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Kenya Access to Rural Finance: Strengthening the Kenya Omena Fish Value Chain



KENYA ACCESS TO RURAL FINANCE

STRENGTHENING THE KENYA OMENA VALUE CHAIN

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ABBREVIATIONS AND ACRONYMS

AFIPEK	Association of Fish Processors and Exporters of Kenya
AIDS	Acquired Immunity Deficiency Syndrome
AMAP	Accelerated Microenterprise Advancement Program
APHIA	AIDS, Population, and Health Integrated Assistance
ASCA	Accumulating Saving and Credit Association
BBK	Barclays Bank of Kenya Ltd
BMU	Beach Management Unit
Bs	Beach Seines
CAS	Catch Assessment Survey
CAs	Competent Authorities
CIGs	Common Interest Groups
Cn	Cast Nets
COMESA	Common Market of Eastern and Southern Africa
CoP	Code of Practice
CBO	Community Based Organization
DFID	Department for International Development (UK)
DTM	Deposit Taking Microfinance Institution
EAC	East African Community
EEZ	Exclusive Economic Zone
EPAs	Economic Partnership Agreements
FD	Fisheries Department
FSA	Financial Service Association
GoK	Government of the Republic of Kenya
GTZ	Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation)
HACCP	Hazard Analysis of Critical Control Points
HIV	Human Immuno-deficiency Virus
HI	Hand Lines
IFMP	Implementation of Fisheries Management Plan
KBDS	Kenya Business Development Services Project
KES	Kenyan Shilling
KEBS	Kenya Bureau of Standards
KRA	Kenya Revenue Authority
KShs	Kenya Shillings
KWFT	Kenya Women Finance Trust
Ln	Lift Nets
LOFTA	Lake Victoria Omena Fish Traders Association
LVEMP	Lake Victoria Environment Management Project
LVFO	Lake Victoria Fisheries Organization
MFIs	Microfinance Institutions
MoH	Ministry of Health
MoLDF	Ministry of Livestock Development and Fisheries
Ms	Omena Seines

Omena	The cyprinid, <i>Rastrineobola argentea</i>
OSIENALA	Friends of Lake Victoria
PEPFAR	President's Emergency Plan for AIDS Relief
P/B	Production to Biomass Ratio
PSDA	Private Sector Development for Agriculture
ROSCA	Rotating Savings and Credit Cooperative
SACCO	Savings and Credit Cooperative
SHG	Self Help Group
SL	Standard Length
SMEP	Small and Micro-Enterprises Programme
Sn	Seine Nets
SOP	Standard Operating Procedure
SWOT	Strength, weaknesses, Opportunities and Threats Analysis
USAID	United States Agency for International Development
VC	Value Chain
WIFIP	Women in the Fishing Industry Programme
US \$	United States Dollar
WG	Women's Group

Executive Summary

The Strengthening the Kenya Omena Fish Value Chain study was carried out in June 2009, based on the results of the Kenya Capture Fisheries study, a value chain finance case study jointly sponsored by the Kenya Access to Rural Finance (KARF) Project and the USAID/AMAP Financial Services Knowledge Generation Project in July 2008. The team used a rapid assessment methodology, focusing primarily on the Omena value chain, to examine the current and potential fisheries financial service needs in the Kisumu Lake Region. The study looked into the current usage of rural finance resources, services and products, while also identifying alternative economic activities to fishing.

The Omena sector plays a significant role in the livelihood and food security for not only the inhabitants of the Nyanza district, but throughout urban regions in Nairobi to Mombasa. Furthermore, Omena is used as one of the most important animal proteins for the poultry feed industry in Kenya. The Omena fishery is currently valued at US \$200 million with the highest catch landings in Lake Victoria compared to Nile Perch and other species. However, results of this study showed that the financial services industry still views lending to sector participants as risky. As a result, there are few financial products targeted at Omena processors or traders. Currently financial institutions offer limited asset financing targeted to fishermen and working capital loans for traders and processors are generally not available. Financial institutions also demonstrated a lack of understanding regarding the Omena business cycle, a lack of knowledge about the return of investment and the capacity of individuals to repay. As a result, Omena processors and traders have very limited options in terms of obtaining finance to upgrade and improve their drying systems.

The Omena processing industry is also dominated by women, which results in added layers of limitations particularly in accessing and controlling resources due to existing culture and tribal dynamics between fishermen and women. The main reasons for large numbers of women engaged in Omena processing as a livelihood is low start-up capital, ease of handling, long shelf life and unrestricted access to products. However, the strong existence of *Joboya* practices – also known as the sex for fish trade – limits the ability for these women to expand their businesses. Other constraints to business expansion include the low level of technology used for drying fish, which results in high spoilage and low quality due to poor handling methods. The spoilage rate of Omena is poorly documented but a conservative estimate is about 25 to 30% of all the Omena processed.

To help improve the value chain dynamics, KARF should work closely with local banks and MFIs to assist in product development, specifically targeting Omena processors and traders. Although banks and MFIs are beginning to target the fishing community, more work could be done to enhance product offerings. A starting point could easily begin with improved market research on the expenditure and savings patterns of Omena traders and processors as to deepen the understanding of how household and business expenditures and income are intertwined. Market research – if done in conjunction with a financial service provider – would be a first step in understanding how to develop and provide working capital loans as well as appropriate savings products for this sector.

Second, KARF should work in partnership with other donors and organizations to increase leverage and efficiency of efforts and investments. Program activities could include working in tandem with the Private Sector Development for Agriculture (PSDA) program, a GTZ-funded project, and/or assisting with the development of a Training/Training of Trainer program(s) on savings, lending and business cash flow within their program of strengthening the Omena Value Chain. With KARF's extensive network, the project could easily facilitate interactive forums with banks/MFIs/DTMs and Omena traders/processors to lessen the disconnect observed during this study such as misconceptions on the nature of business linkages between Omena processors, fishermen and traders.

Third, this study provided deeper insights for improving the livelihoods of HIV/AIDS-affected families by looking into upgrading and diversification opportunities beyond the fishing sector. The high occurrence of HIV/AIDS in this region is surely intertwined with the different aspects of observed within fishing communities. The fish for sex trade, as a result of high poverty and unequal rights for widowers, serves as a main reason for the unstoppable spread of the disease. Current assistance programs working with these vulnerable groups generally do not address their constraints for diversification and upgrading of economic livelihoods. To maximize effort and investment, we recommend that KARF team with organizations like WIFIP and other PEPFAR funded NGOs in providing capacity building activities in finance or technology to strengthen economic activities (fishing, aquaculture, hyacinth handicrafts, and horticulture) for AIDS affected communities.

Chapter One

Approach and Context of the Study

INTRODUCTION AND BACKGROUND

Kenya's fisheries resources are important sources of food, employment and foreign exchange. The fisheries sector contributed about 0.5% to the GDP in the year 2006. Total 2006 national fish production was 158,670 metric tons with an ex-vessel value of Ksh 8,566,781,000 (approximately US \$130 M). The total fish production is dominated by landings caught in Lake Victoria, contributing 90.7%, marine capture 4.4%, aquaculture 0.6% and other remaining bodies 4.3%.

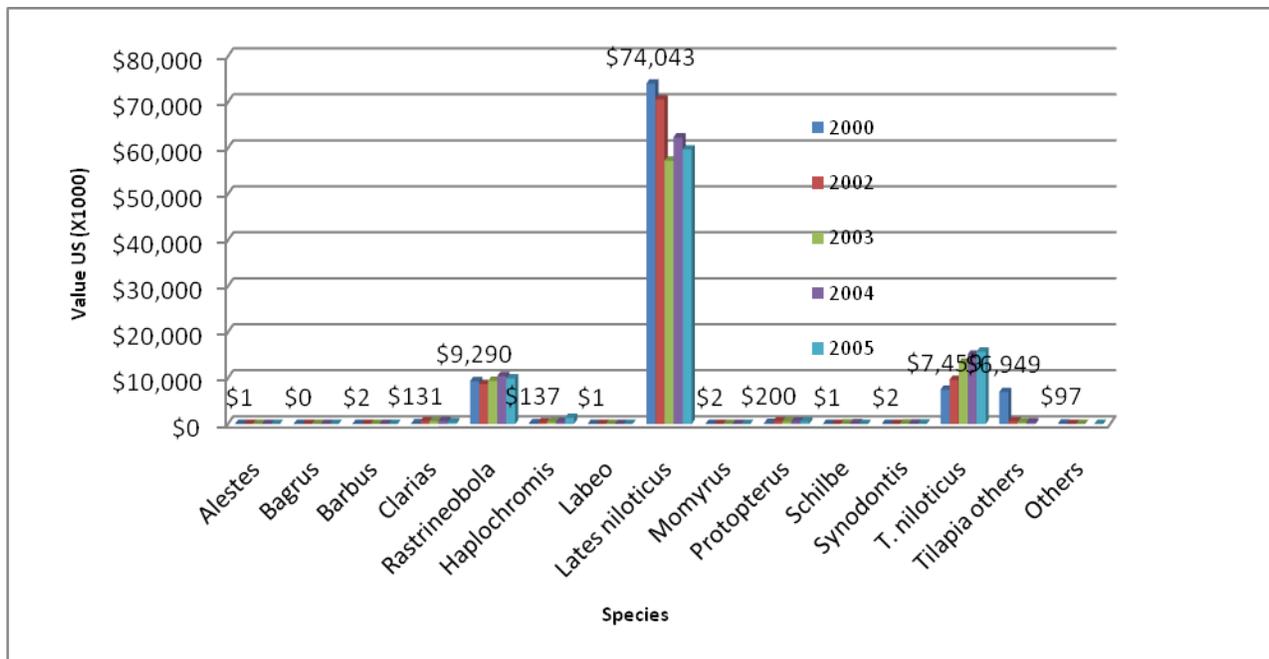
Table 1: Quantity and Value of Fish landed, 2003 – 2007

	2003	2004	2005	2006	2007
Freshwater fish Quantities - Tons					
Lake Victoria	105,866	115,747	133,526	143,908	151,934
Lake Turkana	4,047	9,067	2,493	3,097	4,660
Lake Naivasha	-	63	43	39	72
Lake Baringo	39	62	108	120	190
Lake Jipe	73	40	74	75	112
Tana River Dams	474	839	950	984	1,118
Fish Farming	1,012	1,035	1,047	1,099	1,120
Other areas	1,176	843	785	861	904
TOTAL Freshwater	112,687	127,696	139,026	151,711	160,110
Marine fish					
Crustaceans	756	1,206	1,192	675	476
Other marine products	393	407	397	442	512
GRAND TOTAL	119,655	135,501	146,642	158,470	167,221
Value - Kshs '000					
Freshwater fish	6,468,682	7,539,525	7,386,451	8,070,557	8,197,334
Marine fish	286,120	327,563	329,786	312,398	345,768
Crustaceans	176,347	221,106	228,425	150,865	135,106
Other marine products	24,963	29,895	28,997	33,452	40,957
TOTAL	6,956,112	8,118,089	7,973,659	8,095,851	8,719,165

Source : Kenya National Bureau of Statistics 2007

Lake Victoria not only dominates Kenyan fish production in total landings but also in total value. The catch was primarily comprised of Nile Perch (figure 1), followed by Omena and Tilapia. Nile Perch has traditionally been exported to the European Market and in 2006 it constituted roughly 90% (US \$117.7 M) of the total Ksh 8 billion (US \$130.6 M) Kenyan fish export. However, Omena is the most dominant fish resource that is marketed in the local markets from Lake Victoria in Kenya (Fisheries Department, 2006). The total catch landings in Lake Victoria (in million tons) was primarily Omena (*Rastrineobola argentea*) contributing about 40.3% (57,929 M tons, valued around US\$ 12 M) while Nile Perch (*Lates Niloticus*) contributed 38.4% (55,243 M tons) in 2006. Although Nile Perch has historically held the highest value, it is generally exported, almost fully. In contrast, Omena is mostly sold to domestic consumers in local markets. Thus, Omena is seen as an important product for enhancing food security in the region. Studies have shown that Omena is the second most consumed source of vitamin A in the Nyanza region, with dark green leaves being the first choice (O. Ohiokpehai, 2007). Jan et.al (2000) indicated that 60% of the children are fed Omena at least once a week and that Omena was more likely to be purchased than milk, groundnut and beans as the protein source in their daily diet due to affordability, tradition and availability. Basically, two types of end consumers are found in the in the Omena value chain: households and poultry feed processors, who use sun dried Omena as an animal protein ingredient for poultry diets. Figures vary during the year but estimates indicate that Omena in Kenya is utilized by the animal feed industry channel at roughly 70% and the other 30% used for human consumption, resulting in serious competition for the commodity between direct human food and raw material for animal feed.

Figure 1: Comparative Lake Victoria fish catches by Value (US \$1000) and species, 2000 -2005



Source : Kenya National Bureau of Statistics 2007

The USAID Kenya-funded Kenya Access to Rural Finance Program (KARF) conducted this study as part of the project’s initiatives in strengthening the fisheries sector in Kenya as to link USAID’s investments in market-led development for financial services at various points along

the value chain from producer to the end market. KARF objectives are to: (1) identify new stakeholders and finance providers with particular strengths in rural communities and helps improve their delivery to rural and agricultural clients and (2) support Kenya's financial services industry infrastructure, particularly by building the local capacity to serve this market in the short and long terms. As part of its ongoing work, KARF has identified a need for finance in upgrading activities within the fisheries sector.

This study builds upon the intensive work of the GoK, USAID's Kenya Business Development Services Program (KBDS), a Financial Services Knowledge Generation Task Order (FSKG) under the Accelerated Microenterprise Advancement Project (AMAP) IQC that studied the Lake Victoria fish value chain and other donors, such as the Private Sector Development for Agriculture (PSDA) Program funded by GTZ, to improve the local communities around Lake Victoria.

An initial value chain analyses in this sector was completed by KARF and FSKG in July 2007, and the studies provided the groundwork for identifying the specific value chain dynamics, trends, constraints and opportunities and identified market opportunities, and potential upgrading strategies and action plans. As a result of this study KARF identified the need to further investigate the Omena value chain to address issues of finance, HIV/AIDS and food security. The study addresses economic and financial dynamics, within fisher groups and other value chain actors, to design and deliver financial service interventions needed to create viable business results throughout the chain. The goal is to improve access to financial services while also mitigating threats to biodiversity, and strengthening HIV/AIDS coping strategies and awareness.

OBJECTIVES AND APPROACH

The authors used a rapid assessment approach to examine current and potential fisheries financial service needs in the Kisumu Lake Region, focusing primarily on the Omena value chain, by far the region's most important in terms of economic participation for women. It has been estimated by the frame survey 2006 (Fisheries Department, 2007) that the Omena fishery in Lake Victoria alone, supports an estimated 25,500 jobs to Omena processors who are primarily women. The authors conducted literature review, stakeholders' interviews and group meetings, and used the triangulation approach of different sources of data (Patton 1990) to reach their conclusions. Information was validated through interviews with secondary written sources, like existing written material on the fisheries, and cross-checking the consistency of the interview data by comparing them with observational data, and comparing the perspectives of people having different positions and backgrounds. The study analyzed the current usage of rural finance resources, services and products to determine the potential of expanding rural customer base through improved products (financial deepening), multiple and innovative delivery channels to expand access to new clients (outreach), management (efficiency/sustainability), and how to address policy level constraints (enabling environment). This study also examines activities that could emerge as an economic alternative to fishing. The team met with numerous, financial institutions, fishing groups, women's groups, registered and unregistered self help groups, beach management units and HIV/AIDS support groups to get a better sense of demand side constraints and perceptions, as well as other issues to serving this market with financial services. The team met with approximately 130 different Omena value chain actors over a period of two weeks

The report is organized into three main sections in addition to the executive summary. The next section is a brief overview of Omena value chain which is meant to give the reader a sense of the context in which the study was conducted. The following chapter analyzes the presence of the financial services in the Nyanza province and specifically near the beaches of Lake Victoria. This is followed by a chapter that analyzes the dynamics among actors in the Omena value chain with regards to HIV/AIDS prevalence in the region. The final section outlines opportunities for interventions in upgrading the financial services in the Omena value chain with a focus on sustainability, HIV/AIDS coping strategies, and diversification towards sustainable economic activities through climate change adaptation.

THE CONTEXT: OVERVIEW OF THE OMENA VALUE CHAIN

GEOGRAPHIC AND ECONOMIC DESCRIPTION:

In surface area, Lake Victoria is the second largest fresh water lake in the world after Lake Superior in the United States. Three countries border it: Kenya, Uganda and Tanzania. The lake has a surface area of 68,800 km² of which 35,088 km² (51%) is in Tanzania, 29,584 km² (43%) is in Uganda, and 4,128 km² (6%) is in Kenya. It has a shoreline length of 3,450 km of which 1,150 km (33%) is in Tanzania, 1,750 km (51%) is in Uganda and 550 km (16%) is in Kenya. The lake has a catchment of 194,200 km². Lake Victoria is shallow with a mean depth of 20 meters and a maximum of 79 meters. One consequence of this shallowness is that it is has an extremely rich source of nutrition, due to the higher penetration of sunlight for algae production. Kenya's portion is very productive due to the many flowing rivers through this section into the Lake.

Table 2: Omena and Nile perch landings from L. Victoria (tons) 2004-2006

Year	Total production (metric tonnes)	Omena (metric tonnes)	%	Nile perch (metric tonnes)	%
2004	115,747	34,679	29.96	69,479	51.40
2005	133,526	54,019	40.46	51,400	38.50
2006	143,908	67,929	47.20	55,261	38.40

Based on the frame survey 2006 (Fisheries Department, 2007), there are a total number of 3,181 small seines targeting Omena in Lake Victoria each operated by 4 fishermen thereby providing employment to about 12,724 full time fishermen. Each net supports an average of 8 small scale processors thereby providing an additional 25,448 jobs. At a ratio of one wholesaler to five small scale processors, the fishery provides an additional 5,090 jobs and 10 retailers per wholesaler with livelihood for another 50,896 Kenyans. The present importance of Omena fishery is therefore reflected in the estimated 847,418 who depend directly on this fishery. Even with a nominal number of two dependants, the Omena fisher can be seen to provide livelihood for over two million Kenyans.

OMENA FISHING AND PROCESSING

Omena is harvested using small seine nets (commonly called mosquito seines), and using attraction lamps. Small-scale fishing boats generate almost all of the fishing effort on the Kenyan side of the lake estimated at about 44,264 fisherman and approximately 15,280 fishing vessels (Fisheries Statistics 2006). Very few women own fishing crafts and gears (less than 2%), and men carry out the actual fishing. These fishermen use plank-keel canoes taking a total crew of two to five people. Peak



Photo: Ingrid Ardjosoediro

harvesting occurs during dark nights, when the effect of artificial attraction light is maximized. In the shallower waters, however, the low depths and high turbidity reduce the benefits of using lamps. Omena fishing takes place usually for 18-24 days in a month, because of the lunar cycles and fishing is done during dark nights. Most Omena fishers use the remaining one week as a monthly rest period, when they can mend and prepare their gear or attend to other non-fishery engagements. A closed period management measure to reduce overharvesting has been implemented for Omena fishery starting from 2001 by the Ministry of Livestock and Fisheries. It is illegal to fish for Omena between 1st April and 31st July each year. The highest Omena catches come from Tanzania where the monthly total ranged from 14,000-23,000 tons compared to 5,000-8,000 tons in Uganda and 8,000 tons in Kenya in 2006.



Photo: Ingrid Ardjosoediro

Omena (*Rastrineobola Argentea*), a sardine-like species, *dagaa* in Tanzania or *mukene* in Uganda are a small two-inch long native minnow found in Lake Victoria that are typically dried using sun-drying over nets stretched across the ground. Omena fish processing is mostly done by a small family or women-owned businesses with low technologies of processing and are located close to the beaches and areas of towns around the lake. The supplies come directly from fishermen who sell the catch to women who process them and trade them around the beaches. In fact, women make up 95% of all the Omena processors and traders.

Omena is considered under-fished; less than 50% of its current biomass is being harvested. Studies have shown a high percentage of waste and loss of Omena during the drying process, where both physical losses (e.g., fish is thrown away, washed away by rain, eaten by animals or stolen) and quality losses occur. Quality losses were reported to constitute the major type of loss,

with indicative figures ranging from 10 to 40%.¹ ; typical losses should be in the range of 10-15%). Donor development projects in some areas of the Kisumu/Lake Victoria region have introduced some improved technologies, specifically, dry racks; however, due to lack of capital to invest in improved racks (an average cost of 10,000 KSh/US \$132/drying rack), women have not adopted this newer technology on their own. With more advanced market awareness and intervention of access to finance this technology improvement could minimize losses and thereby increase their income by a third, as it not only reduces the time for drying by half, the dried fish has a higher quality which results in less spoilage and thus is able to receive higher prices from the human consumption market channel vs. the animal feed industry. Introducing technology to improve the preservation of fish during the rainy season would increase the quantity of fish available for consumption in two ways: by reducing post-harvest losses and by allowing fishermen to increase their catches. Although catch rates are high during the rainy season, fishing effort is reduced when processors cannot dry the fish. Improved technologies could include artificial drying (using drying racks vs. on the ground) and salting. Drying using racks would cost US\$ 0.60–0.70/kg of dried product, representing about 4 kg of raw product. Adding US\$ 0.20 for raw material and US\$ 0.40–0.50 for marketing costs one would arrive at a retail value of US\$ 1.20–1.40/kg which may be feasible in view of the high quality of the product.

Processing costs could be reduced by diminishing the initial water content of the fish, which can be done through salting. Salting would stop deterioration so that fish may be kept until the weather allows further drying. As salting reduces the water content the drying time is reduced as well. Salt could already be used on board thus allowing fishermen to stay out fishing for longer periods. However, the salted dried product would be a new product in the market and the acceptability should be tested. Thus it would appear that possibilities exist to improve the role of small inland fish in food supply and in income generation. Action is necessary to test selected solutions on a pilot scale. This is a process of applied research requiring skilled and trained staff apart from necessary equipment. It also requires careful economic analysis as well as market and consumer research.

KEY ACTORS AND DRIVING FORCES IN THE VALUE CHAIN (VC)

Fishermen and boat owners. Boat owners are commonly involved in beach activities, e.g., selling the catch. On the more commercialized beaches, they rarely fish themselves. An increased separation of ownership and management of fishing units has accompanied the new fishing patterns (Harris et al. 1995). Surveys² revealed that the number of fishers in the Lake Victoria increased by 52% from 129,305 in 2000 to 196,426 in 2006. Also the number of fishing crafts increased 63% (42,493 in 2000 to 69,160 in 2006). The number of fishing crafts using

¹ The FISH INFOnetwork Africa's fish industry

² The individual Partner States of the East African Community (EAC) have done frame surveys on Lake Victoria since the 1970s. They include surveys in the Kenyan part of the lake in 1972, 1990, 1994 and 1998. In Tanzania, they were conducted annually in the 1970s until 1991, and then in 1992, 1995 and 1998. In Uganda, frame surveys were conducted in 1970, 1971, 1972, 1988 and 1990. The first regionally coordinated lake wide frame survey was undertaken in March, 2000 with the support of the GEF/World Bank funded Lake Victoria Environmental Management Project (LVEMP) and the EU funded Lake Victoria Fisheries Research Project Phase II (LVFRP II). A second survey was carried out in April, 2002 with funds from LVEMP and a third one in April, 2004 with funds from the respective Governments and the 2006 Frame Survey was in March with financial support from the EU through IFMP. The last three surveys were coordinated by the Secretariat of the Lake Victoria Fisheries Organization (LVFO)

outboard engines increased from 4,108 in 2000 to 9,609 in 2004 and 12,765 in 2006, a 211% overall increase in motorization. This suggests that the fishers have earned enough to afford motors and are now able to go further in search of fish. Over the same period, the total number of gillnets also increased by 88%, from 650,653 in 2000 to 1,222,307 in 2006. All these changes indicate a substantial increase in fishing effort on the lake. The facilities servicing the fisheries sector at landing sites have remained inadequate. In 2006 only 14.3% of the landing sites had permanent fish shades (*bandas*) and only 41.6% were accessible by all-weather roads. Efforts to improve the facilities that service fisheries at the landing sites are underway through landing site and community infrastructure components of the IFMP- EU funded project.

Processors. Women dominate the post harvest sub-sector of the fisheries accounting for 70 to 80 percent of all fish processors involved in fish handling, quality processing and preservation. Because the Nile perch VC is a fairly integrated channel dominated by the Industrial Fisheries Processors (IFPs), women remain only in the smaller scale, less remunerative processing of traditional species (such as Omena). This is governed by existing socio-cultural and traditional tribal rules regarding who is allowed to work at the beaches. While these rules are changing with women moving into boat ownerships and even fishing roles on some beaches, these norms govern the majority of the beaches. Increasingly, the Government of Kenya and donor organizations have sought to organize women to play more active roles, encouraging them to organize Self Help Groups (SHGs) and women's groups (WGs), but not necessarily into formal business associations. Although these groups exist, none of them operate as business groups and many of them are modeled in the line of social welfare, which limits their ability for entrepreneurship.

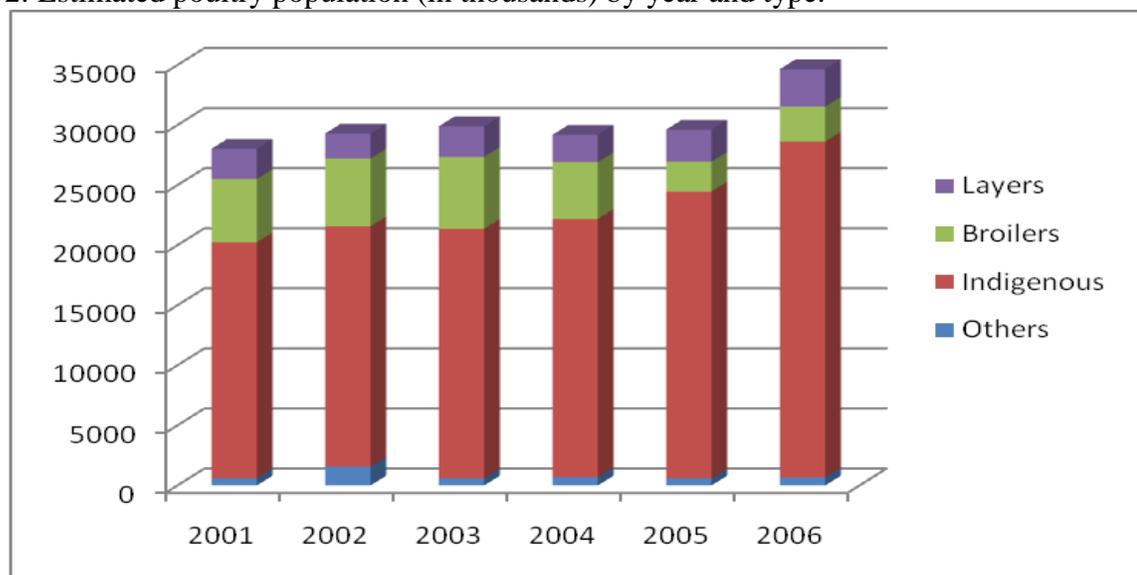
Traders. Wholesale traders of Omena (predominantly men) buy the dried Omena from the women from the remote beaches and consolidate the Omena for transportation to larger markets such as Nairobi and Mombasa. They usually have bigger working capital and set the price at the beach. Some of the traders re-grade the Omena based on the buyers requirements (see picture on the right). Omena is compacted in 70 kg bags and stored in sheds until a required quantity is reached to be delivered to the buyers in Nairobi and Mombasa. Open trucks are often used to transport the Omena, which can result in quality deterioration due to exposure to rain and other elements. Traders are also required to pay levees in the districts that they pass through; some traders have indicated that this increases their formal operating costs.

Feed processors. There are many feed companies using Omena as the protein component for poultry feed, specifically for broiler. The feed companies are mainly located in Kisumu, Nakuru, Nairobi and



Mombasa, but also in secondary and tertiary cities of Eldoret, Kitale and Thika among other towns. The conversion of Omena into other products for animal feed is more uniform; however, many of the animal feed processors have branded some of their products with trade names that are generics of the basic formulations for poultry feeds. Even though Omena contains only 55-60% crude protein as compared to 70-80% for imported fishmeal, the price is only half and this situation has promoted more use of Omena as fishmeal in the poultry feed industry. This trend is expected since protein is the most expensive component of various compounded animal feeds requiring least-cost evaluation for a balanced diet formulation.³ Each of the animal feed processors has different capacities: Ronaldo (250 Kg/day), Hemco Feeds (300 Kg/day), Wonder Feeds and Lake Feeds (1,500 Kg/day), Pembe Millers (15,000 Kg/day), Kenya Dry Products (3,000 Kg/day) and Promasidor (5,000 Kg/day).⁴ Some feed companies indicated that they prefer to source from Tanzania where supply is guaranteed (Tanzania reports a monthly landing of twice the amount than in Kenya), and Tanzanian processors seem to be better organized. In Kenya, chicken is the most important class of poultry compared to ducks, turkeys and geese. Rural household chicken production increased as a way to improve their livelihood. Recorded marketed production of chicken and eggs in 2003 was 1,624.5 M Kshs (US \$ 21.4 M) a 14 % increase of 1999 (1,431 M Kshs/US \$18.82 M)⁵. These figures suggest that the demand for Omena will continue to grow.

Figure 2: Estimated poultry population (in thousands) by year and type.



Source: Draft Annual Report, Nairobi Province Livestock Division 2007). Note: 2006 Figures were estimated from available data.

Beach Management Units. Beach Management Units (BMUs) were established at the local landing stations to bring on board all stakeholders with an interest in fisheries resource management. The concept of co-management of fisheries resources was adopted as the way

³ The Development of Lake Victoria Fishery: A Boon or Bane for Food Security, ABILA, R. O. (2000).

⁴ A study on marketing channels of Omena and consumer preferences in Kenya, Manyala 2008

⁵ Poultry sector country review: Kenya, Fao Animal Production And Health Division Emergency Centre For Transboundary Animal Diseases Socio Economics, Production And Biodiversity Unit, July 2007

forward for sustainable fisheries. Each BMU is made up of a committee of 5 to 9 persons, about half of whom are elected by the local fishing community while the rest are nominated. BMUs are independent of government and lack legal authority. However, the government does rely on BMUs to carry out certain responsibilities. For example, they collect government data and collect levies and licensing fees on behalf of the government. Most BMUs are maintained through the imposition of a low levy on all the landed fish catch. They have been found to be highly accountable to their communities and to be effective. The functions of the BMUs include resolving conflict, punishing offenders, convening community meetings, establishing beach hygiene and sanitation facilities, providing security on the beach and in the fishing ground, receiving visitors, registering beach members, facilitating search and rescue, and the establishment and maintenance of beach infrastructure. Since members of these units come from the community, it can be easily recognized when the BMU's have failed to deliver according to the community's expectations.

FLOW OF PRODUCTS

The national trade in Omena is more pronounced compared to the limited regional trade, which only occur from occasional demand by relief agencies to supplement or add nutritive value to relief food. Traders send their catch to markets, particularly the central markets at Mwanza and Nairobi which handles 90% of the legal trade to distant markets (Maembe 1990). Traders transport fish through a local network of traders, who use boats and an inadequate road infrastructure to access markets. From this point, the fish passes through a small scale or a large scale wholesaler. Both have a choice to sell to retailers or industrial processors; depending on supply, demand and price after consideration of quality factors as well. Some of the whole sale buyers

Illustrative costs
• Boat: KShs. 40,000 (US\$ 526)
• Fishing nets: KShs. 10,000 (US\$ 132)
• Lamp: KShs. 500 X 4, (US\$6.6 *4)
• Fishing operations: 2.5 liters of kerosene per lamp per fishing night that costs KShs. 250 (US\$3.28)/l and the depreciation on equipment where applicable), food for the crew, gear repair and other miscellaneous costs.

re-grade the Omena by sifting off the debris and snail shells. Smaller to medium wholesale trader (some are women 30%) sell around small landing sites to major towns in the lake region such as Kisumu and Homabay. For industrial processing, the final products are for both local consumption and export, depending on the quality and grade. The Omena fish originating from islands in Uganda are mostly transported into Kenya by waterway through Sio Port, Port Victoria and Usenge or by road through the Busia border. When the Ugandans are the one exporting, then they mostly sell through a broker to a Kenyan importer who processes all the import documentation and declarations. The Omena may also be sold directly to an importer on rare occasions. The importers sometimes operate as large scale wholesalers and the product follows the retail market channels or the animal feed industry channel and local/export consumption. Feed millers usually require large amounts, and they currently procure most of its fish protein from Mwanza, Tanzania⁶.

⁶ An interview Unga Millers stated that Tanzanian production of Omena seemed more organized than on the Kenyan side, but that Unga is interested in procuring the Omena locally when up to standards.

COST OF PRODUCTION

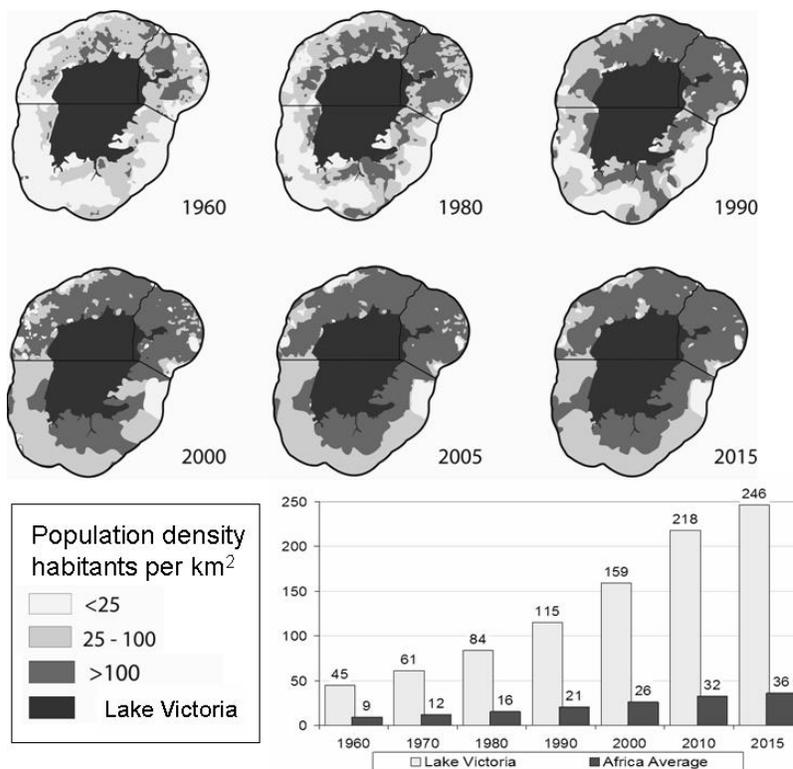
Previous estimates of the investment costs in an Omena fishery show that it is comparable to some family-owned small enterprises in the informal non-fisheries sector. The main investment costs include the costs of the boat and gear which, in the typical case in Lake Victoria, would amount to at least KShs. 47,000.00 (US\$ 618), depending on the size of boat and the size of net (Wakwabi et al, 2003). The operational costs in the Omena fishery include wages for fishing crew, three pressure lamps, floats for lamps, ropes, paraffin for attraction lamps, boat and gear depreciation, or boat rental costs. The operational costs in the Omena fishery are usually subject to little daily variation; hence, net returns are largely determined by the levels of daily catches and prevailing prices (mean average daily catch per boat or some metric). The market price of Omena is greatly determined by the supply and demand, the method of acquisition and distance from the source. The price of Omena per sack (70 kg) in Mombasa is KShs. 7,500.00 (US\$ 98) while that in Luanda, which is close to the production area, is KShs. 9,000.00 (US\$ 118) despite the large differences in distance. The price in Luanda is determined by very high demand while that in Mombasa is likely to be determined by the lower demand and quality due to the distance. In Kisii that is not traditionally fish-eating community, the price is relatively lower at KShs. 4,000.00 (US\$ 52.6) as compared to Kakamega (KShs. 6,500.00, US\$ 85.50).

ENVIRONMENTAL ASPECTS

There are concerns on the sustainability of the Omena fishing and many studies have been carried out to identify the right gear size and areas of protection for breeding grounds. The MOF has therefore stated a closed season for Omena (1st April to 31st July) to protect the population during the breeding season and many studies support that this should continue so as to safe guard the gains of recovery of the Omena fishery.

Figure 3: Increased Population and its Impact on the Lake

The Omena fisheries experience other type of environmental degradation, such as the invasion of the non indigenous water hyacinth, *Eichhornia crassipes*. Water hyacinth first appeared in Lake Victoria in 1989 (Twongo et al. 1995) and by 1995 in the Ugandan waters of Lake Victoria, stationary mats were estimated to cover 2200 hectares. The aquatic weed was introduced in Lake Victoria from Rwanda via the Kagera River by the activities of man. The covering of this surface water of the Lake affects the Omena fishing, as the hyacinth covers the surface area



which is needed to attract the Omena for easy catching.

Surveys for the hyacinth were conducted in selected beaches between June 1995 and November 1999. When surveys were complete, it became clear that this weed is nomadic, except in lagoons and beaches that had little external interference. The open waters remained generally clear due to constant wave action. Interviews conducted on selected beaches/bays indicated that weed carpets impacted both positively and negatively, i.e. they disrupted fishing activities, transport, irrigation, water treatment, enhanced breeding grounds for vectors of human diseases, impacted on biodiversity and had become a source of raw materials for making furniture, paper and artifacts. After successful biological control by the Kenya Agricultural Research Institute (KARI), resurgence and succession were observed.⁷

The lake basin boasts a human population estimated as high as 20 million people (RTF2 1995) from Tanzania, Uganda and Kenya. The biggest Kenyan hub around Lake Victoria is Kisumu (the third largest city in Kenya with a population of 597,000) of which over 60% live in informal settlements (not in the city itself). The town and surrounding beaches experience severe water and sanitation problems, due to low production capacity, limited service coverage of the network, especially in the area of unaccounted for water which is over 54%. In the informal settlements, there is widespread dependence on water vendors and on shallow wells, boreholes and springs which supply water of questionable quality. The Nyanza district experiences recurrent outbreaks of cholera and faces ongoing public health challenges caused by deficiencies in the water and sanitation service. Kisumu town is also a major contributor to the pollution load entering Lake Victoria. In some areas the population density is among the highest rural densities in the world, when compared with the rest of the area it is projected to grow at a faster rate (see figure 3). The urbanization increased improved road access and increase of population around the lake has put in more pressure on the carrying capacity of the water body as the lack of basic sanitation services result in increased pollution into the lake. Runoff from agriculture and sewage has caused to drop the levels of dissolved oxygen, which in turn affects the fish population.

DRIVING FORCES

- Compared with Nile perch, which is dominantly an export fish, Omena is the most important fish in supplying proteins for local communities and in addition to other areas of Kenya outside of the Nyanza province. Its low price, easy divisibility into smaller and cheaper units, and its longer shelf life in the dried form, make the fish popular especially among low-income households. However, human consumption is no longer the monopoly with regard to this fish, as a significant portion of it is already finding way into the fishmeal industry (60-70%). Omena is also a major source of employment especially for women in the artisanal processing and trade sector (60% of Omena processors are women). Unlike in the case of Nile perch where men still dominate the entire fish harvesting and distribution chain, the traditional female dominance in processing and marketing Omena has continued. In the Omena processing, there is still need for value addition in order to reduce the high spoilage during processing and storing (estimated at 25-30%).

⁷ Lake Victoria: The water hyacinth (*Eichhornia crassipes* [Mart.] Solms), its socio-economic effects, control measures and resurgence in the Winam gulf George Ogueno Opande, , John Charles Onyango and Samuel Otieno Wagai Maseno University, Department of Botany, Maseno, Kenya on Science direct 16 August 2005

- The human consumption market for Omena has been more lucrative for traders as they receive a higher price at the local and urban markets compared to the price they receive from feed producers. However, due to excess supplies from Tanzania and Uganda which do not observe closed fishing seasons; the bulk of Kenyan Omena fish is currently being diverted to the animal fish meal industry because of the increased demand and lower standards for quality. The Kenyan middle class has become economically stronger resulting in an increase of chicken consumption in the urban areas.
- Lack of infrastructure facilities is the principal source of market fragmentation, as remote fishing villages are subjected to the more dominant position of traders with a truck. In addition, poor marketing information flow is a constraint to profitable marketing of Omena. There is inadequate flow of price information from the market to the processors and vice versa. Critical information for formulating a marketing strategy is lacking across the board and current marketing strategies are based on informal information at individual level. For example, women processors usually are price takers as they can only rely on the word from the local buyer/trader for prices. The GOK report prices for grain commodities, this information could be expanded to include fish prices.



- Additionally, the use of non-standard measurement units from wet into dry fish creates an added opportunity for dishonest behavior along the VC. Wet fish are measured in troughs and dried fish are measured in *goro goros*, which are both volumetric measurements and when the big trader (or consolidator) comes along to buy from the women they weigh the fish using 50 pounds bag. (see the picture above which shows the blue container, called a trough and the yellow, a *goro goro*).
- One of the major issues identified during the study is the lack of standards for quality for different market segments. To maintain good fish product quality, several measures should be put in place in addition to policy and legislative controls, such as imposing food and safety standards, HACCP principles and improved storing and packing. Currently, there are not standards by the Kenyan Bureau of Standards for dried Omena fish. These quality issues along the value chain deny the players opportunities to reap maximum benefits for superior markets such as supplying to urban supermarkets.
 - The different utility of Omena is a strong pull for the sector. Firstly, Omena serve as cheap protein source in many of the impoverished area of Kenya. Even during food insecure times, women still have a strong purchasing power to buy a handful of Omena to feed the whole *family*, as these fish are really small and inexpensive supplementing to ugali. Secondly, the inexpensive nature, local availability and ideal ratio of protein: fat/unit makes it a sought after ingredient for animal feed. Feed processors indicated that the domestic market preferred chicken feed (broiler and start-up) constituting of Omena because of the extra flavor Omena adds to the feed. The domestic and broiler chickens seem to prefer feed made with Omena due to the extra flavor. Thirdly, exporters have

found different uses for Omena, e.g. cat food export to Denmark and for human consumption in Malawi, the Democratic Republic of Congo and Sudan.

ROLE OF GOVERNMENT, DONORS, AND NGOs AND CURRENT INITIATIVES FOR VC UPGRADING AND STRENGTHENING

Africa Now. Africa Now is an international development organization tackling poverty in Africa by helping small-scale producers, and promoting ethical trade. They are currently implementing a project called *Rich Fisheries, Poor Fishermen* funded by the European Union. Part of the activities implemented are awareness of proper fishing gear, improvement of post harvest handling techniques, business planning training and to increase the economic benefits of fishing for the fisher folk of Suba district. They also assist with improving access for fisher folk to affordable fishing equipment in order to help them take control of their own fishing businesses. They have enabled fisher folk to improve the profitability of their fishing businesses through improved access to village banks, and facilitated access to affordable ice distribution. However, not all village banks have survived and some have left a negative print on fisher folk due to bad experiences with corrupt individuals managing these local offices.

Osiendela. Osiendela (also referred to as Friends of Lake Victoria) is a national NGO registered in Kenya in 1992 and currently operates mainly in Nyanza and Western Provinces. The main objectives of the NGO are to create environmental awareness for the conservation and protection of Lake Victoria and its catchment area from further degradation; to serve as a forum for exchange and expression of the views on environmental matters in the lake; provide necessary training to community members involved in reducing environmental degradation around the lake region; to encourage and carry out research in relevant areas of environment with the aim of finding practical and sustainable solutions; to establish and maintain a resource center on matters and issues relating to the lake for purposes of improving the knowledge base of the community around it; and to articulate the views, concerns and aspiration of the lake resources stakeholders through the establishment of collaborative linkages with similar organizations with the aim of harmonizing issues related to the lake for the purpose of exploiting the resources judiciously. They have initiated several projects focused on improving the fisheries sector, such as the building of the Mbita ice plant with several donors, including USAID. They also started a partnership with OSRAM for an off-grid energy project. The off-grid energy project however did not work out well due to some legal and implementation difficulties.

GTZ Private Sector Development for Agriculture. The German Technical Cooperation Agency (Deutsche Gesellschaft für Technische Zusammenarbeit, hereafter GTZ) supports Kenya with several development projects. The Private Sector Development for Agriculture Programme (PSDA) (2003-2013) is implemented in collaboration with the Kenyan ministries of Agriculture and Animal Husbandry/Fisheries and is to establish good governance and pro-poor public budget administration, and to strengthen peace and security in the region. The method employed is called the product-based approach, where farmers producing certain agricultural products such as potatoes, vegetables, passion fruit, mangos or milk goats are shown how to maximize the value of their own holdings. The successes achieved by cooperation in the agricultural sector are reflected in the adoption of a new sector strategy. Draft bills concerning the use of potatoes and cattle feed have been developed. The PSDA project is also working in the Omena VC providing

capacity building to fisher folk by means of training and working closely with women on group marketing.

WIFIP (The Women in Fishing Industry Programme). This organization started off as a three year non-formal radio education project based along the shores of Lake Victoria, Kenya. Initially this project was designed to work exclusively with women and, in its first two years, the project developed a series of radio programmes specifically designed for, and targeted at women. The aim of the project is to help women fish-traders develop a voice in their community and initiate socio-economic changes to improve community health. Presently, they have grown into an active NGO that work in the Kisumu capital and over 60 beaches with both men and women in the fishing industry. They provide programs on HIV/AIDS prevention via radio; have face to face outreach to groups of fisher folk. Theatre is used as a strategy for knowledge transfer and they offer voluntary counseling services which are outsourced to health professionals. WIFIP is one of the few organizations that address HIV/AIDS through economic development activities such as establishing kitchen garden, training in bookkeeping, marketing, and on entrepreneurship. They also manage a revolving fund, more about this fund in the second chapter.

SIDA (Swedish International Development Cooperation Agency). Over the past few years SIDA has supported the Ecological Sanitation Research (EcoSanRes) program aimed improving and using new innovations in the field of ecological sanitation, i.e. low cost sanitation systems based on the principle of recycling nutrients (from feces and urine) to farming land. EcoSanRes has projects in 18 countries and has the aim of developing capacity and further disseminating know-how in building low-cost, sanitary toilets that produce valuable compost for crops. SIDA has participated in building up a network of persons and organizations working with rainwater issues. Developing methods for utilizing rainwater is important, both as a sustainable supply of drinking water of high quality, and for making use of rainwater in farming as effectively as possible.

UN Habitat: Phase III of UN-HABITAT's Lake Victoria City Development Strategies (CDS), is a three-year project that began in November 2006. The project received financial support from the (Sida) amounting to US\$5 million and aims to improve the lives of the citizens of Homa Bay and Kisumu (Kenya); Entebbe, Jinja and Kampala (Uganda); and Bukoba, Musoma and Mwanza (Tanzania). This development project, by working with the local municipal authorities, will be able to address local environmental issues and to achieve sustainable urbanization through improved environmental planning, management, and policy application processes.

Kenya Fish Processors and Exporters Association (AFIPEK) AFIPEK, which was established in the year 2000, is a professional association of the fish subsector with membership drawn from processors and exporters of fish and fishery products from Kenya. All fish processing/exporting companies are members of the Kenya Fish Processors and Exporters Association (AFIPEK). It is coordinated through a secretariat based in Nairobi which serves the various members located in Kisumu, Nairobi and Mombasa. AFIPEK is not strongly involved in the Omena sector as compared to their involvement the Nile Perch.

Kenya Marine Fisheries and Research Institute (KMFRI) This the institution specifically charged with conducting research on fisheries and general aquatic systems in Kenya. KMFRI

conducts research in six broad areas, namely; fisheries biology (stock and catch assessment, fish production, genetics and breeding etc.), aquaculture (pond construction, stocking, reproduction, feed formulation etc.), aquatic environment (water quality, pollution etc.), fisheries socio-economic (fisheries development, management, livelihoods etc.), fish quality and post-harvest fish technology (fish quality standards, fisheries products development etc.), and fisheries database management (fisheries statistics, data management etc. The main beneficiaries of KMFRI's research are the Department of Fisheries, IFPs, artisanal processors and traders and fishermen. KMFRI has particularly worked with local organizations and donor groups in developing several alternative ways of drying the Omena off the ground and in a more hygienic manner.

Lake Victoria Fisheries Organization (LVFO) The LVFO is a regional organization whose objectives are to foster co-operation among the supporting parties (Kenya, Uganda and Tanzanian governments); harmonize national measures for the sustainable utilization of the resources of Lake Victoria; and to develop and adopt conservation and management measures to assure the lake's ecosystem health and sustainability of the living resources. Its secretariat is based in Jinja (Uganda). Its responsibilities include: Promoting the proper management and optimum utilization of the fisheries resources of the lake, enhancing capacity building of existing institutions and develop new ones, and provide a forum for discussions of the impacts of initiatives dealing with the environment and water quality in the lake basin and maintain liaison with existing bodies and programmes among others. Part of their work has focused on evaluation the impact of the Omena ban on food security and the fishing stock.

Lake Victoria Fisheries Research Project (LVFRP)

The LVFRP was funded by the EU with a total budget of approximately Euro 9.3 million. The first phase of the project started in 1989, initially scheduled to run for a period of one-and-a-half years. The first phase principally focused on the rehabilitation of the existing research vessels in Kenya and Uganda and to construct a new one in Tanzania. Phase II of the project commenced in 1997 and was scheduled to end in 2002. The objective of this phase was to create a viable regional fisheries management framework and the creation of the knowledge basis required for the regional management of the lake fisheries.

Chapter Two

Financial Institutions and their Role in the Omena VC

For decades the fishing communities on Lake Victoria were underserved with financial services. At various times new programs (often donor led) would be initiated to broaden access to these groups and others; many of these programs involving SACCOs, MFIs, FSAs and beach banks failed either from management problems or fraud, leaving the beach communities distrustful and often times without their savings. However, in the past 2-4 years a wide variety of financial institutions – including commercial and state banks, deposit taking microfinance institution (DTMs), and microfinance institutions (MFIs) have begun exploring opportunities to expand financial service provision to communities on the Lake Victoria region from a business standpoint. Where previously the city of Kisumu was the only location to find bank branch offices, now branches exist in tertiary cities of the Lake with the hope of finding bankable clients.

For this assignment, the team met with financial institutions with branches in other secondary cities near major beach and fishing communities (in addition to Kisumu city) to get a better handle on the constraints and opportunities to real lending and savings to fisher folk, particularly traders and processors of Omena. The team conducted interviews with bank managers and staff in Nairobi and in various branch offices. These institutions included: Equity bank, Co-operative Bank of Kenya, Adok Timo (MFI), FAULU (deposit taking microfinance institution – DTM), KREP Development Agency (MFI), Opportunity Kenya (MFI), Kenya Women’s Financial Trust (DTM) and SAGA (SACCO). Specific details about the financial institutions, their locations, products and target market are provided in Table 3.

TABLE 3: FINANCIAL INSTITUTIONS: THEIR LOCATIONS, PRODUCTS AND SERVICES

Financial Institution (and Legal Structure)	Branch Locations in Nyanza/Lake Victoria	Savings Products for Fisherfolk	Loan products for fisherfolk	Other Services	Approximate number of fisherfolk clients, including focus
Equity Bank (bank)	Kisumu, Homabay, Mbita, Siaya, Bondo	Equity ordinary account, current account, jijenge (contractual savings) account, call and fixed deposit	Uvuvi biashara account, SMS banking,	Act as M-Pesa agent, but not yet possible to withdraw savings using M-Pesa	Approximately 5,000 (of 14,000 customers in Lake Victoria region) are fisherfolk; focus on fishermen and boat owners, not Omena traders and processors
Co-operative Bank of Kenya (bank)	Mbita,	Instant Access, Jumbo Junior, Salary Account, Call deposit, Haba Na Haba, fixed deposit, Hekima,	Fixed assets financing to Beach Management Units (BMUs) under guarantee from Africa Now	Money transfers, debit and credit cards, mobile banking, direct debit, mobile payments	Focus on beach management units with intent to expand products to fishermen; not Omena traders and processors
Barclays Bank (bank)	Kisumu, Homabay, Kisii, Nyamira	Mega Saver account (min. balance 1000 KES)	Asset finance,	Internet banking, cheque payment, direct debit,	No information
Opportunity Kenya (MFI)	Kisumu, Kisii, planned expansion into Mbita	Group savings accounts (not intermediated)	Group microenterprise loan		No more than 50 fisherfolk served; focus on traders
Adok Timo (MFI)	Kisumu, Nyando, Rachuonyo, Bondo, Suba, Siaya, Rongo, Migori, Homa Bay*	Personal and group savings, children's savings, shares	Individual and group loans for business, agribusiness, asset financing	Non cash banking, money transfers, cheque cashing, salary advances and processing, remittances, market linkages	4,000 fishermen, 7040 traders (includes non-fish traders) and 160 processors (also non-fish processors) of approx. 16,000 clients
SAGA Thirt and Eterprise Promotion Ltd. (SACCO hybrid)	Kisumu, Bondo, Riria (check), Nyando, south Nyanza	SAGA Save, Total Account (children's), Fixed deposit, share savings; discontinued beach banks for savings	Enterprise loans, Kulima (spelling) loan, microenterprise loan, market day loan;	Group and individual savings accounts, share accounts	16,000 total members, of which about 3,000 fisherfolk (including BMU members) are getting loans***;
Kenya Women's Financial Trust (DTM)	Kisumu, Nyando, Kisii, Homabay, Bondo, Nyamira, Awendo, Masaba, Migori**	Group savings (not intermediated); will begin mobilizing	Group loan products for women; nothing specific for		

		savings on	fisher folk but planned (awaiting word on Ford Foundation grant)		
FAULU (DTM)	None at moment; planned openings				
KREP Development Agency (KDA) (MFI, FSA facilitator)	Kisumu, Migori, FSA partnerships in: Mhoru Bay, Karungu, Sindo, Port Victoria, Funyola,				

*Note: Adok Timo has sub-branch locations in other tertiary cities in Kisumu, Nyando, Rochauonyo, Bondo, Suba and Siaya for a total of 24 branch and sub-branch locations.

** KWFT also has sub-agencies in Kisii, Migori, Bondo, Homa Bay, Awendo and Nyamira.

*** Includes small scale traders outside of fishing sector as well. In MIS, no way to distinguish between fisherfolk and other clients because products not differentiated.

FINANCIAL INSTITUTION PRESENCE AND SERVICES

BANKING PRODUCTS AND SERVICES

Within the past two to four years bank expansion around Lake Victoria has been noticeable. Equity bank, Co-operative bank of Kenya, Kenya Commercial Bank and Barclays have opened branches in secondary cities in Nyanza, namely Bondo, Suba/Mbita and Homabay. No bank currently has branches in the outer islands.

Leading this expansion has been Equity bank with its aggressive strategy to sign up thousands of new savings customers for no minimum balance deposit accounts. Equity has expressed an interest in working with the fishing communities and fisher folk. Anecdotal evidence from the team's interviews showed that approximately 30-40% of the individuals with which we met in Bondo, Mbita and Homabay had signed up for an Equity savings account. Equity has also begun holding sensitization meetings for the community that begin with sessions on financial literacy (book keeping, isolating ones business finances from household finances, loan repayment, the importance of savings) so as to begin to create a lending culture. The literacy program is combined with mandatory weekly savings either in groups or as individuals. Equity's hope is that the literacy and savings programs will help them build a customer base for their new *uvuvi biashara* loans, special loans for the fisherfolk launched within the past 6 months.

Within *uvuvi biashara*, one loan product is focused on business finance for larger entities (presumably working capital) but requires guarantors, title deeds and other acceptable collateral. The second product provides finance for micro leases such as fishing boats, drying racks and fishing equipment (nets, gear) by fishermen and boat owners. The third is focused on fixed asset purchases made by larger enterprises (and possibly well organized beach management units) for cooling facilities and refrigerator trucks. Specifics about the terms and conditions are provided in Table 4.

TABLE 4: EQUITY UVUVI BIASHARA PRODUCTS

Loan Type)	Purpose	Interest Rates	Amounts: Min and Maximum	Repayment Terms	Other Loan Conditions	Target Group within the Fisherfolk
Business Loan	For those already in the fishing business	12% p.a.	Depends on requirements and ability to repay	Not specified	A combination including guarantors, title deeds, log books, shares and cash for security; credit life insurance is mandatory and charged at 0.275%	Registered fishing businesses
Micro Leasing	Micro leasing for fishing boasts, drying racks and fishing equipment	15% p.a.	Up to 300,000 shillings	Depends on amount borrowed	A combination including guarantors, title deeds, log books, shares and cash for security; credit life insurance is mandatory and charged at 0.275%	Fishermen, boat owners
Asset Financing	For cooling facilities and refrigerated trucks for transporting fish	8% p.a.	Up to 300,000 shillings	Depends on amount borrowed up to 3 years	A combination including guarantors, title deeds, log books, shares and cash and assets being purchased for security; credit life insurance is mandatory and charged at 0.275%	Larger fishing enterprises, possible beach management units

Source: Equity Bank Collateral, 2009

In the past 18 months, Equity has signed up close to 14,000 new savers in Nyanza province (the total population of Nyanza is currently at about 4.5 million people). Of these an estimated 5,000 are within the fishing community. These new accounts have largely been sourced by loan officers meeting with the BMUs and then the community. There are only a small number of loans to date, (no data was provided) but the hope is to start slowly and progressively work with lower level clients. Equity hopes to be able to use the BMUs as guarantors for individual (or group) loans to fisherfolk.

Similar to Equity Bank, Co-operative bank has adopted a strategy of using savings as the means to reach the fishing community, opened new accounts, however, focusing first on group accounts held by registered self help groups, and secondarily by individuals. Although not employing the same grassroots savings mobilization strategy as Equity bank, Co-OP bank is also beginning to

work with fisherfolk. In partnership with the NGO Africa Now, it has begun lending to beach management units (BMUs) for the purchase of fixed assets such as cold storage units. Based on this experience, the bank intends to begin lending to fishermen and boat owners for other fixed assets such as boat purchases, nets, and lanterns.

Table 5 provides a summary of the banks in the Lake Victoria region (beyond just Kisumu) that offer unsecured loan products up to 50,000 KES and the interest rates and fees charged to make these loans. Interviews with bank staff and anecdotal evidence suggest that few if any are lending to fisherfolk and specifically Omena traders and processors.

TABLE 5: LAKE VICTORIA BASED BANKS, INTEREST RATES ON UNSECURED LOANS AND FEES

Bank	Interest rate	Other fees
Co-Op Bank	13.5%	875 KES
Equity Bank	18 %*	1,500 KES
Barclays	17.41%	1,000 KES

Source: Survey on Bank Changes and Lending Rates, December 2008

*Note: Equity Bank charges flat interest payments; all others are on a declining balance

MICROFINANCE INSTITUTIONS AND DEPOSIT-TAKING MICROFINANCE INSTITUTION' PRODUCTS AND SERVICES

Although many MFIs and DTMs are operating in Kisumu, their reach to the beach communities seems to be limited. Adok Timo is perhaps the one exception. Begun in 2006, the MFI has expanded rapidly in Nyanza, with branch offices in 19 locations many in secondary beach communities. The MFI plans to transform in the coming years into a DTM. The MFI currently maintains approximately 16,000 active clients engaged in farming, fishing and value addition. Like Co-op Bank, Adok Timo has signed an MOU with Africa Now to begin financing fishing gear and nets for fishermen, with the BMUs acting as guarantors. And unlike Equity, Adok Timo's loans sizes are significantly smaller with loans averaging between 25,000 and 30,000 shilling USD from 6 month to 24 month terms. The annual interest rate on these loans is 24%.

In addition to credit, Adok Timo does provide informal savings services (required as collateral towards loans.) Clients can access their funds using "indigenous ATMs." That is, clients can deposit cash with the local post offices and take cash out at a later date from Adok Timo branches. For migratory fishermen and traders, this allows them to travel to other beaches without worrying about the security risks associated with cash.

Other MFIs, such as Opportunity Kenya (a merger of the MFI WEDCO and Sunlinks) have made in-roads in terms of providing services to the fishing community. Although Opportunity is heavily focused on financing agriculture and interested in expanding to serve the beach communities, it currently serves no more than 50 clients (primarily women fish traders) in the beach communities. This market segment may grow as the organization completes its merger and restructuring.

Kenyan Women's Financial Trust is a third MFI interested but not yet working with women fish traders. KWFT already has branches in many of the main beach cities (Bondo, Homabay, and Suba/Mbita) from which to expand. It is currently pursuing grant funding from the Ford Foundation to finance market research to develop financial products for this market niche.

SACCO PRODUCTS AND SERVICES

Established in 1995, SAGA Thrift and Enterprise Promotion Ltd., a hybrid institution made up of varying SACCO structures, also is one of the few financial institutions focused on serving grassroots community associations, including the fisher folk community. Their support of community associations comes at many levels –including the provision of non-financial services (identification of viable economic projects, business training, etc.) to the provision of savings and credit products.

SAGA offers a number of loan products, including the enterprise loan, the kulima loan (an agricultural loan product with a grace period) and the market day loan for women traders that provides very short term financing for the purchase of Omena. The enterprise and kulima loans products bear an interest rate of 2%/month flat; the market loan by contrast is extended for up to 5 days at an interest rate of 2%. While Omena traders can also access SAGA's kulima loan, an individual loan but made with a group guarantee, they are limited by the size of this loan they can receive (up to \$50,000 Kenyan shillings) and obtaining it is contingent upon the size of one's share account. That is, loans can only be extended for up to three times the share amount.

Several years back, SAGA began working with USAID and the Kenya BDS project began an initiative to start beach banks, beach level service centers that were similar to community banks but on a smaller scale. Unfortunately, SAGA has had to learn the hard way on how difficult it can be to meet the needs of this community. A combination of mismanagement of the beach banks, fraud issues and decreasing interest in the banks eventually led to their demise. SAGA claims they could not be economically sustained due to the culture of the fishermen.

OTHER FINANCIAL SERVICE PROVIDERS

In addition to formal and informal institutional financial service providers, two mobile phone companies, Safaricom and Zain (formerly Celtel) are competing heavily for the remittance business using mobile phones as the delivery channel. The bigger of the two, Safaricom's M-Pesa, launched in March 2007, currently boasts 6.7 million subscribers. Although the Nyanza province does not have the high level of M-Pesa usage as other areas of the country (such as Nairobi where close to 80% of individuals are using M-Pesa) even there approximately 42% of individuals living in the province are using M-Pesa.⁸ Also, despite the fact that Zain's Zap remittance service is newer, it is quickly increasing its market share by snapping up new users who in addition to sending remittances, topping up and making payments, also can withdraw cash from their bank accounts (something M-Pesa users cannot yet do). Combined with the increased uptake and increasing confidence in mobile remittance providers⁹, the potential for this technology and for branchless banking presents a great opportunity for future investment.

⁸ Financial Access Survey, 2009.

⁹ The Financial Access Survey 2009 noted improving perceptions of the risk, cost and ease of using services such as M-pesa throughout Kenya.

The trends related to these online cell phone platforms are worth noting even in light of recent increases in bank/MFI presence in beaching communities. Although they are currently only allowed to do m-payments (not m-banking), with new regulatory oversight from the Central Bank cell phones combined with banks and cash in/cash out agents (often a retail store or stall) could be used to greatly expand access to financial services if they became a platform for mobilizing deposits from the public. Given their low cost and the efficiency gains of using the existing infrastructure, m-banking/m-deposit mobilization would have greater cost efficiencies over traditional financial institutions (particularly banks) that need to build “brick and mortar” establishments in order to do business.

CONSTRAINTS TO FINANCIAL SERVICES WITHIN THE FISHING COMMUNITY

Historically, the beach communities on Lake Victoria have not been considered attractive locations or clients to whom to provide financial services. Because the beaches are remote, away from city centers, lacking in good infrastructure (roads, electricity, running water), lacking in other commercial opportunities for lending and have had a history of donor and government subsidies that has created great dependency on charity, banks have traditionally not lent (or captured deposits) from the fisher folk community. Past efforts by SACCOs, FSAs, “beach banks” and some smaller MFIs to work in the beach communities have also been largely disastrous either because the institutions were mismanaged or because they were corrupt and stole deposits of the fisher folk. As a result, there is limited experience working with financial institutions, a high level of distrust of them and a low level of understanding of different types and terms of financial products and services that they currently offer. This low financial literacy will mean that future financial service provision to the community will need to be paired with information and marketing campaigns that teach and inform fisherfolk clients about the products, their terms and conditions, and repayment expectations.

Because of the limited presence of banks on the beaches, there have also been limited opportunities for secure and safe savings by fisher folk. The fishing community however, operates solely in cash and until recently has had inadequate places for safe and reliable savings. Many individuals save and lend in *merry-go-rounds* which appear to focus more on savings for short term consumption than on long term savings. They have also been poor vehicles for on lending for asset purchases or working capital. Because of the lack of real opportunities around savings and because the attitude of fishermen in particular that “if I need money, I will go to the lake”. As a result, fish are caught, sold immediately for cash and cash is consumed quickly. Despite environmental concerns of overfishing and with real evidence that fish stocks in the lake are dwindling, the attitude that the “lake is cash” continues. The result is a low saving rate and lack of culture around saving for the future consumption or saving for investment.

The lack of savings culture is also perpetuated by low literacy and low business acumen. Despite the fact that the Lake cannot continue to produce fish as in the past, there is limited interest in diversifying into new areas or income streams. This is very much driven by limited education. Although Nyanza has the third highest literacy rate of Kenyan provinces, only 66% of the population is considered functionally literate. Of this percentage, the majority lives in cities, not on the beaches. Many of the practices in the fishing community continue to exacerbate the literacy problem. Boys drop out of school to become fishermen; children of Omena processors

are kept out to ensure that chicken, dogs and other pests are kept off the Omena nets as the fish are drying. Lesser education means fewer opportunities for diversifying or moving into new lines of business.

CONSTRAINTS TO FINANCIAL SERVICES WITHIN THE OMENA VC

As noted above, there are few financial products targeted at Omena processors or traders. SAGA offers a market day loan for women traders that provides financing for the purchase of Omena, but the loan is both short in duration (5 days) and limited in size (up to 50,000 shillings). The interest rate is also the highest in the market. Other banks and MFIs may service traders but only in a group capacity and loan sizes are also limited to 50,000 shillings, and not specifically for fish sector trade. These group loans do not take into account the Omena business cycle and capacity of individuals to repay. As a result, traders often get very small initial and subsequent loan amounts and their progression may be tied to other group dynamics such as loans made to other group members, etc.

Additionally, the continued informality of the business and low level of sophistication and business savvy of processors and traders has meant that the majority of Omena traders have not entered into contracts with middle men, buyers from feed manufacturers or exporters. Although these buyers are interested in larger volume transactions, they have to date not been willing to agree upon prices in advance. As a result the ability to secure finance through contracts or invoices for sales (e.g., factoring) does not exist.

Financial analysis undertaken by GTZ on behalf of the PSDA Omena value chain project however, points to some potential for finance, particularly working capital. Given the minimal inputs, low cost of inputs and limited skill needed to process the product, gross margins and annual revenue to cost ratio of trading are high, 45% and 1.82 respectively. Table 6 shows the seasonal revenues and costs associated with trading and processing Omena. This table demonstrates that Omena processors could cover the costs of loan repayments, even given prevailing interest rates charged in the market loans. The ability to lend to this group, both for working capital and fixed assets, will also likely be improved in the next 6 years through GTZ's ongoing efforts to strengthen and upgrade the Omena value chain, particularly on the processing side. Although further analysis would need to be conducted, increased costs for higher quality drying equipment and other processing costs (brine, seasoning, higher quality packaging, and milling equipment) would likely be met with a higher market price, but also the increased revenue to support it.

TABLE 6: OMENA PROCESSING – NET INCOME PER FISHING SEASON

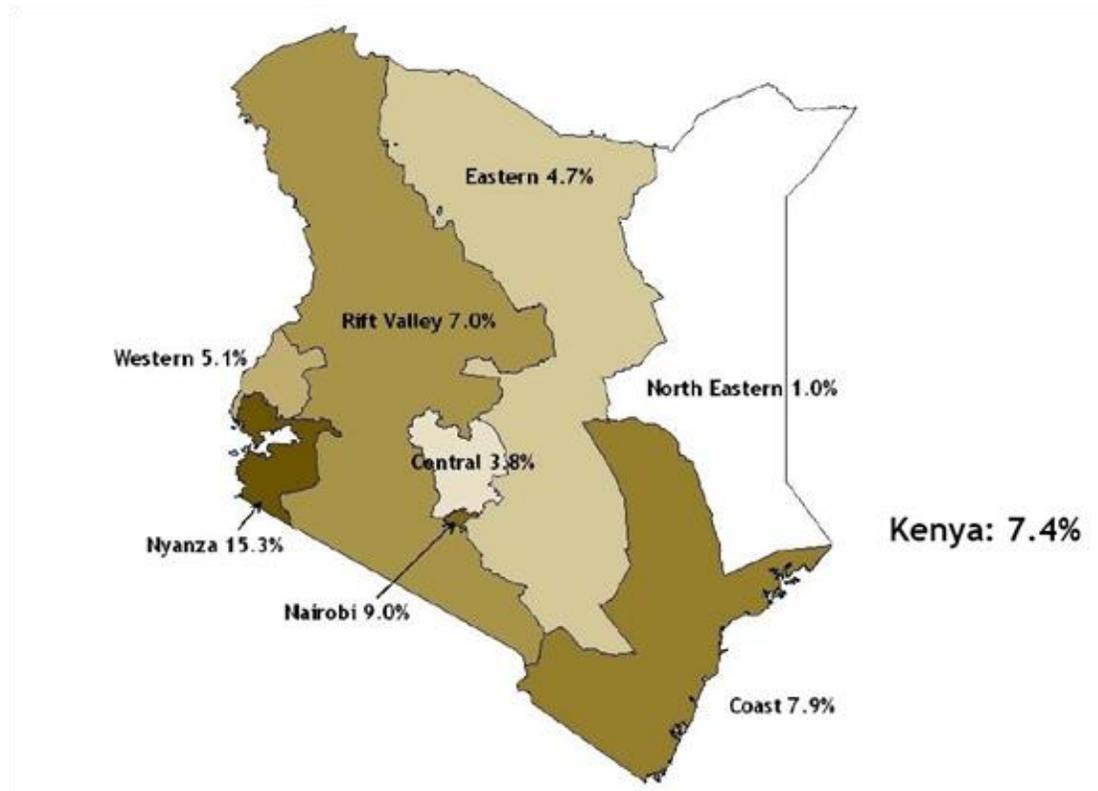
Description	Quantity	Unit	Price	Total Amount (KES)
First Fishing Season (August to November)				
A. REVENUES				
1. Sale of Omena	756	scoops	700	529,200
TOTAL				529,200
B. CASH COSTS				
1. Inputs				
a. Omena (fresh caught)	504	scoops	500	252,000
b. Net repairs	1	each	1000	1,000
c. Legal fees	4	month	50	200
Subtotal				253,200
2. Depreciation				
a. Brooms	24	each	10	240
b. Scoops	4	each	250	1,000
c. Sacks	51	each	50	2,550
Subtotal				3,790
3. Labor (Family)				
a. Drying omena	168	day	150	25,200
Subtotal				25,200
TOTAL				282,190
C. NET INCOME				
				247,010
Second fishing Season (December to March)				
A. REVENUES				
1. Sale of Omena	378	scoops	700	264,600
TOTAL				264,600
B. CASH COSTS				
1. Inputs				
a. Omena (fresh caught)	252	scoops	500	126,000
b. Net repairs	1	each	1000	1,000
c. Legal fees	4	month	50	200
Subtotal				127,200
2. Depreciation				
a. Brooms	24	each	10	240
b. Scoops	4	each	250	1,000
c. Sacks	26	each	50	1,300
Subtotal				2,540
3. Labor (Family)				
a. Drying omena	168	per day	150	25,200
Subtotal				25,200
TOTAL				154,940
C. NET INCOME				
				109,660
D. TOTAL ANNUAL NET INCOME				
				356,670

Chapter Three: Overview of HIV/AIDS and Prevalence in the Fishing Communities

HIV/AIDS IN KENYA

Although the AIDS pandemic in Kenya is believed to be on the decline after peaking in the late 1990s with an overall HIV prevalence rate of 10 percent in adults aged 15–49, HIV/AIDS continues to be a huge challenge for Kenya, especially for Nyanza province where the AIDS prevalence rate is twice the national level. The 2007 Kenya AIDS Indicator Survey (KAIS) Preliminary Report¹⁰ includes new up-to-date information about HIV infections, including information on the scope and distribution of HIV in adults, an estimate of the incidence of HIV through laboratory testing, and the socio-demographic and behavioural risk factors related to HIV and other STIs. The 2007 results showed that 7.8 percent of Kenyan adults age 15 to 49 are infected with HIV, the virus that causes AIDS, up 1.1 percent from the 2003 survey. In Nyanza, the current prevalence rate is 15.3%.

FIGURE 4: MAP OF AIDS PREVALENCE BY PROVINCE IN KENYA



Source: KAIS 2007

Like in other parts of the country, the AIDS prevalence rate in Nyanza remains steady (and twice the national levels) due to low levels of HIV testing, differences in infection within couples, and the continued high prevalence of other sexually transmitted infections (STIs), but also due to a

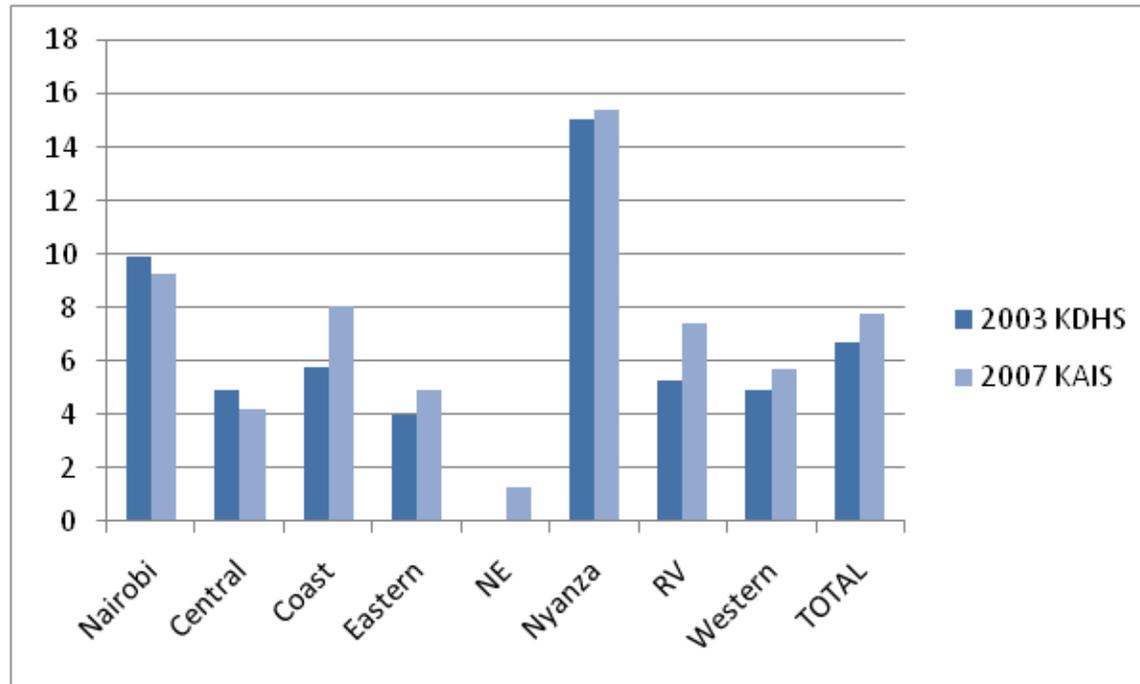
¹⁰ The Kenya AIDS Indicator Survey (KAIS) Preliminary Report was released on July 29, 2008. It contains some basic statistical data on the shifts in prevalence, but speculation on the causes of these shifts will be left to the final report, expected to be released in January 2009.

number of specific and retrogressive cultural practices that have identified to have contributed to the spread of HIV/AIDS. These include:

- Casual, commercial and transactional sexual practices perpetuated by times of sporadic but high liquidity among the fisherman and an influx of poor women looking to sell or transport fish;
- Different cultural expectations about sexual partners; (fisher)men can have sex at random, while women must have a beach “husband” to be assured a good supply of fish. Although the prevalence of *jabo* is hard to determine, it continues to play a role in the trade of fish, particularly Omena (see more information below);
- Negative attitudes towards condom use;
- High consumption of alcohol and drugs;
- Certain continued cultural practices, such as wife inheritance irrespective of health status or the number of widows that a man may already have.
- Lack of male circumcision practices (which when combined with female physiological characteristics make women more susceptible to the virus);

HIV prevalence in Nyanza as well as other parts of Kenya hits the productive class the hardest. Figure 5 shows the HIV prevalence rate for 15-49 year olds and its change since 2003. The prevalence in Nyanza has only increased.

FIGURE 5: HIV PREVALENCE AMONG PARTICIPANTS 15-49 YEARS OLD IN THE KAIS 2007 AND KDHS 2003, BY PROVINCE



Source: Kenya AIDS Indicator Survey, 2007 Preliminary Report

THE “SEX-FOR-FISH” PHENOMENON IN THE OMENA VALUE CHAIN

The sex-for-fish practice, *jaboya*, is a local term meaning “customer” that came to have a different connotation when times got hard and fishing stocks in Lake Victoria became depleted. The practice has fishermen selling the best cut of fish (for cash or on credit) to women buyers who offer up sex. The practice is said to have been exacerbated by more competition for fish due to dwindling stocks and increased migration of people coming to the Lake to improve their livelihood. The practice is believed to have had a large impact on the spread of HIV/AIDS as men and women engage in sex with multiple partners. Also, younger and younger girls are being offered up to ensure that fish traders gain an edge.

Documenting the true prevalence of *jaboya* is difficult. Many local and international NGOs focused on women’s rights and empowerment anecdotally cite a high prevalence of the practice that they believe exploits women, particularly older, poorer migrants. By contrast Kenyan fisheries personnel and other international experts seem to downplay the prevalence of the practice and suggest that it is neither widespread nor more exploitative of women than men. Nonetheless, many local and international organizations have sought to address the issue through behavior change campaigns including through the use of radio programs targeting the fishing community.

What is important to understand is that the practice is driven by economics and by the limited economic roles that women are culturally allowed to play in the fishing community. Migration puts newcomers, women in particular, at a disadvantage in building economic relationships with other actors (buyers and sellers) in the market place. Scarcity of resources means more individuals are competing for a limited pool of fish. Finally, cultural limitations on women’s ability to fish, own boats, manage BMUs, or even whether to be inherited or disinherited by their families in the event their husbands die, limits the economic choices that women, particularly undereducated women can make. All of these factors influence the use of sex to gain access to fish.

CONSTRAINTS OF ENGAGING HIV/AIDS AFFECTED FISHING GROUPS IN THE OMENA VALUE CHAIN

USAID with funding from the President’s Emergency Plan for AIDS Relief (PEPFAR) and to a lesser extent, the UK’s Department for International Development (DFID) is both working with community based organization (CBOs) that support self help groups around the Lake Victoria region to address HIV/AIDS. On the USAID/PEPFAR side, the work is largely directed by the AIDS, Population, and Health Integrated Assistance (APHIA) II Nyanza program (managed by Engender Health which is focused on working to improve and expand sustainable HIV and tuberculosis prevention, treatment, care and support services, along with integrated reproductive health, safe motherhood, family planning, malaria, and selected child survival services and the Health Policy Initiative led by the Futures Group. The project supports numerous community-based organizations to reach its goal to reduce the risk of HIV transmission and the fertility rate in Nyanza by:

- Improving and expanding sustainable facility-based services for HIV, TB, reproductive health, family planning, malaria and maternal child health;

- Improving and expanding civil society activities in order to increase healthier behaviors, including prevention programs that target at-risk populations;
- Linking health services to the community;
- Improving home and community support programs for people and families infected and affected by HIV and AIDS, including orphans and other vulnerable children;
- Reducing the stigma associated with HIV.

APHIA II Nyanza key CBO grantees working with fishing self help groups are: WIFIP, Loki Pak, ASSALAM Muslim Women Forum (AMWOF), and Mildmay, among others. The approach and starting point that each of these groups takes toward the fishing self help groups varies greatly. Most of the CBOs focus primarily on health outcomes and secondarily (if at all) on economic strengthening (which might include value chain strengthening activities or finance). The CBOs also have differing approaches to the use of subsidy in engaging these groups. In fact, only WIFIP seems to take a comprehensive approach, working with groups, women's groups in particular, to gain skills and knowledge to manage small businesses, diversification into other income generating activities (such as agriculture, aquaculture, and hyacinth crafts) improve the leadership and management of beaches, learn and understand their rights, improve incomes in the fishing sector and gain knowledge of HIV and other health issues as well as commitment to positive health behavior change. Their focus is on skills transfer, economic and health knowledge empowerment, not on direct subsidy for the most vulnerable as other organizations seemed to be doing.

Additionally, Africa Now with funding from DFID among other donors is another NGO focused on the fishing sector, working predominantly with individual fishermen and women, associations of fisher folk, and with BMUs. It does this through training programs, access to credit and savings and helping to bring fisherfolk, especially women into alternative livelihoods such as pond-based fish farming, goat rearing, flower and other crop production near the Lake. While part of its focus is environmental (e.g., encouraging fisherfolk to fish less and develop other livelihoods given the decreasing fish stocks in the lake), it is also focused on addressing market constraints that keep fisher folk poor. For example, in conjunction with Postal Kenya it developed a courier service delivering parcels of fish to buyers in Nairobi and Mombasa as a way to get around the transport problem that many fish traders face. Likewise, it worked with the USAID Kenya BDS program in 2006(7) to train women in its program on how to upgrade Omena using drying racks. Its focus on HIV/AIDS is to mainstream messages into its economic programs with fisherfolk.

Interviews with members of HIV/AIDS oriented self help groups (SHGs) suggested that most of these groups may not yet be ready to participate in value chain strengthening initiatives. First, many of the health CBOs have limited skills/knowledge of how to undertake effective economic strengthening of these SHGs themselves. Their focus is on health outcomes. For instance, one CBO shared that it was concerned about the poor nutrition associated with the uptake of ARTs, but not about how to improve incomes through economic opportunities might combat the malnutrition. In other words, they focus on health outcomes first and poverty second. Second, large sums of cash grants are being provided for everything from OVC and grandparent support, food purchases, to funds for purchasing boats and nets. While a few groups are trying to

address the economic strengthening of this group by providing funds or assets to SHGs, the funds are often ongoing (not one-time or cost shared with the group), may or may not be linked with the right training or skills development and are often not linked to markets or market relationships that can help households over the long haul. In the worst case scenario, this cash grants continue into perpetuity creating a strong culture of dependency. Many of the groups interviewed seemed more interested in continued financial subsidy than engaging in a process whereby groups work to address issues on their own long term self sufficiency.

Chapter Four: Conclusions and Recommendations

CONCLUSIONS

Triple functions of the Omena VC. The Omena sector has many attractions to the local community. Firstly, the small fish are a great source for protein in a high food insecure area; divisibility factor e.g. mother can feed many children with a handful of Omena. Secondly, dried Omena has a long shelf life which enables traders to consolidate easily during times of low harvest and women can sell when they want to and are less subjected to spoilage when handled properly. Thirdly, the low startup capital needed to trade and process Omena makes it a low risk business venture and has few barriers to enter. The importance of the Omena sector should be recognized and addressed in the Poverty Reduction Strategy of the Kenyan Government, where the management, control and utilization of fisheries resources to support economic growth and to provide food security should be made as one of the priority.

Huge post-harvest handling losses. Even though, 60 % of the dried Omena goes into the animal feed industry sector where hygiene might not be considered a crucial requirement, it is important to improve handling conditions and facilities of Omena drying to reduce the wastage due to the poor drying techniques. The adoption of low technological innovation such as raised drying racks, solar dryers, improved packaging and proper storage using ventilated shelves could reduce the wastage from 40% to 10%. Unfortunately, there is very low adoption of such technologies at the artisanal processing level, due to the lack of capital to invest in these improvements. Technological adoption can be improved through piloting and training in appropriate technologies for Omena processing combined with improved access to credit for these investments and direct linkages to a secure market. Feed millers and exporters have also indicated the need for a better ratio of fish: dirt (stones, sand, snails etc.), currently bags are filled with about 60% fish: 40% dirt. They expressed willing to pay at least twenty percent over market price if the ratio could be improved to 80 % fish to 20 % dirt.



Value added products Omena processors should explore, next to the animal food processing industry, other high value markets. There is a need to develop various high quality Omena products such as vacuum packed Sun dried and salted Omena for supermarkets (Nairobi, Malawi etc), enriched flour for consumption, and protein concentrates as food additives. As these products are developed, the KEBS should set up national standards for dry fish that also comply with regional and international standards so as to access new markets within Kenya and outside.

Poor information flow from and to the actors, and the barriers to these flows: There are almost no incentives for Omena traders to change the current status quo. Several market failures can be

observed in the fish chain. In the downstream part of the channel, from the processing to the wholesale markets, information on prices, quality, quantity and standards is quite unclear. This is the result of an incomplete information flow. The Omena processors are dependent on the price that the collecting traders are willing to pay. Cooperation among buying agents – agreeing on which price to buy – is common, and this leads to a kind of monopolistic buying behavior on the beaches. Women groups do not act as traditional cooperatives even when they are organized around revolving funds. They do not procure and market their fish as a group, but rather compete amongst each other. The perceived advantages of joining a group would ideally provide the necessary advantages of credit, business support that includes marketing and savings, and reduction of inefficiencies that can work towards economies of scale.

Diversifying away from the capture fisheries sector.

Diversification into other economic activities is needed to provide fisher folk the ability to cope during closed seasons and low harvest times and to reduce the dependency on the unpredictable harvests from Lake Victoria. The introduction of aquaculture development has proven to be a sustainable alternative source for long time employment and food security. Agricultural urban-kitchen-gardening, production of several agricultural produce in a relatively small plot has become a great source for nutritious vegetables (a scarcity on the island and landing sites) and additional



income (part of the produce are sold on the streets or local markets). Women have started individual gardening plots with/or without the help of NGOs, but they need assistance in low technology agronomic (soil testing, better seeds etc) improvement and targeted irrigation systems. Some of the self-help groups have looked at alternative sources for income with their art and bead work and harvesting the hyacinth to make rope and other products.



Financial access On the financial institutions side, most of the major financial institutions still do not understand the fishing sector and the dynamics and cyclicity of Omena fishing and processing. On the savings side, they are beginning very slowly to begin to address the needs of fishermen around savings by assisting them in opening accounts (including minimum balance accounts), while not yet addressing the distance issues that constrain real use of savings

services, namely the long distances to branch locations. There is also more need for promotion of innovative saving schemes and cross marketing of savings account and lending options for the fishing community. On the credit side, MFIs and SACCOs, are beginning to serve this market with group loans, and the banks have picked the “low hanging fruit” to finance, namely fixed assets for fishermen and boat owners (also in groups). Finally, the knowledge and understanding of financial products, services and terminology is quite limited, particularly the more isolated the beach. This presents both an opportunity and a challenge in reaching the fisherfolk community.

RECOMMENDATIONS

WORK IN PARTNERSHIP WITH THE GTZ PRIVATE SECTOR DEVELOPMENT PROGRAM

We recommend that KARF work closely with the PSDA project and use their current activities in the Omena VC as a node to develop complementing activities to improve access to finance within the sector. The PSDP project has a strong VC approach and a wide presence and network in the Victoria Lake area. There are several activities that could be implemented in either the short and long-term. KARF could:

- Assist with developing Training/Training of Trainer programs on savings, lending and business cash flow specifically focused on the Omena sector. These trainings could be set up as separate module which can be added to the current capacity building training organized by the PSDA Omena VC program. The PSDA program provides assistance in organizational development to Omena fish traders. The current initiative of establishing an Omena fish traders and processors association provides enormous leverage to reach more fisher folk in an organized and efficient manner.
- Facilitate interactive forums with banks/MFIs/DTMs and Omena traders/processors to lessen the disconnects observed during this study such as misconceptions of the nature of Omena processors vs. fishermen, the terminology of financing not understood by regular fish processors etc. This initiative can be part of the financial literacy program that the PSDP is implementing, and can coincide with their trainings on book keeping, business management and group marketing.
- Evaluate the potential for a portfolio guarantee (DCA) with a commercial bank or MFI that would incentivize lending to Omena traders and processors.
- Conduct a household survey to understand Omena household consumption/expenditures and savings patterns.
- Develop a comparison of bank/MFI terms, conditions and requirements for fishing community and translate it into local languages.
- Assist with improved market linkages and develop a way of reducing the forces that influence a security's rate of return into common and firm-specific relations, by establishing a factoring model. Supply contracts can specify a guaranteed market and price based upon detailed standards, as well as the provision of sacks, beach-based collection, and scales for standardized weighing, and even credit for women traders to buy and process the Omena. The supply contracts strengthen the long-standing business relationship between buyer and seller, and there can be set prices for different grades, e.g. Grade 1 Omena for export and Grade 2 for the feed industry. This can be done in close collaborations with secure buyer such as feed processors and exporters. Groups that have gone through the PSDP trainings on the importance of quality control standards and grading, and training in the necessity of working in processing “groups” for economies of scale, should be targeted for this pilot activity. It is not recommended to work with a selective group in the beginning, as the best way of rolling out a wider program is through a successful pilot phase, where word of mouth is in most cases the best market campaign.

PRODUCT DEVELOPMENT FOR BANKS AND MFIs/DTMs

Although banks and MFIs are beginning (again) to target the fishing community, more work could be done to enhance the product offering to this group. Thus, we recommend that KARF select one or more financial institution with which to partner to focus on product development for fisherfolk, specifically Omena traders and processors. Potential financial institution partners include: KWFT, Adok Timo and Equity Bank.

A starting point would be to conduct further market research on the expenditure and savings patterns of Omena traders and processors, keeping in mind that as informal business owners, their household and business expenditures and income is intertwined. The costing study undertaken by GTZ that analyzed revenues and costs of Omena processing is a good start, but it does not sufficiently capture the interplay of finance between business and household. This market research – if done in conjunction with a financial service provider – would be a first step in understanding how to develop and provide working capital loans as well as to appropriate savings products.

Based on the market research, KARF could work to develop loan officer training on the Omena business cycle, revenues and costs, gross margins, turnover and working capital needs. This could be rolled out in conjunction with a pilot product.

MOBILE PHONE/BANK LINKAGE FOR DEPOSIT MOBILIZATION

The potential of using a mobile phone platform, an agency model and a bank to capture savings – something CGAP refers to as “branchless banking version 1.0¹¹” – is being discussed at various levels within the financial services industry—at the levels of the mobile phone companies, the banks, the MFIs, the donors and the Central Bank. Equity Bank is also rumored to be in discussions with M-Pesa to begin structuring such a saving channel. For remote communities, such as the beach communities that do not have easy access to transportation or to banking services, a cell phone device paired with a local retail agent lined to a bank that can accept and disburse cash would offer more convenient access to savings services. Achieving that goal, however, will require concerted effort and investment in making agents safer cash in, cash out points and more reliable for these types of transactions. Similarly, bank regulators would need to consider how to regulate the activities so that a depositor who hands over her cash at a retailer will not be at risk of losing her savings if the retailer gets robbed or misappropriates the funds. These regulations do not yet exist in Kenya. Finally, a more robust agency model or agency franchise would need to be developed to address safety concerns around handling cash. Many current retailers simply are not equipped with safes and other security equipment to securely handle funds, nor do they in some cases have sufficient float from their day to day operations to make cash pay-outs.

At present building such a complex system for savings mobilization will have to address four fundamental risks:

- Potential breaches in data and security of transactions (security risk);
- Complexity of operations (operational risk);
- Added regulatory scrutiny (regulatory risk); and

¹¹ Mas, Ignacio “Being Able to Make (Small) Deposits and Payments, Anywhere”, CGAP, 2008.

- Potential added customer care costs¹².

Nonetheless, the industry is moving in this direction. With all likelihood, branchless banking version 1.0 will take longer to come to Lake Victoria than other regions. KARF could play a role in jumpstarting an initiative or pilot them. For example, KARF could undertake a survey of current M-Pesa and ZAP usage and the utilization of bank based savings services along the lake. This survey would help determine both the current local challenges around savings as well as the potential for expanding access. Second, KARF in partnership with a bank could look into the costs and regulatory burdens on the bank side of a bank/mobile operator alliance – particularly as they relate to mobilizing deposits in low population density areas or in regions with limited savings experience, such as the Lake region. These would be first steps in making the business case to move to the Lake Victoria region.

LINKING HIV/AIDS AND FISH VALUE CHAIN UPGRADING –

To maximize effort and investment we recommend that KARF team with WIFIP in providing capacity building activities in finance or technology to strengthen economic activities (fishing, aquaculture, hyacinth handicrafts, and horticulture) for AIDS affected communities.

WIFIP currently manages a revolving loan fund that it's more advanced (and longer running) groups can access. This fund provides members with group loans up to 10,000 KES for up to 6 months at an interest rate of 20% per annum. WIFIP's revolving fund is targeted at more vulnerable groups with the intent on giving them credit and savings experience. Based on our assessment, we believe some of WIFIP's groups or group members may be ready to access both larger sums of capital associated with more formal financial institutions—either banks or MFIs. KARF could work with WIFIP to identify the most appropriate institution or institutions with which to link. This institutional partnership could ultimately help WIFIP get out of the business of providing loans (not its core competency) and give a financial institution the experience in working with Omena traders.

HIV/AIDS AND THE FISHERFOLK

To date, the health community's focus on the fisherfolk has been largely through a health lens. For most of the products and services required to combat HIV/AIDS, this is appropriate. However, more learning and activities need to be done to address the economic issues that exacerbate the pandemic—and not as an afterthought to the treating and caring for the sick. This includes working with HIV/AIDS affected groups to improve their economic status and make them less vulnerable so that they engage in risky behaviors, but also includes removing the donor created barriers that create a culture of dependency, such as has been seen around the lake with many HIV/AIDS focused SHGs.

KARF can assist to make these two things happen. The first is to support organizations such as WIFIP that take a market based approach to working with AIDS affected fishing communities, promoting their holistic approach to improving income generation through alternative livelihoods and value chain strengthening.

¹² Mas, Ignacio "Being Able to Make (Small) Deposits and Payments, Anywhere", CGAP, 2008.

The second is to work with USAID and PEPFAR to undertake a few short studies to inform future economic strengthening programming in the fishing communities. These studies could include:

- An analysis of ART uptake challenges, identifying the nutrition and livelihood challenges to ensuring that ARTs are properly used. This analysis should be combined with a presentation of “emerging” practices in nutrition-linked livelihoods programs that can inform future programming to the fishing community. The International Food Policy Research Institute’s (IFPRI) Renewal program based at Kenyatta University in Nairobi would be an ideal partner to study the challenges. Renewal is well known for its holistic thinking and understanding on the issues of HIV/AIDS, nutrition and livelihoods.
- An analysis of PEPFAR and DFID funding on the fishing sector and the culture of dependency that has been created.

CLIMATE CHANGE ADAPTATION TO AGRICULTURE AND FISHERIES; KEY TO IMPROVE FOOD SECURITY

Globalization of the fisheries sector and rapid urbanization are causing rapid changes to food systems around the Lake Victoria. Food systems encompass food availability (production, distribution and exchange), food access (affordability, allocation and preference) and food utilization (nutritional and societal values and safety), so that food security is, therefore, diminished when food systems are stressed. Such stresses may be induced by a range of factors such as climate change (environmental change), conflict, HIV/AIDS and may be particularly severe when these factors act in combination as noticed around Lake Victoria. Climate change may affect food systems in several ways ranging from direct effects on crop production and fisheries (e.g. changes in rainfall leading to drought or flooding, or warmer or cooler temperatures leading to changes in the water temperatures of the Lake resulting in fish biomass reduction, etc.), to changes in markets, high fuel prices and food prices. Climate is among the most frequently cited drivers of food insecurity because it acts both as an underlying, ongoing issue and as a short-lived shock. Fisher folk have a low ability to cope with shocks and to mitigate long-term stresses and there is a greater need to assist these communities with coping strategies. Improved systems of food/fish production, food/fish distribution and economic access may all contribute to food systems adapted to cope with climate change, but in adopting such changes it will be important to ensure that they contribute to sustainability. KARF could assist these communities in adopting some of the coping strategies by:

- Evaluating opportunities for fisher folk in off-grid energy micro-franchising. OSRAM has invested in 5 pilot solar panel units around the Mbita area in partnership with Osienala. This partnership failed in practice; however KARF could continue this “green” effort and develop micro-franchise models linked to local financial institutions. Young and trustworthy fishermen can be trained to run these solar units to provide solar powered batteries to the local



community.

- Prepare a cost analysis for fish solar drying units, EcoSans, tree planting and water collectors. As donors are increasingly interested in providing funding for innovative “green” technology, it is equally important to understand the cost analysis and specific needs for finance. KARF could translate climate change adaptation coping strategies into real actionable work plans by developing these cost-benefit analyses and evaluate the options provided by financial services institutions interested in this sector.

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O. Ohiokpehai 1*, J. Kimiywe 2, P. Naidoo 3, A. Adesina 3 and N. Sanginga Feeding patterns and practices among households with children aged 6-59 months in Mbita Division, Suba District, Kenya. Journal of Food, Agriculture & Environment Vol.5 (2) : 17-23. 2007

Persons Interviewed for this Assignment

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BMUS AND SELF HELP GROUPS

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Koginga Beach Management Unit

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Vicotria Support Group for PLWHA, Uhanya Beach

Victoria Youth Group, Uhanya Beach

Tier Christian Women's Group

RAPAR Women's Group

Wisdom Women's Group

Lok Paki HIV/AIDS Group