

THE LIVELIHOOD STRATEGIES OF WOMEN FISH TRADERS IN ADAPTING TO CULTURAL AND INSTITUTIONAL CONSTRAINTS IN IBAKA, NIGERIA

Ekaete Udong

Sociology of Consumers and Households Group, Wageningen University
ekaete.udong@wur.nl

Anke Niehof

Sociology of Consumers and Households Group, Wageningen University
anke.niehof@wur.nl

Aad van Tilburg

Marketing and Consumer Behaviour Group, Wageningen University
aad.van.tilburg@wur.nl

Abstract This paper presents findings from a study of women fish traders in Ibadan, Nigeria, which investigated their livelihood strategies, assets and resources, and how institutions and culture mediate their choices. Case studies were conducted on eleven fish traders purposively selected in 2008. Fish trade is a gendered activity in Ibadan. Constraints caused by culture and institutions pose challenges to success. Women selling *bonga* (*Ethmalosa* species), croakers (*Pseudolithius* species), catfish (*Arius* species), barracuda (*Sphyraena barracuda*) and crayfish (*Palaemon* species) were interviewed and categorized into small, medium and large scale, using capital outlay. Though fish trade offered them opportunities of earning income, threats and shocks like seasonality and fire incidents, and constraints like polygamy, patriarchy, underdeveloped infrastructure and insufficient working capital challenged sustainable livelihoods. Livelihood strategies adopted included diversification into petty trading, farming, equipment and property leasing and fish trade. These were influenced by age, educational status, experience and capital outlay.

Introduction

In 2006, out of the 1.5 million metric tons of fish consumed in Nigeria, 800,000 metric tons were imported (USDA 2007), while most of the rest were obtained from artisanal fisheries. This underscores the importance of artisanal fisheries which recruits over five per cent of the 144 million people, directly or indirectly (UNDP 2004, 2006; FAO 2007).

Studies of small-scale fisheries in the developing world in recent times concluded that the open-access nature of artisanal fisheries and the over-dependence of fisher-folk on the resource lead to poverty, marginalization and resource

degradation (Pollnac 1991; Smith 1979). Small-scale fisheries have also been called 'the occupation of the last resort' and fisher-folk 'the poorest of the poor' (Pollnac 1991). In response to the dynamics of resource fluctuations, shocks and stresses and other constraints, and to avert poverty, fisher-folk adopt certain livelihood strategies (Pollnac 1991; Williams and Awoyomi 1998; Bene, Macfadayen and Allison 2006).

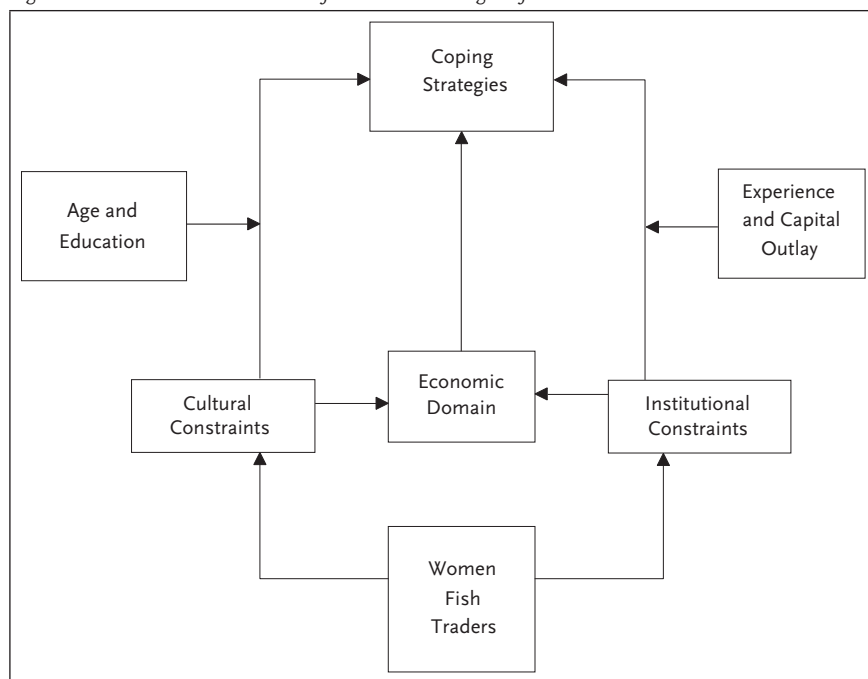
Anderson, Bechhofer and Gershuny (1994) defined strategy as the overall way in which individuals, and possibly collectivities, consciously seek to structure, in a coherent way, actions within a relatively long-term perspective, while Chambers and Conway (1992) defined livelihood as comprising the capabilities, assets (stores, resources, claims and access) and activities required for a means of living. Diverse structures and institutions, combined, shape the ways in which different people access, use and derive wellbeing while processes determine the way in which structures and individuals operate and interact (Ellis 2000). In this context, the women fish trader's livelihood strategies are their activities planned to ensure the survival of their families. These are highly dynamic and vary over time, depending on the seasons (Joseph 1995), age and stage in the life cycle (Ellis 1998, 2000), prevailing institutional environment (Ellis 1998, 2000) and the culture (Overa 2001).

The term 'survival' strategy was coined by Wallace (2002), referring to poor people struggling to survive in risky environments, whose survival and prosperity depend on the pursuit of diverse and multiple activities simultaneously by household members (Niehof 2004; Niehof and Price 2001; Chambers and Conway 1992; Scoones 1998). The nature, scope and effectiveness of these activities depend on availability of resources, the type and status of these resources, people's capability to create or access them, the ability and skills to utilize the resources or assets, and the contextual risks and uncertainties involved.

The objective of this study was to carry out an exploratory research on the livelihood strategies adopted by women fish traders in Ibaka, Nigeria, in their bid to adapt to the prevailing institutional and cultural constraints. In analyzing their livelihood strategies the Sustainable Livelihoods Approach (SLA) framework was used because it enables a better understanding of the fish traders' adaptive strategies, and presents a holistic view of the dynamics of livelihood generation. The framework, adapted from Scoones (1998) and the SLA (DFID 2000), shown in Figure 1, distinguishes five sets of livelihood assets that are essential to the traders' livelihood strategies: human, natural, financial, social and physical capitals (Bebbington 1999). They utilize these assets to adjust to their physical, social, economic and political environments and develop their livelihood strategies to strengthen their well-being. The context in which they operate comprises threats as well as mediating structures and processes, which render them vulnerable to negative livelihood outcomes. The threats include seasonality, frequent fire incidents, HIV/AIDS, and conflicts, while the mediating structures and processes include their culture, formal and informal institutions. Their livelihoods strategies are viewed as sustainable if they can adjust to the threats and deal with the given structures without compromising their future ability to survive shocks. A sustainable liveli-

hood strategy therefore would lead to increased income, reduced vulnerability, food security and enhanced well being.

Figure 1: Theoretical Framework of Livelihood Strategies of Women Fish Traders



In considering the basic elements presented in the adapted framework of the DFID (2000) and Scoones (1998) therefore, the key question to be answered in this study is:

Given the socio-economic conditions, seasonality and the livelihood resources and assets possessed by the women fish traders in Ibaka, what livelihood strategies do they adopt, and how is their ability to carry out such strategies and achieve desired outcomes affected by cultural factors and formal and informal institutions?

The SLA has been used before on poverty reduction projects aimed at reducing vulnerability in communities engaged in small-scale fishing, fish processing and trading (Neiland and Bene 2004; Stirrat 2004), in management of small scale fisheries (Allison and Ellis 2001) and its principles have been applied in fisheries development policy and practice (Allison and Horemans 2006). The approach seeks to identify what the poor have and to strengthen people's own inventive solutions (Moser 1998), and aims at meeting various consumption and economic necessities, coping with uncertainties and responding to new opportunities at household levels, social networks and the community (De Haan and Zoomers 2005). It is actor-oriented, place-focused and context-specific (Marschke and Berkes 2006).

Culture in this study refers to the norms, values, ideologies, customs, mores and traditions that underlie social structures and informal institutions. Formal institutions are structures, organizations and policies, in this case especially economic ones, that together constitute the formal institutional environment (cf. North 1991; Williamson 1991). Institutional constraints in this study include the lack of, or non-implementation of relevant policies, the absence of appropriate structures, limited availability of infrastructural facilities, information, access to markets, and finance and extension services, while cultural constraints include those related to gender, religion, norms and beliefs, ethnicity, polygamy and patriarchy. Also, seasonality, which affects prices, employment opportunities and food availability, is one of the greatest and most enduring sources of hardship for people in Ibaka, as in other Nigerian fishing communities (Adewale and Ikeola 2005).

Women fish processors and traders in fishing communities in the Niger Delta are those wholesalers who sell fresh fish at the beach, process fresh fish for sale, or buy processed crayfish for sale to retailers from the cities. Because of their involvement in polygamous marriages their families are matrifocal, and they continuously struggle to construct their livelihoods within the context of institutional constraints such as lack of infrastructural facilities (electricity, water, roads, health and educational facilities), lack of access to resources and information, which together with the cultural norms, pose challenges, leading to the adoption of diverse livelihood strategies. Livelihood strategies of fish traders have been studied by Satia and Wetohossou (1996) in West Africa, Odotei (2002a) in Cote d'Ivoire, Overa (1993) in Ghana, Odotei (2002b) in Benin, and Adewale and Ikeola (2005), Verstralen and Isebor (1997), Williams (1999), Alamu (1991, 1993), Alamu and Mdaihli (1995) in Nigeria. Other studies conducted in West Africa include Overa (2001) on institutions, mobility and resilience in the Fante Migratory Fisheries in Ghana, Njie (2002) on the fish distribution and constraints to the domestic fish trade of the Gambia; Tall, (2002) on the obstacles to the development of small-scale fish trade and Vannuccini (2000) on post-harvest practices in fishing communities. In Nigeria, Akpabio and Ekanem (2008) studied the extension needs of fish marketers, Ikurekong (2005) local resource development strategies in coastal areas in Akwa Ibom State, Jim-Saiki and Ogunbadejo (2003) small scale fish production, processing and marketing in Lagos State, and Flake and Nzeka (2007) Nigerian fishery products and fish market, among others.

However, studies on the effect of cultural and institutional constraints on the livelihood strategies of women fish traders in Nigeria have not yet been conducted. This study therefore aims at providing information for a better understanding of the livelihood strategies of women fish traders in Ibaka, and the adaptive responses of fish traders to institutional and cultural constraints, so that the solutions to food insecurity among fisher folk households can be found (Allison and Horemans 2006), and appropriate entry points for development intervention or policy support for poverty reduction in fishing communities determined (Allison and Ellis 2001).

Processing and selling of fish in fishing communities in West Africa, just as in Ibaka, has been reported as a 'gendered' activity by Satia and Wetohossou (1996) and FAO (2007), by Odotei (2002a) in Cote d'Ivoire, Overa (1993, 2001) in

Ghana, and Odotei (2002b) in Benin, and in Nigeria by Adeyi (2004). The roles of women as fish processors and marketers have also been reported in Nigeria by Adewale and Ikeola (2005), Verstralen and Isebor (1997), Williams (1996), Williams and Awoyomi (1998), and Alamu (1991, 1993). 'Fish mammies' have been reported to play an important part in *bonga* fisheries in Ghana by Overa (1993). They are marketing agents responsible for selling the fish landed to wholesalers and processors, advancing money to fishermen for fishing inputs, and equipping the boats with food and fuel needed for fishing trips. The gendered nature of fish processing and trade arises from the fact that skills and task training for the acquisition of local knowledge are normally age and gender specific, and taught by members of the appropriate sex (Ruddle 1993; 2000). These also suggest the 'gendered' nature of local knowledge and its systems because men and women usually have different and often complementary economically productive roles, different resource bases, and face different sets of social constraints (Omoto 2004).

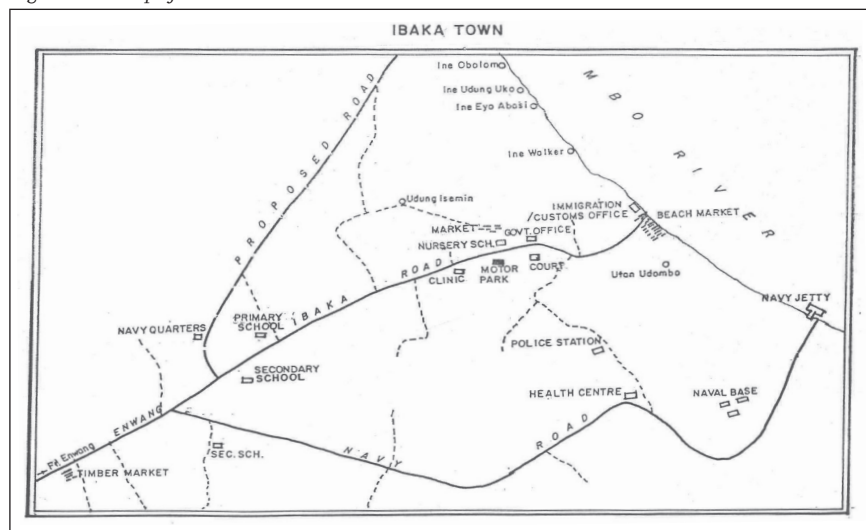
The fish trade in Ibaka follows the traditional pattern obtained for food trade in most West African countries (Lutz and Van Tilburg 2007; Clark 1994; Van Tilburg 1992; Moll, van der Staaij and Van Tilburg 2001). The clients supplying the goods and the regular customers who the wholesale traders sell to are acquired through social networking (Fafchamps and Minten 2002). The transactions are small and undocumented, with many intermediaries, resulting in the traders adopting practices that minimise the potential for breach. Uneven quality of goods gives rise to adverse selection while screening of potential suppliers is complicated due to lax payment practices (Van Tilburg 2001). The vagaries of weather, poor infrastructure and information asymmetry, with high levels of price distortion, several production units and unclear national agricultural policy frameworks translate into transportation delays, storage losses, inefficient and non-competitive market (Van Tilburg 1992; Moll, Van der Staaij and Van Tilburg 2001). Transaction costs are therefore unduly high (Fafchamps and Gabre-Madhin 2006; Moll, van der Staaij and Van Tilburg 2001) and there is high price volatility and low liquidity (Nazneen, Peerlings and Van Tilburg 2007).

The Study Area and Ibaka Community

Akwa Ibom is one of the six states in the Niger Delta, Nigeria. It is under-developed even though oil is exploited both offshore and onshore its precincts. Located on the south-eastern coastline, it has several fishing communities, with Ibaka as the biggest, most dynamic and strategically located. Fish production, processing and fish trade are the major occupations in the community which has more fishermen and women fish processors and traders than any other fishing community in Akwa Ibom State (Ikurekong 2005). It is also the only permanent fishing community in Akwa Ibom State with an established fresh fish beach market for *bonga* and big fish, another market upland, where smoked *bonga* and crayfish are sold in commercial quantities and a motor park from where all the fishery products are evacuated. It is linked to Oron, the nearest town by a forty-five kilometres partly-maintained road, and from there to the hinterland. There is a Naval Base,

Customs office, Marine Police post, Fisheries Extension Office, Health Centre and a Secondary school. The estimated population is about 5,000, forty nine per cent of which are male and fifty one per cent female, like the national average. Over forty five per cent of the population is directly involved in the fishery (NBS 2006; EIA Report 2006).

Figure 2: Map of Ibaka



Source: EIA Report 2006

The community benefitted from an IFAD/UNDP-assisted project which disbursed loans to fisher-folk in three states of the Niger Delta between 1991 and 1996, built the foot bridge that connects the two sections of Ibaka beach, and provided a Ventilated Improved Pit (VIP) toilet facility in the community. Most of the population profess Christianity, with over twenty churches of different denominations, offering social, spiritual and moral support to the women. Only few people are known to practice traditional religion or combine both. The ethnic groups identified in *Ibaka* include the *Oron*, *Effiat*, *Ibeno*, *Kalabari*, *Ilaje*, *Ibibio*, *Ikang*, *Esit Eket*, *Ijaw*, *Andoni*. There are also migrant fishermen from Ghana and Cameroon. The Ghanaians, who specialize in *bonga* fishery are either captains on Nigerian-owned boats, or boat-owners themselves. The Cameroonians, on the other hand, are experts at catching big fish with spears and are hired on seasonal contracts basis by the big fish boat owners. These foreigners thus contribute to the fresh *bonga* and big fish supply for the fish traders. Due to the ethnic diversity, the language of communication in *Ibaka* is 'Pidgin English' – an adulterated, localised English spoken on the streets, markets and fishing communities in Nigeria (Ikurekong 2005).

Cross-border trade is carried out by powered boats between Nigerian traders and their counterparts from Equatorial Guinea, Cameroon and Gabon through *Ibaka*. Bunkering of petroleum products also occurs. Four categories of migrants were identified: The regular migrants from other parts of Nigeria look-

ing for a means of livelihood, displaced fisher-folk from the Bakassi Peninsular who fled their homes during the conflict between Nigeria and Cameroon over the oil rich area, other fisher-folk who migrated from temporary and semi-permanent fishing settlements across the river after losing everything to fire incidents, and foreigners 'following the fish'.

Case Selection, Data Collection and Analysis

Using information obtained from the Fisheries Extension Officers, the market leaders, other local leaders and personal observation, the relative numbers of women involved in the different marketing groups, were used in determining the required sample size. A sample of hundred fish traders was purposively selected using a multi-staged sampling technique involving area and subject sampling and primary data were collected from them using a pre-tested, structured questionnaire. After the survey, preliminary data analysis led to the identification of three important fish trade groups functioning in the community, comprising *bonga*-fish, big fish and crayfish traders. In-depth data was collected from eleven fish traders selected from these groups through the case study method. Several criteria were used in the selection process to ensure the selection of cases that are sufficiently insightful with respect to the objective of the study.

Information was also collected from other interest groups and stakeholders in the community, the boat owners, youths as well as the elders, who, being custodians of the culture, could constitute some of the problems, and whose involvement would be required in solving them (Kotler, Roberto and Leisner *et al.* 2006). Also, gathering data from stakeholders helped generate a holistic view of the constraints and the women's adaptation strategies, ensured reliability and validity (Yin 2003). Triangulation helped confirm the facts through focus group discussions, key informant interviews, observation, and desk research. The desk research involved the study of literature, government reports, websites, publications and journals, and helped in substantiating the outcomes of the interviews and establishing a consistent trend, apart from putting the issues and events in proper perspective. Information collected dwelt mainly on the fish traders' livelihood activities, cultural and institutional constraints related to their livelihood strategies, and adaptation strategies. Household production activities, the fish processing and marketing practices and their non-fish economic activities as well as the threats and shocks, and adaptive mechanisms used to overcome them were also discussed.

A case study protocol was prepared with lists of topics for discussion. Interviews started with explaining the study objectives before discussing specific issues. The discussions were transcribed and issues requiring clarification were verified on repeat visits. A total of six focus group discussions (with five to eight participants each) were conducted in the community. The groups were drawn from each of the three women fish trade groups, the boat owners, the youths, and the elders.

Information obtained from the interviews, focus group discussions and the desk research were collated through an iterative process, to unravel the livelihood strategies of the fish traders, the major constraints affecting their economic activities at household and community levels, and their adaptation strategies. The summary report highlighting the main issues, which was prepared by the researchers involved in the data collection was used in the interpretation of the results. By comparing the results within and across the fish trade groups, it was possible to isolate the major constraints, the adaptation strategies, and the factors determining the strategies adopted by different categories of fish traders.

Results and Discussion

For livelihoods to be sustainable, livelihood strategies require the capability to respond to changes and to continuously renew and develop adaptive strategies. It is within this framework of adaptability to the challenges posed by the institutional and cultural context that the livelihood strategies of the fish traders in Ibaka were studied.

The results are presented in the order of the concepts as follows: 1) Fish trade and seasonal calendar; 2) The nature of the fish trade; 3) Categories of fish traders and their profiles; 4) Livelihood occupations; 5) Institutional constraints and coping strategies; 6) Cultural constraints and coping strategies.

Fish Trade and Seasonal Calendar

The different fish species caught by the fishermen and the quantities landed often depend on the type of gear used and the time of the year. The fish trade is thus affected by seasonality (Joseph 1995), as shown in Table 1. Fish species landed include the pelagic species – *bonga* (*Ethmalosa* species) and sardines, (*Sardinella* species), ‘big fish’ – (croakers, *Pseudotolithus* species), barracuda (*Drepane africana*), shiny nose (*Galoides* species), sharks (*Carcharinus* species), catfish (*Arius* species), threadfins (*Pentanemus* species), red snapper (*Lutjanus* species), and crayfish (*Palaeomon* species). Two distinct seasons, the peak and lean seasons, with variations within and between seasons were identified. The peak season which lasts from around October till March is characterized by landings of large quantities of most fish species endemic to the area, especially the *bonga*, croakers, catfish and crayfish while the lean season which lasts from April to September has characteristic low fish landings and high prices. Different species of big fish are landed in sufficient quantities during the months between the peak and lean seasons so incomes for the big fish is fairly regular though higher during the peak season. The big fish are caught during lean season mostly around oil and gas installations offshore where fish congregate to eat either the algae growing on the installations or smaller fish feeding on the algae. However, during July and August, when the sea is at its most stormy and turbulent, almost no fishing takes place, fish supply is at its minimum and prices of the products are at their highest. Fishermen normally use this period to mend their nets and procure new equipment and accessories, preparing for the next peak season.

Table 1: Demographic Profile of Fish Groups in Ibaka

Variable	Bonga		Big Fish		Crayfish	
	N= 40		N= 30		N= 30	
	Mean	SD	Mean	SD	Mean	SD
Age of women	37	4.58	42	5.24	34	7.36
No of years of schooling	7	3.75	9	4.31	7	4.38
Household size	4	1.36	5	1.36	4	2.06
Years of experience	11	5.2	21	11.34	7	6.7
Amount of capital used (Naira)	38820	27.62	73,083	58.58	23,697	13.38

Source: Household Surveys (2007 – 2008).

1US Dollar = Naira 120

The Nature of the Fish Trade

Bonga

In the *bonga* fisheries men fish and women process and sell. The job of the *bonga* fishermen thus terminates at the beach after handing over the catch to their ‘fish mummies’ or wives who act as agents. These are rich women who have investments in the fishing unit either through the loan of the boat, fishing equipment or working capital, which entitles her to the catches until her loan is defrayed. The process of handing over the fish landed depends on the verbal agreements made between the fishermen or boat owners and the fish mummies or wives. Dealership is well organized at the beach because only the ‘fish mammy’ or the fisherman’s wife has the exclusive right to take delivery of the fish during landing. Fish mummies acquire their status in various ways. Most fishermen operate at near subsistence level with income barely taking care of immediate family needs. Operational expenses like input replacement, wages to assistants or acquisition of improved fishing inputs are met by credits supplied by the fish mummies or the informal market. The fish mummies are recognized in the *bonga* marketing channel as the informal creditors. For a fisherman who requires urgent replacement of input, occasioned by unforeseen hazards at sea (such as storm or loss of trawl nets from piracy or commercial fleets), or damage to craft and engine ashore by storm, institutional credit is just not available. The usual practice is for fishermen to approach wealthy fish mummies for assistance who provide them with cash or inputs on agreed terms and conditions. The entire catch for the season would be sold at a uniform, pre-determined price until the loan and interest are repaid. Even fish for his daily meals is under rigid check by the sole benefactor. Fish mummies are thus very important in the transportation, distribution and marketing of fish because they constitute over ninety per cent of fish distributors.

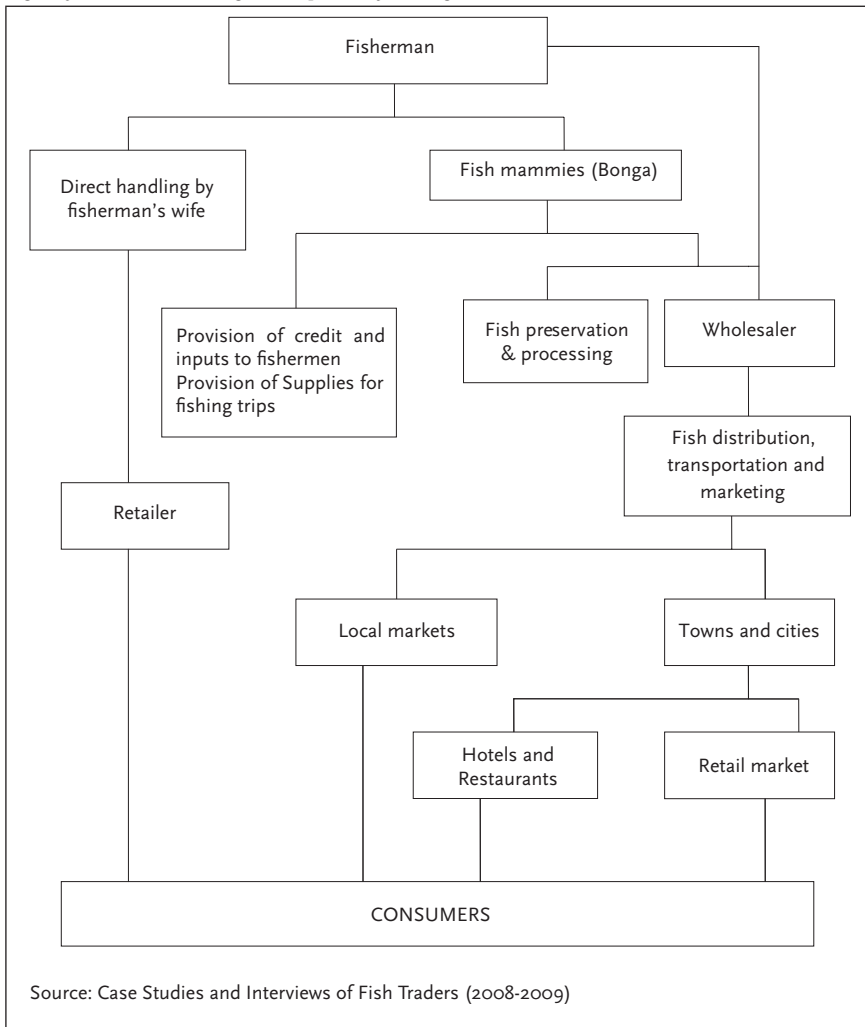
The fish marketing structure for *bonga*, showing the relationship between the fishermen, fish mummies, fishermen’s wives, wholesalers, retailers and consumers is presented in Figure 3. Stiff competition exists among the wealthy mummies for control of sizable portions of supplies to the market and they constitute themselves into middlemen between the fishermen on the one hand, the wholesaler, retailer and consumer on the other. The flow of the products from source

to consumers, constituting its marketing channel, is enabled by them. Only registered fish mongers (wholesalers) can buy fresh *bonga* at the beach and these are bought in basins of about twenty kilograms from the mammies at the beach, transported to their houses using 'barrow boys' (boys below eighteen who have either dropped out of or never attended school, and consider the wheel barrow business more lucrative than attending school), processed and sold to retailers who come from cities like Uyo, Port Harcourt, Onitsha, Warri, Lagos and Abuja to buy them. Processed fish is sold either at the Ibaka market or in the homes of the wholesalers.

Big Fish and Crayfish

The big fish and crayfish marketing systems are different and straightforward. About eighty per cent of the big fish caught is sold fresh at the beach and the rest is smoked for sale at the market or to customers at home. The fisherman transfers all the fish caught after a fishing trip from the boat to the shed, weighs them and calculates the total cost. The fish is either sold at previously agreed prices directly to his 'Madam' – the wholesaler/boat owner who hired him from the Cameroons or at higher prices to his other regular customers. Two categories of women wait for big fish at the beach, the wholesalers who buy directly from the boats and the retailers who come from different towns to buy from the wholesalers. The latter carry ice boxes and coolers to ensure the preservation of the fish to their destinations. During the peak season unsold fish is either transported to the cold room at Oron, about forty-five kilometers away by the wholesalers or stored in freezer boxes with ice while arranging for immediate sale through the mobile telephone service. Crayfish are sold in bags to the women at Ibaka beach by fishermen who transport them from semi-permanent communities from across the Mbo river after processing.

Figure 3: Fish Marketing Activity Chart for Bonga



The wholesalers then convey them to Ibaka market for sale to the retailers from the cities. Entry into the fish trade attracts some ceremony. For example, *Mma Oke* (*Mma*, title for a middle aged woman in Ibibio language), a medium scale big fish trader explained her initiation ceremony into the ‘*Ata Nsiyak*’ group when she arrived Ibaka newly and wanted to start the big fish trade. The initiation involved introducing her as a prospective trader to the executives and members of the group by her sponsor, her aunty who was a member, in a ceremony, with the presentation of:

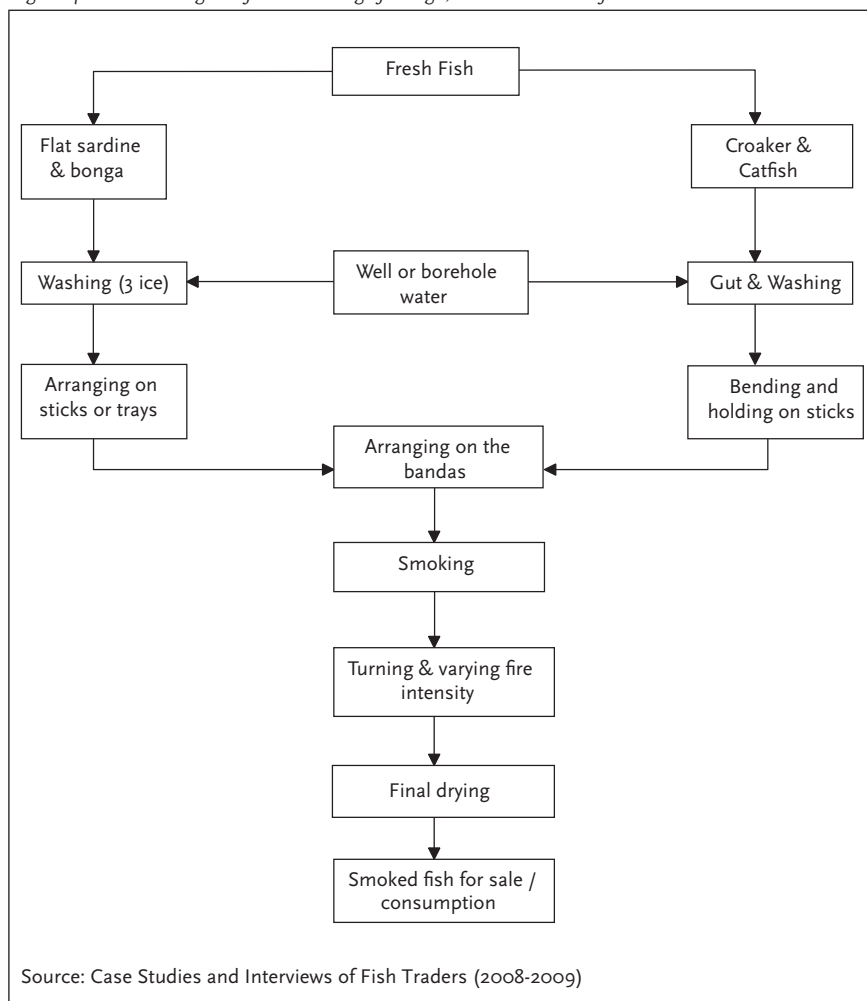
- Two crates of soft drinks (Coca cola or fanta);
- One bottle of Schnapps;
- One bottle of *ogogoro*, (a local gin brewed from palm wine and sold in local communities all over most of southern Nigeria);

- Two packets of cabin biscuit;
- N20, 000 (About 150 u.s. Dollar).

The name '*Ata Nsiyak*' derives from the question '*Ata nso iyak?*' in *Ibibio* language which literarily means: 'What type of fish do you eat?', and is directed at no-one in particular. By adopting the name the group is trying to prove to the *bonga* and crayfish sellers that they deal with superior species of fish like red snappers, baracuda and catfish which are treated as delicacies, and not *bonga*, which is regarded as 'poor man's fish'. An initiation ceremony also applies if one is joining the *bonga* or crayfish group but in this case the cash payments are lower, Naira 5,000 and 10,000 respectively. Each group has its own leadership structure, even though *Mma Hana*, the leader of the big fish group, a boat owner and a recognized title holder in the community, is the overall leader of all the women's groups at the beach.

All the *bonga*, sardines and crayfish are smoked while only about twenty per cent of the croakers and catfishes, among the 'big fish' are smoked. The smoking process is basically the same for the three groups except that the *bonga* are stuck upside down within the meshes of chicken wire, or hung on specially prepared sticks, passed through their eyes. The crayfish are spread evenly on mats, and placed on top of wire gauze while the big fish are bent on sticks before smoking. The fish are gutted and washed with well or borehole water. Only female household members are involved in the gutting and cleaning of the fish, including young, under-aged girls. During the peak season when large quantities of fresh fish are landed, medium and large scale traders hire other women in the community who are professionals to process their fish to avoid spoilage. The fish are smoked in several layers in '*bandas*' (separate smoking houses), or inside their kitchens using open fire. Commercial wells and boreholes owners sell the water used in the households at Ibaka while firewood is bought from male wood sellers who harvest them from nearby mangrove forests. The flow diagram for fish processing is presented in Figure 4.

Figure 4: Flow Diagram for Processing of Bonga, Croaker and Catfish



Profile of Fish Traders

Three distinctive fish trade groups were identified, the *bonga*, big fish and crayfish. These fish species contribute most to the fishery and the trade provides a regular source of income to the community. *Bonga* fishery is the most important because it engages more than half the population of Ibaka one way or the other. Women get entry into the various groups either through sponsorship by friends or inheritance from their mothers or aunts because the fish trade is strictly a women's affair. A proper registration process is however required for joining each group, regardless of the mode of entry.

Table 2: Seasonal Calendar for Fish Trade in Ibaka

Months	Seasons	Fish Species Sold	Remarks
January – March	Peak season for <i>ekpai</i> , big fish and crayfish; Low catch for bonga (<i>Ethmalosa spp.</i>)	<i>Sardinella maderensis</i> , Croakers, barracuda, shiny nose, bonga and crayfish	Dry season
April – May	Low season begins for all species	Big fish, crayfish & bonga	Rainy season starts
June – August	Low season for all species	Bonga, big fish & crayfish, Sharks	Rainy season, Rough Seas
September – October	Beginning of bonga season Good season for big fish and crayfish	Bonga, big fish and crayfish	End of rainy season/ Beginning of Dry season
November – December	Peak period for <i>ekpai</i> , <i>ibat</i> , big fish and crayfish.	<i>ibat</i> , <i>ekpai</i> , big fish, and crayfish	Dry season

Source: Survey, Focus Group Discussions and Interviews with Fishermen and Fish Traders (2007 – 2008).

The mean ages for the groups, (38.25) for *bonga*, (43.50) for big fish and (33.83) for crayfish are not significantly different because of the large standard deviations observed in the three groups. Finding younger women in *bonga* and crayfish groups may be because smaller working capital is needed to start these trades. It is also easier to pair up and start or get sponsorship from a fish mammy for *bonga*. Also, processed *bonga* and crayfish lend themselves to storage, sometimes up to a few months without electricity. Crayfish business also gives more free time for diversification of livelihood activities, formal educational or skills acquisition.

The lower number of years spent in school by the *bonga* (4.90) and the crayfish (5.17) groups suggests that though education is not a screening device in the fish trade, big fish trade may require some reading ability (6.83). There were no significant differences between the groups because of the high standard deviations. The mean number of children in all groups (3.95) is lower than the national average (6.2). A similar observation was made by Niehof (1985) in Patondu fishing community in Indonesia and may be attributed to the women's autonomy, acquired through independent incomes earned mostly through fish trade, and extended to cover decision-making in the reproductive sphere, ensuring that child-bearing does not interfere with their fish business (Niehof 2007).

The mean years of experience in the trade is 5.0 in the crayfish group, 29.4 in the big fish group with more elderly members, and 10.5 in the *bonga* group. Wild crayfish price fluctuations reported by the traders may account for newer recruits in the business as experienced people migrate to *bonga* or big fish trade, where prices are usually a bit more predictable. Significant differences were observed in the amounts of working capital (N30,266.90) for crayfish, (N41,450.30) for *bonga*, and (N67,250.25) for big fish traders while no significant differences in age, formal education, number of children and years of experience were observed in the three groups at < .05 confidence level with 2 degrees of freedom.

Levels of monthly incomes in the households are determined by ownership of assets, experience in the fish trade, seasonality, type of fish traded in, and ownership of fishing inputs and boat, capital outlay, leverage, social capital, presence of mother-substitute in the household. Other factors that influence the monthly incomes include ability to engage in non-fish economic activities such as farming, livestock rearing and poultry, rental of family-owned properties, basket production, or being hired in the formal and informal sector.

Livelihood Activities of Fish Traders

A study of the economic activities showed other sources of income as petty trading, dressmaking, hair dressing, weaving of thatch and baskets, farming, providing labor, leasing of market sheds, transport boats, outboard engines and storage facilities to others apart from the fish trade. However, with the isolated location of Ibaka on the coast, limited assets and resources, and fewer opportunities at livelihood generation, the population is dependent on the fishery for their livelihood and fish trade is the primary economic activity of the women, providing income for the households. During the planting season over ninety per cent of the women create time to plant cassava and vegetables upland, for household consumption. Other activities are mostly carried out simultaneously with fisheries activities. For example, *Mma Aty*, a middle-aged, large scale crayfish seller in Ibaka owns a crayfish store and a dress-making shop near the market and employs other women to help her sew. Also, *Sisy Glo* (Sisy, title for a young woman in *pidgin* English), a young trader in big fish, is striving to improve her educational status by attending part-time classes and also owns a beauty shop, to earn additional income. The leader of all the women at the beach, *Mma Hana* owns a fishing boat, a transport boat and outboard engines, and has leased them all out, apart from her engagement in the big fish trade.

Institutional Constraints in the Economic Domain and Strategic Responses

The institutional constraints experienced in the economic domain by the women at the personal, household and community levels and the strategic responses adopted by them are categorized into those relating to finances and marketing, shown in Table 3, infrastructure in Table 4, and labour in Table 5.

Table 3: Institutional Constraints Relating to the Market and Finance and the Coping Strategies of the Fish Traders

CONSTRAINT & CAUSES	STRATEGIC RESPONSES	GRPS
Insufficient working capital due to lack of access to credit facilities	<ul style="list-style-type: none"> – Borrow money from friends and relations; – Pool resources to buy fish; – Buy fish on credit from fish mammy. 	All groups
Limited market outlets and poor market information due to information asymmetry, long distance markets and poor state of outlet road.	<ul style="list-style-type: none"> – Sell sometimes at a loss; – Cold storage or processing of leftover fish; – Sell on credit; – Contact clients in the city. 	All groups
No fresh fish marketing and processing infrastructure at the beach	<ul style="list-style-type: none"> – Sort fish on the dirty beach; – Clean, and smoke fish quickly to minimise spoilage; 	Bonga & Big Fish
Loss of money to creditors caused by lack of storage facility and road accidents.	<ul style="list-style-type: none"> – Get an emergency loan from <i>osusu</i> (self-help) group, friends or relations to continue trading. 	All groups
Loss of money and property due to incessant fire incidents caused by smoking in open fires	<ul style="list-style-type: none"> – Bury money in the ground or save with an <i>esusu</i> group – Tangible assets left in permanent homes upland 	All groups
Loss of fish and fishing equipment at sea due to- non implementation of fishing regulations	<ul style="list-style-type: none"> – Diversification of livelihood activities. 	All groups
Inability to organize in viable economic groups due to poor extension services	<ul style="list-style-type: none"> – Sale at non-competitive prices, fixed individually. 	All groups
Low margins due to lack of storage facility and pricing information	<ul style="list-style-type: none"> – Sale at going price at the beach and market each day. 	
Poor savings due to low profit margins and too many responsibilities	<ul style="list-style-type: none"> – Join an <i>osusu</i> group for mobilizing savings & for access to credit. 	All groups
High price fluctuations due to seasonality and lack of storage facilities	<ul style="list-style-type: none"> – Buy only what they can afford, and the rest on credit at peak season. – Combine operations with friends during lean season. 	All groups
Lack of access to credit facilities due to illiteracy, discrimination, absence of credit facilities	<ul style="list-style-type: none"> – Borrow money from friends, relations or <i>esusu</i> groups. 	All groups
Lack of access to insurance because fisheries is regarded as a high risk business in isolated communities with incessant fire incidents	<ul style="list-style-type: none"> – Contribute any savings to <i>esusu</i> group; – Bury money in the ground in a bottle in case of fire. – Keep any assets acquired in their permanent homes upland. 	All groups
Loss of capital due to debtors	<ul style="list-style-type: none"> – Use of social capital and network to recover the money; – Build relationships with clients based on trust; – Go to church and pray for the money to be repaid. 	All groups

Source: Survey, Focus Group Discussions, Case Studies and Interviews with Fishermen and Fish Traders (2007 – 2008).

The lack of financial assistance, insurance against risks, processing facilities and marketing information have resulted in a continuous struggle by the fish traders to sustain the fish trade through several strategies including buying and selling on credit, obtaining loans from friends, relations, *osusu* groups (ROSCAS) and local money lenders. Lack of government or NGO support and harassment by the local government officials due to their inability to organize a strong union has created a situation of ‘survival of the fittest’ in the community.

Table 4: Institutional Constraints Related to Infrastructure and Labour, and Coping Strategies

CONSTRAINTS & CAUSES	STRATEGIC RESPONSES	FISH GRPS
Lack of potable water	– Use water from shallow wells and commercial boreholes	All Groups
Lack of electricity	– Use of lanterns, hurricane lamps and electricity generating sets	All groups
Inability to organize as a market union due to illiteracy, and lack of awareness	– Individual enterprise operation and formation of groups with weak structures.	All groups
Administrative harassment due to inability to negotiate status with the Local Government and the chiefs.	– Pay all kinds of levies, at the beach and at the market to different groups.	All groups
Lack of affordable health facilities	– Patronising patent medicine stores and traditional medicine	All groups
Poor quality link road	– Increase the price of fish to compensate for high transport costs.	All groups
Lack of extension information as extension service is mostly targeted at fishermen	– Use of old and inefficient methods to process fish.	Bonga and big fish
Lack of pricing and market information Due to loosely organized marketing system	– Daily price fixing at the beach / market	All groups
High transport costs due to bad access road and high cost of fuel.	– Sale with low margins.	Bonga Big fish
Lack of cold storage facilities due to high cost of installing and running a private one	– Utilisation of old freezer boxes with ice purchased from private producers in Ibaka, to reduce spoilage. – Transport excess fish to the cold room at Oron..	Big fish
Lack of efficient and modern processing facility provided privately or by government.	– Fish smoked in living quarters, kitchens using open fires.	All groups
High cost of ice	– Private ice plant operated with generator; – None or minimal usage of ice for preservation; – Strive to sell all fresh fish at the beach.; – Smoke the remaining fish; – Use cold room for large quantities of landings. – Call clients in the city to come and collect the fish.	Big fish

CONSTRAINTS & CAUSES	STRATEGIC RESPONSES	FISH GRPS
Illiteracy due to insufficient formal educational facilities and lack of opportunities	– Younger women attend private evening schools and skills acquisition programmes as apprentices in hair dressing or dress making outfits.	All groups
Lack of help in the household due to location of fishing community far from home and relations.	– Older female children act as mother – substitutes, taking care of junior ones, looking after the household.	All groups
Inability to pay for labour due to high cost;	– Spending most of their time on the fish trade, and using under-aged female children as labour;	All groups
High turnover of labour due to the harsh environment and hard nature of the job.	– Performing all the processing themselves, with the help of their children.	Bonga & Big Fish

Source: Survey, Focus Group Discussions, Case Studies and Interviews with Fishermen and Fish Traders (2007 – 2008).

The lack of electricity or potable water and the rudimentary educational and health facilities pose serious problems to the community. The nearest functional banking and cold storage facilities are at Oron, forty-five kilometers away, with a partly un-motorable link road which is almost impassable in the rainy season, further increasing the costs of transport and doing business.

Table 5: *Analysis of Cultural Constraints Related to Religious beliefs, Taboos, Ethnicity and the Coping Strategies of the Fish Traders in Ibaka*

CONSTRAINTS & CAUSES	STRATEGIC RESPONSES	FISH GRPS
No trading activity on Sunday as Christians believe Sunday is a holy day.	– Use Sunday for cultivating Social Capital at the church women's fellowship meetings, ceremonies, visiting friends and relations) – Taking care of self and household. – Processing and selling at home	All Groups
No fishing activity on traditional festival days (Dedicated to sacrificing to gods of the water (<i>Awesu and Amamong</i>))	– Stay home taking care of children and pursuing economic activity from home.	All Groups
No trading activity during Christian holidays such as Easter, Christmas and New Year's day	– Migrant traders go home for Christmas and the New Year celebrations. – Poor processors and traders, and residents stay home and rest awaiting the resumption of fishing activities.	All Groups
Need to use costly mangrove to smoke fish to give the desired taste to fish.	– Use of cheaper wood for initial, first stage smoking, and mangrove for the second stage and final smoking.	Bonga & Big Fish
Discrimination against migrants from outside Ibaka and Nigeria.	– Attending the local church, intermarriage with indigenes, and joining a self help group or <i>esusu</i> .	Bonga and Big fish

Source: Survey, Focus Group Discussions, Case Studies and Interviews with Fishermen and Fish Traders (2007 – 2008).

Fish processing is solely a women's activity and the labor pool is limited to the skilled and proficient. Because young women marry early and start their own businesses in order to maintain their families, their apprenticeship period, during which time they act as assistants to their mothers or aunts, lasts between five and seven years only. There is therefore labor shortage especially during the peak season, and only the large and medium scale traders, with higher incomes can afford it.

Cultural Constraints and Strategic Responses

The cultural constraints experienced by the women at the personal, household and community levels and the strategic responses adopted by them are categorized into those relating to beliefs and taboos in Table 6, ethnicity in Table 7, and norms, values and family life in Table 8.

Table 6: *Analysis of Cultural Constraints Related to Norms, Values and Family Life and the Coping Strategies of the Fish Traders in Ibaka*

CONSTRAINT & CAUSES	STRATEGIC RESPONSES	FISH GRPS
Involvement in polygamous marriages with absentee husband due to the culture and ineffective penal system.	<ul style="list-style-type: none"> – Pursuance of diverse economic activities to take care of self and children; – Using absentee husband's social capital and network to secure favours. – Development of strong personal social capital. 	All groups
Patriarchy and non-inheritance of property by women	<ul style="list-style-type: none"> – Deployment of social capital and networking; – Lobbying and patronizing of in-laws to ensure greater access to husband's resources; – Trying to have male children who can inherit husband's property. 	All groups
Non-recognition in society encouraged by culture, colonialism and Christianity.	<ul style="list-style-type: none"> – Seeking autonomy through self empowerment and economic independence. – Use of social capital, networking and advocacy. 	All groups
Gender division of labour which leads to overwork	<ul style="list-style-type: none"> – Using under-aged children for labour – Using female children as mother-substitutes to free her time for economic activities. 	All groups
Loneliness from a polygamous marriage situation or staying far away from home.	<ul style="list-style-type: none"> – Make friends with the resident fishermen both for regular fish supply and for company. 	All groups
Having eye problems and back ache due to smoke from the open fire and continuous bending down to process and smoke fish;	<ul style="list-style-type: none"> – Using traditional medicine and eye drops which are palliatives 	Bonga
Crowded housing situation due to scarcity of land at the beach as everyone wants to live as near the water as possible.	<ul style="list-style-type: none"> – Manage in the crowded situation as they have no choice. 	All groups

Source: Survey, Focus Group Discussions, Case Studies and Interviews with Fishermen and Fish Traders (2007 – 2008).

The non-fishing and trading days are used for meetings, networking, visiting, attending to their social responsibilities, ceremonies, church activities, cultivating social capital, and taking care of themselves and their families. The new smoking procedure is an innovation for reducing the cost of fish processing.

Table 7: Analysis of Constraints Related to Ethnicity, and Strategic Responses

Constraints	Causes	Strategic Responses
Difficulty in learning the local culture for migrant traders from different cultural backgrounds	<ul style="list-style-type: none"> – Forced and voluntary migration – Inter-marriage – Search for incomes by the poor 	<ul style="list-style-type: none"> – Joining a church – Joining a self help or <i>esusu</i> group – Developing networking skills – Use of Social capital – Inter-marriage with indigenes

Source: Surveys and case studies of 2007-2008

The presence of many ethnic groups in Ibaka arises from forced migration of fisher-folk from other fishing communities due to conflicts and fire incidents, and voluntary migrations of fisher-folk and traders from other fishing settlements, upland communities and international fishermen for economic purposes. They mostly develop their networks and social capital through the church.

Table 8: Analysis of Constraints Related to Norms, Values and Family Life, and Strategic Responses

Constraint	Causes	Strategic Responses
Involvement in polygamous marriages	<ul style="list-style-type: none"> – Husband's occupation – Marriage practice in the community; – Ineffective penal system. 	<ul style="list-style-type: none"> – Diversification of economic activities – Use of husband's social capital and networks, – Develop strong personal social capital
Bi-locality	<ul style="list-style-type: none"> – Polygamy 	<ul style="list-style-type: none"> – Develop networking skills – Use social capital – Strive for independent income and autonomy
Non-contribution of husbands to families' upkeep	<ul style="list-style-type: none"> – Polygamy – Non-pooling culture 	<ul style="list-style-type: none"> – Strive to earn income – Autonomy – Diversification
Confusion over children's roles.	<ul style="list-style-type: none"> – Perception of children as insurance against old age and source of labour – Inability to educate children 	<ul style="list-style-type: none"> – Children used as labour – Older female children act as mother-substitutes – Male children ensure access to husband's assets
Eye problem, cough and back ache	<ul style="list-style-type: none"> – Smoking with open fire – Posture in processing fish 	<ul style="list-style-type: none"> – Use of palliatives from herbalists and the chemist shops
Regular illness of children	<ul style="list-style-type: none"> – Use of the beach as toilet – Inability to pay for use of VIP toilet 	<ul style="list-style-type: none"> – Use of chemists and herbalists
Losses of money, equipment and assets during fire incidents	<ul style="list-style-type: none"> – Smoking with open fire – Crowded housing – Flammable housing materials 	<ul style="list-style-type: none"> – Keep tangible assets in permanent homes upland – Bury money in the ground – Keep money with <i>esusu</i> groups

Non-inheritance of property by women	– Patriarchy	– Networking for enhanced social capital – Lobbying and patronizing in-laws for access to husband's resources – Diversification for higher incomes
Non-recognition in society	– Sexual discrimination – Patriarchy	– Seeking autonomy through economic independence – Use of social capital and networks – Lobbying

Source: Surveys and case studies of 2007-2008

Culture has a very strong influence on the women's economic activities and social life. Polygamy, patriarchy and sexual discrimination pose such daunting challenges that only the strong, determined and innovative can adapt and make a successful living. When open fires are uncontrolled during processing, fire incidents occur, destroying fish, assets, cash and equipment.

Strategic Responses and Factors that Determine Them

During the analysis of the case studies, interviews and focus group discussions, evidence of the survival strategies used by fish traders emerged. These included getting sponsorship from a fish mammy or loan from friends and colleagues; arranging for in-kind loans for big fish or crayfish from fishermen and developing networks and social capital. Younger traders tried to acquire formal education and improve their life-skills to improve their livelihoods through diversification. Those with good incomes set up other micro-businesses (petty trading, hair dressing and dress making shops), farming and organizing informal credit. The churches offer many networking and socialization opportunities especially for migrants like the *Ilajes*, *Ijaws*, Ghanaian and Cameroonian fishermen and fish traders, who seek to develop their social capital from there. They also serve as places of solace for everyone, for prayers against perceived insurmountable problems.

The strategies adopted are affected by factors such as age, educational status, number and age of children, years of experience, and working capital available for the trade. Younger traders try to acquire other skills and formal education to enable them diversify while the older women concentrate on earning higher incomes through developing their social capital and expanding their networks, and making better business connections, to enable them diversify, educate their children and secure their livelihoods.

The starters depend on their husband's, or mother's networks and social capital while trying to develop their own. More educated women participate in the more lucrative and better organized big fish trade, and deploy their profits into other tangible economic activities while most of the less educated women end up in the *bonga* and crayfish trade, with lower margins and higher risk. This is probably because the big fish trade requires more capital which can more easily be

raised by a literate person. It is also more complicated and requires resourcefulness and innovation, especially during the peak season.

Women with grown up children like *Mma Hana* could afford to be away from home for longer periods because the female children help take care of the household, whereas women with younger children do business as close to home as possible. The former have more time for economic activities than the latter and mobilize more income for the household. Older female children are deployed into the trade.

The more experienced, older women have a wider network and higher social capital, acquired over the years and used daily for the trade. They know the intricacies of the trade, and generally earn higher incomes, while the young and less experienced traders are learning on the job and working at acquiring theirs while trading, and consequently, earn less income.

Capital outlay has a great influence on the strategies adopted because higher working capital means higher profits which can be deployed into other economic activities. For example, *Mma Ako*, a middle-aged, large-scale crayfish trader has been able to buy sewing machines and set up a dress making shop at Ibaka, while owning a stall in the fish market where she trades, and a storehouse where others store their unsold crayfish bags for a fee at the end of each day. *Mma Hana*, a large scale big fish trader, owns her own fishing boat and engines, hires fishermen to fish for her and also owns a transport boat, bought from the proceeds of her fish trade, which she leases out. Her three children are all in tertiary institutions and she had just finished a degree program herself.

Conclusion

The objective of this study was essentially to determine the livelihood strategies adopted by women fish traders in Ibaka, given the socio-economic conditions, seasonality and the livelihood resources and assets they own, and how the culture and institutions mediate their ability to achieve sustainable livelihood strategies and outcomes. Our results show that while all large-scale and a few medium-scale traders seem to have succeeded in adapting to the challenges, all small-scale and most medium-scale traders are struggling to adapt to the constraints.

Despite efforts at diversification, most livelihood strategies still revolved around the fishery which is a seasonal and risky business. Farming is at subsistence level because there is no arable land around Ibaka, and where there is, access is limited because of tradition. Also, most women have insufficient working capital for the fish trade since they use their meager savings or loans raised from *esusu* groups, relations and friends. Fish is still processed using open fires which cause health problems. Frequent fire incidents consume assets, money, and household property, keeping the banks and insurance companies away from the business. Also, the cost of the final product gets higher when the prices of wood, water, labor, transport and ice are added, lowering the profit margins. The marketing procedure also has its limitations as it is individually arranged, without any marketing information, making the women vulnerable. Though the religious

holidays are used for networking and building social capital, they still account for lost business days and incomes. The women also have no government or NGO support. All these factors combined work against the development of sustainable livelihoods by most of the women.

This exploratory study gives a picture of women fish traders' struggles to sustain their livelihoods, and the conditions in which they operate in Ibaka only. To obtain a broader picture of the livelihoods of fish traders in other fishing communities in Nigeria, and the conditions in which they operate, future research is encouraged, which will help in developing appropriate intervention strategies.

Acknowledgements

The authors gratefully acknowledge the support of the African Women's Leadership in Agriculture and the Environment (AWLAE) Project which made this research possible and the government of the Netherlands which sponsored the research. The authors are also grateful to the reviewers for their constructive and useful comments on the draft manuscript.

References

- Adewale, J.G., R.F. Ikeola
2005 Resettlement Coping Strategies of Women Settlers around Dams in Nigeria: A Case Study of Erelu Dam in Oyo, Oyo State. *Nigerian Journal of Human Ecology* 17(3):177-181.
- Adeyi, G., S. Williams
2004 Gender and Sustainable Livelihoods of Ipata-Jebba Fishing Community. In: Bennett E., H. Rey Vallette, K.Y. Maiga, M. Medard, (Eds.) *Room to Maneuver: Gender and Coping Strategies in the Fisheries Sector*. The Report of a Workshop held in Cotonou, Benin. 1-4 December 2003. Portsmouth, UK:IDDRA; 2004
- Akpabio, I.A., J.T. Ekanem
2008 Extension Needs of Fish Marketers in Akwa Ibom State, Nigeria. *Journal of Agriculture and Social Sciences*. ISSN Online: 1814-960X 07-290/Z1P/2008/04-1-1-5 <http://www.fsublishers.org> (Accessed on February 20, 2010)
- Alamu, S.O., M. Mdaihli
1995 'Socio-economic Survey of Women in Artisanal Fisheries in Kainji Lake Area: A Case Study of Wawu', *Annual Report of the National Institute Freshwater Fisheries Resources, New Bussa (Nigeria)*, Vol. 1994:195-203.
- Alamu, S.O.
1993 "The Role of Women Fish Mongers on Commercial Fish Handling and Marketing in Jebba Lake Basin". *Annual Report National Institute for Freshwater Fisheries Resources, New Bussa (Nigeria)* 1992:152-162.
- Alamu, S.O.
1991 'Assessment of Women's Contribution to Fishing Industry and Fish Marketing in Kainji Lake Basin'. *Annual Report National Institute for Freshwater Fisheries Research, New Bussa Nigeria* 1990:184-190.
- Allison, E.H., B. Horemans
2006 Putting the Principles of the Sustainable Livelihoods Approach into Fisheries Policy and Practice. *Marine Policy* 30:757-766.
- Allison, E.H., F. Ellis
2001 Livelihoods Approach and Management of Small-scale Fisheries, *Marine Policy* 5(5):377 -388
- Anderson, M., F. Bechhofer, J. Gershuny
1994 *The Social and Political Economy of the Household*. The Social Change and Economic Life Initiative: Oxford University Press.
- Bebbington, A.
1999 Capitals and Capabilities: A Framework for Analysing Peasant Viability, Rural Livelihoods and Poverty. *World Development* 27(12):2021-2044

- Bene, C., G. Macfadayen, E.H. Allison
2006 Enhancing the Contribution of Small-scale Fisheries to Poverty Alleviation and Food Security. *Fisheries Technical Report No. 481*, FAO, Rome
- Chambers, R., G. Conway
1992 Sustainable Rural Livelihoods: Practical Concepts for the 21st Century. *IDS Discussion Paper*, No.296. Sussex: Institute of Development Studies.
- Clark, G.
1994 *Onions are My Husband: 'Survival and Accumulation by West African Market Women.'* Chicago: University of Chicago Press
- De Haan , L., A. Zoomers
2005 Exploring the Frontier of Livelihoods Research, *Development and Change* 36(1):27-47.
- DFID
2000 *Sustainable Livelihood Guidance Sheets*. Department for International Development. Accessed at www.livelihood.org/info_guidancesheets.htm. (28th March 2009)
- EIA Report
2006 *Akwa Ibom Industrial, Processing, Oil and Gas Free Trade Zone; Environmental Impact Assessment Report*, May 2006. Akwa Ibom State Government.
- Ellis. F.
2000 Livelihoods, Diversification and Agrarian Change. In: *Rural Livelihoods and Diversity in Developing Countries*. Oxford: Oxford University Press.
- 1998 Household Strategies and Rural Livelihood Diversification, *Journal of Development Studies* 35(1):1-38.
- Fafchamps, M., E. Gabre-Madhin
2006 *Agricultural Trade in Benin and Malawi*. (mimeograph).
- Fafchamps, M., B. Minten
2002 *Returns to Social Network Capital among Agricultural Traders, Department of Economics*. Stanford: Stanford University.
- FAO
2007 *Fishery Country Profile: Federal Republic of Nigeria*. Food and Agricultural Organisation of the United Nations. FID/CP/NIR.
- Flake, L., U. Nzeka
2007 Nigeria Fishery Products, Nigeria's Fish Market. *Global Agriculture Information Network Report No. N17026*, USDA Foreign Agricultural Service
- Ikurekong, E. E. A.
2005 *Local Resource Development in Coastal Areas of Akwa Ibom State: The Case of Artisanal Fishing*. PhD Thesis, Department of Environmental Resource Management, University of Uyo, Uyo, Nigeria.

- Jim-Saiki, L.O., H.K. Ogunbadejo
2003 Small-scale Fish Production, Processing and Marketing in Ibeju-Lekki Local Government Area of Lagos State, Nigeria. Nigerian Institute for Oceanography and Marine Research, Lagos
- Joseph, S.
1995 *Coping with Seasonality: Implications for Fisheries Community Development Social Action* (New Delhi).
- Kotler, P., N. Roberto, T. Leisner
2006 Alleviating Poverty: A Macro/Micro Marketing Perspective. *Journal of Macromarketing* 26(2):233-239.
- Lutz, C.H.M., A. van Tilburg
2007 Food Marketing, In: *New Encyclopedia of Africa* / Middleton (Editor In Chief), John Miller (Editor), Joseph, C., Detroit: Charles Scribner's Sons Reference Books, (Mcacmillan Library Reference, USA Volume 2)
- Marschke, M. J., F. Berkes.
2006 Exploring Strategies that Build Livelihood Resilience: A Case from Cambodia. *Ecology and Society* 11(1):42. [online] URL: <http://www.ecologyandsociety.org/vol11/iss1/art42> (Accessed on March 8, 2010)
- Moll, H., F. van der Staaij, A. van Tilburg (Eds.)
2001 *Smallholders and Markets: Towards a Conducive Environment*. Netherlands Ministry of Foreign Affairs Policy and Best Practice Document:102.
- Moser, C.
1998 "Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs". *World Development* 17(11):1799-1825.
- National Bureau of Statistics, Nigeria
2006 *Annual Abstract of Statistics of Nigeria*, 2006. Abuja, Nigeria.
- Nazneen, A., J. Peerlings, A. van Tilburg
2007 Market Imperfections. In: *Sustainable Poverty Reduction in Less-favoured Areas*. Wallingford: CAB International.
- Neiland, A.E., C. Béné
2004 *Poverty and Small-scale Fisheries in West Africa*. Kluwer Academic Publishers.
- Niehof, A.
2007 Fish and Female Agency in a Madurese Fishing Village in Indonesia. *Moussons* 11:185-209.
2004 The Significance of Diversification for Rural Livelihood Systems. *Food Policy* 29(4):321-338.
1985 *Women and Fertility in Madura*, Indonesia, PhD Thesis, Leiden University
- Niehof, A., L. Price
2001 Rural Livelihood Systems: A conceptual Framework. *Wageningen-UPWARD Series on Rural Livelihoods* No. 1.

- Wageningen: Household and Consumer Studies, Wageningen University.
- Njie, M.
2002 Fish Distribution and Constraints to the Domestic Fish Trade in the Gambia, Fisheries Department, Banjul, The Gambia. Paper Presented at the National Workshop on Links between Artisanal Fisheries and World Markets – Banjul, The Gambia.
- North, D.
1991 Institutions. *Journal of Economic Perspectives* 5:97-112
- Odotei, I.K.
2002a There is Money in the Sea: Ghanaian Migrant Fishermen and Women in the Ivory Coast, *Institute of African Studies Paper*, University of Ghana, Legon, Ghana.
- 2002b Sea Power, Money Power: Ghanaian Migrant Fishermen and Women in the Republic of Benin. *Institute of African Studies Paper*, University of Ghana, Legon.
- Omoto, R.
2004 The Context of Gendered Knowledge: A comprehensive Minimum dataset on Women in Coastal Communities. *SPC Traditional Marine Resource Management and Knowledge Information Bulletin* No.16.
- Overa, R.
2001 Institutions, Mobility and Resilience in the Fante Migratory Fisheries of West Africa, *Chr. Michelson Institute (CMI) Working Paper* 2001: 2, Bergen, Norway.
- 1993 Wives and Traders: Women Careers in Ghanaian Canoe Fisheries. In: *Maritime Anthropological Studies (MAST)* 6:110-135.
- Pollnac, R.B.
1991 Social and Cultural Characteristics in Small-scale Fisheries Development. In: M.M. Cernea, (Ed.) *Putting People First: Sociological Variables in Rural Development*. World Bank. New York: Oxford University Press.
- Ruddle, K.
2000 Systems of Knowledge: Dialogue, Relationships and Process. *Environment, Development and Sustainability* 2:277-304.
- Ruddle, K.
1993 The Transmission of Traditional Ecological Knowledge. In: Inglis, J.T (Ed.) *Traditional Ecological Knowledge: Concept and Cases*. Ottawa, Canadian Museum of Nature and IDRC:17-31
- Satia, B.P., C.Z. Wetohossou
1994 (Eds.) Report of the Working Group on Women's Key Role and Issues Related to Gender in Fishing Communities. *Programme for the Integrated Development of Artisanal Fisheries in West Africa (IDAF)* Cotonou, Benin, Pp 34. IDAF/WP/79.

- Scoones, I
1998 'Sustainable Rural Livelihoods: A Framework for Analysis', *IDS Working Paper* 72 Smith, I.
1979. "A Research Framework for Traditional Fisheries." *ICLARM Studies and Reviews* No. 2, Manila: ICLARM .
- Stirrat, R.L.
2004 Yet Another 'Magic Bullet': The Case of Social Capital, *Aquatic Resources, Culture and Development* 1(1):25-33
- Tall, A.
2002 *Obstacles to the Development of Small Scale Fish Trade in West Africa*, INFOPECHE.
- Tilburg, A. van
2001 Livelihood Diversification of Farming Households in Northwest Sierra Leone. Wageningen University: [s. n.], 2001- *UPWARD Series on Rural Livelihoods* (3). –ISBN 90-6754-645-3- P.34.
- 1992 "Competition at Rural Markets in South Benin". In: L. Camman (Ed.) *Traditional Marketing Systems*, German Foundation for International Development (DSE) Feldaffing:101-112.
- UNDP
2006 *Human Development Report, Nigeria*.
- 2004 *Human Development Report for the Niger Delta, Nigeria*.
- USDA
2007 *Nigeria Fishery Products, Nigeria Fish Markets: USDA Foreign Agricultural Service Global Agriculture Information Network Report* No N17026.
- Vannuccini, S.
2000 Report of FAO/DFID Workshop on Post-harvest Practices and Issues in Fishing Communities in West Africa.
- Verstralen, K., C. Isebor,
1997 "Conditions Socio-économiques des Pêcheuses, Transformatrices de Poisson et Mareyeuses de Ogheye, Nigeria", *Lettre du DIPA (IDAF Newsletter) Cotonou* 36:20-23.
- Wallace, C.
2002 Household Strategies: Their Conceptual Relevance and Analytical Scope in Social Research. *Sociology* 36(2):275-292.
- Williams, S.B., B. Awoyomi,
1998. 'Fish as a Prime Mover of the Economic Life of Women in a Fishing Community'. *Proceedings of the IIFET*, Tromso, Norway:286–92.
- Williams, S.
1999 "The Socio-economic Potentials of Women in Riverine Small-Scale Fisheries in Nigeria" *Proceedings of Women's World 99, the 7th International Interdisciplinary Congress on Women*, University of Tromso, Tromso, Norway.

Williamson, O.E.

1998

Transaction Cost Economics: How It Works; Where It Is Headed. *De Economist, Quarterly Review of The Royal Netherlands Economic Association* 146(1). Kluwer Academic Publishers.

Yin, R.K.

2003

Case Study Research, Design and Methods. 3rd Edition *Applied Social Research Series*. Vol.5 Newbury Park, CA: Sage Publications.