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Vulnerability of female fish traders to HIV/AIDS along the fish market chain of the south-eastern Arm of Lake Malawi

Analysis report

Kambewa, P. • Nagoli, J. • Hüsken, S.M.C.



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September 2009

Fisheries and HIV/AIDS in Africa: Investing in Sustainable Solutions



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The findings presented here are not the views of the author but an analysis of the findings from interviews conducted during the study.

Acronyms

CUMO	Concern Universal Microfinance Organization
FAO	Food and Agriculture Organization
FINCA	Foundation for International Community Assistance
GoM	Government of Malawi
MARDEF	Malawi Rural Development Fund
MDHS	Malawi Demographic and Health Survey
MRFC	Malawi Rural Finance Company
NSO	National Statistical Office
OIBM	Opportunity International Bank of Malawi
SEDOM	Small Enterprise Development of Malawi
UNICEF	United Nations Children's Fund

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Executive Summary

The regional programme entitled “Fisheries and HIV/AIDS in Africa: Investing in sustainable solutions” is being implemented by the WorldFish Center and FAO with funding from the Swedish International Development Cooperation Agency (Sida) and the Norwegian Ministry of Foreign Affairs. In particular, the programme will build a strategic response to HIV/AIDS in the fisheries sector that will generate benefits for vulnerable groups in wider society.

The objectives of this study were first, to understand the market chain of fish as traded by women in the south-eastern Arm of Lake Malawi, with a specific focus on analyzing how fish is moved from the lake to the wholesale market. Secondly, the study identifies HIV/AIDS vulnerability factors along this market chain i.e. from the point of catch to the wholesale market.

A mixture of approaches and tools were used in conducting this study. A rural rapid appraisal on HIV/AIDS in the fisheries sector was conducted in the study areas followed by the main fieldwork which included individual interviews, key informant interviews and focus group discussions. For the main fieldwork, individual interviews were conducted with 73 female fish traders from four fishing villages of Malindi, Makawa, Masasa and Msaka of southern Lake Malawi.

Social and economic characteristics of female fish traders in the target areas were analysed, including age, mobility, education level and marital status. The majority of respondents is between 20-40 years old, with low education levels and married, often to boat owners or boat crew members. As fish trading is seasonal, prices of fish fluctuate, which has an impact on how female fish traders run their business. When catches are high, enough fish is caught to be traded, but when catches are low (during the cold season), fish is more scarce, prices increase and hence the women need to adapt their strategies to obtain enough fish to make a living. In such situations transactional sex often occurs, when female fish traders engage in sexual relationships with fisher men in order to secure their catch, the so-called “fish for sex” deals.

As fisher men and fish traders are highly mobile as they move between fishing areas and markets, they spend weeks away from home, increasing the incidence of temporary, extra-marital sexual relationships. This increases the risk of infection for both male fisher folk and female fish traders. The lack of accommodation in the fishing camps and at the markets further increases these risks.

To be able to sell sun-dried fish, a majority of women in the four study sites owns drying racks, while others have to hire these racks. Thus apart from buying fish, the women also need money to pay for hiring drying racks, as well as transport to the markets. The study found that smoked fish and fresh fish were considered financially risky activities for women as they were more resource intensive and perishable, therefore needing more aggressive negotiations or else one would make a loss. For women to engage in

fresh fish selling would require them to borrow money from fisher men, which would often be repaid through transactional sex.

Contrary to the hypothesis of the study, access to loans was not considered a problem as the majority of respondents had had access to loans. Several organizations were found to give out loans to female fish traders in the study sites, but the period of repayment was often too short for the women to make a profit, and specified training was lacking. This puts female beneficiaries under pressure to look for sources of quick money to pay back their loans, for example through transactional sex, which increases women's vulnerability to HIV. The study found that a majority of the respondents started fish trading business with capital from personal relations, e.g. family and friends. Social capital played a major role in making respondents start their businesses. This implies that encouraging women networks can reduce women's reliance on informal and sometimes sex-based capital sources to earn a living from fish trade.

As the fish landing sites are distant from the urban markets where the fish is sold, various forms of transport are being used. Small trucks (1 ton pick-up) are the most common means of transportation. Competition in the fish trade is severe and women try to maximize their profits, so they try to reduce their operating costs as much as possible. As transport comes at a price, the women often need to borrow money for transport or engage in a sexual relationship in order to secure transport.

Along the fish market chain, the study identified various points of vulnerability of female fish traders, including competition for fish at the landing sites, migration and extra-marital relationships, and pressure to reduce operating costs such as transport and lodging. These insights will assist in the formulation of business-based pilot interventions to reduce female fish traders' vulnerability to HIV/AIDS.

1.0 Introduction

1.1 The regional programme

The regional programme entitled “Fisheries and HIV/AIDS in Africa: Investing in sustainable solutions” is being implemented by the WorldFish Center and FAO with funding from the Swedish International Development Cooperation Agency (Sida) and the Norwegian Ministry of Foreign Affairs. The programme is aimed at increasing the understanding on trends and risk factors of HIV/AIDS in the fisheries sector with the ultimate aim of improving response to HIV/AIDS in the sector. Overall, the programme will strengthen the capacity of people and agencies in the region to develop practical, coordinated and sustainable solutions to enhance the contributions of fish and fisheries to economic and human development in Africa. In particular, the programme will build a strategic response to HIV/AIDS in the fisheries sector that will generate benefits for vulnerable groups in wider society.

In Malawi, the programme component for this study involves understanding and developing business innovations to reduce vulnerability among female fish traders along the south-eastern Arm of Lake Malawi. After the initial assessment phase, a business innovations strategy will be developed and piloted to reduce vulnerability of female fish traders.

The objectives of this study were twofold. First, the study sought to understand the market chain of fish as traded by women in southeastern arm of Lake Malawi, specifically focus was on how fish is moved from the lake to the wholesale market. Secondly, the study identifies HIV/AIDS vulnerability factors along this market chain i.e. from the point of catch to the wholesale market.

1.2 Fisher folk’s vulnerability to HIV/AIDS: a synopsis

Small-scale fisheries provide food and nutrition security, and generate economic opportunities for the poor throughout society, including those living with HIV/AIDS. In turn, good health in fishing communities and the entire sector is a basic pillar of productive and sustainable fisheries that pursue long-term economic objectives and deliver lasting development outcomes. On both sides of this equation, benefits are severely at risk, as per capita fish supply in sub-Saharan Africa is declining, and fisher folk are among the populations most vulnerable to HIV/AIDS.

Vulnerability of fisheries stakeholders to HIV/AIDS has many underlying reasons. Among these, the following have been highlighted in several case studies from around the continent:

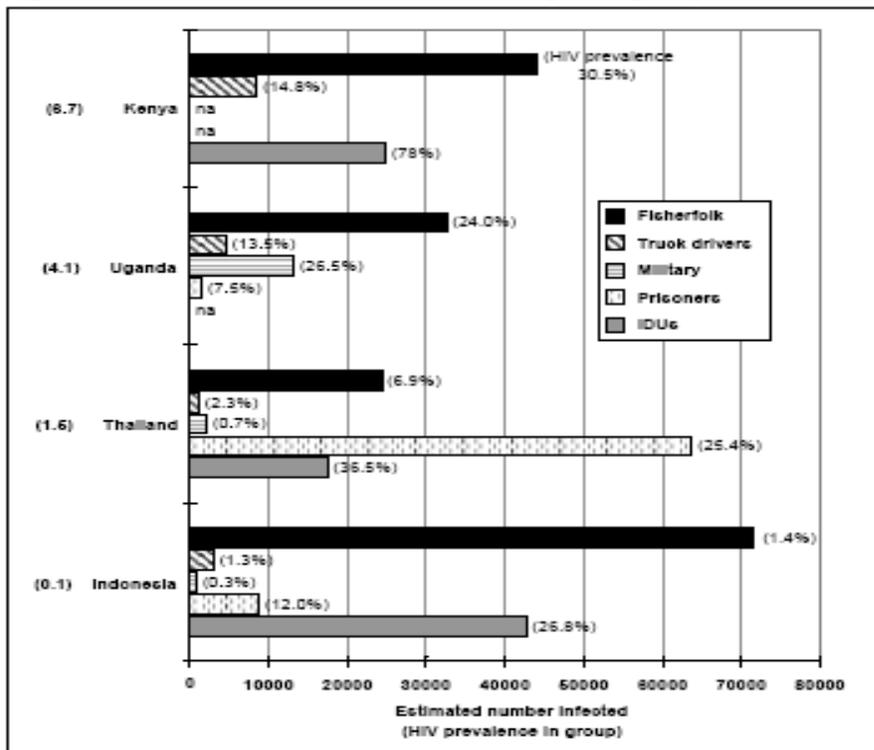
- Demographic structure with high rates of single men in sexually active age groups;
- High rates of mobility and migration;

- Easy availability of cash income on a regular basis without tangible investment or savings opportunities;
- Poverty and gender inequality marginalize women in commercial transactions, making them more vulnerable to sexually exploitative relations;
- Poor health service infrastructure, condom availability and access to specialized centers where voluntary testing can be done;
- Generally poor health and hygiene status in fishing camps and among mobile populations;
- Culture of risk taking and perception of low social status among many fishermen.

Gordon (2005) reports that fisher folks' complex combination of biological, social, cultural and economic factors contributed to their susceptibility to HIV. For instance, fishermen tend to be young and with low perceptions of risk. Many people involved in fishing or associated activities are mobile or migratory and are therefore less constrained by family influences and social structures at home. Added to high disposable cash income, vulnerability of fisher folk is high, especially in cases where alcohol and prostitution are available.

In studies conducted in Africa (Uganda and Kenya) and Asia (Thailand and Indonesia), Kissing et al. (2005) show that except for Thailand, fisher folk were most at risk compared to the other risk groups such as truck drivers, the military, and prisoners (see Figure 1).

Figure 1: Prevalence of HIV/AIDS among risk groups



Source: Kissing et al. (2005).

Studies by FAO (2003 ; 2007) show that while the fisheries sector contributes significantly to livelihoods of the poor, it has become evident that fishing people in many lower income countries suffer from high HIV prevalence rates, often five to ten times as high as those in the general population. In Malawi fishermen have been identified as the sixth high risk group, with an HIV prevalence of 16.6% (GoM, 2006). Other risk groups include prisoners, commercial sex workers, truck drivers and the military. The Malawi Demographic and Health Survey (MDHS) of 2004 indicates relatively high HIV prevalence rates in the fishing districts¹ (NSO 2005). For example, the 2004 MDHS indicates that HIV prevalence in the 15-49 year age group in the rural Malawian district of Mangochi (20.8%) was nearly twice the national average (11.8%) and comparable to the HIV prevalence in the urban district of Blantyre (22.3%) (NSO, 2005). See also table 1 below.

Table 1: HIV prevalence in selected districts in Malawi (15-49 age group)

District	Women		Men		Total % HIV Positive
	% Positive	HIV	% Positive	HIV	
Blantyre	22.5		22.1		22.3
Kasungu	5.5		2.8		4.1
Machinga	14.9		8.2		11.8
Mangochi	21.4		19.9		20.8
Mzimba	6.4		3.9		5.2
Salima	9.5		8.2		8.9
Thyolo	23.1		18.6		21.0
Zomba	24.6		10.5		17.8
Mulanje	23.3		15.1		19.8
Other Districts	12.6		8.7		10.8

Source: NSO (2005)

The Mangochi District Social Economic Profile (GoM, 2007) states that the high HIV prevalence rate stems from: (i) Fishing practices where transactional and recreational sex is high, (ii) Tourism, which has contributed to the prostitution industry, (iii) Deeply rooted cultural practices², (iv) High illiteracy rates and (v) Immigration.

A study in Nsanje showed that fishing grounds were places most vulnerable to HIV/AIDS. They are places for informal courtships, sexual cleansing of new gears and exchange of fish for sex (Kadzandira and Zisiyana, 2006). Fish for sex, a form of transactional sex where in addition to or in place of money, female fish traders offer sex to fishermen to ensure they receive their fish, has also been reported in Nkhota Kota and other lakeshore areas. While this study identified fishing areas as being vulnerable, it does not clearly identify the nature of transactions that take place to bring about fish for sex, for instance. Furthermore, it does not present sources of vulnerability along the

¹ Nsanje, Zomba, Machinga, Mangochi, Salima, Nkhotakota, NkhataBay, Karonga

² Cultural practices such as: initiation of youths (Jando, Nzondo, Thimbwiza; Kutaya Mafuta) and in some cases reports of sexual cleansing.

fish market chain analysis other than identifying the source of vulnerability at a specific point.

Njaya and Kachilonda (2008) carried out a value chain study for *usipa* (*Engraulicypris sardella*) in the southeastern Arm of Lake Malawi. It highlighted the fact that limited supply of condoms, low capital for women, mobility of fishers and limited HIV/AIDS awareness were among the factors that make the fisher folk in this area susceptible to HIV/AIDS. This study focused on *usipa* and left other fish species. Moreover, it did not specifically focus on factors of vulnerability for women along the value chain.

Very few NGOs are currently addressing HIV/AIDS in the fisheries sector. DIGNITAS is currently working in the Lake Chilwa area, especially in Zomba district, mostly in care and support services. Through their collaboration with Women and Law in Southern Africa research Trust (WILSA), an NGO based in Blantyre, the Society for Women and AIDS in Malawi realized that women are being abused in the fishing communities, women are involved in sexual relations in order to be able to buy fish, and girls are engaged in sex at an early age. Therefore, the Society for Women and AIDS in Malawi has started to work with women and children in fishing communities in Nkhotakota.

This report presents results of a study conducted to analyze the factors contributing to the vulnerability of women along the fish market chain in southeastern Arm of Lake Malawi. Specifically, the study focused on identifying the nature of transactions that take place which increase female fish traders' vulnerability.

2.0 Methodology

2.1 Data collection approaches

A mixture of approaches and tools was used in conducting this study. Following a regional technical workshop on research methodologies conducted in Lusaka, Zambia (June 2008), a research protocol was developed, with clear objectives and research questions. This was validated by a National stakeholders' workshop in Lilongwe. A rural rapid appraisal on HIV/AIDS in the fisheries sector was conducted in the study areas. This involved conducting interviews with various stakeholders in the fisheries sector such as the Department of Fisheries, NGOs working in the HIV/AIDS sector, Mangochi District Assembly and fisherfolk at the landing and processing sites, and wholesale and retail markets.

For the main fieldwork, individual interviews were conducted with 73 female fish traders from four fishing villages of Malindi, Makawa, Masasa and Msaka of southern Lake Malawi. These fishing villages were chosen because they are very active and have a high concentration of female fish traders.

A questionnaire was administered to female processors and traders. Additionally, two focus group discussions were held in each community involving selected female fish traders. Key informant interviews were held with fishermen, male fish traders and fisheries extension workers. Participants in the focus group discussions did not participate in the individual household interviews. Participants in the key informant interviews included the beach village committee members, local leaders, and prominent fishers and fisheries officers.

Literature was reviewed on related work to draw lessons. These included local as well as international literature, both theoretical and empirical.

2.2 Data Analysis

The data from the individual household interviews were entered into a computer using the Statistical Package for Social Scientists (SPSS) and Microsoft Excel package. The main data analysis was done using frequencies and means of variables of interest, some of which were graphed. Cross tabulations were developed to assess the relationship among some key variables.

Qualitative data were analyzed using thematic analysis. Qualitative and quantitative data were used to triangulate each other. Specifically, the qualitative data were used to identify underlying issues whose magnitude was shown by the quantitative data.

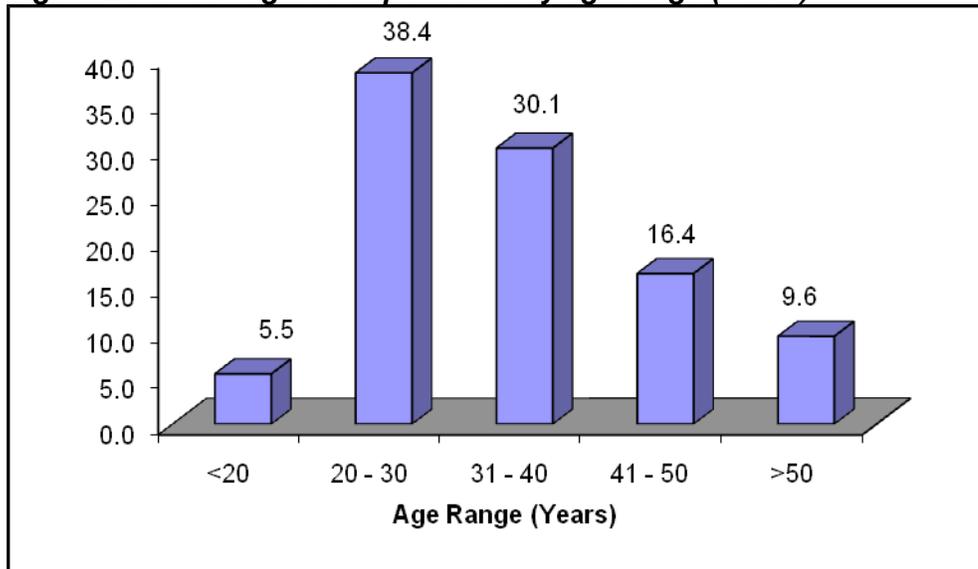
3.0 Results

3.1 Social and economic characteristics of respondents in the study and implications to HIV/AIDS vulnerability

3.1.1 Age of respondents

Women from 73 households were interviewed for individual household interviews. Their ages were categorized in ranges of 10 and the analysis showed that the majority of respondents are between 20-30 years age range (38.4%) and 30-40 years (30.1%).

Figure 2: Percentage of respondents by age range (N= 73)



From the above graph, it is evident that a majority of respondents are females between 20-40 years age range, which tends to be the age range in which women are most sexually active. The majority of respondents were married, accounting for 72 percent. About 4 percent were in polygamous families, and others were either widowed (8%), divorced (10%) or single (6%). This mix of marital status implies that vulnerability of the respondents would tend to vary. First, the fact that a majority of the respondents are in the sexually active age group and 72 percent of whom are married makes this group interesting to study. Secondly, the 28 percent of respondents whom were not married would also expect to be vulnerable in carrying out their fish business.

3.1.2 Mobility and migration

About 80% of the respondents who were married indicated that their husbands stay in the village. Married women whose husbands were not in the village, reported that their husbands were in South Africa (one respondent), Ntcheu (Malawi) (one respondent) and Msaka (Malawi) (four respondents).

All respondents interviewed were recent migrants to the areas. Over three quarters (75.3%) of the respondents had migrated from other areas in Malawi, in search of business at their present location. The picture below shows Msaka beach, one of the busiest fishing grounds in Mangochi district dominated by migrants. Msaka landing area is dominated by the Tongas whose original home is Nkhata Bay in northern region (Malawi). Some of the Tongas in the area are a third generation but they still maintained ties with their original homes. People in the area depend on fish with no other alternative sources of livelihoods.

Compared to the other four communities included in this study, Msaka village had more boats, more permanent structures and a thriving trading centre indicating that there is significant economic activity going on. It was common to find women who were selling fish to be married to boat owners or crewmembers. Some female fish traders are seasonal in the sense that they normally come to buy fish during the hot season (August to April). During the cold season, the fish catches are low thereby requiring more capital as fish prices increase. Masasa beach had more migrant female traders (50%) than Msaka. Probably its proximity to Monkey Trading Centre made it attractive regarding transport facilities. The beach is approximately one kilometer away from the main road with an access road.

At Makawa, the female fish traders were from within the district and they use temporary structures for accommodation while waiting to buy enough fish for a trip to the market. This indicates that buyers patronizing the area spend a few days in the area. Additionally there is also a thriving trading center at Makawa along the Mangochi-Monkey Bay road with many entertainment joints including bars. Key informant interviews revealed that this place is patronized by both locals as well as outsiders who not only come to buy fish but also come to look for sex because of the thriving fish business (both men and women). This is a likely source of vulnerability among the women who come to buy fish as well as local women from the area. In Malindi, the respondents were from the same area only.

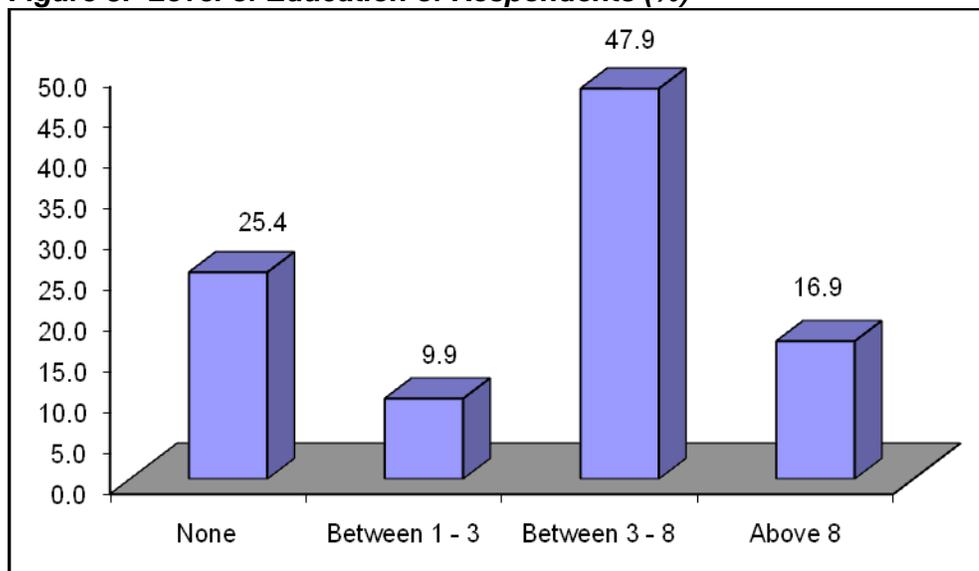
Relationships between boat owners and female fish traders are not uncommon in the study sites. In some cases when the boat owners have no working capital, they resort to 'borrow' money from women, which they use to buy fuel for boat engines, gas for lamps or to pay crew members. This is done on the understanding that when the boat owner has fish, preference to buying fish will be given to these women. However, in some cases a boat owner may have such relationships with several women, all expecting the same preferential favors. It is under such competition that some women offer sexual favours on top of their cash to still get premium preferential treatment over the other women.

3.1.3 Levels of education among respondents

Levels of education of the respondents were generally low. About one-quarter of the women interviewed never attended any formal education. This is represented by 25.4 percent of all people interviewed and nevertheless there is a considerably high percentage of people who

went as far as standard eight representing 23.9 of respondents. The details of how respondents attained formal education are shown in the graph below.

Figure 3: Level of Education of Respondents (%)



The low level of education is a source of vulnerability to HIV/AIDS. There is a general correlation between education level and incorporation of awareness messages; the more education a person has, the higher their access is to HIV/AIDS messages and understanding of the same. This understanding can lead to a higher level of preventive behaviour since they are better informed than could have been otherwise. Moreover, Charlota (2009) indicated that low literacy can be blamed for low negotiating power for sex and early marriages especially among women. It is likely that these sources of vulnerability are also applicable to the respondents in this study.

3.2 Economic characteristics

Because of the nature of the study, the respondents interviewed were female fish traders. The activities they undertook included predominantly fish selling and buying, but some were also involved in fish catching. Apart from fish-related activities some women were involved in farming as another occupation. Fishing was major occupation to about 74% of respondents indicating it to be their first occupation. Farming was indicated as second most important occupation with 50.7% and finally petty trade as third occupation representing 30.1% of respondents.

The respondents' ownership of asset gave an implication that majority of the people were generally poor (see Table 2 below).

Table 2: Asset ownership among the respondents

Asset	Number of Respondents Owning an Asset	Percentage
Boats	20	27.4
<i>Chilimira</i> ^a	12	16.4
<i>Mkacha</i> ^a	0	0
<i>Mono (fishing basket)</i> ^a	6	8.2
Drying ranks	44	60.3
Cell phone	39	53.4
Radio	43	58.9
Total	73	100

^aAll these are various types of fishing gear.

Over half of the respondents indicated to own a cell phone (53.4%) while 58.9% owned radios. Use of cellphones was very common among the fisher folk, mainly used as a communication tool with the market, and some boat owners display their cell phone numbers on their boats in the hope to increase their business.

Over one quarter of the women interviewed indicated that they owned boats (27.4%). These were boats that were mainly operated by their husbands. However, very few respondents indicated to have owned chilimira fishing gear (16.4%), and fishing baskets (8.2%). Ownership of other assets was high, indicating the type of activity that the respondents were involved in. This is also an indicator of wealth; for example, 60.3% of the women interviewed indicated to own drying ranks, indicating that the majority of the women are involved in selling sun-dried fish. About 40 percent of the women rely on hiring drying ranks to dry their fish. Thus apart from buying fish, the women also need some more money to pay for these kind of services. The more money women need, the more they are vulnerable to HIV infection, especially in light of the increased costs of commodities. To sustain their livelihoods, apart from buying the fish, these women often need quick money to pay for the drying equipment.

3.3 Fish related activities undertaken by women

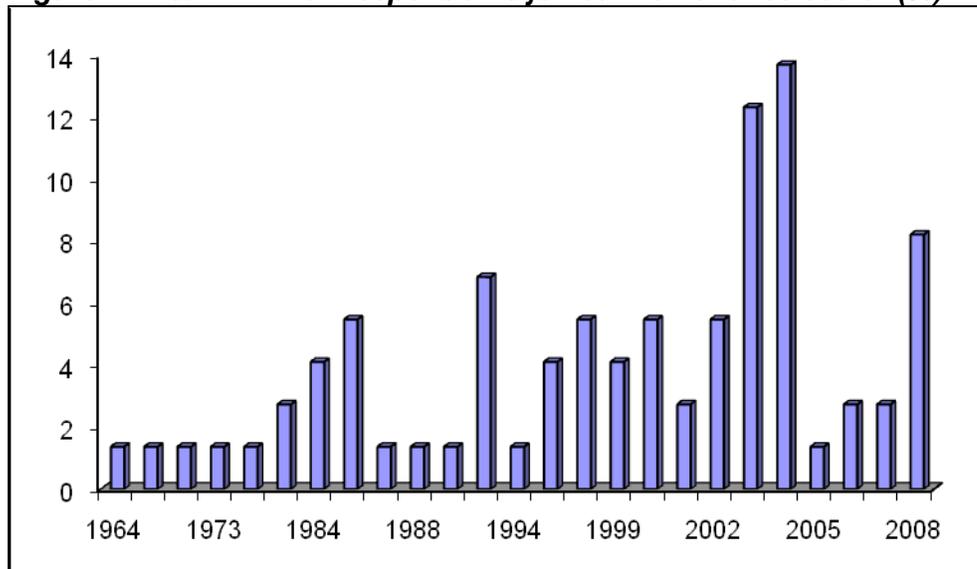
In this study, women's activities were mainly concentrated on the routes between the beaches to the markets. Fish trading is mentioned as their main occupation by almost half of the respondents (47.9%). Other respondents mentioned a mixture of activities which in most cases had trading as a component, including buying, drying, smoking and selling of fish and fish products. Despite the combination of activities as indicated by the respondents, findings from the focus group discussions and key informant interviews indicate that the most common combination of activities for women would be buying fresh fish, drying fish and then transporting fish to the market for selling.

In the focus group discussions, the participants indicated that smoked fish and fresh fish were considered financially risky activities for women, as they were more resource intensive and well as being perishable therefore needing more aggressive negotiations or else one would make a loss. Thus for women to engage in fresh fish selling which is also profitable, would require women to borrow money from their husbands or other male partners. These loans would normally be big and they would end up being repaid through transactional sex. On the other hand, unlike smoked fish, dried fish does not require such resources as firewood to process. And unlike fresh fish, dried fish does not have to be transported to the final destination within a short period of time. Thus financial risks involved in dried fish tended to be minimal.

3.4 Period of respondents' involvement in fisheries

Among the respondents interviewed, the oldest indicated to have joined the fish industry in 1964 (about 34 years ago). Over three-quarters of the women joined the industry after 1996. This can be clarified by increased awareness creation by the Malawi government after 1996, by encouraging people to engage in businesses as income generating activities. The years 2003 and 2004 showed a large proportion of respondents joining the fish industry (over 12% in each year). This might have happened following the 2001/02 nationwide hunger which prompted women to engage in other activities other than farming for a livelihood. This shows that fish trading can play an important role in cushioning people against poverty in general and hunger in particular.

Figure 4: Year in which respondents joined the fisheries sector (%)



As figure 5 above shows, over half of the respondents had less than ten years experience in fish trading. This notwithstanding, a majority (65.5%) of respondent had not attended any training in business. About one third of the respondents (32.9%) had

gone through training in marketing. The importance of business training for women engaged in fish trading cannot be overemphasized. Lack of training can easily lead women to have low business skills which will result in getting low profits. This in turn might lead to their engagement in risky behavior in an effort to increase their profits. Key informants also reported that some women use fish business as a cover-up for sex business. It was reported that in these cases, women would sell fish during the day and engage in sex business at night in bars.

3.5 Institutional support to fish businesses for women

In the study area, respondents mentioned a small number of organizations and institutions that have offered business training. The training types offered were mainly to do with credit facilities; training was a prerequisite to the disbursement of credit or loans by these organizations. In most cases however, the trainings offered tended to be generic and not suited to fishing activities.

Of the respondents who indicated to have received some training, over 40% had received training related to general business management such as management of loans, general business management, finance management, role of demand and supply in marketing, and selling. Only 16.7% received training in fish processing while 5.6% received training in dress making, again unrelated to fishing. It might be that organizations offering credit assumed that their clients know the product well enough and that all they needed was the financing of their activities, but respondents indicated the lack of training as a gap in this service provisioning.

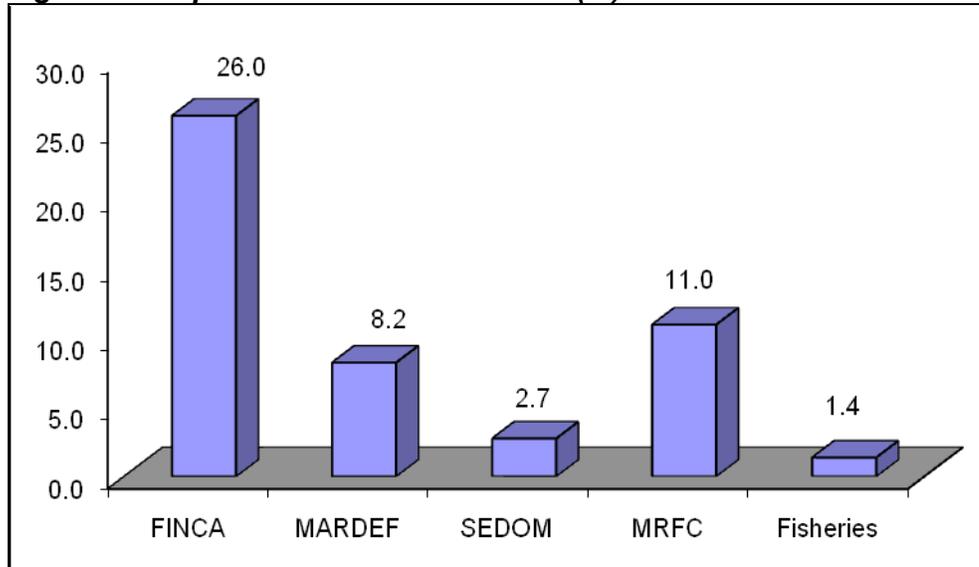
Organizations offering credits (and related trainings) often lack the skills to find out the knowledge level and specific needs of their clients, while on the other hand, community members might be unable to express their needs. This gap has the risk to create disappointment, frustration and unutilized opportunities on both sides, hence for sustainability purposes, there is need for a participatory approach to ensure training and credit facilities answer to real needs in fishing communities.

Among organizations offering different types of credit were Concern Universal Microfinance Organization (CUMO), Small Enterprise Development Organization of Malawi (SEDOM), Opportunity International Bank of Malawi (OIBM), United Nations Children's Fund (UNICEF), Foundation for International Community Assistance (FINCA), Food and Agriculture Organization (FAO), Malawi Rural Financial Company (MRFC), Movimondo and Malawi Rural Development Fund (MARDEF).

When asked if they knew organizations that would give business training in their areas, 42.5% of respondents answered positively. It therefore implies that the areas are relatively well serviced in terms of availability of loan facilities. For the respondents that received loans, a majority (71%) got a loan with the purpose of starting a fish trading business. Others got a loan to buy agricultural inputs, pay school fees and to start a

small business. Figure 6 below shows the sources and the percentage of respondents getting loans from different sources.

Figure 5: Respondents' Source of Loans (%)



FINCA was by far the largest single lender to the respondents. This organization is a micro finance institution specializing in giving loans to women. It uses a group lending approach through commercial banks. MRFC was the second largest lender, accounting to about 11% of the respondents. Although targeting the rural areas, the organization offers loans to both men and women. The loan size was on average MK17,304 (≈124US\$) and by the time of the survey, an average of MK14,618 (≈104US\$) had been paid out.

The discrepancy between what was received and what had been paid back can in part be explained by the modalities of the loans, whereby for some organizations repayment starts two weeks after getting the loan. In most cases, the beneficiaries will have hardly started getting any profit before they are asked to start servicing the loan. As a result, beneficiaries tend to repay the loans for a longer period of time than could have been otherwise allowed a longer gestation period. Long and frequent loan repayment puts women beneficiaries under pressure to look for sources of quick money to pay off the loans; transactional sex is perceived as one such alternative to getting money quickly, which puts women at severe risk of HIV infection.

3.6 Establishment of fish trading businesses

A majority of the respondents started fish trading business with capital from personal relations (family and friends). Data in table 3 below shows that apart from personal relations, other important sources of initial capital were savings from other business.

Table 3: Sources of capital for starting fish trading among the respondents

Source of Initial capital	Number of Respondents	Percent
Personal relations	45	61.6
Savings from other business	15	20.4
From Clubs	5	6.9
Other sources	4	5.5
Loan	4	5.5
Total	73	100

Social capital played a major role in making respondents start their businesses. Sources such as personal relations and clubs are a reflection of the importance of networks in enabling people to start a business. These findings imply that encouraging women networks can reduce women's reliance on informal and sometimes sex-based capital sources. This is confirmed by a study in Uganda by Karukuza and Bob (2005), who found that highly individualistic means of income generation in the communities reduced coping mechanisms, which can in turn increase risk.

In terms of level of capital, it was reported that on average, the women started with MK8,321 ($\approx 60\text{US}\$$)³ and as at the time of survey their level of capital was MK50,437 ($\approx 360\text{US}\$$). Although these are nominal figures, amounts of about MK50,000 ($\approx 357\text{US}\$$) on average are by far a large capital in Malawi where about 40 percent of the population lives below poverty line (less than US\$1 per day). About 53.4% of the respondents said they had access to loans. It appears that a majority of the respondents did not have access to loans at the onset of their business. However once they have an established business, organizations came forward to offer them loans.

³ Average starting time of the business was ten years ago

4.0 Fish market chain

In order to understand the roles and activities of women in the fisheries sector, there is a need to present a typical scenario of a fishery. In the areas visited, fishing is predominantly artisanal, specifically targeting small fish. This involves small engine boats who go out to fish at night. The moon dictates the actual timing; as much as possible, fishermen want to avoid moonlight. For example, when the moon is up, they will wait for it to set before they can commence fishing activities, while during the half moon, they would like to fish before the moon is up.

4.1 Sources of vulnerability to HIV/AIDS at Lake Malawi

The timing discussed above implies that sometimes the fishers will return from fishing at night and some times during the day. The timetable for the fishers therefore implies that female fish traders would have to accommodate this, in order to secure their share of the catch. The hypothesis was that a majority of the women would have somebody buy fish on their behalf. These buyers would be either hired or their relations such as husbands. The study showed that contrary to the expectation, many women (81.8%) indicated that they buy the fish themselves. Only a small number of women had their husbands buy fish for them (14.1%), while the remaining respondents mentioned friends.

In most cases, women reported to have bought fish from people they had no relationship of any kind with (46.2%). Others bought fish from male acquaintances (35.6%) or female acquaintances (4%). Male relations and female relations accounted for only 6.2% and 4.6% respectively. In some cases, women were buying fish from sellers who had their husbands as part of the crew. Buying fish is normally done on cash basis. About 97.2% of respondents said they bought fish on cash basis and the rest said they had a loan facility. In some cases it was the women who were giving loans to the fishers.

Among the problems faced by female fish traders, the most important is the high price of fish (28.8%). High prices of fish result in women buying fewer fish. Because of their small capitals, for them to get enough fish they borrow money or fish from fishermen which is often repaid through transactional sex. Other problems faced by the women in the study sites include theft of their fish at the time of drying, low catch during certain periods of the year, verbal harassment by other traders, and price fluctuations leading to severe losses. Access to fish at the lake was the primary source of vulnerability to HIV/AIDS. Given the number of buyers in contrast to sellers, the market is highly competitive in favor of sellers. Thus buyers tend to out-compete each other, especially during the low season (cold season).

There were several activities that were noted that could potentially predispose women to this vulnerability. Among these are customership love, “fish for sex”, and relationships with migrant fishers. “Fish for sex” relationships are common among the fisher folk.

Given the stiff competition among buyers, it was reported that in some cases, men fishers sell fish to female fish traders in exchange for sexual favors. This is done in an open but covert manner; the fish is sold in the open where everybody else is present, but some buyers actually buy on behalf of the preferred customers so that the relationship is not obvious or raises suspicion.

There are two types of women who are found to be involved in these kinds of relationships. There are single women who are resident to the beaches. These women rely on fish trade as a major source of livelihood. It is common for these women to be more aggressive in getting fish, as it is a source of their survival. Secondly, there are female traders from either the urban areas or other beaches, who might also engage in fish for sex relationships in order to reduce their operating costs for the days they spend at a fish landing site. In all the beaches visited, it was reported that preference for fish buying is given to women from the beach and not to outsiders. Thus an outsider would sometimes resort to offering sex to boat owners or crew members so that they can be given preferential treatment. When fish catches are low these tendencies will increase compared to when there is a good catch with enough fish for sale.

At Malindi, it was observed that teenage girls were an increasingly engaging as fish traders. They buy fish so that they can cook snacks (*kanyenya*) which they sell within the area. This business is lucrative in the area because of the growing trading center with a hospital, secondary school and bus stage. Key informants observed this trend and indicated the potential risks of the spread of HIV, as the girls are involved in sexual activities especially when they sell at night.

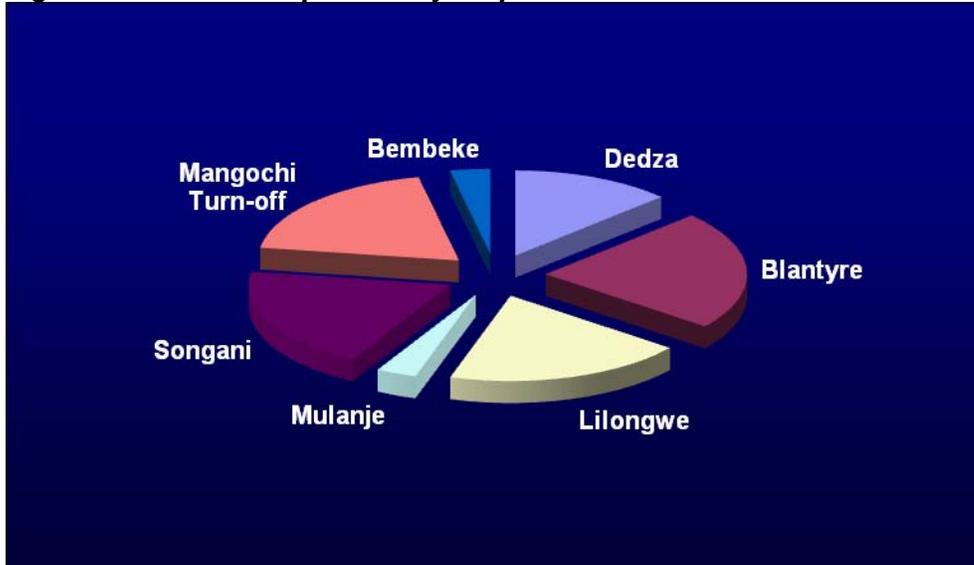
Interviews with key informants in all study sites indicate that when the catches are low, fishermen sometimes tend to favor the women with whom they have a (sexual) relationship, making it difficult for other people to buy fish. The boat owners have more power to demand sex from women who are desperate for fish. Nagoli and Holvoet (2008) found that when fish catches are low, the most vulnerable people are women from the fishing village, in that preferential selling is on female traders. Fish caught will already be earmarked to be sold to specific women. This pre-arranged selling is sometimes accompanied with transactional sex.

4.2 Marketing

Fish caught in the area is taken to distant urban markets such as Mangochi Turn-off in Balaka (about 150 kilometres from Msaka), Limbe market in Blantyre City (250 kilometers), Lilongwe (180 kilometers), Chimbiya (120 kilometers), Songani (200 km) and Bembeke Turn-off (95 kilometers). These markets tend to operate at specific days of the week. For example, although the Limbe Market is open every day, the fish wholesale market is open on Mondays and Fridays only. The Liwonde market is on Mondays and Saturdays. Lilongwe market is open every day. Chimbiya market is open on Wednesdays and Saturdays, while Bembeke market is open in Mondays and Thursdays only. Sometimes traders will move from one market to the other on the same day if they have not sold all their fish. The market days are staggered to allow for the

same traders to move from one market to another. Only 42.5% of respondents mentioned the markets they sell their fish to. Figure 8 below indicates which markets the respondents frequently go to.

Figure 6: Markets frequented by respondents



The main markets mentioned are Lilongwe, Blantyre and Mangochi Turn-off. Some markets, especially in the central region, tend to be seasonal. Fish demand tends to be high during the harvesting seasons when farmers sell their farm produce, especially tobacco. Two major problems indicated by respondents were that they spend a lot of time at the market (11%) and they also lack customers (23.3%). Because most traders do not have specific customers, every time they go to the market they have to negotiate with new buyers. About 30.2% of the respondents said they sell their fish to regular customers; 25% sells mainly or only to men, while 71% sells to both men and women. On average, traders spend two days at a given market. They will arrive at night and sell their fish during the day and return to their homes the following evening or following morning. At a few markets, there is no need for accommodation as traders sleep at the market itself, which is a potential risk factor for the traders in terms of vulnerability to violence, theft and abuse.

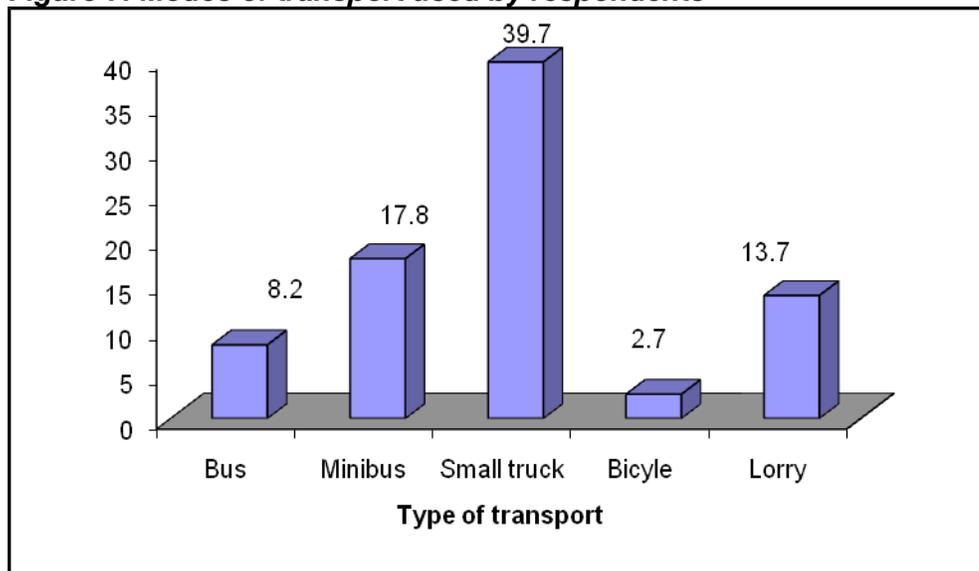
4.3 Transactions at the fish market

In all fish landing sites (assembly points) visited, fish is sold using a 5 liter plastic bucket. Although there is some bargaining, usually it is the seller who sets the price. However this tends to be seasonal; when there is plenty of fish, the fishers will struggle to have their fish sold, while when catches are low, it is the buyers who struggle for the little catch. After the fish has been bought, it is dried before being stored. This is necessary especially when catches are low, as it can take buyers a week to buy enough fish for one trip to the wholesale market.

Respondents indicated different frequencies of going to the wholesale market. About 12.3% of respondents said they go to the markets once a month. Over a quarter (28.8%) reported to go to the market twice a month, while 19.2% go to the market three times per month. The remaining respondents (39.7%) go to the market at least four times per month. The frequency was mainly dictated by the level of capital one has; traders with much capital tend to go to the market more frequently than those with less capital. Season also plays a part; during the hot season, when catches are high, frequency of market attendance is high, while frequency is low during the cold season.

Fish is transported to the markets using various forms of transport. As most markets are far away from the landing sites, motorized transport is most common. By far the small trucks (1 ton pick-up) are the most common means of transporting fish, as figure 9 below shows. Other modes of transport are minibus (17.8%), lorry (13.7%) and bus (8.2%), while only 2.7% transports their fish to the market by bicycle. Traders going to the markets on specified days (market days) would tend to organize themselves and hire a small truck or a lorry. However, traders traveling on any other day tend to use public transport such as a bus or a minibus. The fact that 39.7% of respondents indicated a small truck as their means of transportation would imply that these traders have a tendency to target specific markets.

Figure 7: Modes of transport used by respondents



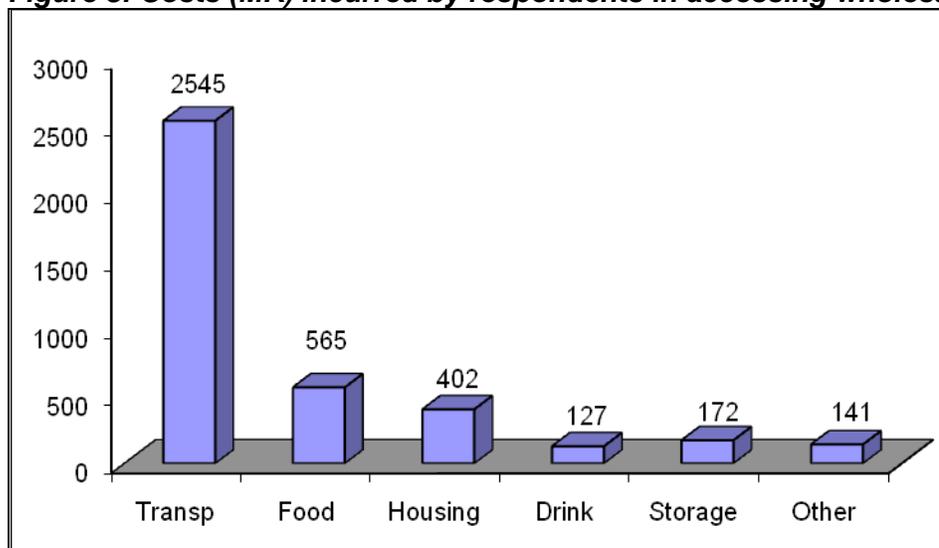
About 17.7% of the respondents indicated that they arrange transport in advance. The remainder (82.3%) indicated that they just take any transport that is available at the bus stage. Asked to indicate whether they knew the transporter, 45.9% said they did not know the transporter. On the other hand, 8.2% said the transporter was a person they knew or were formally related to, and 44.3% said the transporter was a male acquaintance. Payment was mainly per trip (91.7%) while 3.3% said they paid per month. Traveling in groups to a specific market was a source of vulnerability in the sense that women sometimes rely on men to pay for operating costs such as food,

lodging and transportation. This is often done in exchange for sexual favors, and in combination with gender imbalances, this increases female fish traders' vulnerability.

Among the problems the female fish traders face, the high cost of transportation (52.7%) was mentioned by most respondents. Others said fares tended to fluctuate so one is not sure what they will be asked to pay on any one trip. Sometimes the transportation is overcrowded, making travel uncomfortable (5.5%). In cases where transport is arranged, they travel at night, which is very dangerous and increases the risk for these women. It is not uncommon to have fish damaged or stolen during transportation. When an open truck is used, the traffic police can also give problems since carrying passengers in an open truck is illegal.

To access wholesale markets, there are several costs involved for the fish traders. Figure 10 below shows the average costs of the different items fish traders have to pay for. Transport is by far the largest cost for the traders (MK2,545 ≈ 18US\$), followed by food and housing. High transport costs imply that to participate in fish trading one needs a relatively large capital unlike other petty trading activities.

Figure 8: Costs (MK) incurred by respondents in accessing wholesale markets



Vulnerability comes about when men and women travel to the same market and the males start making sexual advances to the women. Oftentimes it was indicated that women tend to fall prey to such tactics because men offer to shoulder women's costs such as accommodation and food. The female fish traders often accept these deals in an attempt to reduce their operating costs and therefore have their business grow as quickly as possible. A common phrase used under such deals is "zithere konkuno", implying whatever happens here should not be reported at home. On one of the common fish trading routes, the Mangochi-Monkey Bay road, there is even an entertainment joint called "Zithere Pano", having the same connotation. Interventions aiming at reducing transport costs can go a long way in reducing the high operating costs for female fish traders, which would improve these women's profit margins and reduce their vulnerability.

4.4 Relationships and temporary marriages among migrant fisher folk

Migration is an important source of vulnerability to HIV infection. Fisher men are vulnerable as they continuously move from one area to the other, in search for fish, spending a lot of time away from their homes and families. Often, they sleep in rest houses or in temporary improvised houses in the fishing camps. Female fish traders are also highly mobile, following the fisher men and their catch, and chasing suitable markets and identifying the best market days to maximize their profit. As described in paragraph 4.3 above, for female fish traders to have a successful business, there are many transactions involved which potentially increase their vulnerability.

Vulnerability for female fish traders occurs on two fronts. Firstly, it is their own movements to various fishing areas and to the markets. Visits to the markets tend to be short; no more than two days. However, getting fish from other fishing grounds other than their homes could take a while, as preference is generally given to women from within the area. In principle it should take longer for outsiders to buy a given amount of fish. To access fish in good amounts within short period of time the women enter into sexual relationships with the men fishers.

Secondly, another source of vulnerability involves extra marital sexual relationships of fishers' wives when the fishers migrate to other fishing grounds. Relationships between boat owners and women fish traders are common in all four study sites. In some cases when the boat owners have no working capital, they resort to 'borrow' money from women, which they use to buy fuel for boat engines, gas for lamps or pay crew members. Key informant interviews and focus group discussions revealed that local migration for men was very common. About 17% of the respondents indicated that their husbands (fishers) were normally away from home, following good fishing grounds depending on the weather and the moon. It was not uncommon for men to be gone for weeks to other fishing grounds sometimes in other districts such as Ntcheu and Salima or distant fishing grounds such as Makanjila. The study found that a practice occurred where, in communities left by migrant fishers, some men would identify which men had gone away for fishing so that meanwhile they could entice their wives into extra marital affairs. On the other hand, when the fishers also migrated to a distant fishing ground for a longer period, they engage in temporary marriages in those fishing grounds, hence increasing their risk of HIV infection, and infecting their original wife upon return.

5.0 Concluding remarks

The study has shown that female fish traders in selected landing sites mainly sell small fish types such as dried usipa (*Engraulicypris sardella*). Unlike other types of fish, dried usipa is a less risky business. Fresh Chambo (*Oreochromis spp*) fish which is a highly perishable product and smoked fish are mainly handled by men. All these products are also capital intensive. There is an understanding among the communities that drying and trading usipa is exclusive product for women. Fish is mainly caught by men to be sold to women. After drying the fish, the fish is transported to the wholesale markets using public transport such as buses, mini-buses or lorries. At the wholesale markets, it was noted that there are no permanent buyers, so female fish traders have to compete for buyers each time they frequent a market.

Along the market chain, various vulnerability points were noted. First, at the point of buying fish from the fisher men, women are vulnerable to contracting HIV as they try to compete for fish with fellow women, especially when the catch is low. Transactional sex is often used by women to secure a catch, increasing their vulnerability. Other than the catch, the migratory nature of fisher folk implies that the fisher men are away from home most of the time. This has two implications; while away, the husbands can indulge in temporary marriages, and at the same time, the wives who stay behind can also indulge in extra marital sexual relations with other men.

Transporting of fish was not identified as a major vulnerability factor as this is done in public, although clandestine arrangements could not be ruled out. Contrary to the expectations of the study, access to loans was not a problem as a majority of the respondents had had access to loans. Rather, lack of training and the conditions under which loans were being provided were identified as problematic; the largest supplier had high interest rates and the time for beneficiaries to pay back their loans was too short. This means that women were struggling to repay their loans most of the time other than growing their business. This has severe impacts on their livelihoods and in an attempt to gain an income and secure food for their households, women tend to use any means possible, including sexual activities.

Insights from this study are being used to guide the design of a pilot intervention in a selected fishing community in Mangochi District, along the southeastern arm of Lake Malawi. In collaboration with Chancellor College and the WorldFish Center Malawi, World Vision International will implement economic empowerment activities to reduce the identified vulnerability factors of female fish traders.

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