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Artisanal Fisheries Socio-Economic Characteristics In Development Planning Strategies

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ABSTRACT

In developing countries, artisanal fisheries occupy a critical position in rural livelihoods. This is because fishing as an activity offers great opportunities for rural communities who have minimal resource endowment. In order to understand the diversity in artisanal fisheries communities' livelihoods, analysis of socio-economic characteristics is important. This can help in designing appropriate strategies that are informed and knowledge-based. In this paper, artisanal fishing community living around Lake Victoria was selected for data collection to enable identification of their socio-economic characteristics. This paper also discusses the impact of selected artisanal fisheries characteristics on livelihoods. Significantly, the study findings show that, the socio-economic features of artisanal fishing households are strongly embedded in their ancestral domain and the preservation of their continuity of culture, values, tradition, system, practices and exploitation of natural resources. Further, these features determine the kind of livelihoods that were observed in the study area. The study concludes that socioeconomic characteristics are important in shaping livelihoods of small-scale fisher folk.

Key Words: Artisanal, household, livelihood, fisher folk, sustainability, socio-economic, fishery, strategy

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I. INTRODUCTION

Small-scale fisheries over the world contribute greatly to the socio-economic development of rural communities. Fishing offers opportunities both for employment as well as for subsistence purposes in developing countries. The greatest challenge has been the sustainability of the resource given the diversity among small-scale fisher folk. It is therefore critical to understand the social set-up in terms of norms, values and cultures within individual fishing households and evaluate their contribution to livelihoods.

Socio-economic characteristics determine how one household can access resources. Households with more assets are at a better position to adequately utilize the resources compared to one which has limited resources. Assessing this heterogeneity is important as it informs sound development planning particularly in rural areas.

1.0.1 Literature Review and Situational Analysis

Artisanal fisheries in Lake Victoria are highly diverse in their fishing behavior and demographic characteristics (Kirema et al., 2014). Household livelihoods are characterized by heterogeneity coupled with complexity in survival. There is evidence of decline in fish catch which has resulted in reduced income, unemployment and overall food insecurity (Kimani et al., 2018). In an earlier study conducted by Jentoft (2004), it was noted that the number of fishermen had also increased in spite of the decline while conflicts between commercial investors in the sector and artisanal operators continued to be reported around Lake Victoria. The level of individual household adaptability has tended to differ depending on socioeconomic characteristics. Socio-economic factors influence a household's decision to choose a livelihood.

1.1 Methodology

The study adopted mixed method to collect data from the field. Purposive sampling was used to identify key informants who were mainly Beach Leaders and Fisheries Officials while semi-structured

interviews were used as tools to gather both qualitative and quantitative data from small-scale fishing households. Small-scale fishing households were identified by their active participation and reliance on fishery related activities in the study area. The study also gathered qualitative data from two typical cases which exhibited unique livelihood systems other than fishing. Their experiences in the fishery activity were important to capture the variations in terms of individual livelihood characteristics. This enabled documentation of the norms, customs and rules that existed in the area. Photographs were used as evidence of proof on the activities that were observed in the area.

Data analysis was done both quantitatively and qualitatively. Quantitative data was analysed using simple descriptive statistics and presented in form of graphs, charts and tables, while qualitative data was analysed thematically and results presented in form of narratives, quotations and statements.

1.2 Results and Discussion

The paper discusses results based on the main variables and characteristics that were of concern to the study. These include age, gender, culture, marital status, level of education, income and occupation.

1.2.1 Age

The study findings show that artisanal fisheries households comprise of individuals of different ages. The roles are also shared within the household across the ages. Households that depended on fishing and related activities engaged in fishing however the decline in fish has forced some individuals to diversify their livelihood activities in order to survive.

Fishing in its very nature tends to be more attractive to the youth than the elderly. This can be explained by the complexity of the activity in terms of resource requirements including gear preparation, transactions and viability of fishing grounds. This demands dynamic individuals who happen to be the youth in the sector. The youth along the lakeshores also tend to engage in activities that are physical in nature which expose them to more challenging tasks for survival. Figure 1.1 shows the age distribution of fishing households that were studied.

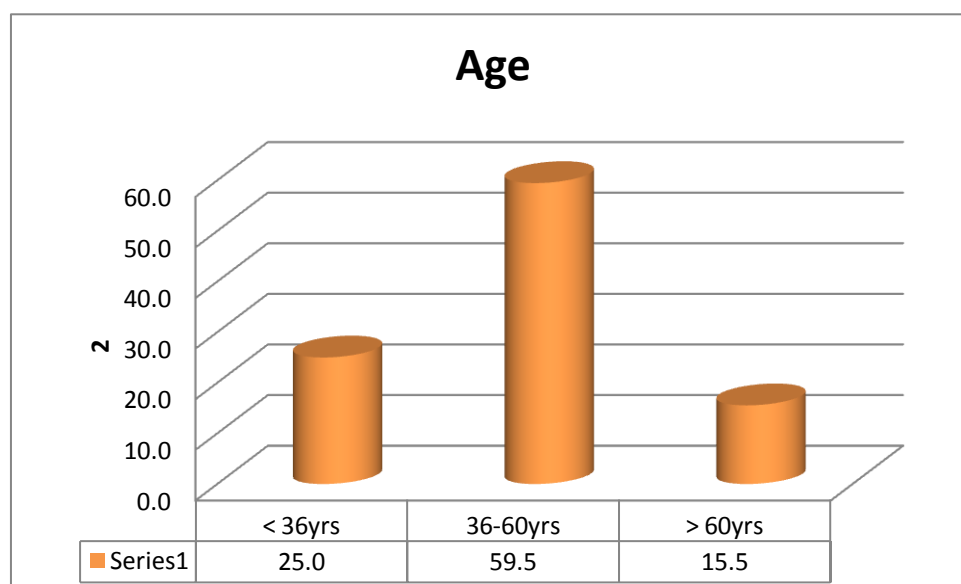


Figure 1.1:

Age of respondents in the fishing households

Source: Field Data, 2019

The study findings show that, most of the respondents were between the ages of 36 and 60 years (59.5%), followed by those who were below 36 years (25%). Those below 36 years were reported to be individuals who had attained at least secondary education and were not fully engaged in fishing. Some had migrated to urban areas in search of formal employment and could sometimes return to the village and temporarily engage in fishing activity as they waited for job opportunities. Age was found to be a critical characteristic in the fishery sector as was further proved by the study that just 15.5% of the respondents were above 60 years.

Fishing is carried out at different times of the day. Some types of fishing activities are done during night depending on the gear type and species of fish being targeted. The study also noted that fishing activities reduce with advancement in age.

1.2.2 Gender

In many societies, gender is an important factor. It influences the type of activities that are performed by household members. Further, it has a role in determining the division of labor within the household. This related to the strategies that can be employed in development planning for rural societies especially artisanal fisheries livelihood. According to the study findings, 78.4 % of the respondents involved in the study were males and directly engaged in fishing activity in different capacities. The study revealed that individuals occupied different statuses in the fishery sector, findings show that, 52.7% were boat owners in the sector while, 31.1% were crews who operated as mobile and temporary employees in the boats. One crew remarked that: “..... we crews (*amal*),.... our employment is in our hands..... we can never be permanent, because of the complexity of fishing activity....., we only go where returns are high... even if it means moving to another fishing ground.....”. There was a significant number of individuals, mostly females (3.4%) who worked in the sector as fish processors (Fig 1.2) and engaged in activities such as scaling, salting, smoking, drying and marketing. Gender roles in the fishery sector replicate stereotypes that exist in other sectors. The study findings concur with Kleiber, et al., (2014), that gender is an important characteristic that strongly determines the type of activities males and females assign themselves within the household. Moreover, gender aspects are deeply embedded in the cultural patterns of people in a society. Historically, fishing has been viewed as exclusively male activity and in some societies women do not even self-identify as fishers in set-ups where fishing is culturally considered as the men’s job. This is attributed to women’s socialization and some other cultural beliefs.



Figure 1.2: A group of women engaged in “omena” drying at a landing beach in Mbita. Men do not participate in such activities due to low incomes from the activity.

Source: Field data, 2019

Women in the artisanal fisheries are confined to low income sources including onshore activities such as beach seine hauling (fig. 1.3) and filleting. Gender consideration is important in development planning process because it forms an integral part in policy intervention and ensures creation of sustainable small scale fisheries livelihoods.



Figure 1.3: *A woman and men hauling seine at a beach in Mfangano Island. Women are limited to hauling at the beach an indication of stereotypes in fishing communities.*

Source: *Field data, 2019*

1.1.3. Cultural beliefs among artisanal fisheries

Artisan fishing households share common knowledge about their history, language, myths, religion, world view, values, behavior patterns and customs. Cultural mechanisms therefore operate differently in many aspects of various fishing communities' life. These beliefs and practices are usually the results of adaptive experiences which are framed by both internal and external events as well as changes that affect these communities over time.

There exists a strong fishing heritage among artisanal fishing communities, which is transmitted from generation to another generation. The cultural element among small-scale fisheries communities is important because it perpetuates and maintains a sense of self-worth at the individual level. The study findings reveal that fishermen derive a great sense of pride in fishing activity and individuals perceive it as a source of their occupational identity. Fishing is also viewed as status symbol, self-actualizing and entails a sense of adventure. These findings confirm conclusions arrived at by Daw et al. (2012) that fishing is seen by some as a very desirable occupation and a significant part of a person's identity and should never be equated to economics.

Culture therefore plays an important role in shaping fishing livelihoods of rural communities through such mechanisms of collective actions, shared cultural identity and sense of common social norms. This means that, there is value attachment on fishing in terms of identity and self-satisfaction fishermen derive from fishing activity. A deeper understanding of artisanal practices enables adequate policy formulation and ensures sustainable livelihood strategies.

1.1.4. Marital Status and Level of Education

Status in the family is important in livelihood systems. This is because family as a basic unit and institution determines the livelihood activities that individuals pursue in order to be self-sufficient. Therefore, there is need for proper planning both at family and societal levels. Among artisanal fishing households studied in Homa-Bay County, majority (80.4%) of the respondents were married while only 6.8 % were single, a situation occasioned by various factors such as separations (divorce) and or death of one partner.

Some activities such as fishing require early entry into marriage. This is explained by the nature of fishing activity which is more of physical availability. Probably, early entry into marriage could also be explained by the level of education of artisanal fisher folk. According to some interviews conducted in the field, some men married more wives in order to have a reliable source of labor especially in areas where beach seine fishing was common. This had implication on the family size which ranged between 6-10 members per a household. Livelihood activities along the shores did not show major differences regardless of one's marital status. Further, it was revealed that livelihoods did not differ much regardless of one's marital status, but fishing was being carried out both for subsistence and as a means of food security within the family. This could be an important determinant in designing sustainable livelihood strategies in the area.

There was evidence that the level of education has some relationship with marital status. The explanation is that individuals with low levels of education are more likely to get into marriage a little early

while higher education attainment prolongs the period of entry into marriage. The whole process has a bearing on the type of household livelihood within the family. It has been confirmed by various studies (Cinner et al., 2009). That low levels of education predispose individuals to low paying jobs but which are also “blue collar” in nature. This has a bearing in the growth of a sector because it limits the options of small-scale fishermen to enter the larger economy. Thus, they are unable to adjust or diversify into other livelihood alternatives and instead opt to remain in the diminishing fishery sector.

The study shows that, majority of the respondents attained primary education (46.6%) some of who either dropped out or completed class eight. A significant number (36.5%), proceeded to secondary school, with only a mere 7.4% had attained postgraduate qualifications. Under such circumstances, no stable and sustainable livelihood sources would be realized as argued by Unger et al., (2011), that fisheries livelihoods improved where people had attained higher education that enables them exploit fisheries resources sustainably and ability to switch to alternative occupations for survival.

1.1.5. Source of Income, Occupation and Time in fishing

Determinants of income vary between households and communities. According to the study findings, fishing (46.6%) was the main source of employment and income while 8.1% comprised of other activities related to fishing. Income relates to the perceived capacity to provide for the basic needs. The study shows that income levels of artisanal fishing households ranged from Kenya Shillings 30,000 to 90,000 (43.9%) per year. This was reported to have dropped compared to the early years of 1990s when there was a boom in the fishing industry. Respondent reported that their daily income from fishing was never constant but varied with the seasons, catch and fish species. Income is likely to attract or discourage individuals from engaging in an economic activity. It is a principal driving factor for joining the fishery sector (Geheb, 1997). Fishing activities are characterized by various routines which impact on the daily patterns of household livelihoods. For instance, time for fishing is determined by the type of fish being targeted. Some species of fish appear in certain seasons of the year hence their timings which are also reflected in the day-to-day activities. Strategic planning would serve to bridge the gap by offering interventions such as alternative livelihood opportunities in the small-scale fisheries sector. There are different arrangements among fishermen in terms of occupation (fig 1.4) which also replicate gender aspects in the fishery sector.

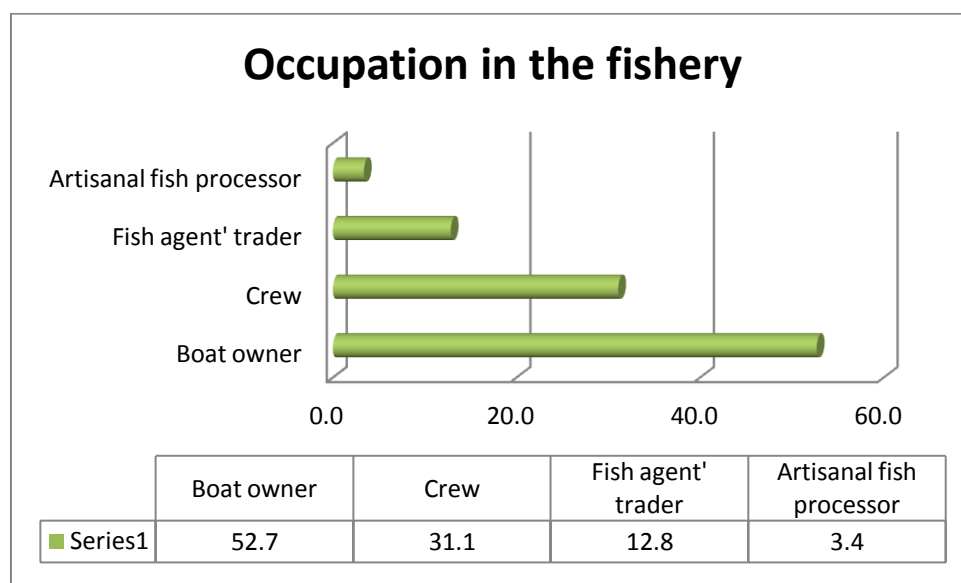


Figure 1.4:

Status and occupations in the fishery sector

Source; Field Data 2019

In the fishery sector, individuals play different roles. These roles come with variations in income, depending on the unique arrangements of fishermen. The study findings show that there were different categories of individuals in the sector; boat and or net owners, repairers, crews and processors. In the whole arrangement, the study found out that boat/net owners (52.7%) were the greatest beneficiaries of the proceeds from fishing, followed by crews (*Amal*), while fish processors who coincidentally happen to be mostly women (3.4%) received the least income from fishing. According to the study findings, fishermen spent more hours engaged in various activities at different levels in the fishery sector.

II. CONCLUSION

Socio-economic characteristics of artisanal fishing households help in building a deeper understanding of why different households pursue various types of livelihoods. The demographic features of artisanal fishing households are somehow homogenous but markedly differ at household level. The study established that majority of respondents were relatively young between the age of 36 and 60 years who also happen to be individuals with established families. Thus fishing is a valuable activity to the artisanal fishing households living along the lakeshores. It provides a source of subsistence and livelihood to the rural poor. In fact it is viewed by many as providing a life-time source of survival. Provision of sustainable methods of exploitation would lead to resource preservation.

Fishing is considered a male-dominated activity in which men are seen to occupy the upper position in the sector while women remain at the periphery and participate in the peripheral activities. They don't participate actively in the most productive activities in the sector. This reflects the gender discrimination, stereotypes and cultural domination among small-scale fishing communities which affect household livelihoods along the lakeshores.

Fishing is viewed as a social status indicator among artisanal fisherfolk communities. It is a means of self-identity particularly perceived as a preserve of the well-to-do families. The level of education was generally low with majority (46.6%) having either attained standard eight or dropped out at primary level. This was a confirmation of the levels of literacy among small-scale fishing households which predisposes them to more fragile livelihoods and unsustainable exploitation of natural resources. The average household size was relatively large with average number of members ranging from 6 to 10 (44.6%) persons per household. Fishing activity also remains the main source of income- with annual average earnings of Ksh 30,000 to 90,000 (43.9 %) for the majority of households in the area.

Fisherfolk have a well-built social capital network which they use as a source of mobilizing support for their livelihoods. The social support systems are in form of welfare groups or merry-go-rounds (*chamaas*) that offer credit facilities to the fisherfolk. Artisanal fisherfolk owned various assets which include; land, livestock and fishing gears. Nile Perch and *Omena* were the most common and valuable fish species in the study area even though the average catch had declined.

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