

**CONTRIBUTION OF FISHING ACTIVITIES TO WOMEN'S WELFARE IN
COAST WARDS OF KILWA DISTRICT**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
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2024

CERTIFICATION

The undersigned certifies that he has read and hereby recommend for acceptance by the Open University of Tanzania, a dissertation titled; **“The contribution of fishing activities to women’s welfare in coast wards of Kilwa district”** in partial fulfilment of the requirements for the award of the degree of Master of Arts in Monitoring and Evaluation (MAME).

.....

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.....

Date

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DECLARATION

I, **Alfao Joseph Sanga**, declare that, the work presented in this dissertation is original. It has never been presented to any other University or Institution. Where other people's works have been used, references have been provided. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfillment of the requirement for the Degree of Master of Art in Monitoring and Evaluation (MAME).



.....
Signature

05/11/2024

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DEDICATION

With gratitude admiration and love, this work being my first ever academic achievement at higher learning institution is dedicated to the following person. First to my beloved mother Mecktidis Mtemi who by virtue of her position was hand in hand with me to pursue this degree and indeed without her concern my idea of having a degree in Masters of Arts in Monitoring and Evaluation (MA. M&E) would never been upheld. But again I would be less than honest if I would not acknowledge the foremost members in my family especially Fortina, Kelvin, Eugenia, Erasto and Mecelina. Then I would be less than honest also if I will not mention Zuhura Mohamed Machenza who had always been a guide and a light to the fulfillment of my study.

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ABSTRACT

The study investigated the contribution of fishing activities to women's welfare in the coastal wards of Kilwa District, Lindi, Tanzania. It examined how fishing activities impact women's income, enhance women's empowerment, and their contributions to the fishing sector's development. Guided by Human Welfare Theory, the study used a survey research design, sampling 90 respondents through simple random and purposive sampling methods. Data were collected via questionnaires and interviews, analyzed using descriptive and thematic analysis. Findings highlighted that women significantly contribute to household income and community development through various roles in the fishing industry. Their participation in decision-making and infrastructure development is crucial for the sector's sustainability and growth. However, challenges such as limited access to resources, market opportunities, and participation in decision-making hinder women's full participation and empowerment. The study emphasized the essential role of women in fishing activities and their impact on household welfare and community development. Despite their significant contributions, gender disparities and limited resources persist, obstructing their empowerment. The study recommended targeted interventions to improve women's access to resources, promote gender equality in decision-making processes, and enhance market opportunities. Addressing these challenges is vital for leveraging women's potential and promoting sustainable development in Kilwa's fishing industry. In conclusion, women's involvement is integral to the growth and sustainability of the fishing sector in Kilwa. Enhanced support and strategic interventions are necessary to overcome existing challenges and fully realize their contributions to community welfare.

Keywords: *Fishing, Welfare, Coastal area, Standard of Living.*

TABLE OF CONTENTS

CERTIFICATION	ii
COPYRIGHT	iii
DECLARATION.....	iv
DEDICATION.....	v
ACKNOWLEDGMENT	vi
ABSTRACT	vii
TABLE OF CONTENTS	vii
LIST OF TABLES	xiii
LIST OF FIGURE	xv
LIST OF ABBREVIATIONS	xvi
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Chapter Overview	1
1.2 Back ground Information of the Study	1
1.3 Statement of the Problem.....	4
1.4 Study Objectives	5
1.4.1 General Objective	5
1.4.2 Specific Objectives	6
1.5 Research Questions	6
1.6 Significance of Study	6
1.7 Scope of the Study	7
1.8 Limitations of the Study.....	7
1.9 Organization of the Study	8

CHAPTER TWO	9
LITERATURE REVIEW	9
2.1 Overview	9
2.2 Definition of Key Concepts	9
2.3 Theoretical Literature Review	10
2.3.1 Human Welfare Theory	10
2.4 Empirical Literature Review	14
2.4.1 Contribution of Fishing Activities to Women's Income.....	14
2.4.2 Role of Fishing Activities Towards Improving Women Empowerment	16
2.4.3 Contribution of Women in the Development of Fishing Activities.....	18
2.5 Research Gap	19
CHAPTER THREE	22
RESEARCH METHODOLOGY	22
3.1 Introduction.....	22
3.2 Research Design.....	22
3.3 Area of the Study	22
3.4 Target Population.....	23
3.5 Sample and Sampling Procedures.....	23
3.5.1 Sampling Procedures	24
3.6 Inclusion and Exclusion Criteria for Sample Selection	25
3.7 Types and Source of Data	26
3.8 Data Collection Methods and Tools	26
3.8.1 Questionnaire	26
3.8.2 Interview	27

3.8.3	Documentary Review	27
3.9	Data Analysis	27
3.9.1	Analysis of Quantitative Data	27
3.9.2	Analysis of Qualitative Data	28
3.10	Validity and Reliability	28
3.11	Ethical Consideration	29
	CHAPTER FOUR.....	30
	RESULTS, FINDINGS AND DISCUSSION.....	30
4.1	Introduction	30
4.2	Demographic Information of Respondents	30
4.2.1	Gender of Respondents	30
4.2.2	Age Groups of Respondents	31
4.2.3	Education Level of the Respondents.....	32
4.2.3	Marital Status of the Respondents	33
4.3	Contribution of Fishing Activities to Women's Income in the Coast of Kilwa District	34
4.3.1	Involvement of Women in Fishing Activities.....	35
4.3.2	Hours Spent on Fishing-Related Work by Household Member	37
4.3.3	Proportions of Household Income Derived from Fishing Activities	39
4.4	Role of Fishing Activities Towards Improving Women Empowerment in The Coast of Kilwa District.....	41
4.4.1	Impact of Women's Engagement in Fishing Activities on Household Decision-making.....	41

4.4.2	Economic Independence of Women Due to Engagement in Fishing Activities	43
4.4.3	Social Status and Recognition of Women Engaged in Fishing Activities	45
4.4.4	Participation of Women in Community Decision-making Processes	46
4.5	Women' Contributions in the Development of Fishing Activities in the Coast of Kilwa District	48
4.5.1	Impact of Women's Involvement on Fishing Activity Income	49
4.5.2	Financial Initiatives or Co-operatives Led by Women in Fishing Development	51
4.5.3	Women's Participation in Fishing-Related Community Decision-making	52
4.5.4	Challenges Faced by Women in Contributing to Fishing Development	53
CHAPTER FIVE.....		57
CONCLUSIONS AND RECOMMENDATIONS		57
5.1	Introduction.....	57
5.2	Conclusion	57
5.2.1	Contribution of Fishing Activities to Women's Income.....	58
5.2.2	Role of Fishing Activities Towards Improving Women Empowerment	58
5.2.3	Contribution of Women in The Development of Fishing Activities	58
5.3	Recommendations.....	59
5.3.1	Recommendations for Action	59
5.3.2	Recommendation for Further Studies	60

5.4	Study Contribution.....	60
5.4.1	Contribution to the Policy	60
5.4.2	Contribution to the Knowledge.....	61
REFERENCES.....		62
APPENDICES		66

LIST OF TABLES

Table 3. 1 Sample Size Distribution	25
Table 4.1: Distribution of Respondents by Gender (n=85).....	30
Table 4.2: Distribution of Respondents by Age Groups (n=85)	31
Table 4.3: Distribution of Respondents By Education Level (N=85)	32
Table 4.4: Distribution of Respondents by Marital Status (n=85).....	33
Table 4.5: Distribution of Respondents by Involvement of Women in Fishing Activities (n=85)	35
Table 4.6: Distribution of Respondents by Hours Spent on Fishing-Related Work by Household Member (Women) (n=64)	37
Table 4.7: Distribution of Respondents by Proportions of Household Income Derived from Fishing Activities (n=64)	39
Table 4.8: Distribution of Respondents by Impact of Women's Engagement in Fishing Activities on Household Decision-making (n=85)	41
Table 4.9: Distribution of Respondents by Economic Independence of Women Due to Engagement in Fishing Activities (n=85)	43
Table 4. 10 Distribution of Respondents by Social Status and Recognition of Women Engaged in Fishing Activities (n=85)	45
Table 4.11: Distribution of Respondents by Participation of Women in Community Decision-making Processes (n=85)	47
Table 4.12: Distribution of Respondents by Impact of Women's Involvement on Fishing Activity Income (n=85).....	49
Table 4.13: Distribution of Respondents by Financial Initiatives or Cooperatives Led by Women in Fishing Development (n=85)	51

Table 4.14: Distribution of Respondents by Women's Participation in Fishing- Related Community Decision-Making (N=85)	52
Table 4.15: Distribution of Respondents by Challenges Faced by Women in Contributing to Fishing Development (N=85).....	53

LIST OF FIGURE

Figure 2.1: Conceptual Framework	21
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LIST OF ABBREVIATIONS

CR	Cooperative Representative
FO	Fisheries Officer
GDP	Gross Domestic Product
KMO	Kaiser-Meyet-Olkin
M&E	Monitoring and Evaluation
MAME	Mater of Monitoring and Evaluation
MLFD	Ministry of Livestock and Fisheries Development
NGOs	Non-government Organizations
SDG	Sustainable Development Goal
SPSS	Statistical Package for Social Science
UK	United Kingdom

CHAPTER ONE

INTRODUCTION

1.1 Chapter Overview

This chapter presents the introduction of the study, background information of the study, statement of the problem, research objectives, research questions, significance of the study, scope of the study, limitations of the study and study organization.

1.2 Back ground Information of the Study

Many people who reside in coastal regions heavily rely on the fisheries sub-sector for their food and livelihood since it provides the animal protein they need for growth and provides a source of income for several rural households. Women have reportedly played a significant role in fishery-related activities all over the world, particularly in coastal environments where these tasks are primarily categorized into three categories: fishing, processing, and marketing. Their function in food production, similar to coastal fisheries, has gained increased importance as a means of lowering poverty and boosting food security (Cliffe, et al. 2013).

According to Nwabeze, et al., (2013), women in fishing villages have been seen to actively participate in fisheries and help support their families. Women have been actively involved in the fish industry in various parts of the world. For instance, women control 39% of the seafood sector in European nations, earning a sizable sum of money for themselves and their family (Aguilar, 2002). Long accepted, but not acknowledged or respected as men's contributions, women play an important role in rural communities' reliance on natural resources, such as fisheries (Obetta et al. 2007).

It is estimated that in 2020, women accounted for just over 21 percent of all people directly engaged in the fisheries and aquaculture primary sector – 28 percent in aquaculture and 18 percent in fisheries. International trade in fisheries and aquaculture products generates significant income and supports poverty reduction and food security, particularly for developing countries, where small-scale fishers, fish farmers and women are strongly represented in the associated value chains. (World Fisheries & Aquaculture report, 2022).

Household members catch most of the fish that the poor eat and trade it in local markets. These fish are rarely or poorly included in national statistics, and it is, therefore, difficult to estimate precisely the real contribution of fish to rural low-income households. To empower women as key food providers for many households, we need to consider the fish consumption patterns of the poor, the nutritional value of fish, and small-scale fisheries and aquaculture activities (World Fish Report, 2010).

Worldwide, women play a significant role in the fishing sector, particularly in small-scale and subsistence fisheries, contributing to household incomes and local economies. Nearly half of the global fisheries workforce consists of women, who are essential in processing, selling, and often catching fish as well. They are estimated to contribute about 2.9 million metric tons of fish annually, valued at approximately \$5.6 billion. Despite this, women in fishing communities often lack formal recognition and support, facing significant barriers to resources and decision-making within the sector (Gustafson & Riley, 2018). This marginalization reduces their access to safety nets and perpetuates gender inequality, as seen during the COVID-

19 pandemic when male fishers received more government support than their female counterparts. Enhancing gender equity in fisheries could strengthen sustainable practices and improve food security globally, particularly in coastal communities that rely heavily on “blue foods” for nutrition and economic stability (Matovu, et al., 2024).

In Sub-Saharan Africa, women are equally vital to fisheries, particularly in countries where fishing is central to rural livelihoods. In many regions, women perform the majority of post-harvest activities, including processing, drying, and selling fish, and are integral to food security and household nutrition. However, they face challenges like limited access to equipment, credit, and markets. Addressing these challenges could empower women, potentially increasing both the sustainability of local fisheries and the economic benefits for households across Africa (Tatua, 2020).

In Tanzania, women in coastal fishing communities, especially in small-scale and artisanal fisheries, are essential for supporting household welfare. In some areas, fishing provides up to 48% of household income through women's roles in catching, processing, and selling fish. Despite their contributions, Tanzanian fisherwomen often face social and financial barriers, such as limited access to fishing equipment, lack of formal recognition, and minimal financial support. Addressing these barriers could improve not only the economic resilience of fishing households but also the overall welfare of women in coastal regions, who play a central role in food security and local economies (Turpie et al., 2022).

In Kilwa Island, the Bantu and people of Arab/Persian ancestry have long coexisted in the use of the fishery resources. Three ecological sea zones (eco-zones) were used

to categorize the coast: intermediate sea, open sea with fringing reef, and mangrove inland sea. Each ethnic group has been able to monopolize its own fisheries thanks to the diversity of sea products in these eco-zones, reducing intergroup conflict. This has aided in preserving the island's peaceful multiethnic coexistence. (United Nations Report 2014). Next to agriculture and livestock, fishing sector provides the third-largest amount of food and is important in terms of nutrition as it is the primary source of animal protein in the diets of most families fishing sector and associated (United Nation Report 2014).

Understanding the modernization and globalization processes is important since they may not benefit the fishing industry or the underdeveloped coastal areas where they live. Some fishermen and communities are getting poorer and the resources are getting worse because they are being left out of mainstream growth. The majority of fishermen are men, however women do participate in the fishing industry in other ways, such as growing seaweed, catching octopuses, and capturing small fish in the intertidal zone. The form of fishing that women engage in is not, however, considered to be "fishing." Cultural barriers prevented women from venturing far from home, going boat fishing, or using scuba equipment to dive on the reef.

1.3 Statement of the Problem

Despite the crucial role women play in fishing, processing, and marketing activities, their participation is often marginalized and overlooked in development initiatives and policymaking processes (World Fish Report 2010). This problem is significant given the heavy reliance of coastal populations on fisheries for food security and livelihoods. Women, who actively engage in these activities, face challenges such as

limited access to resources, unequal recognition of their contributions, and cultural barriers that restrict their participation in certain fishing activities (United Nation Report 2014). The impact of neglecting women's roles in fisheries can lead to exacerbated poverty and food insecurity among coastal households. Without timely interventions that empower women and recognize their contributions, there is a risk of perpetuating gender disparities and hindering the sustainable development of coastal communities.

Previous studies, such as those by Cliffe et al. (2013), Nwabeze et al. (2013), and World Fisheries and Aquaculture report (2022), have acknowledged women's significant role in fisheries activities globally. These studies highlight women's economic contributions and their importance in ensuring food security within coastal regions. While existing empirical studies such as World Fisheries and Aquaculture report (2022), Nwabeze et al. (2013) and the study of Cliffe et al. 2013) have recognized women's roles in fisheries, there is a lack of focused research on the unique context of Kilwa District and the specific barriers hindering women's participation and empowerment in the fisheries sub-sector. Thus this study seeks to investigate the contribution of fishing activities in improving women's welfare in the coast of Kilwa District focusing on women's income, empowerment as well as their contribution in the development of fishing activities.

1.4 Study Objectives

1.4.1 General Objective

The main objective of this study was to investigate the contribution of fishing activities in improving women's welfare in the coast of Kilwa District.

1.4.2 Specific Objectives

- i. To examine contribution of fishing activities to women's income in the coast of Kilwa district.
- ii. To assess the role of fishing activities towards improving women empowerment in the coast of Kilwa district.
- iii. To examine the contribution of women in the development of fishing activities in the coast of Kilwa district.

1.5 Research Questions

- i. What is the contribution of fishing activities to women's income in the coast of Kilwa district?
- ii. What is the role of fishing activities towards improving women empowerment in the coast of Kilwa district?
- iii. What is the contribution of women in the development of fishing activities in the coast of Kilwa district?

1.6 Significance of Study

This study has significant implications for expanding the body of knowledge on gender roles within the fisheries sector, particularly in the context of Tanzania. It provides critical insights into the socioeconomic impact of women's participation, aiming to fill a gap in the literature by focusing on the challenges and contributions specific to Kilwa. For the local community, the findings highlight the economic and social benefits of supporting women in fishing, thereby enhancing household incomes and community resilience. Aligning with Sustainable Development Goal (SDG) 5, which seeks to achieve gender equality and empower all women and girls,

this study highlights the importance of gender inclusion in economic activities as a pathway to sustainable development. Furthermore, the research process offers the researcher a practical understanding of gender dynamics in fisheries, contributing to their academic and professional growth, while providing valuable information to stakeholders such as policymakers, NGOs, and community leaders on effective ways to empower women and support sustainable practices in coastal communities.

1.7 Scope of the Study

The study was conducted in Kilwa, Kilwa is a District located in south east of Tanzania with a population is 190,744 according to the 2012 census. The study was specifically conducted at Somanga, Masoko and Kivinje ward. These wards are located in coast of Kilwa district, the wards are chosen purposely because it has significant engaging in Fisheries business. As a researcher I hope this study will be of contribution on the efforts of fighting marginalizing women in fisheries and aquatic activities along the coast wards of Kilwa District.

1.8 Limitations of the Study

The researcher encountered several challenges during data collection regarding women's involvement in the fisheries business. One significant limitation was respondents' reluctance to participate or provide accurate data, possibly due to discomfort or distrust. To address this, the researcher took a proactive approach by first introducing themselves and clearly explaining the study's purpose, emphasizing confidentiality and the value of participants' input. This strategy helped build rapport and encouraged respondents to engage more openly and truthfully. Another limitation was financial constraints, as the study required adequate funding for

logistics and other resources, which were limited. To mitigate this, the researcher adopted cost-saving measures such as prioritizing local data collection sites, utilizing digital tools to reduce travel, and seeking partial funding support from academic or local organizations to cover essential expenses. These solutions ensured the study's progression despite the challenges faced.

1.9 Organization of the Study

The document is structured into five chapters. Chapter one offers an overview of the research, encompassing details about the research problem, study objectives, research questions, significance, scope, and limitations. In chapter two, the content spans conceptual explanations, a review of relevant theoretical literature, empirical studies, and the presentation of conceptual frameworks. Chapter three delves into the research design, study location, sampling methodologies, data sources, data collection procedures, data processing and analysis techniques, and assessments of validity, reliability, and ethical considerations. Chapter four is dedicated to the presentation and discussion of the outcomes derived from the analyzed data. Lastly, chapter five encapsulates the study by providing conclusions drawn from the research findings and offering recommendations based on these insights.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter focused on gathering related research works of previous scholars. This chapter reviewed different literature works that relates to research questions developed for this study. This section review literature relevant to the study. It borrows content from several research papers and contributions of different authors. It was review the understanding of contribution of fishing activities to women welfare at coast wards of Kilwa District.

2.2 Definition of Key Concepts

Fishing is harvesting wild fish from fresh and marine waters and raising cultured fish in ponds preparation of seafood and freshwater fish for human consumption (Oberle, et al., 2018).

Coastal area is an interface between the land and sea, which comprised of a continuum of coastal land, intertidal area, aquatic systems including the network of rivers and estuaries, islands, transitional and intertidal areas, salt marshes, wetlands, and beaches (Cetin, 2016).

Welfare is the welfare of a person or group is their health, comfort, and happiness. Human welfare to allocation of resources to fit the well-being of humans (Pigou, 2017).

Standard of Living is the material wellbeing of the average person in a given population. It is typically measured using gross domestic product (GDP) per capita. The level of wealth, comfort, material goods, and necessities available to a certain

socioeconomic class or geographic area (Gordon, 2017).

Women Empowerment it including accepting women's viewpoints or making an effort to seek them, raising the status of women through education, awareness, literacy, and training (Cornwall, 2016).

Economic Development: is a program, policies or activities that seek to improve the economic well-being and quality of life for a community (Schumpeter & Swedberg, 2021).

Food Security is where all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life (Alonso et al., 2018).

Equality and Equity is means each individual or group of people is given the same resources or opportunities. Equity recognizes that each person has different circumstances and allocates the exact resources and opportunities needed to reach an equal outcome (Pigou, 2017).

2.3 Theoretical Literature Review

2.3.1 Human Welfare Theory

The study was guided by human welfare theory by J. Stiglits, (2012). According to the theory, to establish things to people that are good in themselves and this excludes the desire satisfaction theory for being one of the objective theories of human welfare. The exclusion is based on the fact that people may desire things but able to purchase them due to poverty. The theory asserts that the ultimate goal of societal institutions and policies should be to enhance the quality of life for every person, focusing on aspects such as health, education, economic opportunity and personal

fulfillment. It encompasses the idea that social progress and justice are achieved not only by ensuring basic needs are met but also by fostering conditions that enable individuals to flourish and reach their full potential. Human Welfare Theory underscores the moral imperative to address systemic inequalities and to promote policies that prioritize the common good, equity, and human dignity (Posner, 2008).

The relevance of Human Welfare Theory to this study lies in its emphasis on promoting the overall well-being and dignity of individuals within society. This theory underscores the importance of addressing factors such as economic opportunity, empowerment, and social justice, which are central to understanding the impact of fishing activities on women in this context. By applying Human Welfare Theory, the study can analyze how fishing activities influence women's income, empowerment, and participation in local development, aligning with the broader goal of promoting human flourishing and equity within the coastal communities of Kilwa District.

Human Welfare Theory, as proposed by Joseph Stiglitz (2012), offers a foundational perspective for examining the role of social policies and institutions in promoting the well-being and quality of life for individuals. The theory emphasizes that the ultimate aim of society should be to create conditions where every person can thrive, not just by meeting basic needs but by providing equitable opportunities for personal fulfillment and economic advancement. This approach critiques the desire-satisfaction view of welfare, which holds that welfare is achieved merely by fulfilling individual desires. Instead, Stiglitz argues for a more objective measure of welfare that considers broader societal conditions, including access to education,

health, economic opportunities, and social justice (Stiglitz, 2012; Posner, 2008).

In relation to the study on women's involvement in the fisheries sector in Kilwa District, Human Welfare Theory is particularly relevant as it highlights the importance of addressing inequalities that restrict women's participation and empowerment. The theory supports the view that empowering women in coastal fisheries is not merely about income generation but about fostering an environment where women have equal access to resources, opportunities for skill development, and representation in decision-making. By addressing these issues, the study aligns with the theory's focus on enhancing human welfare through social equity and justice, ensuring that women in fishing communities have the means to improve their socio-economic standing and contribute to household and community well-being.

Furthermore, Human Welfare Theory provides a moral imperative for the study to advocate for policies that promote the common good by eliminating barriers that hinder women's participation in fisheries. Through this lens, the study underscores the need for interventions that do not merely focus on economic gains but also on promoting equity and dignity. This theoretical framework, therefore, grounds the study in the broader context of social development, recognizing that fostering women's involvement in fisheries can drive sustainable community progress and help reduce poverty in coastal areas of Tanzania (Stiglitz, 2012; Posner, 2008).

The Human Welfare Theory emphasizes enhancing individuals' quality of life and well-being, particularly through economic, social, and health policies that support basic human needs. It stresses that welfare systems should provide equal access to

essential services, promote economic stability, and reduce poverty. The theory's strengths include (1) its focus on inclusivity by addressing socio-economic disparities and ensuring equitable resource distribution, (2) emphasis on social justice and human dignity, advocating for policies that respect individuals' rights, and (3) promotion of sustainable well-being by encouraging long-term health, economic, and social policies that consider future generations (Gough, 2013).

2.3.1.1 Strength and Weakness of Human Welfare Theory

The Human Welfare Theory emphasizes enhancing individuals' quality of life and well-being, particularly through economic, social, and health policies that support basic human needs. It stresses that welfare systems should provide equal access to essential services, promote economic stability, and reduce poverty. The theory's strengths include (1) its focus on inclusivity by addressing socio-economic disparities and ensuring equitable resource distribution, (2) emphasis on social justice and human dignity, advocating for policies that respect individuals' rights, and (3) promotion of sustainable well-being by encouraging long-term health, economic, and social policies that consider future generations (Gough, 2013).

However, the theory has some weaknesses. First, it may lack feasibility in regions with limited resources or infrastructure, making it challenging to implement equitable welfare systems universally. Second, it can lead to dependency on welfare programs if not carefully structured, potentially discouraging individuals from striving for self-sufficiency. Finally, the theory may face political resistance in settings where welfare funding competes with other priorities, making it difficult to secure consistent support (Esping-Andersen, 2015).

Despite these weaknesses, the Human Welfare Theory is chosen for its strong foundation in promoting equity, social justice, and human dignity. It offers a holistic approach to welfare, emphasizing not only economic aspects but also social and health dimensions essential for improving overall well-being. This comprehensive focus on human needs aligns well with ethical standards of public policy and social work, making it a valuable theoretical framework for creating inclusive and sustainable welfare programs (Midgely, 2014).

2.4 Empirical Literature Review

2.4.1 Contribution of Fishing Activities to Women's Income

The study by Benoit (2016) which was obtained from government agent of fishing, fishers and private NGOS. The random sample of 228 respondents was selected. The face and content validity of the instrument was evaluated. Semi structure interview and questionnaire were employed with random selected. Aim of this study is to highlight the important role of the fisheries sector and of small-scale fisheries in particular women, in the economic and social development of West and Central Africa. Stimulate the commitment of national policy decision-makers and their development partners to include small-scale fisheries in development policies to categorize women in the fishing value chain.

Propose strategies that could increase the contribution of small-scale fisheries to poverty reduction and food security in the region. However, this study does not explain how women were empowered in order to engage in the fishing value chain and how much they could purchase from fishers in order to improve their social welfares. In addition, the study included six different countries with different

cultures, different species of fish which are not native to Tanzania's coastal zone.

Empirical studies have shown that fishing activities significantly contribute to women's income, particularly in coastal and lake regions where fishing is a primary economic activity. Women are often involved in post-harvest roles, such as processing, marketing, and selling fish, which provide a vital source of income and support household livelihoods. For instance, a study by Choo, Nowak, and Kusakabe (2008) found that women's involvement in fisheries in Southeast Asia contributes not only to their financial independence but also enhances their bargaining power within households and communities. This contribution underscores the importance of targeted support for women in fisheries to improve economic outcomes and empower them socially and economically.

A study by Cobbina (2018) shown that women's engagement in post-harvest activities such as drying, smoking, and selling fish provides a vital source of livelihood and income, enhancing household food security and economic stability. Furthermore, these activities empower women economically and socially, allowing them greater autonomy and participation in community development. However, challenges such as limited access to credit, market barriers, and inadequate infrastructure often restrict the full income-generating potential of women in this sector.

Study by Lydia (2014) revealed that lack of data and uncertainty about the level of employment in marine fisheries can lead to underestimation of fishing effort and hence over-exploited fisheries, or result in inaccurate projections of economic and

societal costs and benefits. To address this gap, a database of marine fisheries employment for 144 coastal nations was compiled. Gaps in employment data that emerged were filled using a Monte Carlo approach to estimate the number of direct and indirect fisheries jobs. The study focused on estimating jobs in the small-scale fishing sector. According to our study, most women buy small quantities of fish for household consumption or local sale in small amounts. Most women own little capital and are not very mechanized. The study finds that an estimate of 266 million people are involved in global marine fisheries, encompassing full-time and part-time jobs in the direct and indirect sectors, with 22 million of those being small-scale fishers. But 10% of them are done by women and only minor activities are done by them. Other remain 80% are traders and processors of fish products.

2.4.2 Role of Fishing Activities Towards Improving Women Empowerment

The study by Kawarazuka (2010) revealed that women's access to and control of resources is understood as a key determinant of household food security and nutritional outcomes and the pathway to improving child nutrition through empowering women agriculturists. In aquaculture activities, women can participate in the whole processes of activities more equally to men than small-scale fisheries which are usually physically demanding. Since fish farming is not as labor intensive as small-scale fisheries, it is physically adoptable for women. Also, the impacts of increased work and changes in time allocated to other household work, including caring for children, should be further investigated.

The study conducted by Neema (2007) on the role of women in improving living standards at household level. This project analyzed the contribution of women

income-generating activities in Mwanga North Ward in Kigoma/Ujiji Municipality. It was revealed that in families where only men provided for the households' income there were some deficiencies which led to economic and social problems within the family and the community at all. Provision of household requirements was not satisfactory and consistent. However, the study fails to demonstrate the way to empower them in order to equip them. The study purposely excludes unmarried young men and women because they would not have much experience to provide. For that reason, the study focused on married, divorced/separated men and women as well as widows but not consider other factors which are common.

A study by Sene-Harper, et al., (2021) revealed that women involved in fishing-related activities such as fish processing and marketing experience greater financial independence, which improves their bargaining power within households and communities. Empirical studies highlight that women's participation in the fisheries sector leads to improved access to education, healthcare, and social networks, further contributing to their empowerment. Despite facing challenges like limited access to resources and decision-making platforms, the economic contributions of women in fishing activities often result in better social recognition and more active participation in community development.

A study by Harper, et al., (2013) in sub-Saharan Africa demonstrated that women's engagement in the fisheries sector improved their bargaining power and promoted gender equity, as economic contributions bolstered their roles beyond traditional household duties. This empowerment extends to improved access to resources and leadership opportunities within the fishing industry and local governance.

2.4.3 Contribution of Women in the Development of Fishing Activities

Harper, et al., (2020) conducted the study on valuing invisible catches: estimating the global contribution by women to small-scale marine capture fisheries production. The study revealed that women participate in small-scale fishing activities in all regions of the world, with approximately 2.1 million ($\pm 86,000$) women accounting for roughly 11% ($\pm 4\%$) of participants in small-scale fishing activities, i.e., catching roughly 2.9 million ($\pm 835,000$) tons per year of marine fish and invertebrates. The landed value of the catch by women is estimated at USD 5.6 billion (± 1.5 billion), with an economic impact of USD 14.8 billion per year (± 4 billion), which is equivalent to 25.6 billion real 2010 dollars (± 7.2 billion). These catches are mostly taken along the shoreline, on foot, or from small, non-motorized vessels using low-technology, low-emission gears in coastal waters.

The findings highlight the substantial contributions by women in small-scale fisheries in terms of catch, mostly for subsistence purposes and local markets, and the landed value associated with this catch but also these findings also highlight considerable variation across countries and regions. Ameyaw et al (2020) conducted the study about from fish to cash: Analyzing the role of women in fisheries in Indonesia. The study demonstrate that women are key economic actors in small scale fisheries in Pantar Island and one of the key stakeholder groups in coastal resource management and conservation initiatives.

This is particularly important for Pantar Island and its surrounding designated Marine Park. Better understanding of the gender division of labor, will improve accounting of women's participation in the Indonesian fishery sector and should lead

to their interests being taken fully into account. As the fishery sector is a major economic and social sector, and particularly important in remote communities such as Pantar, better gender accounts in fishing will, in turn, help inform better gender policies in Indonesia.

Vunisea (2016) conducted the study about, the participation of women in fishing activities in Fiji. The study was descriptive analyzed and highlighted that women play pivotal roles across various aspects of the fisheries sector. In coastal communities, women are heavily involved in post-harvest activities such as fish processing, preservation, and marketing. Their expertise in these areas contributes substantially to household incomes and food security. Furthermore, women are increasingly engaged in community-based resource management initiatives, advocating for sustainable fishing practices and playing key roles in decision-making processes related to fisheries management. Despite facing challenges such as limited access to resources and traditional gender roles, women's contributions to Fiji's fishing activities are integral to the sector's development and sustainability.

2.5 Research Gap

Despite the substantial research on the contribution of women to fishing activities, several gaps persist within the empirical literature. Studies like Harper et al. (2020) and Vunisea (2016) have shed light on the crucial roles women play in small-scale fisheries, particularly in post-harvest activities and community-based management. However, there remains a need for deeper investigation into how women are empowered within the fishing value chain, including access to resources and decision-making processes. For example, while Vunisea (2016) highlights women's

involvement in fish processing and community initiatives.

Moreover, understanding how women's participation in fishing activities varies across different cultures and regions, as indicated by studies like Benoit Horemans (2016) and Ameyaw et al. (2020), could provide valuable insights into the broader context of women's empowerment in fisheries. To address these gaps the current study aims to investigate the contribution of fishing activities in improving women's welfare in the coast of Kilwa District.

2.6 Conceptual Framework

The conceptual framework of this study involves examining the relationships between independent variables (fishing activities, women's empowerment, and development of fishing activities) and dependent variables (women's income and women's welfare) within the context of the Kilwa District coastal region. Fishing activities serve as a primary independent variable, encompassing various aspects such as fishing, processing, and marketing, which directly influence women's income generation. Women's empowerment, as another independent variable, is shaped by factors like access to resources and participation in decision-making processes, which in turn impact the development and sustainability of fishing activities. The relationships between these variables are dynamic whereby women's participation in fishing activities not only contributes to their income but also empowers them, leading to improved development outcomes within the fishing sector and ultimately enhancing women's welfare.

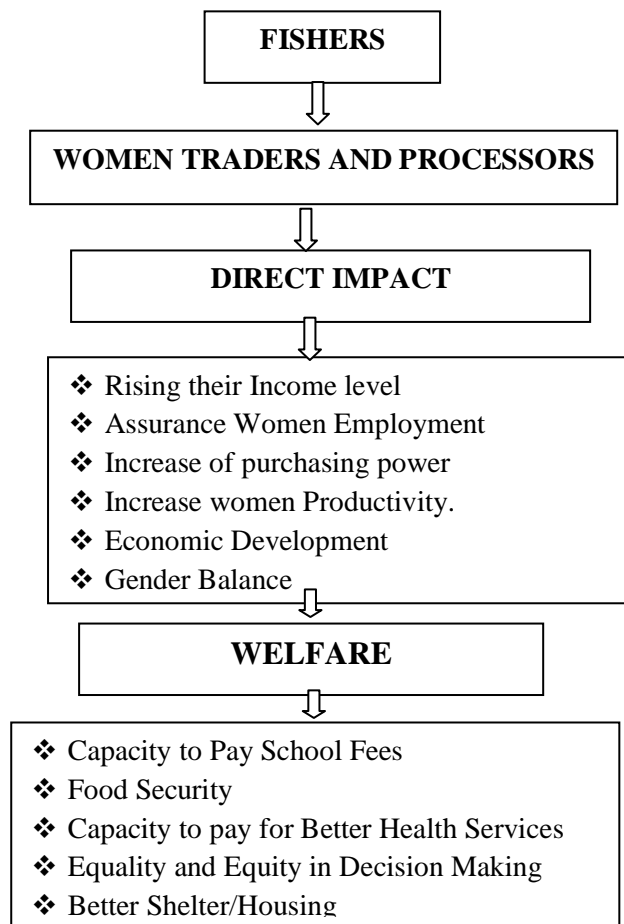


Figure 2.1: Conceptual Framework

Source: Researcher own design (2023).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains methods were used to conduct the study and how data was collected and analyzed. The chapter presents the study design, study area, study population, sample and sampling procedures, data collection methods and tools, data analysis and presentation plan, validity and reliability testing and ethical consideration.

3.2 Research Design

Research design is the arrangement of conditions for collecting and analyzing data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2009). The researcher used the survey research design in this study. The use of the survey research design permitted the researcher to study more variables at a point in time.

3.3 Area of the Study

The study was conducted in Kilwa district. The choice of Kilwa District was made because it is the most active in fishing operations among the five districts in the Lindi (Nakamura, 2011). The region has a high proportion of women trading products derived from fishing, and is a convenient location for researchers to contact with respondents and gather data. According to Lindi Region Fisheries report of 2017, Kilwa District has a total of 5,283 fisheries 368 are women who engages in the sector. Lindi Municipal has 871 fisheries and 104 are women, Mtama Distric had 641fisheries and 112 are women while Liwale, Nachingwea and Ruangwa has

neither fisheries neither area for fishing activities.

3.4 Target Population

Kothari (2009) defines the population of the study as the set of components from which the researcher anticipates deriving conclusions regarding the subject of the investigation. The general target population of this study was the coastal area households who are involved in fishing and women who run fisheries. The coastal area households involved in fishing and women who run fisheries were selected as the target population because they directly engage in activities central to the study's focus on women's contribution to the fishing sector and their impact on household welfare, making them key informants for understanding the dynamics of this livelihood and its challenges.

3.5 Sample and Sampling Procedures

A sample is a smaller group of subject drawn from the population in which a given study was conducted for a purpose of drawing conclusions about the population targeted. For example, Kothari (2004) argued that the result from the sample can be used to make generalizations about the entire population as long as it is truly represented. The following simple formula would be used for calculating the adequate sample size in prevalence study for known population.

$$\text{Sample size } (n) = \frac{N}{1 + N(e)^2}$$

Where by

n = sample size to be studied

N = Population Size

e = Margin of errors

$$\text{Sample size } (n) = \frac{116}{1 + 116(0.05)^2}$$

$$\text{Sample size } (n) = \frac{116}{1 + 0.29464}$$

$$\text{Sample size } (n) = 89.56 = 90$$

Therefore, the estimated sample size for this study was 90 respondents, whereby 85 was households involving in fish business and 3 were Fisheries officers 2 fishing cooperatives unions.

3.5.1 Sampling Procedures

The sample should reflect qualities and characteristics of the whole population. The study employed the simple random and purposive sampling technique to obtain the sample for this study. The study employed simple random and purposive sampling techniques to ensure a representative and targeted selection of participants, allowing for unbiased data collection from a broad population while also focusing on key individuals, such as women actively involved in fisheries, provided in-depth insights relevant to the study's objectives (Creswell, 2014; Etikan, et al., 2016). The researcher collected data and gathered information from women involving in fish business, fishing officers and fishing cooperatives unions.

The sample for this study was drawn from three wards Somanga, Kivinje, and Masoko to ensure a representative understanding of women's involvement in the fishing sector within the selected coastal areas. Simple random sampling was applied to select households actively engaged in fishing activities, providing an unbiased

sample of 85 households across the wards. This method was appropriate for households to allow each one an equal chance of selection, enhancing the representativeness of the data. Meanwhile, purposive sampling was used to select three fishing officers and two cooperative representatives, as these individuals possess specialized knowledge relevant to the study. This targeted approach ensured that the sample included key informants who could provide valuable insights into the regulatory and cooperative dynamics influencing women's participation in fishing.

Table 3.1: Sample Size Distribution

Ward	Sample size distribution			
	Households	Fishing Officers	Fishing Cooperatives	Total
Somanga	24	1	1	26
Kivinje	28	1	1	30
Masoko	33	1	0	34
Total	85	3	2	90

Source: Area of the Study, 2023.

3.6 Inclusion and Exclusion Criteria for Sample Selection

3.6.1 Inclusion Criteria

- i. Only households actively engaged in fishing were included, as they directly contribute to and are impacted by the fishing industry, which is central to the study's focus.
- ii. Women directly involved in fishing, processing, or marketing were included to assess their roles, challenges, and contributions.
- iii. Key informants with specialized knowledge on regulatory aspects, policy implications, and cooperative management in the fisheries sector were included to provide expert insights.

3.6.2 Exclusion Criteria:

- i. Households with no involvement in the fishing sector were excluded, as their input would not align with the study's aim to assess the impact of fishing on women's welfare.
- ii. Individuals under 18 years of age: Due to ethical considerations and the specific focus on adult women's roles in the fishing industry, minors were excluded.
- iii. Inactive fishing cooperatives or officers not assigned to the target wards

3.7 Types and Source of Data

Both primary and secondary data were gathered for this study's analysis. The major information gathered through surveys and questionnaire with women who work in the fishing industry. The researcher also examined documentary review to obtain secondary data.

3.8 Data Collection Methods and Tools

3.8.1 Questionnaire

The technique entails creating a list of ordered questions to get the necessary information pertinent to the study (Kothari, 2014). Researchers distributed questionnaires containing closed-ended questions to households involved in the fishing industry. These questions allowed respondents to choose answers from a predetermined list of options provided by the researcher. The use of closed-ended questionnaires for households involved in the fishing industry was selected to provide structured, easily quantifiable data, allowing for efficient analysis and comparison of responses.

3.8.2 Interview

Kombo and Tromp (2006) state that prepared questions or an interview guide are typically used to direct semi-structured interviews. The researcher conducted interview with fishing officers and fishing cooperatives unions. The researcher conducted interviews with fishing officers and fishing cooperatives unions to gather detailed, qualitative insights from individuals directly involved in the governance, management, and operation of fisheries. This method was chosen to capture expert perspectives and firsthand knowledge about the challenges and opportunities in the fisheries sector, offering a deeper understanding of the systemic issues affecting women's involvement and welfare.

3.8.3 Documentary Review

The researcher also used secondary data from this study, which gathered through the documentary review approach. Written materials such as Fishers Census Reports, Beach Management Unit Members Registration Reports, and District Business License Registration Reports were included as documentary sources; information about women who have registered for fish businesses were gathered from these reports.

3.9 Data Analysis

3.9.1 Analysis of Quantitative Data

The collected data from questionnaires underwent filtering and screening for errors prior to analysis. The researcher employed descriptive statistics to incorporate measures such as mean, percentages, ratios, standard deviation, and variance to analyze all specific study objectives. This was done by using SPSS typically by

involving the following steps. First, importation of dataset into Statistical Package for Social Science (SPSS) version 20, second, clean and prepare the data by handling missing values and outliers. Third step, performing descriptive statistics to summarize the data and gain initial insights, finally, Documenting the analysis process and results to ensure transparency and replicability.

3.9.2 Analysis of Qualitative Data

The interviews provided qualitative data, and the diverse responses from the participants were organized into common categories. Initial data collected underwent quality checks, with recordings made during interviews to ensure data quality. In applying content analysis to qualitative data, researcher first transcribed and organized the collected data, then systematically coded the data by identifying recurring themes and concepts. This involved labeling segments of text with descriptive codes that represented different aspects of the data. Next, researcher categorized and grouped similar codes into broader themes or categories, allowing for the identification of patterns and trends. Throughout this process, rigor and reliability were ensured through inter-coder reliability checks and peer debriefing sessions. Finally, the findings were interpreted and synthesized to develop nuanced recommendations or interventions based on the holistic understanding gained from the qualitative data analysis.

3.10 Validity and Reliability

3.10.1 Validity

Validity, according to Borg and Gall (2009), is the extent to which a test captures the intended outcome. In order to ensure that the questionnaires were thoroughly prepared,

tested, and the questionnaires' suitability and generalization to the topic was too validated by respondents, a pre-testing pilot study was carried out in this research. Additionally, using the SPSS, the researcher assessed the study's validity using the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. Whereby values between 0.7 and 1 will indicate the sampling is adequate for this case was accepted and values less than 0.5 will indicate the sampling is not adequate and that case was rejected.

3.10.2 Reliability

In this study, the issue of reliability was ensured by use of different data collection methods such as review of secondary data and tools such as questionnaires and interview with appropriate sample size and techniques which are in this case are systematic random and purposive sampling. To ascertain the reliability, the researcher used a test-retest method during the pilot survey.

3.11 Ethical Consideration

The researcher sought permission from the Open University of Tanzania in order to allow in collecting data. The researcher did not include the names of the respondents and furthermore the researcher explained the purpose of research to the respondents when collecting data, also ethical issues were accorded with high priority in a sense that needed information were obtained on the consent of respondents. A Researchers protected the privacy and confidentiality of respondents by ensuring that their identities and personal information remain undisclosed and unidentifiable in any research outputs or publications. Furthermore, the researcher engaged in honest and transparent practices, accurately representing their findings, and giving credit to the original authors through proper citation and acknowledgment.

CHAPTER FOUR

RESULTS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the results, findings, and discussion of the study, which aimed to investigate the contribution of fishing activities to improving women's welfare in the coastal region of Kilwa District. This chapter presents the gathered data through questionnaire and interview and then analyzed to offer insights into the role of fishing activities in enhancing women's income, empowerment, and participation in the development of the fishing sector. Therefore, this chapter presents the general data collected from the study area by following the guide from research questions.

4.2 Demographic Information of Respondents

This section provides general information about the respondents' socio-demographic characteristics, including their gender, age, level of education and marital status of the respondents. These characteristics offer insights into the profile of the participants in the study.

4.2.1 Gender of Respondents

In this study, the gender of respondents was a fundamental aspect investigated to understand the differential experiences and contributions of both men and women to fishing activities in the coastal wards of Kilwa District. Table 4.1 shows the distribution of respondents by gender;

Table 4.1: Distribution of Respondents by Gender (n=85)

Gender	Frequency	Percent
Male	37	43.5
Female	48	56.5
Total	85	100.0

Source: Field Data, 2023.

Table 4.1 presents the distribution of respondents by gender, indicating that out of the total 85 respondents surveyed, 43.5% were male, while 56.5% were female. This gender distribution reflects a slightly higher representation of females in the sample population. This gender distribution highlights the prominent role of women in the local fishing economy, including fishing, fish processing, and marketing. It suggests that women are key stakeholders in the fishing sector and play critical roles in contributing to household income and overall community welfare.

4.2.2 Age Groups of Respondents

The age groups of respondents were analyzed to provide insights into the demographic composition of individuals participating in fishing activities within the coastal wards of Kilwa District. Table 4.2 shows the distribution of respondents by age groups;

Table 4.2: Distribution of Respondents by Age Groups (n=85)

Age Groups	Frequency	Percent
0 - 20 Yrs.	11	13.0
21-40 Yrs.	45	53.0
41-60 Yrs.	29	34.0
Total	85	100.0

Source: Field Data, 2023.

The distribution of respondents by age groups, as presented in Table 4.2, provides important understanding into the demographic composition of individuals involved in fishing activities within the coastal wards of Kilwa District. The majority of respondents (53.0%) fall within the 21-40 years age range, indicating that younger adults are prominently engaged in fishing, highlighting the significance of this sector as a primary source of livelihood for individuals in their prime working age. The presence of respondents aged 41-60 years (34.0%) underscores the continued

participation of older individuals in fishing, reflecting the intergenerational nature of this occupation within the community. The relatively smaller proportion of respondents aged 0-20 years (13.0%) suggests limited involvement of younger individuals in fishing activities, possibly due to pursuing education or exploring alternative employment opportunities. These findings imply the need for targeted interventions and support mechanisms that cater to the diverse age groups engaged in fishing, ensuring sustainable livelihoods and economic opportunities across different generations within the coastal community of Kilwa District.

4.2.3 Education Level of the Respondents

The education level of respondents serves as a crucial demographic variable examined in this study to comprehend the educational background and potential disparities among individuals engaged in fishing activities within the coastal wards of Kilwa District. Table 4.3 shows the distribution of respondents by education level;

Table 4.3: Distribution of Respondents By Education Level (N=85)

Education level	Frequency	Percent
Primary Education	43	50.6
Secondary Education	29	34.10
Certificate/Diploma	9	10.6
Bachelor Degree	4	4.7
Total	85	100.0

Source: Field Data, 2023.

Table 4.3, highlights the educational background of individuals engaged in fishing activities within the coastal wards of Kilwa District. The majority of respondents (50.6%) have attained primary education, while significant portions (34.1%) have completed secondary education. A smaller proportion of respondents (10.6%) hold certificates or diplomas, and a few (4.7%) have obtained bachelor's degrees. These

findings suggest that while a considerable number of individuals involved in fishing have completed basic education levels, there is a notable presence of individuals with higher educational qualifications. This diversity in education levels among respondents underscores the importance of considering educational disparities and skill levels in designing interventions and capacity-building programs aimed at enhancing the socio-economic outcomes of individuals engaged in fishing activities. Addressing educational needs and providing opportunities for skill development can contribute to improving livelihoods and promoting sustainable development within the fishing communities of Kilwa District.

4.2.3 Marital Status of the Respondents

The marital status of respondents serves as a significant demographic factor examined in this study to gain insights into the family structures and social dynamics among individuals engaged in fishing activities within the coastal wards of Kilwa District.

Table 4.4: Distribution of Respondents by Marital Status (n=85)

Marital Status	Frequency	Percent
Single	24	28.3
Married	51	60.0
Widow/Widower	6	7.0
Divorced	4	4.7
Total	85	100.0

Source: Field Data, 2023.

Table 4.4, provides information concerning family structures and social dynamics among individuals engaged in fishing activities within the coastal wards of Kilwa District. The majority of respondents (60.0%) are married, indicating that fishing activities are often associated with family livelihoods and responsibilities. A notable

proportion of respondents (28.3%) are single, suggesting a diverse representation of individuals who may be younger or have not yet established family households. Moreover, the presence of respondents who are widowed/widowers (7.0%) or divorced (4.7%) underscores the importance of considering social support systems and vulnerabilities within fishing communities. These findings highlight the interconnectedness of marital status with participation in fishing activities and emphasize the need for holistic approaches that address family dynamics and social well-being in initiatives aimed at enhancing the welfare of individuals engaged in fishing in Kilwa.

The findings regarding family structures and marital status among individuals engaged in fishing activities in Kilwa District align with broader empirical research on the relationship between livelihood activities and social dynamics within coastal communities. Research by Jentoft (2000) and Song et al. (2019) emphasizes the interconnectedness of fishing activities with family life and social networks in coastal areas. Marital status influences an individual's engagement in fishing, with married individuals often viewing fishing as a means to support their families.

4.3 Contribution of Fishing Activities to Women's Income in the Coast of Kilwa District

The contribution of fishing activities to women's income in the coastal region of Kilwa District serves as a primary focus of this study's first specific objective. By examining this aspect, the study aimed to elucidate the extent to which women derive economic benefits from their involvement in fishing-related endeavors. Understanding the role of fishing activities in augmenting women's income is crucial

for assessing their economic empowerment and livelihood sustainability within the fishing community.

4.3.1 Involvement of Women in Fishing Activities

The involvement of women in fishing activities is a critical aspect that shapes the socio-economic dynamics of coastal communities. This section delves into understanding the extent of women's participation in fishing-related endeavors within the context of the Kilwa District's coastal region. Table 4.5 presents the summary of the responses of the respondents;

Table 4.5: Distribution of Respondents by Involvement of Women in Fishing Activities (n=85)

Responses	Frequency	Percent
Yes	64	75.3
No	21	24.7
Total	85	100.0

Source: Field Data, 2023.

The findings presented in Table 4.5 reveals that majority of respondents (75.3%) reported that women are actively engaged in fishing-related endeavors. This high level of participation underscores the crucial role that women play in the fishing sector, contributing to household income, food security, and community development. However, it's important to note that about a quarter of respondents (24.7%) indicated that women are not involved in fishing activities, suggesting potential disparities or barriers that limit women's participation in this sector. The findings imply that addressing these barriers and promoting gender equality in fishing-related opportunities can further enhance the socio-economic well-being of coastal communities. Recognizing and supporting women's involvement in fishing

activities is essential for achieving inclusive and sustainable development in the Kilwa District's coastal region.

Furthermore, during the interview with FO 1 on December 14, 2023 quoted saying that;

“Women in this district are strongly involved in the fishery value chain, particularly in processing aspects. They play role in ensuring the success and sustainability of local fishing industry through their active participation in various processing activities.”

Also, a response from CR 2 on December 16, 2023 was like;

“Women are actively involved in fishing activities in Kilwa district. They contribute significantly to various aspects of the fishing industry, playing key roles in both traditional and modern fishing practices”

The statements from the Fisheries officer and co-operative representative highlight the significant and multifaceted roles played by women in the fishing industry within Kilwa district. The Fisheries officer's observation underscores the pivotal contribution of women to the fishery value chain, particularly in processing activities. Their active involvement in processing not only adds value to the fishery products but also ensures the success and sustainability of the local fishing industry.

Studies such as Harper et al. (2020) and Vunisea (2016) highlight women's roles in post-harvest activities, fish processing, and community-based resource management initiatives. Similarly, our findings emphasize the diverse and significant contributions of women in both traditional and modern fishing practices, corroborating the empirical evidence that recognizes women's active involvement across various aspects of the fishing industry. Furthermore, Studies by Kleiber et al.

(2014) and Bennett et al. (2016) emphasize the integral role that women play in various aspects of the fishing sector worldwide, particularly in contributing to household income and food security.

This alignment underscores the importance of promoting gender equality and addressing barriers to women's participation in fishing activities to achieve inclusive and sustainable development in coastal regions, as evidenced by the findings from Kilwa District and supported by broader research on women's roles in fisheries.

4.3.2 Hours Spent on Fishing-Related Work by Household Member (Women)

This study investigates the hours spent on fishing-related work by women household members within the coastal communities of Kilwa District. Understanding the time allocation to fishing activities among women is crucial for comprehending their labor contributions and the associated impacts on household dynamics and welfare.

Table 4.6 presents the summary of the responses of the respondents;

Table 4.6: Distribution of Respondents by Hours Spent on Fishing-Related Work by Household Member (Women) (n=64)

Time Spent	Frequency	Percent
Less than 10 Hrs.	45	70.3
More than 10 Hrs.	19	29.7
Total	64	100.0

Source: Field Data, 2023.

The findings from Table 4.6 indicate that majority of respondents (70.3%) reported that women spend less than 10 hours per week on fishing-related activities. This suggests that while women are actively involved in fishing, their participation may be relatively moderate in terms of time commitment. However, a notable proportion

of respondents (29.7%) indicated that women spend more than 10 hours per week on fishing-related work, highlighting a substantial labor contribution by women to the fishing sector. Understanding these time allocations is crucial for assessing the workload and contributions of women in fishing activities, as well as their potential impact on household dynamics and welfare. These findings imply that there is a need to consider the labor intensiveness of fishing activities and its implications for gender roles, family responsibilities, and women's well-being within coastal communities. Addressing factors that affect women's time allocation to fishing-related work can inform policies and interventions aimed at promoting equitable participation and improving the socio-economic outcomes of women engaged in fishing activities in Kilwa District.

Furthermore, during the interview with FO 2 on December 14, 2023, quoted saying that;

“The level of women’s participation in fisheries has been increasing at a high speed. We’ve witnessed a notable surge in their involvement across various fishing activities, reflecting a positive trend towards greater gender inclusivity within the industry”

The officer's observation highlights a notable surge in women's involvement across various aspects of fishing activities, indicating a significant stride towards achieving greater gender inclusivity within the fishing industry. This trend suggests a shift towards recognizing and harnessing the potential of women in driving sustainable fisheries management and economic development in the region.

The findings resonate with existing empirical literature on gender roles and labor contributions in fisheries. Research by Neema (2007) and Kleiber et al. (2014)

highlights the intersection of women's time allocation with household responsibilities and societal roles, illustrating how fishing activities shape gender dynamics and socio-economic outcomes within coastal communities.

4.3.3 Proportions of Household Income Derived from Fishing Activities

Examining the percentage of household income derived from fishing activities is essential for understanding the economic significance of the fishing sector within households in the coastal areas of Kilwa District. Table 4.7 presents the summary of the responses of the respondents;

Table 4.7: Distribution of Respondents by Proportions of Household Income Derived from Fishing Activities (n=64)

Income Level	Frequency	Percent
Less than 25%	24	37.5
25 - 50%	19	29.7
51 - 75%	15	23.4
76 - 100%	6	9.4
Total	64	100.0

Source: Field Data, 2023.

Table 4.7 reveals a varied distribution, with a significant proportion of households reporting different levels of income reliance on fishing. Specifically, 37.5% of respondents indicated that less than 25% of their household income is derived from fishing activities, suggesting a relatively lower economic dependency on fishing within these households. Conversely, 29.7% reported that fishing contributes to 25-50% of their household income, indicating a moderate level of reliance on fishing-related earnings. Moreover, 23.4% of respondents stated that fishing activities contribute to 51-75% of their household income, underscoring a substantial economic dependency on fishing within these households.

Furthermore, 9.4% of respondents noted that fishing accounts for 76-100% of their household income, indicating a high level of reliance on fishing as the primary source of income. These findings imply the need for policies and interventions that support sustainable fishing practices, enhance income diversification, and promote economic resilience among households reliant on fishing in Kilwa District. Addressing the economic dynamics of fishing reliance can contribute to strengthening livelihoods and improving overall community resilience in coastal areas.

Moreover, a response from CR 1 on December 16, 2023 was like;

“Fishing activities play a significant role in the income of women in Kilwa. It serves as a crucial source of income, enabling them to support their families by covering expenses such as school fees, food, clothes, and shelter.”

This statement underscores the economic importance of fishing to women's households, emphasizing its role in ensuring their economic stability and well-being. Moreover, it signifies the multifaceted contributions of women to the local economy through their active participation in the fishing sector.

Research conducted by Ameyaw, et al., (2020) emphasizes the substantial contributions made by women in small-scale fisheries to household incomes and local economies. The varying levels of income reliance on fishing, as indicated by respondents in Kilwa District, underscore the need for targeted policies and interventions aimed at promoting sustainable fishing practices and enhancing economic diversification. Moreover, the findings align with empirical study by Ratner, et al., (2014) emphasizes the role of income diversification strategies in

reducing vulnerability among fishing communities, advocating for integrated approaches that support alternative livelihoods while maintaining the socio-economic benefits of fisheries.

4.4 Role of Fishing Activities Towards Improving Women Empowerment in The Coast of Kilwa District

The role of fishing activities in improving women's empowerment in the coastal region of Kilwa District serves as a focal point for the second specific objective of this study. By examining this aspect, the study aims to explore how participation in fishing-related endeavors contributes to enhancing the empowerment of women within their households and communities. Understanding the nexus between fishing activities and women's empowerment is crucial for identifying pathways for promoting gender equality, enhancing decision-making power, and fostering socio-economic advancement among women in coastal areas.

4.4.1 Impact of Women's Engagement in Fishing Activities on Household Decision-making

This section delves into this aspect to examine if women engagement in fishing activities led to increased decision-making power in the household. Table 4.8 presents the summary of the responses of the respondents;

Table 4.8: Distribution of Respondents by Impact of Women's Engagement in Fishing Activities on Household Decision-making (n=85)

Responses	Frequency	Percent
Strongly agree	20	23.5
Agree	46	54.1
Neutral	14	16.5
Disagree	5	5.9
Total	85	100.0

Source: Field Data, 2023.

The findings from Table 4.8 suggest a positive impact of women's engagement in fishing activities on household decision-making within the coastal communities of Kilwa District. A significant majority of respondents (77.6%) either strongly agree or agree that women's involvement in fishing has led to increased decision-making power within the household. This indicates that women's participation in fishing activities has contributed to shifting traditional gender roles and enhancing women's agency and influence in household decision-making processes. While a smaller percentage of respondents (16.5%) remained neutral or disagreed with this notion, the overall trend suggests a correlation between women's engagement in fishing and increased empowerment within household dynamics. These imply the potential transformative effects of women's economic participation in the fishing sector on promoting gender equality and empowering women within their households and communities in Kilwa District.

The findings resonate with empirical studies that highlight the transformative impacts of women's economic empowerment. Studies by Kavarazuka (2010) emphasize how women's control over resources and income-generating activities, including fishing, can enhance their agency within households, leading to improved decision-making and household well-being. Additionally, research by Neema (2007) underscores the positive correlation between women's economic contributions and improved household standards of living, emphasizing the importance of women's roles in economic activities for household empowerment. These studies align with the findings from Kilwa District, indicating that women's participation in fishing activities not only contributes to income but also plays a critical role in challenging traditional gender norms and fostering greater gender equality within coastal

communities.

4.4.2 Economic Independence of Women Due to Engagement in Fishing Activities

This section seeks to understand if women's participation in fishing-related endeavors contributes to their financial autonomy and independence. Table 4.9 presents the summary of the responses of the respondents;

Table 4.9: Distribution of Respondents by Economic Independence of Women Due to Engagement in Fishing Activities (n=85)

Responses	Frequency	Percent
Yes	63	23.5
No	3	54.1
Partially	19	16.5
Total	85	100.0

Source: Field Data, 2023.

The findings presented in Table 4.9 highlight the substantial impact of women's participation in fishing activities on their economic independence within the coastal communities of Kilwa District. A majority of respondents (74.1%) either agree or partially agree that women's engagement in fishing contributes to their economic independence, emphasizing the significance of fishing as a pathway to financial autonomy for women. This finding underscores the transformative role of fishing-related endeavors in empowering women economically and enhancing their agency within households and communities.

However, it is notable that a small proportion of respondents (3.5%) disagree with this notion, suggesting differing perspectives or experiences regarding the economic benefits of women's involvement in fishing activities. The findings imply that barriers to women's economic empowerment and promoting supportive policies and

initiatives within the fishing sector can further enhance women's financial autonomy and contribute to broader socio-economic development in Kilwa District's coastal communities. These insights emphasize the importance of fostering inclusive and equitable opportunities for women's participation and leadership in the fishing economy. Furthermore, during the interview with FO 3 on December 14, 2023 quoted saying that;

“Certainly, there's a compelling example from Somanga where a woman began her journey as a fishmonger over five years ago. Through diligent work and strategic planning, she transitioned from selling surplus catch to establishing a small business. This venture not only supported her family's basic needs such as school fees, food, and house rent but also enabled her to acquire three houses of her own.”

Moreover, during the interview with one CR 2 on December 14, 2023 mentioned that;

“In Somanga Kaskazini, there's a remarkable woman known as "Super Woman" who has made significant economic strides through fishing activities. She owns multiple fishing boats and other properties acquired directly from her involvement in the fishing industry”.

These stories underscore the transformative impact of fishing activities on women's lives, illustrating how they can leverage opportunities within the industry to improve their economic status and quality of life. Moreover, they highlight the importance of recognizing and supporting women's contributions to fisheries development, not only for their individual empowerment but also for the broader socio-economic development of communities in Kilwa district.

The findings align with research by Kwarazuka (2010) which underscores the importance of women's economic agency in enhancing household well-being and financial autonomy, particularly through participation in income-generating

activities such as fishing. Similarly, study by Harper et al. (2020) which highlight the significant contributions of women to small-scale fisheries, illustrating how women's active involvement in fishing not only enhances their economic independence but also supports broader community development.

Also the findings resonate with existing empirical literature on gender dynamics in coastal communities by Kleiber et al. (2014) and Bennett et al. (2016) which highlights the positive impact of women's engagement in fisheries on household income and women's empowerment. These studies emphasize the role of fishing-related activities in enhancing women's economic agency and contributing to poverty alleviation.

4.4.3 Social Status and Recognition of Women Engaged in Fishing Activities

This section delves into understanding if women's participation in fishing-related endeavors influences their societal standing and level of recognition. Table 4.10 presents the summary of the responses of the respondents;

Table 4. 10 Distribution of Respondents by Social Status and Recognition of Women Engaged in Fishing Activities (n=85)

Responses	Frequency	Percent
Yes	77	90.6
No	4	4.7
Not sure	4	4.7
Total	85	100.0

Source: Field Data, 2023.

The findings reveal that a large majority of respondents (90.6%) believe that women's participation in fishing activities positively influences their social status and level of recognition within the coastal communities of Kilwa District. This

indicates that women engaged in fishing-related endeavors are widely recognized and valued for their contributions, which can lead to improvements in their societal standing and empowerment. The small percentage of respondents (4.7%) who indicated "no" or "not sure" regarding the impact on social status suggests that there may still be perceptions or barriers that limit the full recognition and appreciation of women's roles in the fishing sector. These findings highlight the importance of acknowledging and promoting the social contributions and leadership of women in fishing activities, which can lead to enhanced gender equality, community development, and overall well-being in coastal communities.

The findings align study by Vunisea (2016) which highlights the pivotal roles played by women in various aspects of the fisheries sector, including post-harvest activities and community-based resource management initiatives. This study emphasizes how women's engagement in fishing activities contributes to household incomes, food security, and broader socio-economic development, ultimately enhancing their social recognition and empowerment. Moreover, the findings align with the study by Fröcklin et al. (2017) and Hall et al. (2019) which emphasize the transformative effects of women's engagement in fisheries, highlighting how it can challenge traditional gender norms and enhance women's visibility and recognition within communities.

4.4.4 Participation of Women in Community Decision-making Processes

This part seeks to examine the extent of women who are involved in fishing activities, how far they are involved in decision making process in the community activities such as shaping community priorities, policies, and initiatives. Table 4.11

presents the summary of the responses of the respondents;

Table 4.11: Distribution of Respondents by Participation of Women in Community Decision-making Processes (n=85)

Responses	Frequency	Percent
Yes	66	77.7
No	3	3.5
Occasionally	16	18.8
Total	85	100.0

Source: Field Data, 2023.

The findings from Table 4.11 found that a significant majority of respondents (77.7%) reported that women are involved in shaping community priorities, policies, and initiatives, indicating a strong level of engagement and influence in community governance. This level of participation reflects the evolving role of women in leadership positions and decision-making roles, which can contribute to more inclusive and representative community development. However, it is notable that a small percentage of respondents (3.5%) indicated "no" regarding women's involvement in community decision-making, suggesting potential barriers or challenges that limit women's full participation. The response of "occasionally" from 18.8% of respondents indicates room for further enhancement in ensuring consistent and meaningful participation of women in community-level decision-making processes. These findings highlight the importance of promoting gender-inclusive governance structures and empowering women to contribute effectively to shaping community development agendas in the coastal communities of Kilwa District.

Furthermore, during the interview with CR 2 on December 14, 2023, mentioned that;

Fishing activities play a crucial role in empowering women in the Kilwa district. Through the co-management of fishing activities, women are

provided with opportunities to build their capacity and take on leadership roles in decision-making meetings.

This involvement of women in fishing activities not only strengthens their capacity but also enables them to actively participate in decision-making processes related to fisheries management. By taking on leadership roles in these meetings, women assert their influence and contribute to shaping the direction and policies of fishing activities.

The findings from Table 4.11, resonate with empirical studies emphasizing the role of women in shaping development agendas and policies. Kawarazuka study (2010) underscores the importance of women's access to resources and control over decision-making in improving household food security and overall community development. Also, research by Ameyaw et al. (2020) in Indonesia demonstrates how recognizing and accounting for women's participation in fisheries can inform better gender policies and resource management initiatives. These studies collectively underscore the transformative potential of women's engagement in community governance, emphasizing the need for inclusive and gender-responsive approaches to community development in coastal areas.

4.5 Women' Contributions in the Development of Fishing Activities in the Coast of Kilwa District

The contribution of women to the development of fishing activities in the coastal region of Kilwa District constitutes a pivotal focus of the third specific objective of this study. This section seeks to explore and understand the multifaceted roles played by women in advancing and enhancing fishing-related endeavors within their

communities. By examining this aspect, the study aims to shed light on the diverse contributions of women, including their involvement in fisheries management, entrepreneurship, knowledge transfer, and community organization.

4.5.1 Impact of Women's Involvement on Fishing Activity Income

This section delves into this aspect to examine the extent to which women's participation in fishing activities influences the overall income generated from these endeavors. Table 4.12 presents the summary of the responses of the respondents;

Table 4.12: Distribution of Respondents by Impact of Women's Involvement on Fishing Activity Income (n=85)

Responses	Frequency	Percent
Yes	77	90.6
No	3	3.5
Not sure	5	5.9
Total	85	100.0

Source: Field Data, 2023.

The findings from Table 4.12 show that the majority of respondents (90.6%) believe that women's participation contributes to increasing the overall income generated from fishing activities. This underscores the significant economic role played by women in the fishing sector, highlighting their contributions to household income and community prosperity. The small percentage of respondents who expressed uncertainty (5.9%) or disagreed (3.5%) with this notion suggests potential gaps in understanding or awareness regarding the economic contributions of women in fishing. These findings emphasize the importance of recognizing and supporting women's roles in the fishing economy, which can lead to enhanced economic outcomes and sustainable livelihoods within coastal communities.

Moreover, during the interview with FO 2 on December 14, 2023, mentioned that;

“Women play crucial roles in advancing fishing activities in Coast of Kilwa district. They actively participate in decision-making meetings, ensuring their voices are heard in shaping policies and strategies. Additionally, women contribute significantly to the development of fisheries infrastructures, actively engaging in projects aimed at enhancing the industry's efficiency and sustainability”.

The statement from the fishing officer underscores the essential contributions of women to advancing fishing activities in the Kilwa district. Their active participation in decision-making meetings signifies their growing influence in shaping policies and strategies within the fishing sector. By ensuring their voices are heard, women play a vital role in advocating for gender-inclusive approaches and addressing the diverse needs of the fishing community.

The align with the study by Benoit Horemans (2016) in West and Central African nations underscored the economic and social importance of women in small-scale fisheries, emphasizing the need for policies that promote their inclusion and empowerment. This study corroborates the notion that women's participation enhances income generation within fishing communities, supporting the argument for gender-inclusive approaches to fisheries management and development.

The findings indicating the perceived economic impact of women's participation in fishing activities resonate with existing empirical literature by Choo et al. (2015) which highlight the substantial contributions of women in small-scale fisheries, both in terms of catch and economic value. These studies highlight how women's involvement in fishing can significantly enhance household income and community prosperity.

4.5.2 Financial Initiatives or Co-operatives Led by Women in Fishing Development

This part seeks to understand the extent to which women take leadership roles in establishing and managing financial initiatives or cooperatives aimed at supporting fishing development. Table 4.13 presents the summary of the responses of the respondents;

Table 4.13: Distribution of Respondents by Financial Initiatives or Cooperatives Led by Women in Fishing Development (n=85)

Responses	Frequency	Percent
Yes	61	71.8
No	24	28.2
Total	85	100.0

Source: Field Data, 2023.

Table 4.13 reveals that a majority of respondents, comprising 71.8%, believe that women take leadership roles in establishing and managing such initiatives. This finding underscores the significant role of women as leaders and innovators in driving financial support mechanisms to enhance fishing development. However, it is notable that a considerable proportion of respondents, representing 28.2%, indicated otherwise, suggesting potential challenges or barriers faced by women in assuming leadership roles in financial initiatives or cooperatives. These findings highlight the importance of addressing gender disparities and promoting women's empowerment in fisheries development efforts to harness their full potential in driving sustainable fishing practices and economic growth in coastal communities.

The findings from Table 4.13, indicating perceptions of women's leadership roles in fishing initiatives, align with existing empirical literature that underscores the crucial contributions of women in fisheries management and governance. Research by Flora

and Prates (2019) and Johnson et al. (2017) highlights successful examples of women's leadership in establishing financial support mechanisms and cooperatives within fishing communities, leading to improved economic outcomes and sustainable resource management. These studies emphasize the need to address gender disparities and empower women to take on leadership roles in fisheries development, which can foster inclusive decision-making processes and enhance community resilience.

4.5.3 Women's Participation in Fishing-Related Community Decision-making

This section delves into this aspect to understand the extent to which women actively engage in decision-making forums related to fishing activities. Table 4.14 presents the summary of the responses of the respondents;

Table 4.14: Distribution of Respondents by Women's Participation in Fishing-Related Community Decision-Making (N=85)

Responses	Frequency	Percent
Yes	64	75.4
No	6	7.0
Occasionally	15	17.6
Total	85	100.0

Source: Field Data, 2023.

The findings from Table 4.12 shows that majority of respondents (90.6%) believe that women's participation contributes to increasing the overall income generated from fishing activities. This underscores the significant economic role played by women in the fishing sector, highlighting their contributions to household income and community prosperity. The small percentage of respondents who expressed uncertainty (5.9%) or disagreed (3.5%) with this notion suggests potential gaps in understanding or awareness regarding the economic contributions of women in

fishing. These findings emphasize the importance of recognizing and supporting women's roles in the fishing economy, which can lead to enhanced economic outcomes and sustainable livelihoods within coastal communities.

The findings align with the study by Benoit (2016) which demonstrate that women play pivotal roles in small-scale fisheries worldwide, contributing significantly to catch production, economic value, and household income. The study underscores the economic and social importance of women in the fishing sector, emphasizing the need for policies that promote their inclusion and empowerment. The findings from Table 4.12 underscore the economic significance of women's involvement in fishing activities and highlight the potential benefits of supporting their active participation for sustainable livelihoods and community well-being in coastal areas.

4.5.4 Challenges Faced by Women in Contributing to Fishing Development

This section delves into this aspect to understand the specific obstacles encountered by women in actively participating in fishing-related activities. By exploring these challenges, the study aims to uncover the systemic, cultural, and socio-economic factors that hinder women's meaningful engagement and empowerment in the fishing sector. Table 4.15 presents the summary of the responses of the respondents;

Table 4.15: Distribution of Respondents by Challenges Faced by Women in Contributing to Fishing Development (N=85)

Responses	Frequency	Percent
Limited access to resources	17	20.0
Gender-based discrimination	6	7.0
Lack of training opportunities	46	54.2
Market access barriers	16	18.8
Total	85	100.0

Source: Field Data, 2023.

The findings from Table 4.15 reveal several key challenges faced by women in actively contributing to fishing development within the coastal communities of Kilwa District. The most commonly cited challenge, reported by 54.2% of respondents, is the lack of training opportunities for women engaged in fishing-related activities. This highlights a critical gap in skills development and capacity-building initiatives that could enhance women's participation and empowerment in the fishing sector. Additionally, limited access to resources (20.0%) and market access barriers (18.8%) are significant obstacles that hinder women's meaningful engagement in fishing activities.

Moreover, a smaller percentage of respondents (7.0%) identified gender-based discrimination as a challenge, indicating persistent socio-cultural barriers that impact women's opportunities and roles in the fishing sector. The findings imply that addressing these challenges requires targeted interventions such as providing training programs, improving access to resources, addressing market barriers, and promoting gender equality to create an enabling environment for women's empowerment and participation in fishing development in Kilwa District.

Also during an interview with FO 1 on December 14, 2023, mentioned that;

“In my experience, women encounter several challenges hindering their contributions to fishing activity development. Access to capital remains a significant barrier, limiting their ability to invest in equipment or expand their businesses. Also, there's a need for greater inclusion of women in decision-making organs within the industry. Moreover, some women struggle with inferiority complex, which affects their confidence to actively engage and assert their roles”.

Furthermore, CR 1 on December 16, 2023 quoted saying that;

“In my interactions, I've observed several challenges that women encounter in their endeavors to contribute to fishing activity

development. A lack of market opportunities poses a significant hurdle, limiting their ability to sell their catch and generate income. Moreover, access to capital remains a prevalent issue, constraining their capacity to invest in equipment or expand their operations. Also, many women lack the necessary experience and connections to access outside markets”

These statements collectively underscore the multifaceted challenges faced by women in their endeavors to contribute to fishing activity development in the Kilwa district. Addressing these barriers will require comprehensive strategies that prioritize women's empowerment, access to resources, and inclusion in decision-making processes, thereby fostering a more conducive environment for their meaningful participation and advancement within the fishing industry.

The findings align with the study by Harper et al. (2020) which, emphasizing the critical need for capacity-building programs, improved resource access, and gender-inclusive policies to support women's empowerment in fishing activities. Furthermore, the statements from fisheries officers and cooperative representatives align with these findings, illustrating firsthand experiences of women encountering barriers related to access to capital, market opportunities, and confidence to engage actively in fishing development.

Moreover, the challenges highlighted in Table 4.15 align with empirical studies emphasizing the importance of addressing gender-specific barriers in the fisheries sector. Research by Kawarazuka (2010) underscores the significance of providing targeted training programs to enhance women's skills and capacity in fishing-related activities. Similarly, studies by Vunisea (2016) and Ameyaw et al. (2020) emphasize the role of improving access to resources and addressing market barriers to promote

women's meaningful engagement in fisheries. Moreover, findings from Neema (2007) and Johnson et al. (2017) highlight the persistent challenges of gender-based discrimination that affect women's opportunities in the fishing sector, necessitating comprehensive interventions to promote gender equality and empower women in coastal fishing communities like Kilwa District.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, we draw conclusions based on the findings presented in the preceding chapters and provide recommendations aimed at enhancing the role of women in fishing activities within the coastal wards of Kilwa District. Through a comprehensive analysis of the data collected from questionnaire and interview, this study has examined the various aspects of women's participation in fishing activities, their contributions to household welfare, empowerment, and the challenges they encounter. Building upon these insights, the conclusions and recommendations outlined in this chapter aim to inform policies and interventions that promote gender equity, sustainable fisheries management, and socio-economic development in the region.

5.2 Conclusion

The findings of this study highlight the pivotal role of women in the fishing activities of Kilwa District's coastal wards. Women are not only active participants in various facets of the fishing industry but also serve as significant contributors to household income and community development. Their involvement in decision-making processes and infrastructure enhancement underscores their importance in shaping the sustainability and growth of the fishing sector. However, challenges such as limited access to resources, market opportunities, and participation in decision-making pose barriers to their full participation and empowerment.

5.2.1 Contribution of Fishing Activities to Women's Income

Fishing activities significantly contribute to women's income in the coastal wards of Kilwa District, playing a vital role in supporting their households and fostering economic independence. The findings of this study underscore the importance of fishing as a crucial source of income for women, enabling them to meet essential needs such as food, shelter, and education expenses. Women's active participation in fishing-related endeavors not only enhances their financial stability but also empowers them to play key roles in decision-making processes within their households and communities. However, challenges such as limited access to resources and market opportunities hinder their full economic potential.

5.2.2 Role of Fishing Activities Towards Improving Women Empowerment

Fishing activities play a significant role in improving women's empowerment within the coastal wards of Kilwa District. Through their active participation in fishing-related activities and co-management of fishing endeavors, women are provided with opportunities to enhance their skills, knowledge, and leadership capabilities. Their involvement in decision-making processes not only amplifies their voices but also contributes to shaping policies and strategies within the fishing sector. Moreover, women's contributions to the development of fisheries infrastructure highlight their proactive engagement in initiatives aimed at enhancing the industry's efficiency and sustainability. However, challenges such as limited access to resources and gender-based discrimination persist, hindering women's full empowerment.

5.2.3 Contribution of Women in The Development of Fishing Activities

Women make significant contributions to the development of fishing activities in the

coastal wards of Kilwa District, playing vital roles in various aspects of the fishing industry. Their active involvement in decision-making processes, infrastructure development, and day-to-day fishing operations underscores their importance in shaping the sustainability and growth of the sector. The findings of this study highlight the indispensable role of women as key stakeholders in driving positive change and fostering the advancement of the fishing industry. However, challenges such as limited access to resources and market opportunities pose barriers to their full participation and contribution.

5.3 Recommendations

5.3.1 Recommendations for Action

To foster inclusive and sustainable development in the fishing sector of Kilwa District, several recommendations for action are proposed based on the findings of this study. Firstly, initiatives aimed at enhancing women's access to resources, including financial capital, equipment, and training opportunities, should be prioritized. This can be achieved through the establishment of targeted financial support programs, capacity-building workshops, and skill development initiatives tailored to women engaged in fishing activities. Secondly, efforts to promote gender equality and women's empowerment should be integrated into fisheries management policies and practices.

This involves ensuring women's meaningful participation in decision-making processes, co-management structures, and leadership roles within fishing communities. Furthermore, awareness-raising campaigns aimed at addressing gender stereotypes and promoting the recognition of women's contributions to the fishing

sector should be implemented. Finally, collaboration between government agencies, non-governmental organizations, and community-based organizations is essential for the effective implementation of these recommendations and the realization of gender-responsive and sustainable fisheries management in Kilwa District.

5.3.2 Recommendation for Further Studies

Further studies in the fishing activities of Kilwa District's coastal wards could focus on several areas to deepen understanding and inform future interventions. Firstly, a study tracking the socio-economic trajectories of women engaged in fishing activities over time could provide valuable insights into the long-term impacts of their involvement and identify factors influencing their empowerment and well-being. Also, qualitative research exploring the intersectionality of gender with other socio-economic factors such as age, education, and household dynamics could offer a nuanced understanding of the challenges and opportunities faced by different groups of women in the fishing sector. Furthermore, research examining the implications of climate change and environmental degradation on fishing communities, particularly their differential impacts on women, could inform adaptation strategies and resilience-building efforts. Further studies in these areas would enrich the existing knowledge base and inform evidence-based policies and programs aimed at promoting gender equity and sustainable development in the fishing sector.

5.4 Study Contribution

5.4.1 Contribution to the Policy

The study provides important information that can inform policy initiatives aimed at

enhancing the participation of women in the fisheries sector. By highlighting the economic and social contributions of women in fishing, as well as the barriers they face, this research underscores the need for policies that improve women's access to resources, market opportunities, and representation in decision-making processes. Such policies would support gender equality in coastal economies and contribute to the sustainable development of the fishing sector by ensuring that the contributions of women are recognized and supported at all levels.

5.4.2 Contribution to the Knowledge

This study contributes to the existing knowledge on the socio-economic role of women in fisheries, particularly in the context of Kilwa District. By documenting the ways in which women support household welfare and community development through fishing, this research adds to the body of literature that emphasizes the importance of gender inclusivity in rural economic sectors. Furthermore, it highlights specific challenges, such as resource limitations and market access issues, which hinder women's empowerment. The findings offer a basis for future research and discussions on gendered roles in fisheries and sustainable development practices, especially in similar coastal regions.

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APPENDICES

APPENDIX I: QUESTIONNAIRE FOR HOUSEHOLD SURVEY

Dear respondent I am a student from Open University – Tanzania. I am studying Masters of Arts in Monitoring and Evaluation. This questionnaire aims to examine your answers to this questions about “*The contribution of fishing activities to women’s welfare in the coast of Kilwa district wards*” It is a partial of fulfillment of the requirement of the award of masters of arts in monitoring and evaluation. Your given information will remain confidential and your name is not asked anywhere in the questionnaire. Therefore, I am asking for your cooperation in filling this questions form.

Instructions

Please put a tick (✓) in the bracket.

PART I: DEMOGRAPHIC CHARACTERISTICS

1. Sex

Male ()

Female ()

2. Age

0-20 yrs. ()

21 -40 yrs. ()

41-60 yrs ()

61 + yrs. ()

3. Education level

Primary Education ()

Secondary Education ()

Certificate/Diploma ()

Bachelor Degree ()

Master's Degree ()

4. Marital Status?

Single ()

Married ()

Widow/Widower ()

Divorced ()

**PART II: TO EXAMINE CONTRIBUTION OF FISHING ACTIVITIES TO
WOMEN'S INCOME IN THE COAST OF KILWA DISTRICT**

5. Is any woman in your household involved in fishing activities?

Yes () No ()

6. What percentage of your total household income is derived from fishing activities?

Less than 25% () 51-75% ()

25-50% () 76-100% ()

7. How many hours per day does your household member (women) involved in fishing activities spend on fishing-related work?

Less than 10 Hrs () More than 10 Hrs ()

PART III: TO ASSESS THE ROLE OF FISHING ACTIVITIES TOWARDS IMPROVING WOMEN EMPOWERMENT IN THE COAST OF KILWA DISTRICT

8. In your opinion, has women engagement in fishing activities led to increased decision-making power in the household?

Strongly agree () Disagree ()
 Agree () Strongly disagree ()
 Neutral ()

9. Has women engagement in fishing activities contributed to the economic independence of women in your community?

Yes () No () Partially ()

10. Have you observed an improvement in the social status and recognition of women engaged in fishing activities in your community?

Yes () No () Not sure ()

11. Do women involved in fishing activities actively participate in community decision-making processes?

Yes () No () Occasionally ()

PART IV: TO EXAMINE THE CONTRIBUTION OF WOMEN IN THE DEVELOPMENT OF FISHING ACTIVITIES IN THE COAST OF KILWA DISTRICT

12. Do you believe that women's involvement has positively contributed to the development of fishing activities in your community?

Yes () No () Not sure ()

13. Has the involvement of women in fishing activities led to an increase in the overall income generated from these activities?

Yes () No () Not sure ()

14. Have you observed any financial initiatives or cooperatives led by women to support fishing development?

Yes () No ()

15. Do women actively participate in community decision-making processes related to fishing activities?

Yes () No () Occasionally ()

16. What are the main challenges faced by women in your household in contributing to fishing development?

Limited access to resources ()

Gender-based discrimination ()

Lack of training opportunities ()

Market access barriers ()

THANK YOU

APPENDIX II: INTERVIEW GUIDE FOR FISHING OFFICERS AND FISHING CO-OPERATIVE REPRESENTATIVES

1. From your perspective, how actively are women involved in fishing activities in this district?
2. Have you observed any changes in the level of women's participation in fishing activities over the past few years?
3. In your experience, how significant is the contribution of fishing activities to the income of women in the Kilwa district?
4. Can you highlight any specific success stories or examples of women who have economically benefited from fishing activities?
5. What challenges do women typically face in the fishing industry in terms of income generation?
6. From your perspective, how do fishing activities contribute to women's empowerment in the Kilwa district?
7. How does the fishing sector ensure that women have equal access to resources?
8. What training programs are available for women engaged in fishing, and how do these contribute to their empowerment?
9. From your perspective, what role do women play in the development of fishing activities in the Kilwa District?
10. Have you noticed any community projects initiated or led by women in the fishing sector?
11. From your interactions, what challenges do women commonly face in their efforts to contribute to the development of fishing activities?

APPENDIX II: CLEARANCE LETTERS



Ref. No OUT/PG202000589

18th October, 2023

District Executive Director (DED),
Kilwa District Council,
P.O.Box.160,
LINDI.

Dear Director

**RE: RESEARCH CLEARANCE FOR MR. ALFAO JOSEPH SANGA, REG NO:
PG202000589**

2. The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007. In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.

3. To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr. Alfao Joseph Sanga,**

Reg. No: PG202000589), pursuing Master of Arts in Monitoring and Evaluation (MAME). We here by grant this clearance to conduct a research titled **“The Contribution of Fishing Activities to Women’s Welfare in Coast Wards of Kilwa District”**. He will collect his data at your area from 19th October to 30th November 2023.

4. In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820. We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA



Prof. Magreth S. Bushesha

For: VICE CHANCELLOR

THE UNITED REPUBLIC OF TANZANIA
PRESIDENT AUTHORITY
REGIONAL ADMINISTRATION AND LOCAL
GOVERNMENT AUTHORITY
KILWA DISTRICT COUNCIL



Replywith:

Ref:No. KDC/E.10/VOL III/37

30 October, 2023

Mr. Alfao Joseph Sanga,
The Open University of Tanzania,
P.O.BOX, 23409,
DAR ES SALAAM.

RE: REQUEST FOR RESEARCH

The heading above is concern.

2. Refer to your letter dated **18 October,2023** with reference number **OUT/PG20200589.**
3. I would like to inform you that, your request to conduct research intitled "**The Contribution of Fishing Activities to Women's Welfare in Coast Wards of Kilwa District**" has been accepted from 19th October-30th November 2023, under the following terms and conditions.
 - You should comply to Organizations codes and conduct during the whole period of research.
4. Thank you in advance.

Juma A. Ally

FOR: DISTRICT EXECUTIVE DIRECTOR

MURUGUWA KT CHIDA
KILWA DISTRICT COUNCIL
19/10/23

Copy to

1. Vice Chancellor
The Open university of Tanzania,
P.O.BOX, 23409,
DAR ES SALAAM.