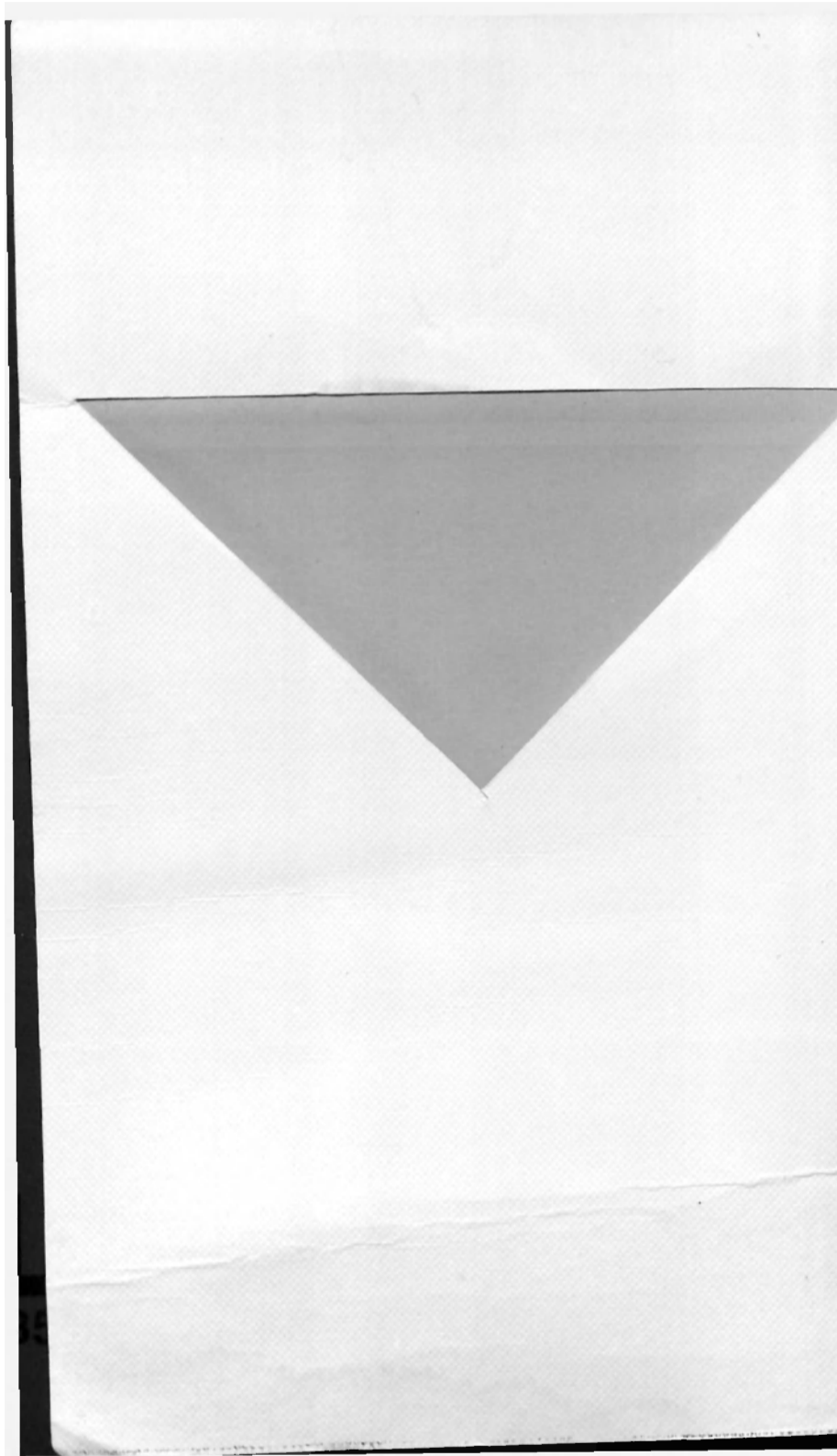


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**LAKE VICTORIA'S  
NILE PERCH FISH INDUSTRY:  
THE POLITICS OF JOINT ACTION**

By

Winnie V. Mitullah

Working Paper  
No 519

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NILE PERCH FISH INDUSTRY:  
THE POLITICS OF JOINT ACTION**

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February 1998

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**LAKE VICTORIA'S  
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**INTRODUCTION**

Kenyan exports of Nile Perch (NP) from Lake Victoria reached US\$ 27.4 million in 1995. The exports have been made possible by a seemingly inexhaustible demand for fish in developed countries and a cluster of fishermen, traders and processors in Kenya ready to bring the fish to market.

The cluster is an odd mix of urban based fish processing factories, artisanal fishermen and rural traders. For the industry to prosper, this group needs to work separately and together to ensure that every stage of the process - from the lake to the consumer's plate - happens without a hitch. Studies of other geographically based clusters suggest that the key to success lies in collective efficiency generated by the interactions in the group. This paper attempts to explore some of those interactions and their effects.

Most of the empirical material presented in this paper comes from fieldwork in two places: Uhanya, one of the main fishing communities on the Kenyan shore of Lake Victoria and Kisumu, where most of the export processors are clustered. Section 1 of this paper is contextual and gives a brief introduction to the fish industry in Kenya. It shows the overall dimension of the industry, how it is organised and existing transaction regimes in Uhanya. In addition, it outlines the conceptual framework for understanding the politics of joint action. Section 2 discusses Uhanya cluster emphasising the role of fishing, cooperative society, agents and traders to the development of the cluster. Section 3 discusses the large scale fish processors and their link with Uhanya, while section 4 analyses the two challenges facing the cluster. The chapter also reflects on the theory of collective efficiency in Lake Victoria fish processing; whereas the concluding chapter provides lessons for collective efficiency.



### SECTION 1: FISH INDUSTRY IN KENYA

The global fishing industry began to expand after the second world war and has now become an important industry due to the growth in demand. The industry is characterised by heterogeneity of organisational forms and diversity of activities and actors. It is dominated by industrial or semi-industrial firms thriving alongside small scale harvesting, processing and marketing activities. According to ILO (1988), there are about 15 million fishermen in the entire world among which small scale (artisanal) accounts for between 13 and 14 million. Secondary activities and associated industries provide employment to between 26 and 28 million people.

In many developing countries of Asia and Africa, fish accounts for more than 50% of total animal protein intake. In Africa, small scale artisanal fishing makes up 84% of total catch (Willman, 1983). The industry mostly uses dug-out canoes operated by sail and paddle. The sector is organised in clusters. It is labour

intensive, applying simple methods and techniques, which are continuously being improved (Platteau 1989). Rising living levels in both developed and developing countries and the high income elasticities have aroused huge demands for fish products, resulting in commercialisation of the industry and the gradual transformation and subordination of the traditional management systems.

In Kenya, fishing is an important economic activity. It provides both employment and income to a large percentage of the local communities. Over the last fifteen years the aggregate landings of fish from inland waters have increased. Landings from Lake Victoria alone account for about 98 per cent of production from Kenya inland lakes, and account for about 93 per cent of all the fish landed (Kenya 1997). Some fish is sold fresh while a significant proportion is processed by fish processors for later consumption. Some processing is done by Small Scale Fish Processors (SSFP), while other, notably freezing and packaging for export, is undertaken by Large Scale Fish Processors (LSFP).

### 1.1 Size and characteristics of industry

The Kenyan small scale fishing industry has been active for centuries. Its intensive incorporation since 1980 into the large scale capitalist fishing production and processing has not stifled the industry. Artisanal fishing and trade go on within and around all the waters in Kenya. In 1980 a total of 48,218 metric tonnes of fish and crustaceans valued at 316,902 million shillings were landed by 41,796 fishermen using 12,637 fishing vessels throughout the country (GOK, 1993). By 1995 the total value of metric tons of fish landed increased to 5,204,309 billion shillings (Kenya 1995). Among the sources Lake Victoria had the highest percentage of catch (table 1.1). Other sources include: coastal and deep sea fisheries, [mainly restricted to the coast] and fish farming where fish is raised in artificial ponds and dams scattered around the country.

Metric Tonnes	1980	1985	1990	1995
Total Fish	48,218	105,973	201,778	193,789
Lake Victoria Fisheries	26,914	88,589	185,101	181,888
Nile Perch	4,310	53,011	57,262*	102,546
Value Ksh. '000				

Table 1.1: Fish Landings [in Metric Tonnes]

IDS/WP No. 519

IDS/WP No. 519

Total (market)	316,902	311,770	7,231,820	5,204,309
Lake Victoria	58,805	190,550	1,532,964	4,678,140
Nile Perch (fishermen)	7,434	92,290	687,167*	3,315,503

\* Figures for 1991

Source: Compiled from Various Annual Statistical Bulletins, Fisheries Department, Statistics Section

Small scale fisheries around Lake Victoria are highly segmented. Within the industry, there are fishermen, crewmen, traders and middlemen. Fishing is mainly done by men of all ages with primary level education (Ogutu 1988; FAO 1992). They use rudimentary tools and gear, with most owning only one boat. On the other hand, women engage in local processing and trading, with a few trading beyond the locality and district. Majority are poor and invest in the fish trade due to its low capital requirement.

The LSFP mainly export fish to Europe, Middle East, Australia and Japan. Few others export to U.S.A. In 1995 a total of 12,052 metric tonnes of fish and related products were exported earning Kenya Ksh. 1,492 billion in foreign exchange (Kenya 1995). In 1996 one of the major processors exported fish to European Union (EU) valued at Ksh. 519,626 million while exports to Israel were 4,109 million and Japan 5,004 million (Danner 1997).

Social classes are becoming distinct within the fishing industry. On the one hand are artisanal fishermen and fish processors as well as small scale fish traders, on the other hand, are entrepreneur seasoned fishermen with advanced technology, LSFP and progressive traders. The first group rely on rudimentary technology and operate on very low capital; while the second group have advanced technology, adequate capital and are able to manipulate the first group.

### **1.2 Commercialisation of Lake Victoria Fisheries**

Commercialisation of the fish industry at Lake Victoria began with the influx of people to various beaches in response to increased fishing activities. The introduction and maturation of the Nile Perch (*lates Niloticus*), improved fishing technology and the subsequent opening of the export market attracted seasoned fishermen and traders into fish trade. Most beaches realised an increase in the number of fishermen, boats and traders (O'Riordan 1996). Trawling, although currently outlawed was also going on during the initial stages of commercialisation.

The availability of Nile Perch (NP) for export since the mid eighties has transformed Lake Victoria Fisheries from a local into an international resource. The effect of the boom has been reflected in the increasing number of fishermen in the corresponding years. In 1979 there were only 16,000 fishermen on the Kenyan shores of the lake and by 1993 the number had increased to 82,300 (Kenya 1994). Most of these fishermen are entrepreneurs and not 'actual fishermen'. They hire fishing crew and managers with fishing knowledge to fish for them.

The opening of the global market and increased Nile Perch catch accompanied with establishment of processing factories has been positive to fisheries of Lake Victoria. It has given rise to a number of actors, including LSFP coming to the beaches with refrigerated trucks to collect fish using agents. Different types of traders exist with some doubling up as agents of LSFP. The latter have been actively involved in the processing of fish.

In total there are twenty two fish processing firms in Kenya located mainly around the lake shore. Originally they were mostly based in Nairobi and Mombasa. The increase of fish requirement and the opening of the foreign market has pushed a number of firms to relocate on the shores of Lake Victoria (Abila and Jansen 1997, October) with majority in Kisumu. All of them are export oriented, contribute to employment generation and earn the government foreign exchange (Greboval, 1992).

The commercialisation of the Nile Perch is taking place as artisanal fishermen, fish processors and small scale traders, continue operating as they always have. In the process the artisanal fishermen are exploited by the well-to-do LSFP through their agents and middle persons. They are compelled by the economic situation to enter into a patron - client relationship with the large scale commercial entrepreneurs. Agents of large scale fish processors make all sorts of arrangement with the fishermen, including; credit relationship, supply of gear and purchase of fish in the lake from special transport vessels among others (Jansen 1997).



The availability of NP for export has triggered competition for fish and the artisanal fishermen using rudimentary technology can not effectively compete. Although commercial fishing is important as a foreign exchange earner and employment generation, processing factories set up in connection with export oriented fish industry have in various ways undermined traditional management systems (Jansen, 1995). It has transformed both the position of artisanal fishermen and small scale community based fish processors around the lake. The stiff competition for raw Nile Perch has pushed most small fish traders to deep frying *mgongo wazi* (bare fish skeleton) and deep frying, smoking and sun drying 'baby perch'.

Commercial fishing needs large investment capital which most artisanal fishermen cannot afford. Most fishing enterprises are plagued by problems facing small micro enterprises elsewhere in Kenya. They lack finance, infrastructure and effective organisation. The reluctance of commercial banks to extend credit to ordinary fishermen, reduces their ability to compete (Ogutu 1988).

Cooperatives which are weak are viewed as possible alternative. Informal credit for supplies by traders and middlemen which is dominant in Asia is marginal within the fishing clusters of lake Victoria. In Asia, the middlemen provide informal loan and other benefits with one obligation of the fisherman to sell all their catch to the trader to whom they are indebted (Merhjin, 1989).

### 1.3 The Cluster

A cluster is a group of producers making the same or similar things in close proximity to each other (Schmitz 1995). The entire Kenyan part of Lake Victoria fish cluster includes about 65 fishing beaches scattered in six districts within Nyanza province. This research, however, covers what we believe to be a representative segment of that cluster: 'Uhanya-LSFP Cluster'. The cluster includes LSFP at the lake and in urban centres, and fishing, trading and related activities at a single feeder beach.

Uhanya beach is located in Usigu division, in Siaya District. It has a population of about 4,000, including

1,500 fishermen and is one of the major beaches (Mitullah 1996) of Lake Victoria. Residents of Uhanya are engaged in fishing and multiplicity of related activities, including fish processing, fish trade and retailing of consumer products. These attributes provide a good seed bed for assessing the existing transaction regimes in the context of the fish industry. From time to time this paper discusses one of the components of the cluster separately.

#### 1.4 Transaction Regimes

The cluster has several different market channels or transaction regimes for full-size<sup>1</sup> and under-size perch which are summarised into the four main regimes shown in figure 1.

---

<sup>1</sup> Full-size Nile Perch weigh above one and a half kilogrammes and are the only ones purchased by large scale fish processors.

FIGURE 1: TRANSACTION REGIMES

Full-size Nile Perch		Under-Size Nile Perch
I	II	IV
KF UF	KF UF	KF KT
KT	KT	
[Cooperative] Agents	[Cooperative] Agent	Small scale Processors
Purchaser	Purchaser	
	[Cooperative] Agents	

[refrig.truck]	[refrig.truck]	[smalltrucks,] pickups]	KT [bicycles, matatus,buses]
large factory	large factory	[markets in Nairobi and large towns] Hotels and Restaurants	markets within region,western, other parts of Kenya
Foreign customer (frozen and chilled fish)	Domestic retailer (frozen fish)	Domestic retailer [Fresh fish]	Domestic retailer [dried fish]

Codes:

KF = Kenya fishers  
UF = Uganda fishers  
KT = Kenya traders

Refrig. = Refrigerated

The four regimes are different but related and all except the fourth regime are linked to the final destination of fish (processing factories, national and export markets) through agents and purchasers.

*First Regime* consists of both Kenyan and Ugandan fishermen who fish both in Kenyan and Ugandan waters. They use the Kenyan fish traders as middle persons for their fish. Once fish is purchased by traders, it is taken to the cooperative shed<sup>2</sup> where it is directly marketed to LSFP through their agents. The agents purchase fish in close collaboration with purchasers of LSFP who accompany the refrigerated trucks. Once purchased, the fish is loaded into insulated trucks to large factories for

---

<sup>2</sup> There is a parallel newly constructed modern fish landing which is only used by one progressive trader, who is an agent of three LSFP. All the fish this trader collects from several beaches including Uganda islands by pass the cooperative shed and land on a new shed built to EU required standards. The LSFP dealing with the trader collect the fish for further transportation to the factories.

processing. Subsequently fish is processed, frozen or chilled and exported to foreign markets.

*Second Regime* is equivalent to the first regime except for the final destination which is domestic retailers.

*Third Regime* has both Kenyan and Ugandan fishermen selling their fish directly to the cooperative shed, where it is purchased by medium scale traders using small trucks and pickups. The fish is delivered to hotels, restaurants and markets in major urban centres such as Kisumu, Nakuru and Nairobi.

*Fourth Regime* is composed of Kenya fishermen and traders who sell both under-size and fish rejected by LSFP to small scale processors (SSP), without necessarily going through the cooperative shed. Occasionally, some agents do 'small time' business of buying 'rejects' at the shed and selling to the Small Scale Processors (SSP). The processors use various methods, including smoking, frying and drying for processing before selling their product to both small and medium

scale fish traders. This fish is sold within the region (division, district, province) and other provinces such as Western, Nairobi and Coast.

Although all the above regimes are important to Uhanya, this paper limits itself only to the first and second regimes. These two regimes are related, interact with other regimes and also link up with both national and international trade. They therefore provide a good ground for analysing the politics of joint action.

### **1.5 Conceptual Framework**

The promotion of individual efforts embedded largely in small scale enterprises has become a key development agenda. Debates revolve around the performance of small scale enterprises and the different methods of improving their performance. Clustering and collective efficiency notions have been advanced as routes for understanding and fostering efficiency and performance of small scale enterprises through collective action (Schmitz, 1989). The notion owes its origin to Alfred Marshall's theory of



'externalities', which focus not on a firm's internal organisation but on the general development of industry including, the importance of location and the potential for efficiency among small firms. These are reflected in labour pooling, development of specialised local supplies and services, and technology spillovers (Marshall 1890; Schmitz 1997).

Collective efficiency theory states that under certain circumstances, clusters of enterprises give rise to the division of labour and specialization among small producers, the emergence of suppliers, agents, technical and financial service providers, and ultimately a pool of skilled wage workers (Schmitz, 1995). It is further argued that collective efficiency by facilitating the industrialization process, can lead to the creation of jobs and higher incomes for many people in developing countries (McCormick et al 1996).

External economies and joint action are the two prongs of the theory of collective efficiency. Detailed discussion of main economic variables of collective efficiency has

been covered elsewhere (McCormick 1998; Mitullah 1998). Joint action is of particular interest to this paper. External economies are important to growth, but are not sufficient to ride out major changes in product or factor market. These require joint action (Schmitz 1995; 1997). What is often not clear, however, is what promotes or prevents joint action. This paper views both economic and political factors as important in the analysis of joint action. However, so far economic has been the only aspect treated.

When analysing clusters it is necessary to assess the benefits and costs of joint action. The hypothesis that the small size of product market, the net effects of disabling external economies, and the high cost of effective joint action have prevented African clusters from developing beyond low level operation (McCormick 1997) needs a critical look. Applying Schmitz's theory of collective efficiency and the idea of responding to opportunities, and crisis by shifting 'gears' from passive to active collective efficiency (Schmitz 1997), one can argue that clusters based on petty commodity trade and services

except in isolated cases have not exploited the potential of joint action.

The social and political implications of joint action have to be assessed and appropriately tapped. This can be done by applying interest group theory, derived from pluralist conception of society. Interest group analysis is important in processes that involve decisions of who gets what, when, and how. In this process of interest group politics one interest group bears the cost of action and another receives the benefits.

There is need to understand what draws individuals and enterprises into cooperating or taking joint action as well as what prevents them from doing so. For one to take joint action there has to be a feeling of inadequacy in one way or the other. To this extent, any entrepreneur who decides to combine forces with other entrepreneurs or firms expects some gain based on shared interest. However, two faces of power characterise politics of interest groups. One is manifested overtly in the decision making process, and the other is evident in the capacity

of powerful individuals and groups to prevent issues that threaten their interest from arising (Chilcote 1981).

Institutions are important for individuals and interest groups. They provide grounds for interaction, carving alliances and forums for addressing issues which can not be handled by individual entrepreneurs and/or firms. However, most clusters in Africa, either lack relevant institutions and/or have weak ones. This makes it difficult to exploit the benefits of collective efficiency through cooperation. The existing associations are largely informal and address welfare issues. Few of them also engage in advocacy, advice/information and training activities, savings and loans and joint market activities (Haan 1995). Although these institutions come up 'from within', a distinction can be made between a 'top-down' and 'bottom up' approach. The latter is viewed as important for growth. It enables a group of micro and small enterprises to take joint action in facing a particular problem (Haan 1995).

Institutions be they formal or informal are important as a guide to human interaction. They affect the performance of the economy by their effect on the costs of exchange and production (North 1990). In applying the theory of collective efficiency, the state at local level and sectoral associations can play a pivotal role in fostering and assisting clusters. This is more needed during early stages of industrialisation (Nadvi and Schmitz 1994). Reflecting on African clusters which are struggling to industrialise, the case for working institutions including focused state support is warranted.

Considering the fact that both state and sectoral associations are necessary for the growth of clusters, the fate of African clusters remains murky. Since the mid eighties, most African governments have been pressurised into taking a backstage role in development activities. This exposes existing weak institutions which have all along relied on the ineffective state for direction and support, to uncertainties. The only way out for such institutions may lie in taking active joint action in order

to transform existing weak institutions into working business and social organs.

Above all, this section notes that whereas joint action may be positive to business, caution has to be taken on its effect on individual entrepreneur's morale. Most enterprises in Africa are still small and revolve around the individual sole proprietors. As reflected in the Nadvi and Schmitz's typology (Nadvi and Schmitz 1994) some of these businesses are basically for subsistence, and the role and vision of the individual entrepreneur may be more important than investing in joint action.

## **SECTION 2: UHANYA CLUSTER**

### **2.1 Brief History**

Uhanya beach is as old as Lake Victoria. However, Uhanya cluster owes its origin to the beginning of the 1980s when the NP business started transforming the fish industry around Lake Victoria. Prior to this, Uhanya was no different from any other beach dominated by artisanal

fishermen and processors struggling to make a living with hardly any markets beyond the beach and surrounding area. The fishermen used rudimentary techniques including reed traps, papyrus beach 'seines' and sisal long lines. These methods controlled the exploitation of the resource, since fish was largely for consumption with a little for limited markets.

The development of Uhanya cluster has to be understood within the broader context of Lake Victoria fisheries. By 1963 there was only one shop by the beach and local fishermen were catching tilapia (*oreochromis leucostictus*) and other local species such as catfish (*bagrus docmac*, locally referred to as *sew*) and elephant Snout Fish (*mormyrus kannume* locally referred to as *suma*). The arrival of sardine (*rastrineobola argentea*, locally referred to as *omena*) traders from Kisumu who had been operating in Luanda Kotieno (a beach in another location) in 1977 marked the beginning of a key turning point in Uhanya. Their arrival in addition to early resident artisanal processors activities realised the marketing of dried fish beyond Uhanya and surrounding

regions. This further opened the market and increased competition. These factors intensified business efforts and provided an unplanned preparation for the intervention of LSFP.

The intervention of LSFP due to the boom during the mid eighties marked a major turning point for Uhanya. The beach began to change drastically as the LSFP and medium scale fish traders from Kisumu, Nairobi and other major urban centres travelled to Uhanya for the great NP. These economic forces gradually transformed Uhanya and by 1995, Uhanya had become an active rural center with a number of urban characteristics. It had a total of 710 residential units, 2 bars, 15 hotels including food kiosks, 6 tailoring shops and a total of 50 lodging rooms. There are also numerous itinerant traders, trading in diverse consumer goods. The population of Uhanya ranges between 2,000 and 4,000 depending on the season.



## 2.2 Services and Infrastructure

Fishermen and traders in Uhanya operate within an environment lacking most infrastructure and services. Except for an access road and a telephone booth, infrastructure and other services are lacking. The beach has no electricity, banking, financial, postal and health facilities.

Sanitary services are either lacking or are very poor. Most structures within the beach have no toilets and all residents rely on untreated water from the Lake. Residents bathe, wash clothes and draw water for household use from same spots. This contributes to pollution and prevalence of diseases related to poor sanitation and water quality. For postal and health facilities residents have to rely on services available four kilometres away in Usenge, whereas nearest banking facility is located twenty five kilometres away. Few NGOs provide credit to entrepreneurs within Uhanya.

One public telephone booth installed before the survey services the entire population. This, in addition to the Fisheries Department Radio Call are the only airwaves communication available. The residents are cooperative in using the public telephone booth. This facility has improved communication between Uhanya and the rest of the country. Traders are able to make business contacts with both customers and external supplies of business requirement.

Plans for electrical power supply to the division were in an advanced stage<sup>3</sup>. A community project estimated to cost a total of Ksh. 80 million, is expected to provide electricity to key centers and institutions within the division. The project is expected to have two phases; a main line and a phase consisting of three feeder lines. With Uhanya being a third priority, it will take a while before it has electricity.

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<sup>3</sup> Interview with District Officer, Usigu division.

### 2.3 Fishing in Uhanya

Fishing enterprises in Uhanya are small and undercapitalised. Their owner managers are, like most small-scale enterprises, most concerned with the short-term goal of earning sufficient income to cover their families' basic needs.

Most fishermen (73.3%) operate on full time basis while only 23.3 per cent combine fishing with other activities. Employees in fishing enterprises were mainly males and their number ranged between 2 and 15 with only 16.7% having no employees. Those who did not have employees operated their enterprises with assistance of relatives and family members. Firms had more assistants ranging between 1 and 15 with majority (70%) having between 1 and 5 assistants. A total of 63% of the firms noted that they had difficulty finding good assistance, 36.7% did not have any problems. Most firms noted that the number of workers had increased. Another 43.3% had experienced a decrease with 3.3% indicating that the numbers had remained the same.

Almost all fishermen use non motorised boats. The few entrepreneurs who had motorised boats were mainly traders collecting fish from other beaches and Ugandan Islands. During the survey, the total number of boats at site was 97, while average landing per day was 52 boats<sup>4</sup>.

Fishermen rely on capital from their own sources ranging from Ksh. 10,000 to 150,000 with a mean of 45,100. Own sources were dominated by income from business, previous employment and farming respectively. No fisherman had borrowed from private banks, development banks, special government sponsored credit lines or NGOs. Instead they relied on informal money lenders, friends and cooperatives. However, 43.3 per cent had attempted to get credit. The credit was required both for working capital and investment.

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<sup>4</sup> Discussion with fisheries officers based in Uhanya.

Since beginning operations, fishermen in Uhanya have been exposed to a number of changes. While business and income have increased, the quantity of catch has reduced. The reduced catch is reflected in reduced sizes of NP, increased demand for fish and intense competition among the actors. Whereas the increase of business and income has attracted more businesses as demonstrated by the increase in boats, LSFP, number of fishermen, maintenance cost of boats, it has also contributed to the seasonal changes in number of fishermen.

Fishing of under-size fish is a major problem in Uhanya and greatly contributes to depletion of fish. However, it did not come out in the survey. Only two fishermen indicated that they specialise in under-size NP with four others indicating that they specialise in both under-size and other types of fish. Participant observation at the beach showed extensive processing and trade in under size 'baby perch'. This was supported by key informant interviews and Focus Group Discussions (FGD).

Apart from fishing, the cluster is dominated by fish processing and fish trade. Most trade activities are small, run by owners and were largely started during the 1990s as a response to the NP boom and intervention of LSFP. Since the boom most traders have worked continuously in the fish industry. The cluster has a number of enterprises which rely on and service the fish industry. Trade is dominated by both large and small scale fish traders and processors. The LSFP have advanced processing technology, they purchase fish in Uhanya and transport it to Kisumu and other major towns for processing. On the other hand, the SSP largely rely on purchase of 'rejects'<sup>5</sup> and illegal under-size NP.

#### **2.4 The Knot: LSFP and Trade in Uhanya**

The cooperative, traders and agents are the main actors in Uhanya. They provide the link with LSFP who in turn

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<sup>5</sup> 'Rejects' are Nile perch which do not pass the quality test of large scale fish processors. Ordinarily they are safe for immediate consumption and processing.

link Uhanya with both the national and international market. Apart from the cooperative which is meant to provide a forum for joint action, the other actors operate individually. The LSFP have developed networks with traders and agents. These networks are largely of benefit to traders, agents and the LSFP. The artisanal fishermen who have been the source of trade and life of Uhanya are gradually being sidelined. The fishermen's umbrella organisation, YFCS is not effective and does not seem to provide any benefits; whereas the traders and agents are aggressive and seem to be taking a good share of business as discussed below.

#### **2.4.1 Agents and Traders**

The movement of fish from Uhanya beach to the processing plants depends on the work of traders and agents. The agents and fish traders bring fish from several landing beaches, including Ugandan islands, to central points accessible to insulated trucks for loading to the factories. Factories also take fish directly through fishermen cooperatives. There are two types of agents:

company and independent agents. Company agents are contracted by the company to supply wet fish. In most of the cases the agents supply mainly one LSFP and in some exceptional cases, for example a progressive entrepreneur or agent may supply more than one LSFP. Independent agents sell fish to factories without any binding agreement.

A number of agents have learnt to survive in the game and are able to change customers whenever they wish, including when they have been provided with benefits. Some of the agents have become good traders owning their own boats and engines, while others merely rely on collecting fish at landing from fishermen. Another lot of agents combine their own efforts of collecting fish with buying from other traders and fishermen; while the last lot go a step further and forge formal links with fishermen by supplying them with nets and fishing gear on loan.

Most progressive traders are agents of LSFP. The key difference between a trader and an agent is their



beginning point. Most agents begin their operations as hired employees of LSFP or medium scale fish traders, whereas traders start off as entrepreneurs, buying and selling fish. In the process of employment some agents begin running their parallel business and eventually become trader/agent. Agents who do not run parallel businesses work in close collaboration with traders and fishermen.

The LSFP rely on traders and agents for the supply of fish and have to keep the relations good, in order to ensure steady supply of fish and also keep their employment. The LSFP prefer to have agents who have good relations with traders and fishermen and are at the same time influential. The agents keep the LSFP informed of the activities of the beach including the going prices for fish.

The price for a kilogramme of fish paid to agents is different from that paid to ordinary small scale traders and fishermen. The latter get lower prices with differences being as wide as over fifteen shillings per

kilogramme of fish. Besides, their fish is only purchased after those of the agents have been taken. During high seasons they get stranded with fish and are highly manipulated by agents and purchasers.

Progressive fish traders have become the middle persons between the LSFP and the fishermen. They buy fish cheaply from fishermen in several beaches including Ugandan islands and land them in Uhanya ready for the LSFP. Few factories have begun renting their own vessels, including trawlers<sup>6</sup> and hiring their own crew in order to get enough fish. This undermines fishermen's and other small traders opportunities of being vertically integrated (Jansen 1997, September) into the supply chain. However, one progressive trader was found to be vertically integrated into the supply chain.

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<sup>6</sup> Trawling is illegal within the Kenyan waters, but influential individuals, including some LSFP are known to be trawling.

The progressive trader/agent (Box 1) had 8 registered motorised boats and was collecting fish as far as Ugandan islands. Another study has indicated a total of 30 boats for the entrepreneur (Abila and Jensen 1997, October). It is possible that some of the boats are not officially registered, although they operate within the beach. Agents, like this entrepreneur, earn good amount of commission and have more steady prices than the fishermen and traders who are not agents.

**BOX 1: Profile of Progressive Middle Scale Trader**

The supply of fish in Uhanya is dominated by one progressive middle scale trader. From humble beginnings as a butcher cum fisherman and owning three boats, this entrepreneur has diversified into fish trade, wholesale and retail consumer goods, export of goods to Uganda, public boat transport to Uganda and ownership of a petroleum station. He has also started other businesses in Uganda, other beaches within vicinity and the border town of Busia but Uhanya still remains his stronghold.

The entrepreneur has 50 employees and 40 assistants and does all business activities with their support. He provides his own fuel since he owns a petrol station, transport as he owns a fleet of transport modes, including a pickup and has employees and assistants with different trade specializations. He has eight motorized boats and buys his fish cheaply from Ugandan Islands, Kenyan Islands and other beaches. He has formal arrangement with three LSFP and can give credit when his supply of fish is more than the cash the agents of large scale processors have.

The entrepreneur is supplied with free ice and can preserve fish for some period. This is an advantage which many fishermen and traders in Uhanya do not have as most fishermen and traders get stranded with fish when there is an oversupply. The LSFP have also assisted him in constructing his own 'controversial' fish weighing board by the beach. The board is of high calibre in comparison to the *kanaka* (shed) owned by YFCS. After the EU salmonella shock, the trader with the support of one of the large scale processors replaced the 'controversial' weighing board with a modern EU acceptable landing shed.

Business in Uhanya depends on progressive fresh fish traders, agents and LSFP who collect fish for transportation to factories. These interest groups dominate business and have formal arrangements among themselves. This gives them an upper hand in local business, as opposed to local fishermen and SSFP. The three interest groups are able to effectively trade even during high season when the market is flooded and the LSFP rely only on their agents for fish.

#### **2.4.2 The Cooperative**

YFCS is the main association for fishermen. It is an umbrella body for all fishermen and 90 per cent of the fishermen interviewed belonged to the association. The cooperative has been in existence since 1968 when it had only 54 members. In 1996 the cooperative had a total of 1,000 members, but only 580 were active during the survey. The society also has a full time management secretariat with a total of 30 salaried employees, including fish landing and sale clerks (recorders). The cooperative draws its revenue from commissions on sale

of fish, two shops selling fishing gear and parking fees from trucks loading fish. The cooperative equally shares the parking fee with Uhanya beach organization<sup>7</sup>. The cooperative manages a total of nine beaches and Uhanya is the main beach for the society in terms of size, fish landings and income.

A number of difficulties were being experienced by the society, the major one being that of middlemen working as agents of the large scale fish processors dominating the fish trade and determining prices. Agents are important to the large scale fish processors who have to compete for the available fish. The agents understand the local dynamics of business and are able to easily interact with fishermen and other traders. The cooperative attributes the dominance of agents and large scale fish processors to the lack of cold storage facilities at the

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<sup>7</sup> Beach Organisation is a management organ for the entire beach residents. It ensures that the operations of the beach are running and the welfare and social affairs of the beach are catered for through community efforts.

beach. This makes the cooperative unable to control members and other actors as far as sale and pricing is concerned.

The fishermen did not seem to appreciate any activities of the organisation. They noted that the society was not supportive and could hardly provide any assistance, even basic fishing gears such as nets. The society was also accused of not bothering about pricing, wrong fishing gears, future plans for fishermen and the insecurity in the lake. Instead they were concerned about the daily commission on fish landings. The cooperative earns a commission of fifty Kenyan cents for one kilogramme of fish. During high season the society earns between Ksh. 60,000 and 100,000 and between Ksh. 50,000 and 60,000 during low season. Most of these funds are spent on monthly payment of staff and membership bonuses every end of year.

Key informant interviews showed that the cooperative had attempted to deal with the issue of pricing but was unsuccessful, and did not pursue the issue any further.

The issue of fish pricing is political and the LSFP use all their influence to ensure that the prices remain at an acceptable level to them. At one point their lobbying reversed an increase of prices which the cooperative had achieved from the government.

Fishermen who did not belong to the cooperative pointed out that they were not impressed by its activities and did not see the benefits of belonging to the association. A probe on the role of the cooperative as far as price setting and quality control is concerned showed hardly any role. A total of 95.5 per cent of respondents indicating that the cooperative played no role in price setting, while another 89.5 per cent indicated that they played no role in quality control. However, they were noted to be playing some role in retailing fishing gear (65%), taking commission on sales (25%) as well as giving dividends and bonus to members (10%).

The FGD confirmed the negative attitude fishermen held for the cooperative. It was noted that fishermen were disillusioned with the society, did not see its benefits nor did they care what was going on within it. Most



fishermen indicated that the association did not provide any support. Notwithstanding, the cooperative officials conceptualised fishermen as difficult individuals noting that '*gero janam tek!*' (developing a fisherman is difficult). Cases of fishermen selling fishing gears bought through credit were cited as indications of their problematic nature.

It was further revealed during the FGDs that Uhanya fishermen who were disillusioned with YFCS had attempted to form a parallel organisation (Uhanya Fishermen Organisation/group) which was thwarted by both YFCS and other government authorities. Fishermen in Uhanya registered an organisation in 1993 and started remitting their commission to the group instead of YFCS. This became political and the officials of YFCS liaised with the District Commissioner who ordered that all the commissions be given to YFCS. By this time the group had accumulated Ksh. 100,000 which was still in their account during the survey.

### **SECTION 3: LARGE SCALE LAKE VICTORIA FISH PROCESSORS**

Fish processing industries around the lake shore date back to the mid eighties. Almost all of them, except three that had just begun operations in Kisumu started operating during the NP boom of the mid eighties. In total, there are fifteen registered factories around the Kenyan lake shore but only twelve were in operation during 1997 (Abila and Jansen 1997). Most of the factories process NP while a few also fillet tilapia for both foreign and domestic market.

The NP has several products, the main one being fillet, comprising 30 - 35 per cent of body weight of medium size NP. Some factories which export to countries that require comparatively low quality, extract 35 to 50 per cent. The by products of the NP include; swim bladder (maws), frames (skeleton), fat, skins and trimmings. Among the by-products, the frame has been popular as a domestic dish. However, extraction of fillet up to 50 per

cent has affected its quality for human consumption and a high percentage goes to fishmeal factories.

### **3.1 Ownership**

The factories are largely owned by members of the Asian community, some of whom are Kenyan citizens. Eight of the 12 operating factories are owned by people of Asian origin as sole owners or in partnership with people of other nationalities (Abila and Jansen 1997). The few African entrepreneurs who have ventured into processing seem not to be doing well. During the survey, one of the most modern factories owned by a group of African partners was under receivership. Another owned and managed by a group of Africans who had previous work experience in other processing factories, including the one under receivership, was just beginning operations, while a third one was struggling to survive in business. Interview with the African entrepreneurs revealed the closed nature of the processing business and the importance of having right foreign contacts for marketing.

### 3.2 Production Capacity and Fish Supply

All the factories interviewed were running below their production capacity. Whereas their production capacities ranged between 10 and 75 tonnes of whole NP per day, majority were producing below 10 tonnes per day with the highest producing between 10 and 12 tonnes a day. Other research has shown that fish factories in Kenya can process up to 380 tonnes of fish per day but only 200 tonnes of fish per day are processed (Abila & Jansen 1997, October).

Reason for operating below capacity was given as inadequate fish supply. Some factories indicated that during low season they have to close their factories, whereas others noted that they get additional fish from their sister companies in Uganda and Tanzania. One factor contributing to smaller fish supplies is the lack of cold storage facilities on the boats and at the beaches, which leads to rejection and wastage of fish caught. Another possible reason which was not mentioned by the processors is related to fish quality for export market,

especially for fresh chilled fillets. They require very high processing and quality control standards, including appropriate storage before freighting abroad. Any lapse of the process can lead to lose of millions of shillings and possible ban on exporting to the destined market.

### 3.3 Competition

Competition among the large scale fish processors is intense. They compete both for scarce fish supplies and for lucrative foreign markets. For them to survive the competition they have to develop good relations with actors at the beaches. In order to ensure fish supply, LSFP provide assistance to their agents and fishermen's cooperatives in different forms. Assistance to agents and fishermen include: credit, ice, fish containers and in some cases transport. The amount of support provided is largely mutual and based on the trust the two partners develop. Some processors noted that there are cases when they are disappointed with the agents but can hardly take any serious action, except breaking the relationship.

The progressive trader/agent was supplying three LSFP but most of the processors did not seem to have clear understanding of the entrepreneur's activities beyond their dealings. Whereas one LSFP commended him for having built a modern *banda*, another boasted of having constructed a *banda* in close collaboration with the entrepreneur.

LSFP prefer to deal with agents as opposed to fishermen's cooperatives. Most LSFP view the cooperative as a threat to their business and it has been alleged that they have played a role in making cooperatives not work. Strong cooperatives are able to negotiate prices and also deliver fish to the factories, thereby reducing the number of middle persons. The inability of fishermen through the existing cooperative to preserve fish due to lack of cold storage has been exploited by LSFP. The latter collect fish by insulated trucks on their own terms. Since fish is a perishable commodity, most traders and fishermen have their hands tied and have to sell fish at a price dictated by the LSFP and their agents

Each LSFP seemed to have its own network of foreign contacts. There was not a lot of evidence of competition among them. There is however, intense global competition. Kenya fish competes with fish from Europe and Asia among others. The key factor in this competition is quality. Fears about quality of Kenyan fish have led to two crises in the industry in the past year. The issue of market was enough to bring the usually suspicious and isolated LSFP together.

Unlike Tanzania, where LSFP have associations, the Kenyan LSFP do not have any association and largely keep off each other. Interviews with LSFP showed the secretiveness embedded in the fish trade. One processor noted that 'each firm wants to keep its secrets and make profits in their own way'; another observed that jealousy keeps processors apart with many bringing down others - no true friendship - no trust'! According to a number of processors, the EU ban on Lake Victoria fish and a follow up of EEC inspectors made processors relate to each other. This was a relationship triggered by shock and worry of what to do with the huge investments,

which could no longer operate due to the ban. It is still too early to judge whether this will eventually lead to having an organ for joint action for the processors' cluster and fish industry in general.

Discussions with LSFP revealed extensive reliance on agents for information about other processors. One processor observed that, whenever he wants to know the going prices he confides in his purchasers and agents. In exceptional cases, he may call a fellow processor, whom he relates with beyond business to ask about details of the market, more specifically pricing. The same processor noted that whenever his supply of fish dwindles, he gets on alert since possibilities are that other processors could be paying more. He gave examples where fellow processors lie about the actual amount they are paying for wet fish, only for the cheated colleagues to discover too late when they have nothing to process.



## **SECTION 4: A CLUSTER UNDER CHALLENGE**

The Lake Victoria fish industry has faced two major crises in recent years. Responses of key actors have been different in each case, but it is our contention that, in both, the eventual 'solution' depended as much on political as economic variables.

### **4.1 Challenge No. 1: Falling Fish Supplies**

Falling fish supplies has been an issue in the Lake Victoria fisheries since the early twentieth century. The colonial government addressed the issue using several methods: improved technology of catching fish (Okedi 1995), enforcement of regulatory measures and introduction of exotic species to complement existing stock (Andersen, 1961; Fryer, 1960). The latter resulted in the introduction of NP, viewed as a response to both the failure of improved fishing methods and enforcement of regulatory measures Gheb notes that, 'unable to find practical solutions to the regulatory crisis the lake faced, the colonial authorities turned to considering the

possibility of complementing existing fish stocks with introduced fish species in desperate attempt to prevent a total collapse of the fishery` (Gheb 1997:68).

The NP Boom of the mid eighties cannot be isolated from external global forces. Apart from the maturation of the NP and the opening of foreign markets, the boom also coincided with the demand for quality fish and sufficient purchase capacity for fish in the world market (Jansen, 1996). The demand was greatly influenced by the depletion of fish resources in the north and the desire of the south to earn some foreign exchange. Ten years later, the south also began realising the depletion of fish resources.

In recent years a number of reasons have been given for the diminishing catch. They include: overfishing, illegal fishing gears including trawlers which destroy nursery grounds, the Nile Perch poaching on most small fishes, and water hyacinth weeds spreading and interfering with water system. It is not possible to isolate the contribution of each of the variables to the diminishing fish catch.

Instead we examine how the actors involved have responded to the issue.

#### **4.1.1 Responses to Falling fish Supplies**

Three different responses to falling fish supplies can be identified. First, small scale fishermen, especially those with access to motorised boats began going deep into the lake and to Uganda to buy fish. They essentially turned into traders. Second, many small scale fishermen without motorised boats turned to catching under-size perch. Finally, the LSFP, as already mentioned, tried to ensure adequate supplies by drawing on their Tanzanian and/or Ugandan supplies and by strengthening their ties with those Kenyan agents who were performing well.

##### ***Progressive Traders' Response***

Progressive traders responded to the diminishing fish supply by travelling all the way to Ugandan islands and several other Kenyan beaches to purchase and deliver fish to LSFP at the beach. This entails having motorised boats

and having a good crew with good contacts at the sources of fish supply. Additionally, due to tight enforcement and restriction of Kenyan boats into Ugandan waters, traders who take such trips must have relevant networks and adequate resources, including those for bribing Ugandan authorities. During the survey, only the progressive trader had his boats going to Ugandan on a daily basis, whereas the other two traders only made occasional trips.

#### ***Non Motorised Fishermen's Response***

Most local fishermen are not motorized and are therefore not able to go fishing into the deep waters or collect fish far from the beach. Instead, they rely on luck of catching any type and size of fish from nearby fishing sites. The scarcity of full size NP within the Kenyan waters has further complicated the local fishermen's and processors' case. In order to make ends meet, these fishermen have been pushed into combining both good and bad fishing methods. The result has been going against the fishing regulations which condemns catching under-size fish. They have to fish late in the night and sell their products before sunrise, otherwise they risk being apprehended by

the fisheries officers; should the officials decide to do their work and not take *chai* (bribe).

The reliance of both local fishermen and fish processors on under-size NP is a threat to the operations of the cluster. The survival of the two groups has been dependent on the inability of fisheries officials to enforce fishing regulations, an outcome thought to be influenced by the officers partisan position. Fisheries officials are known to own boats and trade in all types of fish including fishing and selling under-size fish. This makes them relax or ignore a number of fishing regulations, as demonstrated by the very fact that all along the beach one can see 'baby' perch being openly sun dried, deep fried and smoked.

A probe into fishing regulations during FGDs confirmed the partisan nature of fisheries officials and their exposure to manipulation. The fishermen normally organise a small delegation with '*chai*' to talk to fisheries

officials during 'closed season'<sup>8</sup>. Whereas one may argue that the fishermen are either ignorant of what their action amounts to, or are stuck to traditional belief that fish cannot be depleted, the fact that local fishermen and processors largely rely on their trade as the only source of employment and income has to be given serious consideration.

*LSFP Response*

The LSFP have not addressed the issue of the diminishing fish supply, instead they have responded by expanding their catchment area into Tanzania and Uganda. The two countries have been observed to have better record of enforcing fishing regulations. Observation of Uhanya fish landing showed bigger sizes of fish coming from Uganda with those coming from Kenyan waters largely being under-size. This may partly imply that the LSFP are assured of adequate supply of fish from the neighbouring two countries, and are not

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<sup>8</sup> 'Closed season' is a restricted period of fishing, when fishing is not supposed to be undertaken in specific breeding areas.

bothered about the reducing stock in Kenya. Further, a large percentage of fish landed in Uhanya comes from Uganda.

The inability to address the challenge of dwindling fish supply is partly due to the different interests involved and their different coping mechanisms. It seems that so long as each interest group is able to satisfy its interest, however temporary, there is no issue cutting across to bring actors together. Additionally, for example in the case of the cooperative, officials also have their personal interests to protect. Another shortcoming in addressing the falling fish supplies, is the absence or mis-focused role of the state as reflected in the behaviour of fisheries officials.

#### **4.2 Challenge No 2: European Union Quality Control Shock**

Quality control is key in any food industry. The Nile Perch boom flourished for over ten years without any quality problem, until January 1997 when salmonella was

found in fish exported to Europe. This caused a shock in the fish industry, resulting in a further turning point in Uhanya. According to one of the lead processors, in January 1997 one Ugandan firm exported fish infected with salmonella to Spain and two people died.

The presence of salmonella in fish resulted in Spain imposing a ban on NP from East Africa to their market. France, Portugal, and Italy followed prompting European Union (EU) to impose the ban to cover all its member countries. This ban affected trade as was reflected in the drop of price of Nile Perch from Ksh 50 per kg in November 1996 to about Ksh 25 per kg in february 1997 (Abila and Jensen. 1997:17 October). By October 1996 price range was 45 - 60 per kg depending on whether one had an agreement with a processor or not. Those with formal arrangement like the progressive entrepreneur got the highest price. This price did not include the agent/purchaser manipulated prices which were as low as between 20 - 30.



#### 4.2.1 Responses to EU Quality Control Shock

The EU ban on fish triggered a critical look on quality of fish from East Africa. The European Union responded by sending inspectors to the three countries to inspect handling and processing of fish from point of capture to the market. The mission revealed the unsanitary conditions and poor handling of fish at the beaches. They also noted the poor disposal methods of fish skeletons and meat trimmings and the sub-standard factory conditions.

Their recommendations demanded action by all concerned parties including governments of the three countries. Each country selling fish to the EU was required to have one competent authority which approves all fish processors. Required conditions for processing fish for EU market were also outlined, giving prominence to ISO 9000 standards and other quality standards. In order to ensure quality processing firms were required to dispose fish frames (skeletons) from factory immediately by selling them to fish meal plants in order to keep the

plants clean. In cases of sale to small traders, the requirement was that they be sold elsewhere out of the factory.

Prior to the inspection most processors were disposing the frames and pieces of remaining meat by selling to small scale traders within the factories. Most of them bought in small quantities, and occasionally factories were unable to immediately dispose them. This was viewed by the inspectors to be a possible source of contamination of fillets for export.

Another requirement was that fish caught should be immediately cooled in ice-boxes and fish should not touch ground. This requirement had a direct impact on most beaches including Uhanya cluster. Our survey of Uhanya cluster had showed poor fish handling (Mitullah 1997) with a high percentage of 'rejects'. Like other beaches, Uhanya lacks sanitary facilities and before the EU inspectors came in June 1997, fish handling was pathetic - merely being dragged on the ground and carelessly thrown into the insulated trucks.

***Response to EU Shock by LSFP***

The ban almost killed the fish processing industry since the EU is one of the major markets for NP from East Africa. Although some LSFP took individual initiatives to visit their customers and reassure them of the safety of their products, individual action could not save the industry. One of the lead LSFP noted that the whole industry had suffered irrespective of whether any given firm had ensured quality or not. This is because EU viewed fresh water fish coming from East Africa as coming from one source, regardless of country or firm. Any quality failure by any single firm exporting to EU would affect all firms, even those with ISO 9000 certification.

At the level of processors, the shock of EU ban and subsequent presence of EU inspectors partly contributed to opening door for information sharing among the LSFP. Each processor was keen on knowing what type of requirements is expected by the inspectors and whether their factories would be targeted for inspection. For the processors whose markets were affected there

was a lot of running around and collaboration with relevant health authorities. Other processors whose markets were not directly affected, or had options of finding other markets, did not take any serious action.

Apart from consulting each on what action to take in response to the EU shock, a number of LSFP struggled to ensure that the factory conditions were acceptable. This process began with a re-examination of the handling of skeletons and the small pieces of remaining meat at the factory level. Prior to the shock, many firms left the skeletons and pieces of remaining meat lying inside the factory for long periods. In some cases they would be around the factory for days, either awaiting collection or simply ignored. This was found unacceptable by the EU inspectors, and strict requirements were recommended.

In response to the recommendation on the handling of the skeletons and pieces of meat, many factories opted to have contracts with fish meal firms. This option was taken because the fish meal firms are able to take the by products in bulk as opposed to the small scale traders

who purchase small quantities. This option reduces the chances of having the by-products lying within the factories. Some firms sell the by-products away from the factory, mainly in Obunga<sup>9</sup>, while few others sell to small traders outside the factories. The latter is thought to be acceptable, because most factories have built large and high concrete walls around the factories.

Other response at the factory level have included putting in place well equipped laboratories, modern fish filleting plants acceptable to the EU and engaging foreign technical assistance to ensure that the required standards are met. Other factories which are doing comparatively well had to send some of their personnel to get the

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<sup>9</sup> Obunga is a cluster for artisanal processing of NP skeletons and pieces of meat from the LSFP. It has over 500 hundred individual entrepreneurs processing and selling fish. Should the factories decide to deal only with the fish meal firms, as is increasingly becoming apparent, the whole cluster would be no more.

details of the requirements and also lobby their foreign market counter-parts. These efforts resulted in some factories achieving even higher standards (for example Nordic standards) than those required by the EU (Jansen 1997).

The response to the EU requirements did not stop at the factory level. Processors were also required to ensure that the sourcing of fish is appropriate and quality requirements are followed. In order to ensure this a number of processors have obtained their own fast-going transport boats with refrigeration facilities. Other processors support their agents to own the right equipment and supply them with ice. Since the EU requirements began to be strictly followed less fish is going to waste and the factory conditions have improved. Improved handling at the beaches is expected to reduce the reject rate to about 5 per cent. Previously the LSFP were rejecting over 25 per cent of fish delivered for processing.

Intense competition gave way to co-operation in the face of an external threat. Individual LSFP had to temporarily put aside their secretive business behaviour in order to address a problem threatening the survival of the industry. Apart from co-operating among themselves, they also had to lobby government and design strategies of supporting and working with actors located within the beaches.

#### ***Uhanya Cluster Response to EU Shock***

The processors soon found that the EU inspectors were not only interested in the factories but also the source of fish, especially aspects related to handling and sanitation at the beach. The key to the action to save the Uhanya cluster was the alliance between the progressive trader and one of the large scale processors. Seeing the looming doom to their trade, they came together to make consultations with government Ministries and Departments and constructed a modern well equipped *banda*.

The modern *banda* is located right at the landing and has

relevant sanitation facilities, including a small generator pumping water from the lake into a reservoir tank, where it is treated with chlorine. The *banda* consists of a well constructed open shade with an attached office and toilet. It has white tables and chairs and it is way above the *banda* used by the cooperative society and the one previously used by the progressive entrepreneur. On landing, fish is immediately cleaned and chlorinated using water from the reservoir tank. Fish is then weighed and loaded into insulated trucks. The whole exercise of landing, cleaning, weighing and loading fish is undertaken by uniformed clean personnel, and takes less than three minutes.

Uhanya cluster was lucky to have a progressive trader with capacity to respond to the shock. The trader has alliances with three LSFP, whom he satisfactorily provides with fish. Previously he had worked with other processors who had their own story to tell about him. It was also interesting to note that although he was dealing with three LSFP, each thought he was 'theirs' and did not seem to know much about his dealings with other



processors. The trader plays his cards well, and scoops gains from each LSFP, depending on his interest.

Interview with LSFP indicated that prior to the response of the trader Uhanya beach had very poor quality fish and some processors had stopped getting fish from the cluster. On the other hand, LSFP who were dealing with the trader noted that the entrepreneur was hard working and had improved business within the cluster. Most of them were supplying the trader with ice, containers, transport and other benefits.

This was not the first time the trader in collaboration with some LSFP had attempted to address the issue of quality. Prior to EU quality shock, the trader had constructed a landing board which was comparatively better than the one managed by the cooperative and acceptable to the LSFP he was dealing with. However, this was not acceptable to the YFCS, and the trader had to use his political contacts to ensure that the shed was not pulled down.

### **4.3 Collective Efficiency in Lake Victoria Fish Industry**

As indicated at the beginning of this paper, geographic clustering of enterprises is expected to bring with it certain benefits that can be lumped under the heading of 'collective efficiency'. The benefits arise partly from external economies and partly from joint action taken by the cluster's participants. The general analysis of this particular cluster has revealed that, at the level of Uhanya beach, the main benefit to those in the cluster is access to foreign and national markets through the LSPF (Mitullah 1998; McCormick 1998). The analysis further suggests that, while this benefit was at first the result of passive external economies, maintaining it in the face of the recent challenges depends on effective joint action (McCormick 1998)

In the case of EU shock, joint action took place and catastrophe was avoided. However, the mechanisms for joint action were not institutionalised, so the actors may need to begin all over again when the next crisis comes.

The LSFP have no organ for addressing issues affecting the industry and they are more concerned about their own firms than about the cluster as a whole. Each individual firm relates and lobbies fellow LSFP(s), actors at the beach, government officers and any other relevant individuals and institutions, the way they deem beneficial to their firms. This introvert approach has contributed to the inability to handle aspects which are negative to the development of the industry such as diminishing fish stock, sanitation along the beaches and the insecurity in the lake.

The challenge of dwindling fish supply has not given rise to effective joint action. As discussed in section 4.1 all the actors who should address the issue, are evading it and taking alternative options, including further depletion of the resource. In order to understand the failure to address this challenge, the role of the various interest groups have to be appreciated. Of particular concern is the fisheries officials partisan position. They are unable to enforce fishing regulations since they are known to own boats and trade in all types of fish including fishing

and selling under-size perch. This makes them relax or ignore a number of fishing regulations.

#### SECTION 5: LESSONS FOR COLLECTIVE EFFICIENCY

The analysis in this paper raises issues not well handled by theory of collective efficiency: 'general interest vs competing interests; unequal power relations and interplay of social and economic gains.

There are a number of interest groups within Uhanya, all of which have their specific interests to pursue and protect. Collective efficiency assumes that enterprises are capable of tapping the 'general interest' in the name of economic gains. However, any form of collective action is predicted by different modes and patterns of organisation within the social system that will either need to be harnessed or in some way overcome if a new associational form is to develop (Lowe 1986).

A problematic aspect of collective efficiency in political

analysis is the subordination of individual interest. For an individual to opt for a collectivity there have to be gains beyond their individual interest. In the case of Uhanya there are a number of gains beyond individual enterprises and entrepreneurs and yet there are no effective collectivities. One explanation could lie in what is viewed for example by fishermen as personal gains by leaders of the cooperative society.

The non motorised fishermen who are among the most exploited in the trade process, and they have a lot to gain in a collectivity. Forming a cooperatives is generally viewed as a positive approach of addressing issues such as depletion and pricing of fish, security in the lake, sanitation along and within the beach and possible availability of cold storage. These are aspects which cut across and can not be addressed by individual fishermen. The cooperative has hardly addressed any of these issues, thereby raising questions on the benefits of membership in a collectivity.

The unequal power relations are reflected in the fishermen's attempt to harness economic gains by forming a parallel association and the struggle of the YFCS to ensure that the association does not take off. The fishermen had identified their economic interests and the gains entailed in forming a parallel association. This was in response to the failure of the existing cooperative society, but neither the leaders of the existing YFCS nor LSFP could allow it. Their intention was perceived as a competing interest which had to be quelled.

In response, all possible manipulative moves were taken to ensure that the parallel cooperative does not come up. This included seeing relevant government officers and using them to ensure that the members of the intended cooperative do not meet. These moves, including those taken by the YFCS did not assess why the fishermen wanted to move out of the existing cooperative union. Indeed the both YFCS and the LSFP know the benefits of association and inherent potential of collective action and needed to have responded positively to the

fishermen's move. But because this move was a threat to their interest, they could not give it support.

The thwarting of the fishermen's effort to form a parallel association is another apparent problematic aspect of collective efficiency. It implies that in cases where there are competing interests, joint action may be very difficult to realise for all the competing interests. This is largely because the competing interests are not at par in relation to resources and the political networks each is able to rally. The case becomes more complicated in cases where authorities charged with responsibility of managing a resource and supporting prevailing interest groups are partisan and subscribe to particular interest group(s).

The second unequal power relations is seen in the progressive trader (ref: Box 1). Apart from the road and occasional influence on patrol of the Lake, other interventions the trader makes are for personal gains. For example, only his fish is allowed to land on his EU certified landing shed. Whereas, majority of traders and fishermen do not have any formal arrangement with large

scale fish processors, he has three formal arrangements and is a middle man for some fishermen and traders. Although his vertical link with the LSFP has indirect spill over effect to other enterprises within the cluster, the extent of unequal power relations make it hard to realise joint action.

The self-interest approach of the progressive trader has both positive and negative effects on the cluster. The development of an acceptable well equipped *banda* by the trader in collaboration with one LSFP, has made the cluster retain its portion of the export market; by attracting more LSFP to the cluster. However, the restricted use of the development is not positive to other traders and artisanal fishermen, who still have to use a comparatively poor *banda*.

The fishermen have no formal arrangement with the LSFP and have to deal with medium scale fish traders [who use pick ups for collecting fish] through their agents located at the cooperative *banda*. The prices offered to fishermen by these traders and consumers are



lower than those offered by the LSFP to the progressive trader. The progressive trader is contented with pricing which he directly negotiates with senior officials of LSFP firms in Kisumu. Consequently, it is not in his interest to press for steady and good prices for fish from the cluster. This is a role which the cooperative and other actors have to take up, if they are to make more gains from the fishing activities based at the cluster.

One bottleneck to joint action from other actors in Uhanya lies in the fact that groups are not organised around businesses but welfare associations which have very little to do with business. It is only the LSFP and the progressive trader who have harnessed the economic gains, whereas the other interest groups such as fishermen and artisanal fish processors are harnessing social gains. This is reflected in the many welfare groupings existing within the cluster. These groupings have not transcended welfare concerns into economic realm and their potential of taking joint action based on economic gains is doubtful.

In conclusion, collective efficiency has been developed as an economic theory and, as such, provides useful insights into the dynamics of clusters like Kenya's Lake Victoria fish industry. Economics, however, does not tell the whole story. Assessing the ability of a cluster to respond to external shocks and to provide continuing livelihoods to all participants requires understanding the politics of joint action as well.

**NOTES**

- 1 This paper is one of the outputs of the Kenyan portion of a larger project on Collective Efficiency and Small-scale Industry, directed by Hubert Schmitz of the Institute of Development Studies at the University of Sussex, and funded by the Department for International Development, London. Dorothy McCormick, coordinator for the Kenya team provided needed input for shaping this paper.

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