1-4	35	40
5-9	39	44
10+	4	5
TOTAL	88	100

3.1.3. Educational Level

Thirty-one (35%) respondents had no formal education, but thirty-two (36%) completed primary school education. Three (3%) had vocational training after primary school, while two (2%) had professional training after secondary school and another two (2%) had university education. This is a unique situation. Lack of formal education is common among fisherfolks because of a lack of the infrastructure.

4. SOURCES OF EMPLOYMENT FOR WOMEN IN KOKO

Women's economic activities are closely related to the socio-economic condition 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 and making great efforts in solving problems connected with the industry. The fishermen migrate when there is a scarcity of fish to search for more fertile fishing grounds. The women, especially the Itsekiris and Ijaws harvest fish and fish products from the main channels of rivers and maze of creeks.

The women are significant participants in the artisanal fishing industry. They are also considered specialists in post harvest activities even though traditional socio-economic

expectations place special demands on the role of the women. They change their economic activities in line with the economic environment of the community. Trading for example is a versatile activity in which they naturally participate. They easily move from one commodity to another and entry into the market is open. The activities range from fish processing to street food vending and financial management in the fishing industry. Their activities vary according to the seasons. These are survival strategies which they employ as a show of concern for the welfare of their families.

Vending of cooked food is very popular with women as well as the selling of processed agricultural products. These include cassava and cereal based foods such as gari, starch, rice and corn dishes such as eba, foofoo, rice and beans as well as eko and moinmoin. Famous stews for cooked foods are locally prepared from oil palm fruits called “banga soup”, served with starch foofoo or gari from cassava. Others are fried yam, cocoyam, sweet potatoes and plantain. Palm oil extraction is popularly carried out. Making of traditional alcoholic drink from sugar cane is also an important economic activity.

Mat-weaving from papyrus reed and palm fronds also contributes to the economic activities of the women in addition to farming vegetables, pepper, cassava and yams. Some of them raise chicken, sheep, goats and pigs. Harvesting of periwinkles (molluscs) is gaining importance as the empty shells of the small snails are used in construction. These are mixed with concrete and gravel to strengthen foundations in construction.

Children are not left out in the economic activities. The women involve their children in trading. They are sent to hawk ice water and a variety of products. Vending of street foods take different forms from the port to the residential area or special market stalls and shops. Koko has three market locations from which goods from inland and neighbouring villages are taken and sold.

An important role women play as part of their economic activities is that of hostesses for migrant fishermen and visitors to the port town. They provide accommodation and cooked food for their migrants as well as finance their fishing activities by providing money for the purchase of needed items, repair of fishing equipment in return for acting as “middlemen” for the migrants. This role allows them to purchase and sell all the output of the migrants, thereby, profiting from the relationship.

Women also work as seamstresses, hairdressers, cosmetologists, soap makers and butchers. Professionally, there are women nurses, teachers, and civil servants. There are traditional mid-wives and healers. A survey of a sample of six women provides information on the daily activities of women engaged in the main economic activities in the study area.

4.1. Economic Activities

The people of Koko are primarily fisherfolks. Men, women and children are actively engaged in fishing activities. Other economic activities include: farming, trading, boat carving, carpentry, driving and masonry. The men go to the sea throughout the week except Sundays (an accepted day of rest). Fishing is with small unmotorised dug-out canoes. The main gear used for fishing in the area are cast nets, gill nets, traps, hooks and lines. Associated with the industry is the promotion of other income-generating activities such as firewood selling, sale of fuel and water and road transportation of people and goods. Therefore, the industry in Koko attracts men

and women from other parts of the country. Throughout the year, on a weekly routine, traders from other towns such as Warri, Sapele, Benin City and so on, come to Koko to purchase goods which include all forms of fish products. The Ilajes from Ondo State are migrants who have become permanent settlers. Petroleum companies, especially Total, Shell and Mobil, have set up offices in Koko.

Fish handling forms the primary economic activity for the majority of respondents. Sixty (68%) acquired the trade by legacy from their parents, especially their mothers. Ten (11%) stated that their engagement in fish production (artisanal fishing) was based on vocation.

4.2. Secondary Activities

Some of the respondents disclosed that they now depend on other sources of income as primary activities while fish production and other fish related activities have become secondary for them (Table 6). The reasons given include the current economic depression which has made fishing an expensive venture.

Seventeen (19%) of the women are engaged in buying and selling of a variety of products from petty trading, provisions, clothing, firewood, plastics and so on. Ten (11%) are engaged in farming as a secondary activity, cultivating crops such as okra, cassava, yam, pepper and vegetables. They also grow plantain and oil palm. Part of the harvested products are sold, while the remaining are consumed by the family. Some (6%) are engaged in street vending of cooked food items such as fofoo (made from processed cassava), pounded yam, fried yam and plantain, rice and beans.

The list of activities which women undertake in Koko is inexhaustible. They include fashion designing (dress making), hairdressing, making of soap, powder and other toiletries, selling of empty drums from the oil industry, mat-weaving, oil palm extraction, sale of firewood, pepper grinding, sale of locally made alcoholic drink, kerosene, ice cream and the government service. These activities can be grouped into five main categories namely: Fishing and Fishing related activities, Trade and Commerce, Service Industries, Agriculture and the Civil Service (Table 6).

4.3. Aspects of Fisheries Undertaken

The various stages in which respondents are engaged is reflected in Table 7.

Marketing of fresh fish is done by 22 (27%) of the respondents. Since electricity is unreliable, access to cold storage is hardly affordable, hence, most of the women sell their fish fresh to the middle men who take the fish to larger markets in Benin City, Sapele and Warri. As an alternative to preserving the fish products, fresh fish are processed. Processing and Marketing of fish is done by 15 (18%) of the respondents. Therefore processing and marketing of fish products rank second in position to the various aspects engaged in by Koko fish dealers. Of the women interviewed, only ten (12%) are engaged in fish production, although the cost of fishing nets is reducing women being fully active in the job. The remaining combine their various activities as the economic situation dictates.

Unlike previous interviews where some of the women consider themselves as fish producers because they finance the fishermen's activities, the economic situation forced many women to withdraw from fish production as a means of employment.

Table 6: Sources of Employment for Women in Koko

Employment	Primary Activity	Secondary ⁴ Activity	Frequency	Percentage ⁵
Fishing and Fishing Related				
1. Fish Production	3	7	10	11
2. Fish Processing	5	10	15	17
3. Fish Marketing	2	20	22	25
4. Production, Processing	5	5	10	11
5. Processing and	5	10	15	17
6. Production and	3	7	10	11
Trade and Commerce				
7. Street Food Vending	5	5	10	11
8. Petty Trading	5	5	10	11
9. Ice Cream.	2	-	2	2
10. Drinks	5	-	5	6
11. Provisions	4	2	6	7
12. Clothing	2	3	5	6
13. Plastics	3	-	3	2
14. Baker	2	-	2	2
15. Kerosene Vending	2	-	2	2
16. Hair Cream and Pomade	3	-	3	3
17. Grinding Machine	2	-	2	2
Service Industries				
18. Fashion Designing	5	10	15	17
19. Hair Dressing	3	2	5	6
20. Hotelier/Restaurateur	3	5	8	9
Agriculture				
21. Farming	3	10	13	15
22. Mat Weaving	2	-	2	2
23. Butchering and sale of	2	-	2	2
24. Rubber tapping	1	-	1	1
25. Oil Palm Extraction	2	8	10	11
26. Firewood	3	2	5	6
Civil Service	6	-	6	7
TOTAL	88	-	-	-

⁴ Figures include women with more than one secondary activity

⁵ This is the Percentage of women engaged in each activity

Table 7: Aspect of Fisheries Undertaken

ASPECT	FREQUENCY	PERCENTAGE
Production	10	12
Processing	15	18
Marketing	22	27
Production, Processing and	10	12
Processing and Marketing	15	18
Production and Marketing	10	12
TOTAL	82	100

5. DISTRIBUTION OF TIME BETWEEN THE HOUSEHOLD, PLACE OF WORK AND THE LABOUR FORCE IN KOKO

Information gathered from all respondents indicate that the women work for as long as 15-16 hours daily doing household chores like cleaning, washing, cooking, fetching water as well as raising children. They also engage in economic activities either as paid family labour or as waged workers employed in other income-generating or income-substituting activities.

5.1. Domestic and reproductive Labour: Women as mothers and wives

All the respondents gave information enumerating their household responsibilities. This is because the care of children, tidying and sweeping the house and surrounding premises, washing clothes, fetching drinking water and cooking, are fundamental responsibilities considered inherent to women and children. These are contributions in kind.

All the women, with the exception of the fisherwomen, indicated that they start domestic work early in the morning between 4.30 and 6.00 a.m. This is when 90% of the respondents carry out basic household chores. The fisherwomen return from fishing expeditions between 5.30 and 6.00 a.m. They too carry out their share of household chores in the mornings between 7.00 and 10.00 a.m. before sleeping briefly in order to recover from their sleepless night spent catching fish.

All the 6 respondents (7%) of the sample working for the government leave home for their place of work by 8.00 a.m. The rest of the women leave home for their respective places of work either at market or the pier or in front of their homes as the case may be between 8.00 and 10.00 a.m. Forty percent of the respondents indicated that they enjoy the support of relatives (especially female relatives) and older children (especially daughters) in carrying out household chores. The contributions of relatives and children to the household labour is a welcome relief which the respondents would not like to forfeit since these activities would normally have been carried out by the women.

5.2. Time Spent on Household Chores

Table 8 summarises the distribution of time among the various chores that are carried out on a daily basis. Women who earn a living cannot afford to spend much time on chores, thus, 79% of the respondents could afford to cook breakfast (Table 8). After meals is often taken care of by relatives and children. However, full- time housewives generally spend an average of sixteen (16) hours daily on various household chores, while the women who earn a living spend about 8 hours a day doing chores as indicated in the profile on Table 10. An important role played by relatives/children is that of fetching drinking water (77%).

Table 8: Time Spent on Household Chores

Household chores	Time spent	Frequency by respondents	Percent	Frequency by relatives /children	Percent
1. Cleaning/Sweeping	1-2 hours	40	45	48	55
2. Fetching drinking water	1-2 hours	20	23	68	77
3. Washing clothes	2-3 hours	40	45	48	55
4. Cooking food especially	2 hours	70	79	18	21
5. Caring for children					
• bathing them	1 hour	50	55	38	45
• feeding them	1-2 hours	30	34	58	66
• dressing them	1-2 hours	30	34	58	66
6. Miscellaneous					
• catering for visitors	1-2 hours	20	23	-	-

Table 9: Time Spent at Place of Work and the Labour Force

Activity		Time Spent
1.	Benin River Estuary Fishing	10-12 hours
2.	Koko Pier purchasing fish products	3-4 hours
3.	Home smoking fish products	5-6 hours
4.	Market place	
	• selling processed fish products	4-5 hours
	• agricultural products	6-7 hours
	• cooked food	3-4 hours
	• others	5-6 hours
5.	Purchase of items in preparation for market	3-4 hours
6.	Preparation of items such as vending of street food	2-3 hours
7.	Shops opening and closing periods for:	8-9 hours
	• Fashion designers	
	• Hairdressers and provision sellers	
8.	Butcher	6-7 hours
9.	Rubber - tapper	6-7 hours
10.	Farming	4-6 hours
11.	Mat-weaving	8-9 hours
12.	Firewood sales	8-9 hours
13.	Preparation and cooking of meals for family consumption	
	• marketing	2-3 hours
	• preparation	2-3 hours
	• serving and cleaning up after consumption	1-3 hours
14.	Civil Servants and other Professionals	7-8 hours

6. DESCRIPTION OF LABOUR DISTRIBUTION AMONGST WOMEN DURING THE DAY

In Koko, like most fishing communities in West Africa, gender is a factor in the allocation of labour, traditionally and otherwise. Hence, mother-child (especially daughters) bond was often left intact in terms of labour distribution during the day. This was because in every household women's economic role as workers and providers was not seen as incompatible with their reproductive role as mothers, wives and daughters. Even after the universal emancipation, women in rural communities (fishing communities for example) continued to be engaged in many activities which they are expected to carry on inside and outside of the household which are critical for the survival of its members.

More recently, women's labour force participation rates continue to show rapid increase. The shift from agriculture, including fisheries, has forced women to move from the traditional activities in agriculture to manufacturing and service related jobs, as well as office jobs.

The increase in professional jobs is an evidence of the improvement in educational levels in recent years in Nigeria as a whole. Without the traditional support of the extended family, it has become more difficult to combine income-generating activities and household maintenance activities especially with limited resources available to many of the households in fishing communities.

However, due to the growing need for cash as a result of the current shift in the region toward a consumer economy, paid employment has become even more critical for women. Table 8 and 9 summarise the labour distribution amongst women in Koko during the day. Labour for household chores are distributed between the women, relatives and children.

Children and relatives were more involved with fetching drinking water (77%) followed by feeding and dressing of the young ones (66%) and washing clothes, cleaning and sweeping. They were least involved with cooking food (21%) and were not involved at all with catering for visitors. The women were involved in all aspects of household chores moving from one to another including even fetching drinking water.

Those who were engaged in only one major occupation (e.g. hairdressers, fashion designers and the fisherfolks) spent all day at their jobs, staying for between 8 and 12 hours daily. Those who had secondary activities divided their time among the various activities reported in Table 9.

A detailed analysis of a sample of the women engaged in each of the major activities is presented here to illustrate how each of the women distribute their time among their various responsibilities at home and at work.

Full-time Housewife

Mrs A. She is 30 years old, married with 2 dependents, trained as a fashion designer after her school certificate (WASC) education. She is not practising because she lacks the take-off capital required to start business.

She wakes up every day between 4.30 and 5.30 a.m. She does her household chores and sends the children to school. She continues with her chores once the children are out of the house. All these, between 5.30 a.m. and 9.00 a. m. After this, she goes to the market to buy foodstuffs for the family or she may wash clothes until around 12.00 noon.

At noon she starts preparing lunch, which she does up to 2pm. She may finish her afternoon chores at 5pm and then starts preparing dinner. Dinner is served between 7pm and 8pm. She cleans up after dinner and makes sure the materials for breakfast are ready before she goes to sleep around 10pm. Overall, she would have spent about 16 hours on the job at home before retiring for the day.

Fisher Woman

Mrs O. She is 45 years old, married with 8 dependents. She has no formal education. She inherited the fishing profession from her parents. Apart from fishing as a major occupation, she is involved in selling provisions and backyard farming.

She does her household chores between 7 am and 10 am every morning during which she also tends her crops in her backyard farm. She has a small kiosk in front of her house which she cannot open until she comes back from the river.

She goes to sleep waking up around 3 pm. She continues her household chores until 7 pm. By then, she sets out for the river to fish. Out on the estuary, she sets up her fishing gear and nets and waits for the catch. She tries to catch some sleep, waking up intermittently to check her nets and hooks.

Between 5.30 am and 7 am, she gathers her equipments and sets out for the pier and heads back home to sell her catch to processors and other marketers. After 3 pm, she opens her kiosk and sells her provisions until she is ready to go fishing in the evening.

Her major constraint is the lack of an outboard engine to allow her to fish further afield in deeper waters.

Fish Processor

Mrs S. She is 45 years old, married with 7 dependents. She has no formal education. Like Mrs O., she inherited the profession.

She buys fresh fish and crayfish which she processes and preserves through smoke-drying for subsequent sale to fish marketers. She wakes up between 4.30 and 5.30 am daily when she starts her household chores. At about 7 am she goes to the pier to buy fish from the fishers.

Between 9 am and 5 pm she processes her fish. She continues her household chores while the fish is on the fire, constantly checking to ensure even smoking. She starts the sale of fish to marketers from 5 pm until late in the night. She completes her chores and goes to bed around 10 pm.

Her major constraint is the lack of capital to purchase large quantities of fish products for sale.

Fish Marketer

Mrs E.A. She is 50 years old. Married with 10 dependents. Completed modern school. She buys both fresh and dried fish for sale. In addition, she sells plates as a secondary occupation.

She wakes up daily as early as 5 am to do her household chores until around 6 am. She goes out to buy fresh fish for sale between 6 am and 10 am. She continues her secondary occupation and household chores from 10 am until around 4 pm. By 4 pm, she goes out to buy processed fish. She sells processed fish at anytime of the day.

She travels sometimes for days to other distant markets to sell her fish. She also visits nearby markets on a regular basis. Her major constraint is lack of capital to purchase fish products for sale.

Table 10 summarises the major occupations of women as well as the accompanying minor activities.

Table 10 Major Occupations and the Accompanying Secondary Activities

Major Occupations	Accompanying Minor Activities
Fishing	Backyard Farming, Petty Trading, Civil Service
Fish Processing	Backyard Livestock Raising, Food Vending, Pepper Grinding, Petty Trading
Fish Marketing	Backyard Farming, Petty Trading (most fish marketers have sole occupations).
Full-time Housewife	Backyard Farming and Livestock Raising
Petty Trading	Civil Service, Backyard Livestock Raising
Fashion Designing and Hairdressing	Petty Trading

7. EVALUATION OF DAILY ACTIVITIES OF WOMEN IN CASH AND IN KIND

Everyday the women wake up to the realities of a new day. They are engaged in various forms of activities ranging from the simple household chores to the more complex functions like going on the river to fish. While some of these activities can be classified as cash generating activities, various others are only in kind.

7.1. Activities in Cash

These are activities that directly add to income. They include fish production, processing and marketing; marketing of other products and goods (food, meat, wares etc.); provision of services (hairdressing, fashion designing); manufacturing products e.g. soap, mats and liquor as well as paid employment.

Some of these activities are primary activities while some are taken as secondary activities. In most cases, women depend on these activities for income which is used for a variety of purposes such as supplementing household up-keeping, paying rent and children's school fees, training dependents in vocations, and self maintenance.

In West Africa, women, including those in the study area, are expected to contribute to the upkeep of the family both in cash and in kind. Thus, all the respondents were engaged in several profit-generating enterprises either sequentially or at the same time. This is because the economic predicament of the country is reflected in the economy of the rural areas such as the fishing communities. Also these women who must support their husbands who had no jobs at the time of the survey could not afford to pass up any opportunities of making a little money on the side.

In Koko at the time of the survey, 40 percent of the respondents reported that they had no access to land for farming and as such most purchase all their food items including fish products. These women must look for avenues to generate money for all that the family members need, including food stuffs. Due to the depressed economy, even the small seasonal business they and some of their children participate in to increase their income is not encouraging.

During the survey only three (3%) women were actively engaged in capture fisheries on the Benin River Estuary (Table 9). These women spend 10-12 hours, 4-5 days a week. They leave home daily for the fishing grounds in the evenings as from 6.00 p.m, except when the weather is bad. The weather is presumed bad when there is overcast and the atmosphere appears gloomy and/or stormy. According to the women, the water would be rough and dangerous and it would, therefore, not be safe to go fishing in such weather. These women return from their fishing expedition at dawn between 4.30 and 5.30 am.

At the fishing grounds they reported that they normally set up their fishing nets (gill nets) as well as their traps, then would be on the look-out for other users of the waterways so that their fishing nets, traps etc. are not carried away or destroyed. They check their nets and traps intermittently until 2.00 a.m. They start collection of gear as from 3.00 a.m. It takes them 2-3 hours to remove their nets and traps from the water into their canoes folding them in such a way that there would not be snags that may destroy their equipment. If it is the peak season it takes longer to get the equipment and products out of the water into the canoes.

At such times they do not spend too much time removing the gilled fish from the nets or hooks. They just pile everything into the canoes and wait until they get home in the morning before sorting the products with the help of their children and/or relatives. On the other hand, during the lean season all the sorting is done at the fishing ground as fewer fish products are caught anyway.

On the average, therefore, they spend between 10 and 12 hours out of their home, fishing. According to the women, the best fish products are reserved for home consumption since these are small quantities anyway while the rest are sold in exchange for money. All these women were born and raised in fishing families and took up this activity through legacy as well as vocation.

Apart from fishing and its related activities, several other cash-generating activities such as trading, fashion designing, farming, hairdressing and others were listed in Table 9. These are activities that earned some income for the women. In estimating the real incomes in section 9.0 all the sources summarised in Table 11, have been considered.

7.2. Activities in Kind

Averately, women spend 8 hours a day (the minimum being 2 hours and the maximum being about 16 hours of the day) doing their household chores either before they go out to work or later in the day or both.

The 10 women who are engaged in agriculture (farming and livestock rearing) as a secondary activity do it for subsistence. They only sell in case of surplus, which is seldom. Only 3 women were engaged in farming as a primary occupation.

Farming by the women therefore is an activity in kind, just like household chores. However, it is in a special class because its end-product can be quantified and converted into cash, which was done in the study to arrive at real income.

Other activities in kind are the rearing of children and participation in group activities, e.g. cooperative societies. In order to completely account for every hour the women spend daily, especially at home, it will be necessary to calculate some cost for the number of hours spent at home and hence arrive at an estimation? of women's income.

Table 11 summarises the different activities carried out by the women on a daily basis. The first column is a list of all activities that directly add to income (cash activities). The second column is a list of activities carried out but do not directly produce income. Backyard poultry and farming could produce income directly if the products are sold. However, all the respondents said they produced for the family only.

In estimating daily real income, these two activities (2 and 3) have been used because households would normally have purchased the products in cash from the market if they did not produce them. However, items 1, 4 and 5 have not been used because they were not seen as income generating activities even in the remotest sense by the respondents.

In our evaluation here, we have proxied items 1 and 4 by inputting costs to the number of hours spent by the women. The average wage paid in the study area to house-helpers (N5.00/hour) was used as proxy. Although this may be lower than the opportunity cost of some

of the women's labour, this uniform measure makes computation easier. Table 12 presents a picture of the income generating nature of household chores.

A full time house-wife who spends 16 hours of each day working at home would earn a wage of N80 while the average daily wage for all home-work in the study area was N39.30. Of the 70 women who were engaged in household chores, 16 (23%) claimed to be full-time house-wives. While an 8-hour working day in a paid employment would attract a wage of about N50/day, the same number of hours at home attracts much less.

Table 11 Women's Activities in Cash and Kind

Activities in Cash	Activities in kind
1. Fish production, processing and marketing	1. Household chores
2. Marketing of other goods (food, meat, wares etc.).	2. Backyard Poultry
3. Provision of Services (hairdressing, Fashion designing)	3. Backyard Farming
4. Manufacture of products (soap making)	4. Rearing of children
5. Paid Employment	5. Participation in group activities

Table 12 Household Chores as Income-generating Activity in Kind

Hours of Chore	Naira ⁶ Equivalent	Frequency of respondents	Percentage
1	5	3	4
3	15	12	14
4	20	10	14
5	25	2	3
6	30	9	13
7	35	16	23
8	40	5	7
16	80	16	23
Average Daily Wage: N39.30		70	10

⁶An average wage rate of N5/hour paid to househelps was used as the conversion factor.

8. DAILY REAL INCOME AND SOURCES

8.1. Estimation of Daily Real Income

Income is a significant variable in determining the standard of living of people. It is also an important parameter in determining savings behaviour as well as the ability to re-invest in one's business. When incomes are low or irregular the individual thinks more about family survival and less about savings and eventual re-investment. Consequently, the business begins to suffer and the vicious cycle of poverty becomes difficult to break.

The field study took place at a time when the national economy was at its worst due to various domestic crisis as a result of the socio-political environment in the country. The situation created a number of uncertainties mirrored in the general attitude of the people and the food security of the nation. It was supposed to be the peak season for fishing, but most of the fishing canoes were lying idle.

Factors listed as responsible for this hull in activities include: scarcity and high price of fuel; destruction of fishing nets by the speed boats used by the staff of the petroleum industry in the area; lack of loans to purchase needed fishing inputs. The situation has worsened to what obtained in October 1995 when an earlier survey was carried out in the study area. The respondents do not keep financial records of their activities. Therefore accurate information about their financial situation was not available. Table 11 tabulates the information provided by the respondents from which the daily activities of the women were evaluated in cash and in kind. In addition, determination of the daily real income of the women from the various sources of incomes were made.

In the study area, especially among the respondents, most incomes were realised on a daily basis. Only those who were civil servants collected their salaries monthly although they still engaged in other secondary activities which brought in money on a regular basis.

The women earned incomes from a range of activities, from the sale of firewood and drums to mat-weaving, sale of liquor, fashion designing, and all forms of fishing activities. Table 6 listed most income-yielding activities as provided by the respondents.

In estimating daily real income, the purpose was to imply all income that accrued to a woman covering all daily activities from the moment she wakes up until she goes to bed. Care was therefore taken to carefully estimate or proxy incomes from all economic activities including those which are in kind, which are normally not converted to cash in the market place.

Therefore, incomes from backyard farming and gardening (foods consumed in the home) and portions of fish catch apportioned to the household for consumption and other such gains in kind were quantified. For example, if a fisherwoman responds that her family does not buy fish but relies on her catch, we estimated how much such a family size would consume and converted it to cash using the market price. A similar thing was done for backyard farming and butchering.

8.2. Real Daily Income from all Sources

Out of a total of 88 respondents, 78 (89%) had incomes either from primary or from secondary activities. The average daily income from all sources was N140 with a standard

deviation of N100 which was a reflection of the divergence in income levels. The data highlighted one other significant information which is the fact that, marketing rather than production or processing brought the highest income, while fish production took the rear out of all the fishing-related activities (Table 14).

Petty traders even did better than the fisherwomen and the processors. It is not surprising then that we have more women in fish marketing and other types of petty trading. The women who wait on shore (the pier) to buy the product and resell earn more. The return for those who buy the processed (smoked) fish was even much higher than for those who sold fresh fish products. This difference in returns is due mainly to the loss of quality and quantity through spoilage which is usually experienced by those who sell fresh fish.

As shown in Table 13, the majority of the respondents (60%) had daily income of N200 and below while 34% had incomes ranging from N201 to N1000. Only 2 (2%) realised daily incomes of N800 and above.

The divergence in income is a reflection of the types of activities and the volume and magnitude of trade and production embarked upon. For example, the least income which was from a mat-weaver who had no other source of income was N24/day while the highest was N2,500 from a super market operator.

The highest daily income from a fishing-related occupation was N1875 from a fish marketer who also had no other secondary activity. In between these two extremes were incomes from various other occupations and combinations of occupations. As shown in Table 6, the most common occupation was fish marketing which engaged about 25% of the respondents.

As reflected in Table 14, fish marketers had the highest average daily income of N232 followed by petty traders whose average daily income was N159. The least income among the respondents was N33 which was from farming.

Fish capture attracted an average daily income of N129 in Koko. A CBN/NISER (1992) national study on the impact of SAP on Nigerian Agriculture had put the average daily income amongst fishing households at about N65.

National studies of the type reported here tend to reflect divergences in sample locations; interviewer expertise; and the willingness of respondents across the study area to respond truthfully to questions on income because of tax implications and other fears. This is especially true only when the enumerators are not familiar to the respondents (Okpanafe et.al , 1991). This may be the reason why the national figure reported here was on the low side when compared with the Koko case study.

Table 13 Daily Income Amongst the Respondents

Income (N)⁷	Frequency	Percentage
20-200	47	60
201-400	14	48
401-600	8	10
601-800	4	5
801-1000	1	1
1001-1200	-	-
1201-1400	-	-
1401-1600	2	3
1601-1800	-	-
1801-2000	1	1
2000+	1	1
TOTAL	78	100

Table 14: Average Daily Income from each of the Major Occupations

Major Occupations	Average Daily Income (N)
Fishing	129
Fish Marketing	232
Fish Processing	149
Trading	159
Farming	33
Civil Service	60
Fashion Designing	135
Others	125
Average Income	140

⁷ Since most of the figures were calculated from weekly and monthly estimates, a 20-day month on the average was used. This was based on input from the respondents to effect that the maximum number of full days for fishing (production, processing and marketing) was not more than 20.

9. CONCLUSIONS AND RECOMMENDATIONS ON AREAS (TECHNICAL, ECONOMIC, AND INSTITUTIONAL) OF ASSISTANCE

9.1 Conclusions

This study has clearly demonstrated that Koko fishing communities provide different types of employment for different women. However, the driving force behind the economy of the community is fishing and its related activities. Because women are more involved in the marketing and processing of fish, their role cannot be over-emphasized.

A downturn in the fishing industry at Koko means a downturn in the economy of the entire Koko community. Given the prevailing economic situation in the country, the women fisherfolk are going through hard times. Volumes of catches are dwindling, spoilage is increasing, while other sources of employment are fast disappearing. In spite of all these, the women still have to divide their valuable time between income-generating activities and household chores that do not attract any cash benefits.

Therefore, steps must be taken to improve the economic well-being of the fisherfolks in this area, who are quite willing and ready to utilise such assistance judiciously.

9.2 Recommendations

This study has highlighted some of the problems confronting the fisherfolks in Koko fishing communities, as well as other categories of the working population.

Some of the problems are:

- Loss of income from fish spoilage (fish spoilage occurs from poor handling, inadequate transportation, lack of storage facilities and poor processing technology).
- Low volume of production due to inadequate capital (fishing equipment and inputs).
- Lack of understanding of the roles, functions and advantages of cooperative societies.
- Absence of employment opportunities.
- Transport and storage problems.

To improve the situation, it is recommended that the following steps be taken:

1. Provision of capital for the purchase of outboard engine through a cooperative revolving loan fund. This would enable fisherfolks to reduce the time needed to move the freshly caught fish from the fishing ground to the point of sale and thus reducing spoilage.

As an alternative or in addition, training in the building and using of insulated ice boxes to transport and store fish products from the fishing ground to the point of sale should be introduced to the fisherfolks. They should also be taught better fish handling techniques to prevent bruising which eases bacteria infection and spoilage.

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

effect their desires. Consequently, it is suggested that capital could be provided, through a revolving loan to enable fisherfolks to purchase bigger fishing equipment such as fishing nets, outboard engines, traps etc.

3. Only a handful of the fisherfolks (20%) belong to cooperative societies. Others claim ignorance of their existence or of their roles and functions. Others yet are not educated about their advantages and are thus scared of becoming members. Since one of the easiest channels for receiving help (financial, technical and training) is through the cooperative organisations, training workshops on the benefits of cooperative membership should be organized for the fisherfolks.

4. Income is an important parameter in determining savings and re-investment. Most of the respondents lack the banking culture. It is impossible to use banks as a means of extending loans (especially short term loans) to intending borrowers without a banking culture. The respondents should be trained in the act of banking and credit management. A workshop in this respect would be appropriate whereby the participants can be taught the rudiments of the savings culture and its advantage in making borrowing easier from banks. Complete dependance on external loan sources without input from the respondents might be far fetched. If respondents learn and are taught to save, they could improve their lots through bank borrowings.

Koko, being a fishing community, depends solely on economic activities revolving around fishing. The remaining income-generating activities all depend on what the stakes are at the fishing grounds. If the volume of fishing is increased through the injection of capital, through training and other support programmes, the entire community including non-fisherfolk would all benefit. Increased fishing activity means increased marketing volume. These would mean more money and a wider distribution of income since more people would now be employed by the different fishing activities. Increased “fishing income” implies increased activity for transporters, petty traders, hairdressers, fashion designers and other professions.

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APPENDIX: List of People Interviewed

1. Mrs. Helen Abioritsegbemi
2. Mrs. Ejime Adamu
3. Mr. Aseph Adeyemi
4. Mrs. Helen Adeyemi
5. Miss Gloria Ajiyen
6. Mrs. Queen Akatakpo
7. Mrs. Sheila Akonu
8. Mrs. Vivian Akonu
9. Mrs. Felicia Akpan
10. Mrs. Helen Akuku
11. Mrs. Elizabeth Amaye
12. Mrs. Belief Amunugo
13. Mrs. Esther Aronkonu
14. Mrs. Alice Atsenuwa
15. Mrs. Remi Atsenuwa
16. Mrs. Cemetina Brassey
17. Mrs. Mercy Buwa
18. Mrs. Patience Buwa
19. Mrs. Helen Daibo
20. Mrs. Rose Eayetitor
21. Mrs. Comfort Edu
22. Mrs. Comfort Egbe
23. Mrs. Joy Egbede
24. Mrs. Queen Egbede
25. Mrs. Aritetsoma Nelly Egere
26. Mrs. Beatrice Enaite
27. Mrs. Florence England
28. Mrs. Comfort Ero
29. Mrs. Comfort Etan
30. Mrs. Felicia Etchie
31. Mrs. Nayon Etchie
32. Mrs. Victoria Etchie
33. Mrs. Rose Etete
34. Mrs. Ofé Etuwewe
35. Mrs. Queen Etuwewe
36. Miss Omuli Ewatan
37. Mrs. Lucy Fashaya
38. Mrs. Mabel Hammond
39. Mrs. Mene Igbebishe
40. Mrs. Evelyn Ijirigho
41. Mrs. Aishatu Isa
42. Mrs. Queen Iyarefe
43. Mrs. Florence Jakpa
44. Mrs. Janet Jalowo
45. Mrs. Philomena Japhet
46. Mrs. Alice Jiringho
47. Mrs. Koma Jiringho
48. Mrs. Victoria Jiringho
49. Mrs. Anna Jones
50. Mrs. Maria Kpenosen
51. Mrs. Stella Lily
52. Mrs. Nwuye Lion
53. Mrs. Margaret Mamman
54. Mrs. Mercy Mato
55. Mrs. Mabel Mikie
56. Mrs. Christiana Moghia
57. Mrs. Esther Odonome
58. Mrs. Alice Odudu
59. Mrs. Biodun Odudu
60. Mrs. Janet Ofonodo
61. Mrs. Omowumi Ogedem
62. Mr. John Ogilogi
63. Mrs. Veronica Okoh
64. Mrs. Felicia Okotie
65. Mrs. Patience Okufusa
66. Mrs. Alice Olowho
67. Mrs. Omowumi Olowho
68. Mrs. Queen Omadeli
69. Mrs. Ama Omagbe
70. Mrs. Grace Omagbe
71. Mrs. Lady Omasheye
72. Mrs. Favour Onobokhua
73. Mrs. Roseline Osikhena
74. Mrs. Betty Oritsadere
75. Mrs. Folake Oritsenuogho
76. Mrs. Roseline Osikhena
77. Mrs. Mary Proso
78. Mrs. Emmanuella Ugwu
79. Mrs. Comfort Ukuti
80. Mrs. Mercy Ulori
81. Mrs. Helen Rabo
82. Mrs. Christiana Salihu
83. Mrs. Victoria Shodi
84. Mrs. Happy Sunday
85. Mrs. Felicia Tiemo
86. Mr. Oritsematosan Tonwe
87. Mrs. Christiana Tuoyo

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