

THE DYNAMIC ROLE OF WOMEN IN TRANSFORMED FISHERIES OF LAKE VICTORIA

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Abstract

The decline of fish catch in Lake Victoria has manifested into changed gender role with women being edged out of fisheries activities. This paper attempts to describe the role of women in transformed fisheries of Lake Victoria. A total of 246 fishers from fishing dependents communities in three islands of Lake Victoria were involved. A Cross-Sectional Research Design was abided whereas both probability and non-probability sampling techniques aided selection of both men and women respondents in fish capture and offshore fisheries activities. Findings from study revealed the existence of a clear-cut division of labor within the fishery sector with men and women taking on different roles. However, women fishers reported to be unprivileged by men occupying fisheries activities previously undertaken by women during artisanal fishery. The emergence of commercial fishery resulted into women's role in fish processing and other post-harvest activities immediately occupied by fishermen and or male fish agents. Adverse impact of men domination in fisheries activities were remarkable to female headed households than male headed due to disproportional access in fisheries resources. The prevalence of socio-cultural restrictions and prohibition of women engagement into some fisheries activities indicated to deter women's struggle to edge out of poverty. The creation of

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non-fisheries income generating activities and establishment of fish farms (aquaculture) in the riparian community holds promising prospects to women and community at large.

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Introduction Lake Victoria with surface area of 68,500 km² supports livelihood to multitude of surrounding communities within the region. Majority of lake basin inhabitants depend on fishing as major economic activity. For over years, both men and women has played key roles in the fishing sector. However, following transformation of fisheries in Lake Victoria men and women have tended to occupy different roles. Currently majority of men have tended to occupy fish capture activities while women have often occupied the post-harvest activities which make them not just marginal players but active role players in offshore fisheries activities. Both men and women have a clear division of labour which is culturally defined existed over time in which men dominate the in-water fish capture operations while women mainly appear to be involved in offshore fish processing activities (Medard *et al.*, 2002). However, the position of women in the fishery sector still is undermined by the domination of men whereas in most cases they have minimal access to and control over productive resources and even much less over benefits. Lwenya *et al.*, (2000) observed that women's effective and meaningful participation in fishery operations and management is greatly hampered by their subordinate positions at the household and community level. But in actual fact, given equal access to opportunities and resources, women can be equally efficient and dynamic as men and indispensable partners in development (Lwenya *et al.*, 2000).

While men seem to dominate the fishery of Lake Victoria, the fishery sector around Lake Victoria is characterized by a high participation level of single, divorced and widowed women, and separated mothers (Ogutu, 1992; Medard and Wilson, 1996; Geheb, 1997; Lwenya *et al.*, 2009). These are the type of women who seem to exercise more freedom, engaging into fisheries activities in the absence of their male partners. Francis (1995) argued that the migration of men to other parts of the lake and urban centers has left women to take up duties traditionally performed by men. Consequently, they have taken up fish trading and processing as a major source of household income.

Like everyone else the motive for women involvement into fisheries related activities emerge from one common reason; the need for income to support family at home which is the principal driving force for joining into fishery sector (Geheb, 1997). In a study to analyze gender roles in fisheries management, Lwenya *et al.*, (2000) argued that while women play an important role in post harvest sector, there are changing roles in the fisheries where men have seized opportunity to enter into retail fish trade, which was once a female domain practiced along shoreline. Additionally in recent years men have been found dominating the Nile Perch fishery and its trade, which is more profitable, and export oriented pushing women to the less profitable fish species of Sardine and other indigenous fish species (Medard *et al.*, 2002). With women increasingly edged out of fishery sector, apparently their contribution to household income tend to be in jeopardy. In similar account, Medard *et al.*, (2002) showed that as activities of traditional fish trading and processing became largely integrated in the marketing chain for fish processing and fishmeal industries, the presence of women in activities became rare and consequently as commercialization of fishery intensified, women increasingly tend to be pushed out of fishery. The ongoing decline of remuneration from fishing sector means a lot to the welfare of women in fishing communities. This study intended to investigate the dynamic role of women in fishing communities of Lake Victoria following the decline of fish catch. Understanding how women trail within the fishery sector in the auspice of declined remuneration from the sector, provides room for understanding future livelihood of women particularly single mothers heading households in fishing communities.

2.0 Research Methods

Three islands (Figure 1) inhabited by fishing communities were surveyed in this study to investigate women's livelihood dynamics in the wake of declined fish catch.

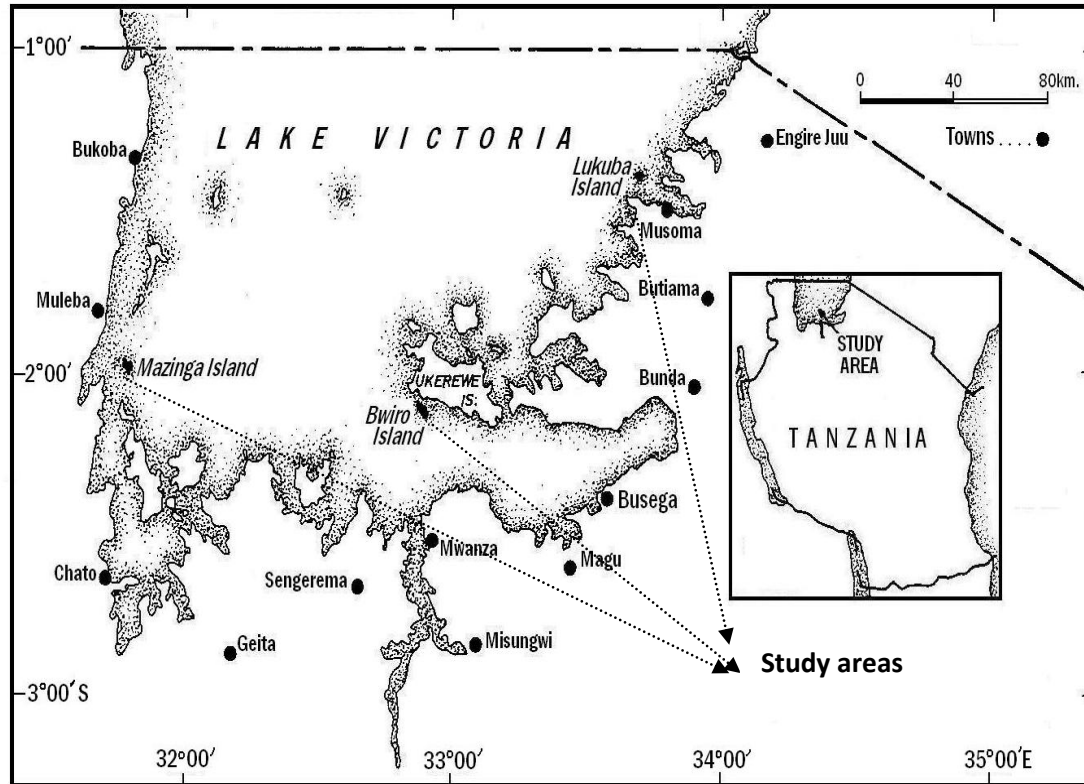


Figure 1: Map of Lake Victoria Indicating Surveyed Islands with insert showing location within Tanzania

Source: Geography Cartographic Unit, UDSM (2014)

A total of 246 respondents were interviewed at a single moment in time to gather both secondary and primary data. Primary sources of data were both men and women from each island. Respondents were randomly selected from activity strata (fishing crews, fish traders, fish mongers, boat owners, fishnets and machine repairers, and off-shore fish processors). Random selection of fishers in strata was aided by the register of residents which acted as sampling frame provided by village governments in collaboration with BMU offices. Subsequent Focus Group Discussion was earmarked and organised from register of residents. Key informants were purposefully picked to provide additional information which needed further clarification and verification. These included government/ institutional officials (fisheries and natural resources, community, health, police, agriculture and food security), and officers from fisheries

management organisations (BMU, CBOs, NGOs, TAFIRI). Secondary sources of data included journals, library archives, books, articles, and newspapers.

The structured questionnaire was the main tool for data collection in this study because of its versatility in covering a wide range of issues whereas both open ended and close ended questions were administered. Interview sessions were framed in favour of each category of respondents. The importance of focus group discussion in this study cannot be overemphasized. At times where contradictory information was earmarked during personal interviews, focus group discussions refuted such differences whereby individuals in groups argued and finally a consensus reached. Several issues particularly ones rooted in community cultural settings which at first seemed difficult to be comprehend during formal interviews, were revealed by women during focus group discussion. Observation method was not left in this study whereas at some instances the enumerators either at close range or at a distance observed women involvement into different activities along shorelines. Finally, the collected data were processed then analysed using SPSS 19.0. Measures such as percentage, mean, maximum and minimum values were computed. In some circumstances cross tabulations analysis were run to establish associations between and among variables using a Pearson Chi-square analysis. Results from analysis were presented in forms of text, charts, tables and figures followed by descriptions and interpretation.

3.0 Results and Discussion

3.1 Involvement of women into fisheries

The fisheries of Lake Victoria as elsewhere in Sub-Saharan Africa is highly characterized by gender based division of labor with women being more involved in post-harvest and ancillary activities while men predominate in fish capture activities. Of total respondents interviewed in this study, men comprised majority (93.1%) while women comprised only 6.9%. This shows that although the role of women in fisheries cannot be overemphasized, but men still predominate the fishery activities now and in the long run. Findings in Table 1 shows that while majority of men (82.1%) indicated to engage in fish capture, a big proportion of women (76.5%) comprised in on-shore fish processing which includes fish smoking, salting (Plate 1), and deep frying. A small proportion of women (17.6%) indicated to involve in offloading and or sun-drying of Sardine fish, with the remaining women (5.9%) involve in small-scale fish trading at landing sites.

Table 1. Gender Involvement in Fisheries Activities (%)

	Men	Women
In-water fish capture	82.1	0
Offloading fish from vessel	3.1	17.6
Fish trading	3.9	5.9
Fish processing	10.5	76.5
Boat and Net repairing	0.4	0
Total	100	100

Source: Computed from Field Data, 2012

Women fishers reported to be unprivileged compared to their men counterparts occupying fisheries activities that were formerly undertaken by women. This is due to the fact that, following an increased export demand for Nile Perch, women's role in fish processing and other post-harvest activities were immediately occupied by fishermen and or male fish agents. For example, in focus group discussion women at Lukuba Island revealed that most of fish processing activities (fish smoking, deep frying) and fish retail trading around lake shores were formerly undertaken by women until the late 1990s.

In all surveyed islands, women involved in offshore fishery and non-fishery activities which included selling of cooked food to fishers, work as porters in offloading fish from fishing vessels, fish processing (salting, smoking, sun-drying) and sale of both industrial brews, liquor and soft drinks. Plate 1 below shows a woman involved in sun-drying salted immature Nile Perch at one beach in study area. Many of such women were common and observable to researchers during this study at every surveyed island.



Plate 1: A woman Salting immature Nile Perch at Izunge beach, Bwiro Island

Source: Research Survey, 2012

The presence of men in fish smoking and salting of Nile Perch was a clear and observable phenomenon to researchers in all surveyed landing sites which justified men overtaking activities previously prescribed as for women. During a focus group discussion at Lukuba Island with elders it was accounted that traditionally fish processing (smoking, deep-frying, sun-drying) was considered as women's activities, but now men have tended to occupy these activities. Little remuneration accrued from fish capture activity was to a greater extent attributed to influx of men in fish processing. During a focus group discussion at Mazinga island fishermen narrated that:

“fishing is no longer a reliable and lucrative business as compared to the past where fish was captured in abundant”

Apparently, the pervasive influx of men into fish processing means exert narrowed offshore fisheries opportunities for women. Consequently, women fish processors tend to be pushed far back from the fishery sector into non fishery and ancillary activities of little remuneration. During one focus group discussion, women asserted that in the past several of them used to engage in onshore fishery activities but the situation changed after commercialization of fishery

in early 1980s. Of such women indicated to have diversified their means of living by venturing into other non-fishery activities as way of earning income to support family while others indicated to have migrated from home of origin to seek life opportunities elsewhere along lake basin. In similar account Asowa-Okwe (1989) noted that because of commercialization of Nile Perch in Lake Victoria, family and gender relations were restructured whereby a system of labour migration evolved around the peripatetic Nile Perch during 1980s, especially among casual fishermen.

The experienced transformation of fisheries in Lake Victoria ought be blamed for edging women out of fishery sector. A shift for men occupying activities previously regarded as inferior to them has become common along the lake basin. During this study it was indicated that much of the Nile Perch once offloaded from fishing boats, it goes directly to the weighing fleets loaded into refrigerated trucks or boats. Previously activities such as offloading fish from vessels were undertaken by women. During artisanal fishery majority of men considered involvement into fish capture as a status symbol while it was regarded inappropriate for women to undertake.

Though men extended working spheres by engaging in offshore fisheries activities, still they dominated in fish capture as fishing crews, fishing gear repairers, transporters and traders. Wives and or partners of fishermen living at fishing camps involved much in supporting activities conducted at the beaches. Such women were mostly identified in this study involved in running restaurants, groceries, kiosk, and other sort of household chores undertaken at beaches. This shows how women have widened income earning spheres in the auspices of men domination over remunerative fishing activities. Women in this study who stayed at fishing camps either at their own or with couples revealed to engage in activities such as offloading fish from vessels particularly in Sardine fishing camps and fish preservation.

Apart from a list of women enrolled during this study, other women were observed at beaches working in activities ranging from domestic chores in their husbands/partners homestead, and others worked as cooks, shop keepers. Leendertse (1990) observed that early before the late 1980's women were being increasingly marginalized in the fishery industry occupying the smaller scale less remunerative processing of traditional species while the newer technologies

associated with the Nile Perch were dominated by men. Additionally, women from female headed households in this study showed to experience much freedom of engagement into various fishery activities undertaken at the beaches compared to women from male headed households. This shows how the patriarchal system still portrayed a role of women restriction in the work sphere. In one focus group discussion at Lukuba Island, men defended of women restrictions into fisheries activities by arguing that it was too risky and strenuous for women to engage into fish capture. Such accounts rendered majority of women considering themselves unable to engage into fishing.

Findings of this study showed that involvement of women in fisheries activities spurred far reaching consequences to household's development much more than men. While much of fishermen's expenditure was centered into luxury and alcoholism, women fishers spent much of their income earned from fisheries and non-fisheries activities to buy food for their families and pay for other necessities for children and other dependents at home. This was much evidenced by women from female headed households which comprised majority divorced and widow women. Further focus group discussion showed that women fishers were able to save money than men because they had many family obligations to cater for than men. At Bwiro Island women showed to be good in cooperating and supporting each other in a rotating micro-credit scheme locally named "*fagilia*". This was a kind of a rotational saving and credit scheme whereby each woman saved a certain amount of money per week to a pot which was emptied in every month to a group member until the rotation revolves. Through such kind of contribution, some women were able to buy fishing gears and fulfill other family obligations at the expense of such money. The observed overwhelming majority of men in fisheries relate to what have been reported by Ogutu, (1992); Medard *et al.*, (2002); Lwenya *et al.*, (2009) elsewhere in Sub-Saharan Africa whereby both men and women tend to have a clear-cut division of labour which in some societies are culturally defined.

3.2 Influence of cultural setup in changing role of women in fisheries

Of total number of women respondents, about 83.5% were migrants not living with their husbands at landing sites. These included women who indicated to have had run away from families as avoidance of male domination and cultural restrictions which denies them working in

fishing camps. Such restrictions and male domination were much evident at Bwiro Island where fishermen were quoted saying that:

“according to Kerewe’s culture a menstruating woman is prohibited to enter or touch a fishing vessel or gear”

According to the Kerewes, touching a fishing gear or vessel is associated with a curse which may result into low fish catch or drowning during fishing (FGD, 2012). Similar cultural restriction was reported in Luo community where there is a law prohibiting menstruating women anywhere near the lake purportedly to contaminate the lake and affect its productivity (SEDAWOG, 2000). Existence of such restrictions based on cultural law seems to have acted as some kind of regulatory mechanisms restricting women engagement into fish capture activities. Furthermore, discussion with one old woman called Nyamtondo Msangwa at Lukuba Island revealed that women in former times were actually prohibited to have any physical contact with fishermen or their fishing gears a night before fishing. Failure to realize good catches was associated with a previous sexual interaction with women, hence it was unacceptable for a fisherman to have sexual intercourse with a woman prior to going fishing. Such cultural laws were also noted to exist in other surveyed islands but with different restrictions. At Mazinga Island, prohibition of women into fishing activities was slightly low since women of different cultural backgrounds were found to involve in offloading and sun-drying fish. Mazinga Island comprised of people from diverse ethnic backgrounds as compared to other two surveyed islands. During focus group discussion at the island, fishermen claimed that women were not actually restricted to engage in fishing activities, but because of risks associated with fishing as it requires a lot of energy and more time over which women could spend attending domestic chores.

Despite the cultural restrictions associated with fishing, interviewed women indicated willingness to engage in fish capture because of its high remuneration. This shows that it is the existing male domination that has denied women engage in activities such as fish capture, and instead women have tended to occupy ancillary activities undertaken at shoreline. In few cases where women were observed to engage in fish capture, it was in fish angling along shoreline mainly targeting *Tillapia* particularly for home consumption. However, such cases were only

observable at Bwiro Island where about 5 women engaged in fish angling targeting *chichlids species* locally named as *Furu*. Nonetheless, existence of such cultural stereotype in fisheries seems to sustain for a short while since fisheries activities in Lake Victoria have tended to attract individuals from diverse socio-cultural backgrounds because of its fisheries being an open access system.

3.3 Pattern of women's choice for fisheries activities

Gender characteristic of respondents in this study were analyzed to examine how it exert differences in choice for livelihood strategies among household members within a fishing community. Women involvement in onshore fishing activities varied depending on type of fishery activities undertaken at particular beach. In beaches where Nile Perch fishing was mostly undertaken women were observed to be comprised in processing of juvenile and or reject Nile Perch and retail selling of processed fish and its products (fried, smoked, sun-dried). Men were observed to dominate pre and post fish capture activities as crew members, boat owners, and managers, over which bigger earning was realized as compared to activities undertaken by women offshore. It was revealed during Focus Group Discussion that women had more restricted access to use and ownership of resources ranging from those linked to fishery and other resources beyond fishery sector as compared to men. An exception was noted in female headed households where women as breadwinners used their resources in fisheries activities which attracted higher remuneration. At times of resource constraints women were reported to suffer more compared to men and this indicated to have shaped differences in the adopted livelihood strategies.

In another instance during low fishing season, several women were reported to work extra hours to cope with low income to supplement what could be earned by their husbands. Role of women became so important especially when their husbands did not go fishing due to bad weather or the low season, women could still supplement family income by engaging in off fishery activities and earn income. It was observed in this study that other women tended to allow their children especially daughters to work as petty traders along the beaches. In extreme cases some women opted into sending their daughters in nearby towns to work as housemaids and required to send their wages back home as remittance to support family. It was also observed that women were

also the major seller of fried juvenile Nile Perch, juvenile Tilapia and sundried Sardine especially during the evening time. It was revealed further that, when sectors of fisheries were considered as minor, ancillary were available for women to undertake, but when the same became of higher marginal returns it attracted men, and women experienced more difficulties in participating. Bwathondi and Mosille (1988) noted that even the sun-dried swim bladder which used to be taken as minor and many women moved into it, was no longer women's business. After prices for those bladders rose steeply in the early 1990s it was immediately taken over by men who seemed to increasingly dominate remunerative fishery activities.

With regard to education, most of the respondents declared to have acquired primary education. However, women admitted that low education level that they attained limited them from maneuvering livelihood options particularly in the period of fishery resources shortage. Women admitted to be aware of their disadvantaged situation in terms of education, and asserted that it affected them in pursuit of livelihood hence limited their opportunities of diversifying from their locality. In similar account, Medard *et al.*, (2000) indicated that where fisher groups existed, lack of education was a source of stagnation in the groups' business endeavors, limiting their communication to the outside world.

It was observed further that different households devised different livelihood strategies. Two types of households were found to be common in study area; male headed households and female headed households. Male headed households comprised the majority 85.0% while female headed households comprised 15.0%. Following the decline of fisheries resources single parent women reported to had undertaken the role as breadwinners with more becoming day labourers in onshore fish processing to support their families. Amongst women who indicated to work as porters unloading Sardine from fishing vessels to dry land, 89.0% originated from outside the particular island (migrant women). No clear reason for the differences was given but through focus group discussion with women it was revealed that women originating in particular surveyed island feared to engage in fishery activities at shore compared to migrant women. Women household heads asserted that, the decline of fish catch in a locality rendered their husbands to leave homes and seek fishery opportunities elsewhere far from home. This suggested that a prolonged absence of husbands at home rendered women to exercise freedom of

engaging in different fisheries activities to support family at home. Many of such women with narrower means ended up in laboring in onshore fish processing. Women in male headed households experienced lower freedom of diversifying livelihood strategies as compared to women in female headed households. In similar account, Fordham (2003) argued that the key factors that contributed to the differential vulnerability of women in the context of natural hazards included: high levels of illiteracy, minimum mobility and work opportunities outside the home, and issues around ownership of resources such as land.

Recent management measures indicated to affect women to a greater extent than men. All nets with a mesh size of smaller than 2.5 inches were banned including beach seine which was important source of the main smaller fish that women traded with. One woman narrated that during operation of beach seines, they used normally to send their children to participate in hauling beach seine in exchange for some fish or exchanging cassava flour with a portion of fish in return. Such batter trade system made many households headed by women who did not own fishing gears or work on fishing have access to fish for food and extra for sale. The closure of beach seining although was very important in rejuvenating Lake Victoria's ecology, its impact is felt disproportionately by women compared to men.

4.0 Conclusion and Recommendations

The impact of the Lake Victoria's fishery transformation to women cannot be overemphasized. During artisanal fishery women experienced much access to fishery resources contrary to what became commercial fishery. Although during artisanal fishery both men and women were comprised into Lake Victoria's fisheries, the collapse of artisanal fishery pushed women further away from the fishery sector. The decline of remuneration from water fish capture activities has rendered men to shift into offshore fisheries activities such as fish processing which previously were dominated by women. It is obvious that, unabated decline of remuneration from fish will for sure continue to exert significant deterioration of women livelihoods. Therefore, creation of non-fisheries income generating activities and establishment of fish farms (aquaculture) in the riparian community along the lake basin holds promising prospects to women and community at large.

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