

**A thesis submitted to the Department of Environmental Sciences and Policy
of
Central European University in part fulfilment of the
Degree of Master of Science**

**The social-cultural impacts of interventions on women in the fishery sector:
a case study of Buchanan and Robertsport, Liberia.**

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July, 2023

Vienna

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Ruth Willey BARSSEH

Abstract of the thesis Submitted by:

Ruth Willey BARSSEH

For the degree of Master of Science and entitled: The social-cultural impacts of interventions on women in the fishery sector: a case study of Buchanan and Robertsport, Liberia.

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Good management for healthy seas needs a clear path that includes women. The importance of the fishery sector cannot be overemphasized as it is the main source of food and livelihood for a vast portion of Liberia's population and other parts of the world; however, it also has significant social and cultural impacts, especially on women due to gender roles, including restrictions due to gender-based cultural norms, healthcare challenges due to fish smoking, and other physical strains. Women are described as the strongest pillar in Liberia's fisheries sector. However, this pillar is not strong enough to sit on the decision-making tables based on existing social-cultural norms in the sector. The current interventions have rarely been monitored or evaluated for their impact from the community's perspective, especially on women. In Liberia, very few studies are focused on understanding women's roles in fishing communities and their participation as key stakeholders in governance or community interventions. This study provides unique insight and perspective on the impact of community-based interventions from the women's perspective, their experiences, and the challenges they face.

The study aims to explore ways in which interventions aimed at improving the livelihood of women in Liberia's fisheries sector may impact roles and responsibilities within their communities, as well as how these interventions affect gender relations within the sector as well as unintended side effects. The research looks at three broad categories of interventions: Training (leadership and communication, community engagement, and education training), financial empowerment (microfinance schemes and community banking), and added value (fish smoking techniques, hygienic handling of fish). The research results provide information to policymakers and practitioners in developing more effective and sustainable interventions to promote women's participation in the fishery sector and to achieve sustainability of fisheries resources. The study's findings indicate that women (fishmongers and processors) have been capacitated with financial management, fish handling, and leadership skills to improve their participation in governance and advocate for sustainable fisheries practices. The VSLA provides access to capital (savings, credit, and loans). The interventions help challenge social-cultural norms about women's role in fisheries, as demonstrated by the CMA leadership. However, the interventions have also increased tension between men and women. The research recommends that men and women be equally engaged in intervention activities to educate them on the importance and benefit of women's participation in fisheries governance.

Keywords: Interventions, Fisheries governance, women, fishmongers and processor, Liberia.

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List of Abbreviation

SSF: Small-Scale Fisheries

NGO: Non-Governmental Organization

NaFAA: Liberia National Fisheries and Aquaculture Authority

EJF: Environmental Justice Foundation

FAO: Food and Agriculture Organization

CMA: Co-Management Association

WB: World Bank

1.0 Introduction

Liberia needs a clear roadmap to safeguard its fisheries from illegal fishing. This necessitates hearing the voices of all stakeholders—fishermen, fishmongers, and processors—equally (EJF 2022). Women are an essential stakeholder group that must be included in creating and implementing this roadmap. Women's roles in fisheries differ across countries, industries, regions, and communities, but their importance in the sector is pronounced (Ameyaw et al. 2020).

In Liberia, women comprise more than half the fisheries workforce as fishmongers, processors, traders, and distributors. They ensure food security, meet nutritional requirements and sustain their families and communities (EJF 2022). Globally, women also account for half of the total workforce in the fisheries sector (Torell et al. 2019). However, they seldom participate in fisheries decision-making processes (Torell et al. 2019) due to social-cultural norms in the sector (Uduji and Okolo-Obasi 2020; IUCN 2019). Structures and institutional practices at the community and national levels in small-scale fishing communities sustain gender inequality as community customs reinforce restrictions on gender norms and national policies marginalize women in the sector (FAO 2017). The gender division of labor in small-scale fisheries is based on the predominant perception of women as caregivers (FAO 2017).

Changes in fisheries policies and rules directly impact women because they depend on fisheries for their livelihoods and families' upkeep (Torell et al. 2019). It is important to involve the active participation of women in fisheries governance. According to the Director of Liberia National Fisheries and Aquaculture Authority (NaFAA), being a woman in the fishery sector is challenging. Women's participation in the sector faces challenges such as education (literacy), access to capital, lack of preservation facilities, health care, cultural rules, and household responsibilities (Torell et al. 2019; FPA 2021).

Persistent gender inequalities prevent women from fully participating in economic opportunities and decision-making, ultimately restricting the sector's potential (IUCN 2019). Africa owes its women and girls a better deal and needs targeted interventions to raise women's economic status and deter aggression (Torell et al. 2019).

1.1 Background Literature on Interventions

Interventions have been implemented in the study location to improve women's participation in fisheries governance and access to resources in the fisheries sector. However, the national government and its partners have implemented few projects targeting women and their active participation in fisheries.

1.1.1 National Fisheries and Aquaculture Authority (NaFAA)

NaFAA manages, regulates, and protects the country's fisheries sector (Republic of Liberia 2017). The institution works with development partners such as the World Bank (WB), Food and Agriculture Organization (FAO), and Environmental Justice Foundation (EJF), among others, to implement interventions to manage the sector sustainably. The West Africa Regional Fisheries Project, funded by the World Bank (WB) and implemented by NaFAA, established the first co-management association in 2012 in Grand Cape Mount. NaFAA also partnered with the Food and Agriculture Organization (FAO) to construct a fish processing facility in Buchanan called the Thiaroye Technology Stoves. NaFAA also partnered with EJF in establishing the first Co-Management Association (CMA) in Margibi, Grand Bassa, and Grand Kru counties.

NaFAA established fishing cooperations for artisanal fishermen, fishmongers, and processors and distributed yamaha outboard engines to the cooperatives (FPA 2022). NaFAA also prevents the killing of protected species (turtles, sharks) and the use of chemicals for fishing, like mercury and dynamites.

1.1.2 The Environmental Justice Foundation (EJF)

The Communities for Fisheries project implemented by The Environmental Justice Foundation (EJF), under the funding of the EU-Liberia Agriculture Programme, is implementing interventions in Buchanan, Marshall, Grand Cess, Sass Town, and Robertsport fishing communities.

“The project aims to empower communities to co-manage fisheries and reduce illegal fishing, build lasting sustainability and social equity in Liberia's fishing sector, and engage and empower women to ensure their inclusion in decision-making for long-term sustainability” (EJF 2021).

1.1.3 The Food and Agriculture Organization (FAO)

The Food and Agriculture Organization (FAO) has introduced and constructed a new method of fish drying, or smoking, called the Thiaroye Technology Stoves to fish processors to reduce the health implications of fish smoking on fish processors and improve the quality of their fish to minimize losses.

1.2 Research Aims

This research aims to understand the various current community-based interventions implemented by government and non-governmental agencies, the women's response to these interventions, how interventions have enabled women's participation in them, and what challenges these women faced. The research also explored the impact of local social and cultural context on the success of implementing such interventions. The research further assesses the experience of women with interventions aimed at access to resources, social inclusion, environmental sustainability, and unintended side effects, and how these interventions have promoted distributive, procedural, and social justice. The research also considers unintended side effects as a result of interventions.

The following questions answer the research aims:

- What specific interventions has this institution implemented in the small-scale fishing communities, and how have these interventions impacted women's social and cultural aspects in the fishing communities?
- What are the main factors contributing to the success or failure of interventions aimed at supporting women in the fishery sector of Liberia, and how do these factors relate to distributive, social, and procedural justice?
- How can interventions be designed to consider and address the social and cultural impacts on women in small-scale fishing communities?

The field research was conducted between May 15 and June 8, 2023. The researcher interviewed 31 participants, including fishmongers, processors, fishermen, and stakeholders.

1.3 Research Structure

The research is divided into five chapters. Chapter One is the introduction, which introduces the research, aims, and questions. The next is Chapter Two, Literature Review, which presents a literature background for the research by reviewing past published and unpublished literature. The main elements discussed in this chapter include women's role and contributions to fisheries; challenges and barriers faced by women in the sector; Interventions in the fisheries sector; Effectiveness of interventions; Women's perceptions of interventions; social and cultural impacts; Social-cultural Impacts; effects on empowerment and cultural roles; and unintended side effects. This chapter also discusses the framework that guides the study and Liberia's fisheries sector. It explores women's roles, contributions, and challenges in Liberia's fisheries sector. Following this chapter is chapter three, Research Methodology. In this chapter, the researcher provides insights into the type of research used for the study and discusses the methods used and why each method was considered. This chapter also includes the study's limitations. The following chapter is chapter four, Research Results. This chapter presents the

results of the study gathered from transcribed interviews. The results are presented based on themes identified and created during the data analysis. The next chapter is chapter five, which discusses the results and finally, chapter six presents the conclusion and recommendations.

2.0 Literature Review

This chapter presents the literature background for the research by reviewing past published and unpublished literature on the topic.

2.1 Women's Role and Contributions to Fisheries

Gender roles in small-scale fisheries are characterized by men catching the fish while women dominantly process and sell the local market (Uduji and Okolo-Obasi 2020). Women's work in the fisheries sector is often overlooked or under-represented in official statistics (FAO 2017). This leads to a vicious cycle where a lack of sex-disaggregated data gives rise to gender-blind policies (FAO 2017). Women comprise 15% of fish harvesting activities and occupy 90% of jobs involved in fish processing, including smoking and canning (IUCN 2019). Like in other parts of the world, West African women's contributions to the fisheries sector are significant, and they play a vital role in maintaining their healthy function (Ameyaw et al. 2020; Torell et al. 2019). In the Liberia fisheries sector, women comprise 60% of the workforce in drying, packaging, and selling fish (EJF 2020). In developing countries, women's participation in the small-scale fisheries (SSF) sector is both paid and unpaid, which contributes to the household and community at many levels, such as food, and income (Fitriana and Stacey 2012). Women engaged in alternative livelihood activities such as tailoring, making bread, among others to support the family, especially in the lean periods when fish catches are low (Torell et al. 2019). The overall fish processing in the fisheries sector involves several chemical activities, which include drying, salting, smoking, freezing, cutting, or packaging fisheries products to modify, preserve, and market them (IUCN 2019). Income generated through women's fish processing and fish marketing is vital for supporting the fishing sector (Britwum 2009).

Men are often associated with fishing because they harvest fish from offshore vessels. However, their fishing activities are mostly supported by women who play a significant role in processing, sales, and financial and logistical support for fishing trips (IUCN, 2019; FAO, 2017). The

contribution and involvement of women in small-scale fisheries post-harvest activities such as micro-fish retailing, fish processing, fish distribution, and marketing position them as significant actors in the socioeconomic development of West African countries (Williams 2001). A study conducted in the Niger Delta region of Nigeria finds that women have emerged as significant entrepreneurs in fish processing, carrying out most of the fish processing business either at a smaller or larger scale (Uduji & Okolo-Obasi 2020).

Women in African communities and other coastal communities might be actively and equally involved in fishing activities as the men; however, their tasks and responsibilities are different, and due to this difference, women are sometimes excluded in fisheries studies (Uduji & Okolo-Obasi 2020). The sector is viewed as a male-dominant sector because they are the ones who go to sea to fish; as such, they should be the decision-makers. Authorities usually identify women in coastal villages as fishermen's wives, and their work is considered part of the domestic work of caring for families and households (Fitriana & Stacey 2012; FAO 2017). This classification makes women's work in fisheries not counted by the national government (Fitriana & Stacey, 2012)- as they are ignored in official data collection on unpaid labor (FAO 2017). Women's roles limit their participation in decision-making processes and how they are perceived by society (Fitriana.R.2012). Despite the global implementation of gender initiatives, gender inequality persists in every sector and society, including the fishery; women are still not included in decision-making processes (Fitriana.R.2012). With the significant role played by women, it has been proposed (add citation) that women are considered significant stakeholders in fisheries decisions and studies.

The control of fisheries equipment or inputs such as (boats, engines, and nets) as well as decisions on when, where, and how to fish, is generally in the hands of men in West Africa, while women, on the other hand, control decisions regarding post-harvest activities including where, when, and how to process and sell the fish, (Torell et al. 2019).

2.2. Challenges & Barriers Faced by Women in the Sector

Women's participation in the fisheries sector is hampered by barriers caused by household responsibilities (childbirth), education, literacy, access to capital (canoes, boats, and nets), cultural norms, mobility restrictions brought on by household responsibilities, and discriminatory legislation (Matsue, Daw, and Garrett 2014; FAO 2015). Women find it difficult to respond to market incentives and other policy reforms because the constraints women encounter daily are more severe than those facing the men who are provided with the fishing gear and equipment to go fishing (Williams 2001). marriage is found to be very important among women in the fishing communities (Ameyaw et al. 2020). As access to fish depends on the women relationship with the fishermen (Ameyaw et al. 2020). This makes it difficult for women to adapt to changes and meet expectations. Women also face several health issues such as eye irritation, and lung problems due to smoking from fish processing activities (Ameyaw et al. 2020) .

If women are that crucial to the fishery sector, their roles, needs, and market networks should be acknowledged, understood, and documented (Ameyaw et al. 2020).

Men and women in the fisheries sector share a symbiotic relationship neither can survive without the other (E. Bennett 2005). If the men do not fishing, there will be no fish and if the women do not process and market the fish there will be no money in the sector economy. So it is important that both men and women have equal access to resources and participate in fisheries governance. Women and children are usually the most vulnerable in society, so they are the most susceptible to poverty, which hampers their ability to own fishery assets (E. Bennett 2005; S. B. Williams 2001) .

Most women in fisheries have limited access to basic education, credit, added skills training, technology, and information essential for improving their economic income within their resource constraints (Williams. S.B. 2001.). Women's full participation in economic activities

and decisions making is prevented by persistent gender inequality, which ultimately hinders the sector's economic potential (IUCN 2019) - as women are key in post-harvesting activities such as smoking, freezing, packaging, and selling which grows the sector economically. In addition to gender, the place of birth and tribal identity of individuals also play a role in influencing the extent to which women can participate in the local decision-making processes (Rohe, Schlüter, and Ferse 2018).

The fisheries sector is driven and dominated by men due to cultural norms and traditions that perpetuate gender inequality, limiting women's influence and participation (Medard et al. 2002). Women's control over their income and how much of the income is reinvested in their business or contributed to their household is significantly influenced by cultural factors (IUCN 2019). Women comprise a minority of boat owners; those who own boats dictate when and where a boat can fish, and the boat owner also decides who should captain and crew the vessel. (Torell et al. 2019; Williams 2001). However, these women do not attend fisheries meeting in the community as the captain (man) represents them in the meeting.

While it is true that gender is recognized as a transecting issue by several African governments, fisheries policies often do not include measures that promote gender equity and women's participation in fisheries discussions (Torell et al. 2019). Most African traditions, culture, and myths prevent women from fishing at sea, yet they are involved in all aspects of the post-harvest sector (Torell et al. 2019). Despite fisheries being an important entry point and opportunity for advancing gender equality and increasing effective, sustainable fisheries management, pervasive inequalities, including Gender Based Violence (GBV), still challenge the sector (IUCN 2019).

Though women play numerous and varied roles throughout fisheries value chains, they tend to be absent in corporate, government, and community leadership (IUCN, 2019;). In fishing households, women's work is considered domestic work, and they are excluded from

participating in activities in public spaces (Fitriana & Stacey, 2012). However, since women comprise nearly half of the fisheries sector workforce, their knowledge and expertise should be equally integrated into solutions and policies (IUCN, 2019).

2.3 Interventions in the Fisheries Sector

Although gender issue is a crucial aspect of most African governments, fisheries policies rarely include any measures to promote gender equality and enable women to engage in fisheries dialogues (Torell et al. 2019). In the past, the issue of women's participation in community-based projects or interventions was mostly neglected in the fisheries sector - as initiatives were concentrated on increasing men's harvest in capture fisheries through the provision of equipment to increase and preserve the value of harvested resources (Stanford et al. 2014). However, more recently, there has been some effort to address this. More recently, interventions have given some attention to increasing women's ability to participate in markets, including processing fish and providing equipment to support improved harvest (MDPI 2017). Microfinance and business support interventions successfully provided women with better access to savings and loans to improve their business skills in Ghana (Torell et al. 2019). A study conducted in Ghana shows that training in post-harvest processing enhances women's ability to handle fish more hygienically; business management and financial literacy have equipped women with the necessary tools to improve their fish processing business (Torell et al. 2019).

The gender integration programs led by the government generally concentrate on assisting the post-harvest processing sector by promoting value-chain improvements and addressing social concerns (Torell et al. 2019). To prevent unintended adverse side effects, interventions to promote women's empowerment in the fisheries sector should include strategies that engage men to enable their understanding and benefits of gender equality (IUCN, 2019). In Ghana, the Gender Mainstreaming Strategy for the Fisheries Sector aims to promote the active involvement

of fishers , mainly women; fisheries management and decision-making have also increased access and control of resources and opportunities to enhance individual contributions towards sustainable and equitable development (Torell et al. 2019).

Research shows that in Indonesia, coastal 'communities,' the government, international development agencies, and NGOs have implemented several approaches and initiatives to enhance diversity or introduce alternative livelihood strategies (Stacey et al., 2019). According to a study by (Torell et al. 2019), one way to increase women's participation in fisheries management is by enhancing female leadership among post-harvest processors- promoting the capacity of fish processor associations to participate as critical stakeholders in the management of fisheries actively is essential. Promoting women's participation in local marine governance can increase social and ecological outcomes (Rohe et al. 2018).

2.4 Effectiveness of Interventions

Few fisheries interventions have been implemented to support gender equity, women's empowerment, and participation. However, the effectiveness of these interventions depends on their goals and execution strategies. While other interventions' impacts have not always been clear, some interventions have clear and positive impacts and outcomes. However, it is not always obvious how well interventions work to advance gender equity in fishing communities and fisheries governance. For instance, despite numerous efforts and strategies being put into place in Indonesian coastal communities, it is not always apparent how these interventions would affect the improvement or diversification of livelihood options (Nurdin et al. 2018).

Many intervention initiatives have focused on increasing men's harvest in capture fisheries through the provision of equipment to increase and preserve the value of harvested resources (e.g. boats, ice) (Stanford et al. 2014).

A study by Torell et al. (2019) reveals that post-harvest processor interventions substantially impact women's empowerment - microfinance, training, and VSLA support filled a critical gap

by providing access to capital (savings and loans) and training, enabling women to handle fish more hygienically and improve their businesses in Ghana. Interventions that increase women's participation in fisheries management can have positive social and ecological outcomes (Rohe et al. 2018). Interventions to improve women's entrepreneurial and negotiating skills have strengthened women's livelihoods through increased income and agency and better social and health outcomes (IUCN 2019). In addition, interventions that promote collaborative efforts among women (fishmongers and processors) associations can make them a potential force to advocate for sustainable fisheries management (Torell et al. 2019). Interventions focused on improving women's entrepreneurial and negotiating skills have effectively strengthened women's livelihoods through increased income and agency and better social and health outcomes (IUCN 2019).

Findings from an impact assessment by (Torell et al. 2019) in Ghana reveal that a fisheries management project in Ghana implemented to integrate gender and empower women in fisheries management successfully challenged traditional cultural norms about women's involvement in the fisheries sector. Interventions that address the practical differences in women's and men's resource endowments through a binary approach are often ineffective in mitigating poverty at the household level - instead, they have increased women's constraints, such as women's time burdens, and deepened the differences between men and women in households, markets, and society. (Razavi and Miller 1995; Okali 2011).

Insufficient understanding of women's significant roles and contributions in the sector can lead to failure to acknowledge their needs and interest in policies and programs, overall affecting the outcome of sustainable development (IUCN 2019).

Ensuring women's inclusion as stakeholders and involvement in decision-making is vital to increasing interventions' effectiveness in promoting gender equity in fisheries. Additionally, including men in gender mainstreaming strategies helps sensitize them to the advantages of

gender equality and prevent unintended negative social consequences in fishing communities (IUCN 2019). Women's capacity to participate in extension programs is constrained in the region as a whole due to their lack of education, time constraints brought on by their dual household and economic responsibilities, as well as the design of extension programs, which frequently employ male agents and individuals without a background in fishing (Williams 2001).

2.5 Women Perception on Intervention

A positive perception of people toward development interventions results in a more engaging activity because they are more likely to feel empowered and gain confidence, which increases their likelihood of actively pursuing the goals (Diener and Biswas-Diener 2005;).

Assessment of the Regional Fisheries Livelihood Programs (RFLP) in Indonesia (2012) received different perceptions from beneficiaries – while others expressed satisfaction with the implementation of RFLP activities. Others pointed to 25% satisfaction with the activities. Women expressed that they, as women, had little influence on local decision-making and no representation within the council of elders, the customary institution that had the final say on many decisions regarding village life, as well as marine resource use and management - women can take part in any meetings and put in what they believe, but the men must make the final decision (Rohe et al. 2018). Capacity development sessions related to innovation, conflict management, advocacy, and leadership have contributed to women's perception that they have a voice in fisheries management. (Torell. et al. 2019). Women perceive they have a voice in fisheries management due to capacity-building training related to innovation, conflict management, advocacy, and leadership (Torell et al. 2019).

2.6 Social_Cultural Impacts

Gender Social norms are "the informal and formal laws, beliefs and practices that help to determine collective understanding of acceptable attitudes and behaviors" (Harper et al. 2014, 2). Social and gender relations, determined by expressions of power between men and women, impact their access and control over resources and influence the nature and distribution of benefits (Stacey et al. 2019; FAO 2017). Throughout a woman's life-cycle social norms overlap with development outcomes as they determine whether she has any opportunity to forge her pathway to empowerment and contribute to the empowerment of her community. A study conducted evaluating initiatives on gender and women and sustainable livelihoods in small-scale fisheries in Indonesia discovered that even though many interventions have targeted women, particularly initiatives to boost women's productive capacity, 10% of the projects challenge local gender norms and relations to empower women by applying a gender transformative approach. In comparison, 40% of the projects had no detectable gender approach (Stacey et al. 2019). In the context of livelihood activities, gender relations refer to social relationships defined by the power dynamics between men and women, which can directly affect access to and control over livelihood assets such as natural resources. Moreover, these gender relations can also influence the distribution of benefits associated with these assets (Stacey et al. 2019).

2.7 Effects on Empowerment, Status, and Cultural Roles

Females' empowerment is attained when they are free to make decisions, exercise their rights, access resources, and contribute to society. Women's economic empowerment depends on their rights, access, and ability to make decisions over land and assets. (Harper et al. 2014). Economic empowerment, through entrepreneurship or accessing credit, the land is linked to decision-making power (Harper et al. 2014). while internal motivation and self-empowerment are primary sources of empowerment; cultures, society, and institutions can

foster or stifle opportunities for empowerment (IUCN 2019). Due to the increased exposure to sustainable fisheries management, women are better qualified to advocate for ethical fishing methods and have demonstrated an active interest in doing so (Torell et al. 2019). An example in Liberia can be traced to the continued engagement with fishmongers and processors, which has increased their knowledge and confidence to participate in fisheries management decisions to take up leadership roles in Co-Management Associations (CMA). Women in the sector's continued exposure to sustainable fisheries management knowledge and leadership skills have greatly benefited CMA's processes across coastal communities

2.8 Unintended Consequences and Negative Impacts

Unexpected outcomes and side effects are always a possibility in interventions and programs. Diverse interventions, such as promoting gender equality and women's participation in fisheries management, may have unintended side effects in the community and the fisheries sector. For example, as women take on a larger role in fisheries management, they are still disproportionately burdened with managing household economics (Torell et al. 2019). Additionally, interventions focused on increasing women's access to and control over fisheries resources may lead to conflicts and tensions within the community and increased competition between men and women for limited resources. Interventions that address the practical differences in women's and men's resource endowments through a binary approach are often ineffective in household poverty reduction -instead, they increase women's constraints, like time burdens, and deepen the differences between men and women in households and society (Razavi and Miller 1995; Okali 2011).

To attain equitable change, fisheries development projects, such as Smallscale Fisheries Management Projects (SFMP), should couple with approaches that consider not only how women can become more engaged in fisheries management but also how men can contribute

more to running their households (Torell et al. 2019). This will help reduce women's workload while strengthening their role in fisheries management and avoiding unintended negative social outcomes.

GBV might also be an unintended outcome of interventions and programs. This might be exacerbated by characteristics of the fishing sector that can reinforce toxic masculinity. These characteristics can include negative peer pressure associated with strong group identity and social isolation or marginalization, resulting from stark gendered divisions of labor and long periods away from fishing trips (IUCN 2019). Fisheries interventions tend not to consider eliminating and preventing GBV, constituting a lost opportunity and potential risk, as interventions can unintentionally exacerbate vulnerabilities (IUCN 2019). Also, providing resources to women, such as credit and loans, can contribute to GBV by changing household and gender dynamics. Women who are breadwinners are at more risk of GBV than when men are the sole earners in the home (IUCN 2019). In some fisheries communities, working directly with fishermen to address harmful social norms around violence and harmful masculinity has been an effective strategy to prevent GBV (IUCN 2019). For example, an initiative in a coastal district of Vietnam works with fishermen to stop violence against their wives through the establishment of the Responsible Men Club - Through the Club, fishermen receive knowledge, skills, mentoring, and peer support which enables them to develop coping mechanisms regarding the isolating and stressful nature of fishing work as well as positive ideas about masculinity and their role in their communities (IUCN 2019). Organizations that use the rhetoric of participation or being community-based without examining the gender implications of the work may unintentionally entrench inequality or create new barriers to "women's empowerment (Baker-Me'dard 2017).

2.9 Theoretical Framework

The Environmental Justice Taxonomy approach guides Distributive Justice, Procedural Justice, and Social Justice to research the social-cultural impacts of interventions on women and the environment in the fishing communities in Buchanan and Robertsport, Liberia. Justice is the standard on which the distributive aspects of society structure are assessed (Schlosberg, 2007). Injustice is inequalities that benefit the few (Rawl 1971). Robert E. Rodes Jr. defines Justice as a virtue that moves people to render others what is due them (Kuehn 2000). Justice in political practice balances numerous interlinked elements of distributive, recognition, participation, and capability (Schlosberg 2007). Ecological Justice is the form of Justice between humans and the natural world, while environmental Justice is the distribution of good and bad environmental benefits among humans (Bell 2006). Justice theory depends on societal theory (Rawl 1971).

2.9.1 Environmental Justice as Distributive Justice

Distributive Justice is the equal right to treatment; that is, goods and opportunities are distributed evenly to everyone it was given, including the distribution of respect or honor, wealth, and other divisible community assets (Kuehn 2000). Distributive justice considers how society distributes rights, goods, liberty, social and economic, and how equality and inequalities are defined and regulated (Schlosberg 2007).

This justice aspect focuses on fair distribution outcomes rather than arriving at results. This relates to women's access to education and training, financial resources (microfinance scheme and community banking), and added value (fish smoking techniques, hygienic handling of fish) to enhance their ability in their community. In an environmental context, distributive justice involves the equitable distribution of the burdens resulting from environmentally threatening activities or the ecological benefits of government and private-sector programs (Kuehn 2000). Justice as distribution is focused on the distribution of goods and benefits and how the goods and benefits impact individuals and communities. (Schlosberg 2007). In distributing resources,

benefits, and income, authorities must be consistent with the liberty of equal citizenship and opportunities (Rawl 1971).

2.9.2 Environmental Justice as Procedural Justice

Procedural Justice is defined as the right to treatment as an equal (Kuehn 2000) - such as the right to equal decision-making on goods and opportunities that will be used, managed, or distributed. Aristotle referred to this as a status in which individuals have an equal share in ruling and being ruled (Kuehn 2000). It involves justice as a function of how decisions are made, a focus on the fairness of the decision-making process rather than its outcome.

This environmental justice aspect is also called "procedural equity"—the need for democratic decisions—encompassing inclusiveness, representation, parity, and communication (Kuehn 2000). Procedural justice, also called political justice, reflects the belief that achieving environmental justice will require changing the political dynamic so that all groups are treated fairly in decision-making processes (Kuehn 2000).

2.9.3 Environmental Justice as Social Justice

Social Justice demands that every community, class, or group member have enough resources to live a life that befits humans (Kuehn 2000). This aspect of environmental justice is also called social equity, including an assessment of the role of sociological factors such as culture, political power, ethnicity, class, and race in environmental decision-making (Kuehn 2000). The lack of recognition and inclusion in social, political, and cultural settings leads to insult devaluation at the individual and community levels (Schlosberg 2007).

The perspective of social justice presents environmental justice as a component of larger racial, social, and economic justice problems. It helps illustrate the influence of class and race on the quality of life of a community and its people (Kuehn 2000).

2.10 Liberia Fisheries Sector

Liberia is a low-income nation where fisheries have the potential to contribute to both national economic development and sustainable livelihoods for the most vulnerable (Wuor & Mabon 2022). The coastline of Liberia is 570 km, 34 km in width, covering a total area of 20,000 km² of fishing ground extending from Grand Cape Mount in the north to Maryland County in the south with 200 nautical miles range (FCWC 2021). Liberia Fisheries sector in Liberia plays a pivotal role in the livelihoods of the coastal population and food security. The sector provides full and part-time employment for 37,000 people, while small-scale fisheries directly employ 33,000 people -60% of whom are women. (FCWC 2021; Jueseah et al. 2020; EJF 2020). The fisheries contribute approximately 10% to the country's gross domestic product (Jueseah et al. 2020; EJF 2020; Wuor & Mabon 2022). NaFAA is the regulatory body for the Liberia fisheries sector.

The sector is divided into three major components: marine, which includes industrial and artisanal fishing activities; inland, which focuses specifically on artisanal fishery; and aquaculture, done through fish farming (FCWC 2021). The small-scale fisheries sub-sector is the most important regarding landed weight and is the country's largest producer of domestic fish consumption (FCWC 2021). The Kru and Fanti ethnic groups from Liberia and Ghana dominate the artisanal fishery. They both use different fishing gear. The kru fishermen fish in small dug-out canoes, seven meters with hooks and lines powered by paddles, and sail with crew members of 1-3-persons some have transitioned to using seven hp outboard engines and gillnet (FCWC 2021; Chu et al. 2017). The Fanti fishermen fish using larger equipment such as canoes of 12 m, ring, purse, and large gillnet nets powered by 25-50 hp outboard engines, with a crew member of about 15 people (FCWC 2021; Chu et al. 2017). Artisanal fish catch is mostly locally consumed, and imports complement shortages in the supply of fish (Jueseah et

al., 2020). illegal, unreported, and unregulated (IUU) fishing (IUU) and overfishing threaten the country's food security (EJF 2020; Wuor and Mabon 2022).

Artisanal fisheries Liberia

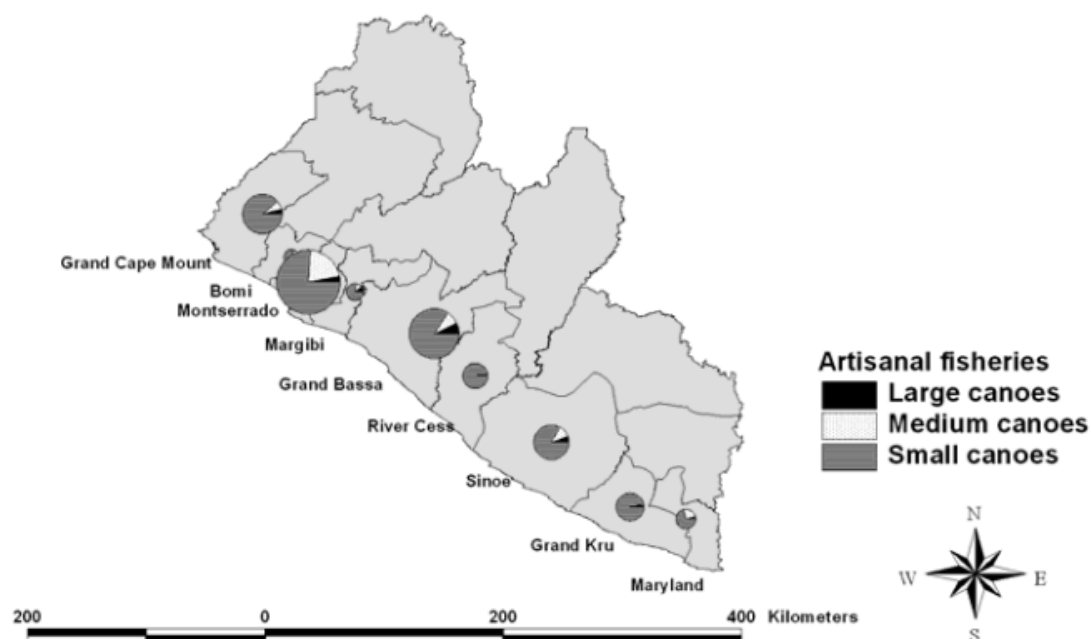


Figure 1: Artisanal fishing canoes distribution in the Liberia coastal counties of Liberia (Source: FCWC 2021)

Women (fishmongers and processors) comprise 60% of the workforce in Liberia's fisheries sector (EJF 2020). Women play a crucial role in ensuring food security, meeting nutritional requirements, and sustaining the livelihoods of their families and communities (EJF 2020). The Director General of NaFAA described the role of women in the Liberian fisheries sector as pivotal to the economic growth of the country's fisheries sector but noted that not much priority is given to them, making them vulnerable (FPA 2021). Women are faced with challenges, including cultural practices and traditional norms that deny women access to leadership and land for fish farms. There are also limited modern processing techniques, making them work in hazardous conditions, and lack of preservation and cold storage facilities and means to transport

their goods (FPA 2021). To combat IUU fishing and protect women's livelihood, the voices of everyone must be heard in decision-making, including women who comprise more than half the fisheries workforce as fishmongers, processors, and canoe owners (EJF 2020). Finance is a major barrier that prevents women from having their voices heard in fishing communities (EJF 2022). Financial institutions are unwilling to credit or give out loans to women due to their migratory nature due to the seasonal fish flow, and people who lend money demand high collateral, which they cannot meet. (EJF 2022).

2.11 Conclusion

Chapter One has presented different literature on the current status of women's roles within the fisheries sector, including the challenges faced by women, the effectiveness of interventions, and gender biases that have and continue to persist in the implementation of management policies and laws. Women in the fisheries sector are increasingly challenged in several ways: lack of education, access to resources, and cultural barriers lead to their underrepresentation and participation in fisheries management activities.

Interventions like (microfinance, business support initiatives and promoting female leadership among post-harvest processors) aimed at improving women's participation have had some successes in enhancing the capacity of women and are important factors in the success of fisheries management (Rohe et al. 2018; Stacey et al. 2019; Torell et al. 2019). However, gender inequality is still deeply rooted in the sector, which makes it challenging for women to thrive and be recognized as major stakeholders.

The literature shows consistent evidence that cultural, social, and financial factors limit women's participation in fisheries management and decision-making. Furthermore, women's participation in intervention activities positively impacts their lives and challenges persisting social-cultural norms and stereotypes. However, in some instances, these interventions have

also led to unintended side effects that continue to limit women, such as increased workloads and gender inequality between men and women in the sector.

3.0 Methodology

3.1 Research Type

Qualitative research methods were applied throughout the study. Qualitative research includes non-numerical data collection and analysis such as audio, text, and video to gather answers to the research questions from existing research, interviews, questionnaires, focus group discussion, and observation (Merriam & Tisdell 2015). Qualitative research is a descriptive interpretation using words rather than statistics to analyze social relationship patterns (Kendall 2012). The research focused on interventions in small-scale fishing communities (SSF) that aimed at women's improvement and inclusion, implemented in the study locations. The study primarily targeted assessing the social and cultural impacts of interventions in small-scale fishing communities in Liberia. The study assumes that fisheries management is an important topic that should include the equal participation of all stakeholders, including fishmongers, processors, and fishermen. Interventions implemented to promote women's participation in the sector have social and cultural impacts; therefore, assessing these interventions is essential to understanding these impacts adequately. The study collected data using a quantitative research design with semi-structured interviews with women in small-scale fishing communities and critical informants with the National Fisheries and Aquaculture Authority (NaFAA), co-management associations, and non-governmental organizations. The research was conducted between May and July 2023 in Liberia and Vienna.

3.2 Data Collection

Semi-structured interviews were used to collect data from women in the small-scale fishing communities, and stakeholders such as the National Fisheries and Aquaculture Authority (NaFAA), co-management associations, and non-governmental organizations. Thirty-one interviews were conducted to gather data on the topic, including 12 in each location.

During the face-to-face interview with fishmongers and processors in Buchanan, 12 women, and two men were interviewed; the same was applied in RobertSPORT. Three people were interviewed from implementing institutions, including NaFAA. Interviews and answers to the questions were recorded on the researcher's mobile phone with the interviewee's consent, and points were noted down in a notebook and then transcribed to a Word doc file.

3.2.1 Review of Past Studies

The research began data gathering by reviewing previous studies related to women's role and participation in the fisheries sector and how community-based interventions in small-scale fishing communities have impacted women socially and culturally- considering their women's access to resources, leadership, and social inclusion. This was done by searching google scholar using keywords such as social culture impact on women in fisheries communities, intervention in fisheries Liberia, intervention in fisheries Liberia, intervention in fisheries West Africa, intervention in fisheries Africa and developing countries. Documents reviewed included project documents, peer-reviewed literature, and drafted and published written policies. This process aided the researcher in understanding the available knowledge and arguments on the topic. It also shaped and informed the researcher's position which is very important in the context of qualitative methods, especially.

3.2.2 Semi-structured interviews

A semi-structured interview is an exploratory interview used most often in the social sciences for qualitative research purposes or to gather data (Magaldi & Berler 2020) - participants are encouraged to speak freely about their perceptions and experiences (Kallio et al.2016). The researcher conducted semi-structured interviews to elicit detailed information on the topic from the participants. Participants or respondents were the fishers who provide data for the study through interviews (Kendall 2012). Open and close-ended questions were part of the semi-structured interviews. Additionally, follow-up questions were asked to delve deeper into the

topic, maintain the flow, and gain accurate and optimal information (Kallio et al.2016). This made it easier for participants to understand and direct the conversation toward the study. During the interview, participants were free and flexible in expressing their knowledge and experience on the topic. The semi-structured interview method is suitable for studying people's perceptions and opinions (Kallio et al.2016). To get participants to speak freely, the interviews were conducted in the absence of implementing institutions, as their responses were immanently from their personal experiences and knowledge, free of pressure or threats. It also allowed participants to expound on their responses, offer personal experiences, and give context to their answers; this method ensured that crucial topics were covered. The interviews were conducted in Buchanan (Small and Big Fanti Town communities) and Robertsport (Kru Town and Fanti Town fishing communities).

3.2.3 Interviews

Most of the comments made on the semi-structured interviews also apply here. Again: More details, methodological considerations, and literature references.

An interview is a data collection method where the researcher or interviewer asks respondents or participants questions (Kendall 2012). A total of thirty-one questions were used for the study, and they were divided into two sections; the Socioeconomic information section: this section contained close-ended questions on demographic information on their age, marital status, education, and access to fishing and processing equipment, while the second section had open-ended questions on comprehension of and practical expertise and experience with interventions or programs (for example, Can you tell me about the time (s) when you fully participated in decision-making processes due to these interventions and what it was like for you?). These two sections were used to provide primary and detailed information on the social-cultural impact of community-based interventions by obtaining sociological data on the respondents and data on their experience with interventions. The Thirty-one questions were created to evaluate women's

access to resources, social inclusion, distribution of benefits and resources, and participation in fisheries decisions and policies. Please see the Annex for the research questions. They addressed the environmental justice taxonomy's concepts of distributive justice, procedural justice, and social justice. The interviews with the fishers, including women and men, were conducted during the morning and evening hours in informal settings such as in their homes, on the beaches or in general meetings. The interviews with implementing institutions, government and non-governmental organizations (NGOs) were conducted formally, such as in their offices or workplace. Each interview lasted for a maximum of 40 minutes and a minimum of 30 minutes. The length of the interviews depended on how knowledgeable a participant was.

Five (5) of the 12 participants from Buchanan were interviewed via phone due to deplorable road conditions, as the bridge leading to Buchanan was damaged, and citizens were advised not to use it at the time of the research.

3.3 Sampling

Participants were chosen using purposeful sampling (Palinkas et al. 2015). Fishers (men and women in the fishing community) are often busy due to the nature of their work; using this was appropriate to select participants to participate in the study. The researcher chose this sampling method to speak with selected individuals based on their knowledge and experience of the topic to encourage meaningful contributions (Palinkas et al. 2015). The interview was addressed to the specifically selected, knowledgeable fishmongers (women who only buy and sell fish), processors (women who process and sell fish), and fishermen (Men who fish at sea). Purposeful sampling was also used because the research case is information-rich (Palinkas et al. 2015). The women leader selected the participants after the researcher met with the leaders. Additionally, individuals mentioned in an interview were sampled using the snowball method. The study was planned to maximize the participants' free time for a better outcome. This was done by going into the communities and meeting the local leaders (sea chief and women leader)

to inform them about my purpose in the community, my thesis, and the available time fishers are often accessible and willing to participate in the study. In each research site, 12 women and two men voluntarily participated in the study. Participants were told that their participation in the study was of their free will and that no compensation or money would be given to them for participating. The research also used snowball sampling to allow participants to recommend people knowledgeable about the topic to participate (Palinkas et al. 2015).

3.4 Data Analysis

Data were analyzed through a blended coding approach combining inductive and deductive coding approaches (Smith K. 2021). The researcher used this method because initial codes were developed before the analysis, while other codes evolved during the analytic process. (Smith K. 2021). These codes were developed in line with the framework of distributive justice, procedural justice, and social justice to identify these themes: access to resources (credit or loan, training, education, skills, and canoes or boats), social inclusion (leadership, social status), and environmental (overfishing, environmental degradation) and indications of possible unintended side effects in relation to distributive, procedural, and social justice. These codes are related to the three forms of justice because they involve how women benefit from fisheries resources which have to do distributive justice; women's participation in meetings and fisheries governance which relate to procedural justice and finally, the recognition of women in cultural and societal settings.

The qualitative analysis has been applied to understand the experience and interpretation of women on fisheries interventions implemented in their communities and the impacts these interventions have on the social and cultural aspects of their lives. It also aimed to identify unintended side effects and to describe the impacts or outcomes from the point of view of the participants (Merriam & Tisdell 2015). The coding process began with first getting acquainted with the data by transcribing and reading the data after which the researcher began identifying

quotes or statements that represented an idea; these codes were grouped into themes based on their relationship. New codes that emerged during the coding were continuously compared to identified codes to identify differences and similarities.

3.5 Presentation of Results

The research results are presented in an in-depth format aligning with the research questions and the taxonomy of environmental justice. The researcher discusses the findings in line with the three components of the environmental justice taxonomy that this study considers: Distributive justice, Procedural justice, and Social justice.

3.5 Study Area

The research was conducted in two coastal cities in Liberia, namely: Buchanan and Robertsport. Buchanan and Robertsport have populated landing sites comprising fishers (fishermen (men), fishmongers, and processors (women) from the Kru and Bassa tribes in Liberia and the Fanti tribe from Ghana. Buchanan and Robertsport were selected for this research because they are two major fishing areas where several fishery interventions are implemented to promote women's participation. The two locations also have established fisheries Co-management Associations (CMA). Buchanan is the capital city of Grand Bassa County. It is the third largest city in Liberia, with two fishing communities (big and small Fanti town) and six landing sites. Robertsport is the Capital city of Grand Cape Mount County. The city has three major fishing communities and four major landing sites. Despite Robertsport being known for its fishing activities, it is also a touristic city. Several touristic sights and attractions exist in and around the city, such as Lake Piso.



Figure 2. Political Map of Liberia (<https://www.netmaps.net/digital-maps/liberia-political-map/>)

3.6 Ethics

The study adhered to the CEU Research Ethics Policy and Guidelines, and only adults were allowed to participate voluntarily. Each participant was verbally informed that participation was entirely voluntary, and that the researcher was a university student with a connection to one of the implementing institutions. However, the researcher would keep the interviews anonymous and private for confidentiality. The research ensured the confidentiality and protection of data by ensuring that data collected were stored locally on the researcher's gadgets, phone, computer, and google drive. These gadgets were protected by security passwords with restricted access. Participants were also assigned random codes for confidential issues.

To ensure confidentiality, the researcher randomly assigned all participants interviewed to different categories of codes to ensure confidentiality. The codes include an acronym and a

number. The number does not represent the participant's gender or position. Participants from Buchanan were coded as B-01, B-02, B-03, etc.; participants from Robertsport were coded as R-01, R-02, R-03, etc.; implementing institutions were coded as SH-01, SH-02, and SH-03.

3.7 Limitations

The field time for data collection was very limited (4 weeks). This restricted the number of respondents available for the interviews as the field duration limit was minimal. The respondents were preoccupied and engaged in their daily livelihood and household activities,

A variety of constraints restricted the study. Some were a product of time, mainly due to the little time allotted for the research. In one instance, participants' availability was hampered by conflicts with their other activities, including personal and domestic activities, business or social engagements, or tasks for different initiatives.

Some individuals chosen via the snowball method were unavailable; therefore, they could not participate in the study. The research gap in the Liberia fisheries sector constrained the study as only a few research is available on the Liberia fisheries sector. As it was challenging to access literature relevant to the study, most research was outdated and did not reflect the sector's recent reality.

4.0 Research Results

This chapter presents the results of the questionnaires and provides a supporting discussion of the respective results. The data was collected from 15 May 2023 to 5 June 2023.

4.1 Description of the sample

The aim of the research was to understand women's role in the fisheries sector, so the primary target respondents (24) were all women in both Buchanan and Robertsport. Four males were interviewed, and their responses provided their perspectives on women's engagement and promotion in the community. The interviews of three respondents represent the three stakeholders who provided their perspectives on engaging and promoting women in all aspects of the fisheries sector.

Table I- Data Collection Result Summary

Women (Fishmongers and processors)	24
Men (Fishermen)	4
Stakeholders (Implementing Institutions)	3
Total	31

The respondent's ages ranged between 30 to 55 years. They were mostly active fishmongers and processors. See Table IB for more details

Table I B - Participant's age range

Participants	30- 40	41-55
Buchanan	3	11
Robertsport	2	12
Total	5	23

Responses indicated that the women could own fishing resources like canoes, machines, nets, and men would do the fishing. This was mainly because the local tradition and culture did not 'allow' women to fish in the ocean. Table III below indicates that 83% (N=20) of the respondents owned fishing equipment like paddle canoes, machines, and nets. In Buchanan, five out of 12

women-owned fish equipment, while in Robertsport, four out of 12 participants owned fishing equipment.

Table III - types of equipment owned.

Fishing equipment Own	Buchanan	Robertsport
Paddle Canoe	6	3
Machine Canoe	4	1
Fishing Net	2	1

About 11 respondents (Buchanan 6, Robertsport 5) reported completing elementary school. Only one respondent in Buchanan reported to be pursuing Bachelor's degree. See Table III B for more details.

Table III B - Level of education per location

Education level	Buchanan	Robertsport	Total
Pre-school	1	1	2
Elementary	6	5	11
Junior High	2	1	3
Senior High	1	3	4
University courses	1	0	1
Never attended school	3	4	7

Most respondents indicated that they learned business skills in the fishing sector from their families or guardians who were engaged as fishmongers and processors. This was their primary source of livelihood. See Table IV for details on the respondent's experience.

Table IV - Participant's Years of Experience

Location	5-10 years	11- 20	21-30 years	>30 years
Buchanan	2	4	5	3
Robertsport	3	5	5	1
Total	5	9	10	4

4.2 Livelihood

The responses indicated that there are more women fishmongers and processors than when they started working in this sector. However, the reasons for the increase in women taking up this

occupation differed among the respondents. The reasons reported were that it is a quick sale or fast business to enable daily income to feed the children and families (N=10).

"There are more women now because the fish business is fast, and that is where people can get their daily bread quickly to feed their children and families"(N=10).

Others (N=8) stated that lack of education has resulted in lower opportunities for men's employment leading to women taking up fishing as an alternative source of income for their families.

"There are more women now than before because finding a job is hard for our husbands, so we are taking the lead in supporting our family through the fish business,"

As men go out to the ocean to fish, the women are responsible for processing and selling the caught fish daily. The women of the families who are fishmongers teach their daughters business skills.

"Fish drying and selling is the only thing we know here, and that is what we learn from our mothers- if your mother is a fish processor, you will learn it so that when you grow up, you can start your own business (R-10)."

However, this has created an issue of child labor in coastal communities, as young boys and girls are encouraged at very young ages to learn to fish and process fish. This was observed in communities where fishing is the primary source of income.

Women are also engaged in fish-selling to gain respect in the community and prevent GBV. One participant stated that,

"When only the man feeds the home, he will start bluffing and disrespecting the woman at times; the man will even beat his wife for little things, so the women too need to stand on her feet and have their own money" (R-03).

Women taking up employment as fishmongers or processors has created the opportunity for additional income, enabling them to support their children's education. Children are usually sent to another town or city to enable them to attend school and will stay with their extended families or guardians.

4.3 Interventions

The respondents stated that there are interventions implemented in the communities. According to the respondents in Buchanan and Robertsport, EJP and NaFAA are implementing activities in their communities such as Village Saving and Loan Associations (VSLA), the establishment of women groups, Co-management Associations, and Fishing cooperatives. However, there were slight changes in their responses on fish processing and storage facilities by FAO, The participant in Buchanan stated that their fish processing and storage facility construction is almost completed while the participants in Robertsport stated that the construction work has not started but there is also a fish drying (smoking) kitchen constructed by the World Bank (WB) in Robertsport. However, the women noted the fish processing shed cannot accommodate all the fish processors in Robertsport so there are just few women using the building.

4.5 Gender Roles

According to participants, men and women have specific roles in the fishing communities. These roles were established as part of the local gender and cultural norms. The established roles are that the men go to the ocean to fish, while women are responsible for post-harvesting work and sometimes preharvest work, which includes buying materials for fishing, and processing and selling the fish. Some excerpts from the responses are mentioned below:

"The role of the men is to fish, after which they clean the fishing equipment. Men are also the decision-makers in the house and the community" (R-03).

"Our work as women is to clean, dry (smoke), ice, packaging, sell the fish, and take care of the home. Men go fishing, sew the nets, and clean the canoes" (R-08).

"Apart from processing and drying the fish, women buy the hooks, ropes, baits, and gas for fishing; we also pay for repairing machines and canoes - I can say we, the women, are in the main role in the fish community" (B-04).

"Men are the one who takes high leadership position because they are the ones who go on sea fishing - women and discuss the fish price" (R-06).

According to 18 respondents, interventions implemented in their communities, such as creating women's groups, including women in Co-management Association leadership (CMA), training on leadership and communication, and establishing VSLA, are helping to challenge traditional gender roles within the fishing communities. Women are taking on more leadership roles, especially in decision-making in the governance and management of the fisheries sector. Women have gained access to education and awareness, enabling them to actively participate in fishing management activities, leading to a shift in power dynamics within the community.

"Things are changing now; since EJJF started working with and training us, women are no longer only involved with fish selling and processing; we cannot go fishing, but at least we can take part in meetings" (B-04).

"The project has created awareness of the importance of our role -we never knew that the role of men and women in the fishing business was equal, but now we do because if women do not buy gas or bait for some fishermen, and if I do not process the fish will not get value" (B- 03).

"Women now have increased knowledge to understand that their role in fisheries should not only be limited to processing the fish but also to participate in management and decision-making" (SH-02).

Although the interventions have provided women with the necessary knowledge of leadership, the women are still limited to processing and selling fish to a large extent. The efforts to acknowledge and accept women as one of the main stakeholders in the fisheries sector need to continue.

"Because the men do not want us to be their head even if we are capable of doing so, that is why they group themselves and campaign against the woman who contested for the Grand Bassa CMA elections, and she lost to a man" (B-09).

4.6 Participation in Fisheries Decision-making Processes

About 82% (N=23) reported not participating in community meetings or fisheries management decision-making processes before interventions were implemented in their communities. The respondents reported that men held leadership positions and led most decisions in fishing sectors, and the women were rarely invited to such meetings.

"The men are the ones that can sit in meetings to discuss and make decisions about the fishing business because they are the ones who go on the sea to fish; if they want to invite women, it is only the women leader that can attend the meeting; most time the men only invite the leader to discuss price or when they want to fine a woman" (B-012).

"Before, women never had a role in participating in leadership or any position in the fishing community. Now women become secretary, treasurer, and vice president- I serve as the vice-chairperson for the CMA formation committee, and it was good because I contributed to the establishment of the CMA" (B-08).

Women leader is the only one invited at times to participate in the meetings, but their participation is limited.

"I am the women's group president here, and I always participate in meetings to represent my women, but I do not have the power to make final decisions in the meetings because the men can be plenty in the meeting more than the women" (R-01).

Equipment owners have decision-making power and can attend meetings; however, this is not the case for women, as women do not participate in these meetings.

"Women who have canoes have some decision-making power; for example, for my canoe, I decide which fishermen I want to fish in my canoe because I am the owner, and I am the one buying the fish materials, but the men who

are fishing for me are the one that can attend the meeting because they are the one that goes on the sea to fishing" (B-03)

One of the implementing institutions stated that women are on the decision-making table due to intervention activities.

"In the past, when men and women were together in a gathering, women could not talk unless they were amongst themselves in their small corners. Through constant engagement with women, they can talk during discussions, share their opinions, and express themselves. They have earned more community respect and are no longer brushed out" (SH-01).

The establishment of supportive women's groups helps empower women's participation in discussions.

"EJF trained us and organized our women groups "Fish for Living" the Fanti also have their women group; because of the different training and workshops we attend, women are now in leadership and know our value" (B-06).

"The leadership and communication training EJF helps us women to be brave to talk and compete for a leadership position because we know our importance. Whatever a man can do, a woman can also do the same and even better" (B-01).

Women are informed of the importance of their role and ideas in fisheries management and their rights to be part of the decision-making processes.

"We are fighting to participate in meetings and become leaders not because we want to disrespect our husbands but because we know our rights and a lot about the ocean" (R-11).

4.7 Access to Opportunities

The participants were asked if they owned fishing equipment such as canoes, nets, machines, and a processing house (kitchen). A processing shed is where the women smoke or dry the fish. About 37% (9 women) said they owned fishing equipment and men were fishing for them. They processed and sold the catch. About 62% (15 women) said they do not own equipment but

financed fishermen by buying them bait and gas. About 83% (20 women) said they owned a fish drying kitchen, while 17% (4 women) said they did not own a drying kitchen; instead, there is a mini dryer in their house to dry their fish, and when the fish is more, they used their 'friend's' kitchen.

Participants were also asked what kind of training they had participated in and what they learned. Their responses (women) were homogenous across Robertsport and Buchanan, specifically economics (financial literacy), leadership and communication, and fish handling. Below are their homogenous responses.

"EJF trained us on the different types of leadership and communication; they also trained us to use us to manage our money (VLSA) and how to keep the peace in the community. FAO trained us about good hygiene when processing the fish so that our customers and ourselves will not get sick" (B-03).

"Through the village savings and loan associations, we were also trained to be good leaders and communicate well with our members, customers, and community. In the leadership training, we learn that men and women have equal rights to attend meetings and make decisions about the fishing business" (R-06).

All respondents reported that they perceived changes in women's ability to discuss fisheries management, handle fish more hygienically, and be more prudent with money. Fishermen and fish processors also stated that they understand gender equality issues and the importance of their roles in the sector and the community because of the knowledge they gain.

"We understand that our ideas are important in fisheries management because we handle the fish. If the men use a chemical to catch the fish, we can know by looking at it that we are always on the beach, so we, the women, have the power to end bad fishing (use of chemicals)." (B-02)

"Any time the NaFAA, EJF, and FAO want to meet in the community or Monrovia with the fishing communities, we, the women, are always part of the meeting. Women are now more active in discussions related to fisheries management" (B-03).

"Men now recognize women in fisheries meetings, and some feel that women have been marginalized in fisheries for too long" (B-08).

4.8 Economic Empowerment

All the respondents interviewed indicated that the intervention activities have significantly empowered women economically by providing them with training and resources to engage in income-generating activities related to fisheries. As a result, there is more respect for women in the community and less reliance on men for financial and decision-making assistance. The VSLA assists women in saving money and offers loans and credits to its members.

"We used to suffer to get loans for our business because the banks told us that we were stationed at a particular place that we were always changing the location of the fish season, so they used to refuse to credit us, but since EJF brought VSLA, it is helping our business and family." (R-9)

"Most of us never used to save our money, and getting a loan from banks was hard, but because of this VSLA, we can realize profits from the business at the end of the year and get loans easily." "Sitting here, my eldest son and daughter will graduate from the university and high school this year. I pay their school fees from my business" (B-02).

"I was able to buy another fishing canoe. Last year some women were also able to move their business to another level; some of them who never owned canoes were able to buy canoes while some women who had one canoe are having two now" B-03).

One of the respondents reported that she is an active member of VSLA, this has resulted in her husband acknowledging her financial contribution, and he respects her. This is also because he benefits from the credit and loans she takes from the association. Financial empowerment of women has helped to reduce GBV in the communities. Another respondent stated that the FAO fish handling training was significant for their business.

"My husband's canoe had a problem, and we needed to repair it; I told him not to worry because of the VSLA club. I went to my VSLA meeting and took a loan which I gave him to repair the canoe. Because of that, my name changed in the house to Sweetheart" (B-03).

"My fish used to spoil in my hand, but since I participated in the fish handling training, my fish can no longer spoil in my hands as it used to, and I am making a good profit from my business "(B-04).

4.9 Organization and Advocacy

The respondents reported that the interventions have helped the women organize and build a sense of community by establishing women's groups and VSLA clubs. Respondents indicated that the women's groups (Fish for a Living, Women of Success, and Dependable Women) established to support women's voices in pushing for their full participation in fisheries management and decision-making has been a boon to them. They stated that the women's advocacy for good fishing, leadership, and full participation in fisheries governance and management have improved due to their participation in intervention activities. With the knowledge of leadership, communication, and sustainable fisheries, the women pointed out that they were taught to communicate their ideas well in meetings. These remarks indicate that the women's groups have been effective in advocating for women's well-being and sustainable fisheries practices by saying no to bad fishing (use of chemicals). Below are some responses from participants.

"Our women's group (Dependable Women) has brought unity among us, we check on each in times of sickness, bereavement, and other happy moments, and we also contribute some money toward these moments" (R-10).

"The women groups established by EJF helped us to talk for ourselves and made the men and the community respect our views" (B-03)

"We have our constitution, and the government knows about us because our constitution is probated; we meet monthly to discuss matters about our businesses and those affecting us, but the VSLA meets every Friday" (R-01).

Women's participation in fisheries governance promotes equity and good fishing practices as they refuse to buy fish caught using chemicals.

"Women were never part of fisheries governance structure, but through the community, for fisheries project, women are actively engaged and capacitated to participate in fisheries governance the CMA advocating for themselves and sustainable fishing practices" (SH-02).

"NaFAA told the fishermen not to use chemicals in fishing because it is not for the sea and our health and that we, the women, should not buy fish caught with chemicals. -a few months ago, my customer (fishermen) brought fish. Immediately I saw the fish; I knew he used chemicals to catch it, so I refused to buy it. I told him anytime he uses a chemical to catch fish I will not buy it so he stop using it" (B-02).

4.10 Addressing Gender Equality

To understand how interventions have considered or addressed gender-related issues in fisheries, the question, "Can you explain how these interventions have addressed issues of equality?" was asked the respondents. The respondents described that the interventions have addressed issues as the women are no longer observers. They are now included in community discussions and decision-making processes. Women and men work together in diverse roles and actively contribute to the community and fisheries governance, unlike in the past when women were disregarded.

"The interventions are helping to address gender equality because women and men are now working together equally. In the past, the only positions women used to occupy in the community were chaplain and treasurer" (B-03).

"Because of the meetings and awareness EJF the men and women are now working together too, and we are now speaking in meetings and taking leadership roles" (R-09)

Participants also reported that interventions had given men and women equal access to fishing equipment, such as machines which they received from NaFAA through corporations.

"Women's abilities are now recognized, and men alone are not benefiting from interventions. For example, NaFAA distributed machines to cooperatives that women and men are part of, and every member has equal rights to the machine. In the past, only the man would have benefited from these machines" (R-06).

"I am the president for the cooperative on my landing site; in the past, the men would not have allowed me to lead, but because other women were supporting me, I was selected" (B-04).

A participant stated that equal gender representation in meetings and intervention activities actively incorporated women in decision-making processes in the community.

"Now when the government or any organization want to meet with fishers, women are always invited. Most times we are more than the men, and when we speak our ideas are takedown" (B-06).

"We, the women, would not have known our rights and importance in the community, but because of the training, We know our rights and that fishing is everyone's business. We are now empowered" (B-11).

The male respondents from Buchanan reported that more focus is given to women than men because the implementing institution always says women have been left back for a long time.

"Any program that comes into this community is always about women to the extended women are now involved in CMA activities- making the women not respect us (men)" (R-12).

When asked to define gender equality, respondents indicated an equal opportunity for men and women.

"Gender equality means everyone should benefit from anything the government or NGO share in the community" (R-07).

"In my own words and what we are taught in meeting gender equality mean men and woman should be free to speak their mind, take part in activities and benefit from anything" (B-01)

"Gender equality means everyone is equal. It is my right as a human being and a fish processor to take part in leadership" (B-03)

4.11 Social-cultural Factor

Respondents were asked about social and cultural norms and practices related to women's roles in the community. Most respondents believe that social-cultural norms in their community have impacted women's roles, noting differences between women's and men's roles regarding participating in fisheries governance access to resources. All the respondents said that cultural

norms restrict women from performing physically demanding tasks and taking on leadership roles.

"Woman's voice is not supposed to be above her husband's as the man is the head of the home and the final decision maker."(R-14)

"A woman can own a canoe and other fishing types of equipment, but she is not allowed to fish at sea." (R-08)

"The cultural beliefs that can affect us women in this community, especially the belief of the men that women should not be a leader even if women can do the work better. This is one of the reasons why those who contested for the Co-management Association (CMA) president lost the election to a man."

"Men are the one who takes big position because they are the ones who go on sea fishing, but we do not want to go fishing; we just want to attend meetings and give our ideas" R-01."

4.12 Impact on Well-being

Respondents were asked to describe how interventions have impacted their overall well-being. Most respondents indicated that interventions had impacted their well-being through financial support and technical knowledge of handling and processing. Interventions enhancing the opportunities for women to support additional income have provided additional income to support children's education and to expand the business. But most importantly, they understand their rights, become leaders in decision-making forums, communicate their needs confidently, and become financially independent. The women's economic empowerment through VSLA has increased their income, thus reducing poverty in their households and community as a result of their participation in fisheries governance and positive social outcome. Below are some quotes from respondents.

"Village saving is helping us financially. We can pay our children's school fees on time; if we have an emergency, we can loan easily from the VSLA" (R-06).

"The main intervention helping us is the Village Saving and loan association, which is helping us to save and manage our money. We can get credit and

loans any time to improve our businesses and settle family problems- for example, my son had an accident and needed an operation. I ran to the VSLA and got a loan to pay my son's bills. I am very grateful to EJF" (R-08).

"The traditional ways of drying our fish can give us eye problems. The FTT kitchen FAO is building will help with our health and improve the value of our fish" (B-03).

"The smoke ovens in by the World Bank in Robertsport made it much more efficient for women to dry fish using less wood, spend less money on wood, reduce the amount of smoke for their health, and get quality fish, and intern generate the required to profit from the fish. What they use now is much better than the traditional oven or canopy. The VSLA has also given the women financial power to cater to their business and family need" (SH-01).

4.13 Environmental Conservation

Most of the interventions' target audience were working fishers, women, and men to enable active participation in fisheries management and decision-making processes to enhance their contributions and promote equitable and sustainable development. Promoting women's participation in fisheries governance positively impacts the community and the environment as they contribute their perspectives and knowledge in sustainable fisheries measures. These interventions are promoting sustainable fishing harvesting, monitoring illegal fishing activities, protecting the habitat and endangered species, and raising awareness of all these activities. The community members are trained in monitoring and data collecting tools using applications on Android phones. The app helps communities easily collect information on IUU fishing activities. See quotes from respondents below.

"EJF project installed an app (collect app) on the phone of fishermen to collect information on IUU fishing activities at sea. The app is on my husband's phone. They also say no one should kill sharks and turtles" (R-03).

Women and men are trained to participate in community science to collect data on (temperature, turbidity, and beach cleaning)" (B-01).

"They are raising awareness about open defecation and dumping plastic on the beach. People used to waste dirt and defecate on the beach, but because

of the awareness, it has reduced, and our landing sites are now clean" (R-06).

"NaFAA is stopping people from using monofilament nets because they kill the smaller fish, they also stop fishermen from killing protected species (turtles, sharks). We are told that no one should kill them because they are finishing from the sea and that if smaller fish are killed, there will be no fish in the future" (B-03).

Apart from the interventions addressing environmental issues, there are also traditional laws that protect the environment and the women are the ones who enforce these laws because they are always on the beach waiting for the fishermen.

"No one is allowed to wash their hands or pan in the sea after holding or checking fish. No one is also allowed to waste the water they wash with fish in the sea, we believe that is used to clean fish in the sea, it will spoil the sea (reduce catch)" (R-06)

" Anyone caught throwing dead fish and dirty water into the sea is fine because it will make the sea dirty, and the fish will run away (Reduce catch)" (R-13).

Without the interventions mentioned above, the respondents expressed that the women would not have received recognition in the fishing community, and the fishing community would not have upheld women's rights. Without the support and training from interventions, their financial and social contribution would be limited. They would not have been able to expand their business to generate more income and could not participate in the fishing governance and decision-making forums.

"We were never going to be recognized, and it would have been terrible for us as women in the fishing community. Because even with all the training or intervention that comes to us, fishermen still do not support women's full participation in meetings and decision-making activities. So, if the interventions had not been implemented, women would not have had the voice to advocate for themselves" (B-03).

"We were never going to be strong. We were just going to continue selling our fishing business without managing it properly and struggling to get a loan" (R-06).

"Women would have continued to stay in the back while men made all the decisions in the community; we would not have known our rights and importance in the community" (B-01).

4.14 Unintended Side Effects

The study identified unintended side effects of interventions implemented in the research locations, like competition between men and women, increased workload for women, dissatisfaction, and potential conflict. Increased participation of women in fisheries governance will result in a change in the power dynamics in the community, leading to tension and rivalry between the men and women in the communities.

"These interventions have increased our workload and made us very busy, but we like it because it is improving our ability" (B-02).

There is dissatisfaction among community members due to the uneven distribution of benefits.

"The machines NaFAA give to the corporations only the Liberians received, and we are also paying taxes, but we were excluded. They said they did not give us because we already have machines" (B-012).

"The kitchen the FAO is building is not big, and not all the fishmongers in Buchanan will dry fish in it, so because of that, some women are angry, and it brings confusion" (B-08)

"Some women have issues with their husbands. Some men do not want their women to attend project meetings. They think their women will cheat them and not pay attention to the home. Men still do not accept that women are supposed to participate in it" (R-03).

The women-focused interventions have created competition, between men and women in the community with increased women's participation in fishing governance and decision-making processes. The issue of trust is also a reason why men frown on women's participation in project activities. Increased awareness of women's rights has caused men to be insecure within familial settings.

"I see that some men are angry that women are now part of leadership roles because, according to them, women do not go to sea, so we should not be in leadership. The men are also angry because they say all the programs coming into the community are focused on us" (B-08).

"Now that the women are competing with men, there are some tensions because the women are now asking questions in the meetings and at home that they never asked, They are asking now because they are now knowledgeable and informed, so it is not conflict free. Some men did not want the women to contest in the CMA election and won; there were many rivalries between the women and the men because the men did not want the women to occupy those positions" (SH-02).

"Men do not like their women participating in these activities; as a result, it is causing problems in some homes-they; they think their women will cheat on them and not pay attention to the home. Also, they are afraid that their women's eyes will open (women will be wiser)" (R-06).

4.15 The Stakeholder Interview

The stakeholder interview was conducted to gather information from institutions implementing interventions in the research location. The stakeholders comprise NaFAA, EJF, and FAO. These stakeholders were identified based on the information provided by the respondents. Responses from the stakeholders provided valuable insight into women's rights and role in the fisheries sector and interventions their institutions implement in the study area. The main impacts of interventions on women are building women's capacity to participate in fisheries governance to promote sustainable fishing through training, financial literacy, and adding skills. For example, during the interviews in Buchanan, the respondents said that they now understand that the views of women are important in fisheries management. Men now recognize women in fisheries

meetings, and many feel that women have been marginalized in fisheries for too long. In Robertsport, participants maintained that women are now more active in discussions related to fisheries management. Table V presents quotes from respondents on the result of interventions.

Table V – intervention results or impacts – quotes.

Interventions Activities	Women (Processors)	Implementing Institutions
Leadership & Communication Training	<p>Women learned about the different types of leadership, how to talk among groups, and how to solve problems. Because of that, women are now in positions like vice president, general secretary, and auditor.</p> <p>Women now know they have equal rights to men to participate in fisheries-related discussions and management.</p> <p>We are also together as women to speak for ourselves</p>	<p>Improved women's ability in the community by building their capacity in leadership and communication. This has enabled them to participate in fisheries governance (CMA).</p> <p>Women now have increased opportunities to understand fisheries management and decisions. They now have skills, especially when it comes to advocacy and lobbying.</p> <p>Women are now creating awareness of sustainable fisheries and participating in science-based research.</p>
Financial Management Training	Women have access to saving credit and loans thanks to the VSLA.	The women were also trained in financial management (Village Saving and Loan Association), we helped them establish their saving club, and they are saving in the community.
Added skills	Women are knowledgeable about the fish handle and process and hygiene	Women now have the needed skills to handle fishing hygienically.

5.0 Discussion

5.1 Impacts on Gender Roles

The research results indicate that men and women have specific roles in fishing communities. The role of the men is to fish, after which they clean the fishing equipment while the women process the fish. Gender roles in small-scale fisheries are characterized by men catching the fish while women dominantly process and sell the local market (Uduji & Okolo-Obasi 2020). Men are also the main decision-makers both at the household and community levels. The women do the rest of the work, drying (smoking), freezing, packaging, selling the fish, and caring for the home. The women also sponsor fishermen's fishing activities, including buying fishlines, hooks, ropes, and baits. Women also help repair and purchase new canoes. Women use their income from fish sales to invest in boats and gear to sell or rent to men for harvesting activities (IUCN 2019). The study observed that despite women's role in the sector, women's role in fisheries governance is still limited as the sector is seen as male-dominated. Fishing is often associated with men because they harvest fish from offshore (IUCN 2019). The different roles of men and women in society shape the constraints to participation and receipt of benefits (Fitriana and Stacey. 2012). One participant mentioned that the moment the men bring the fish from the sea, the rest of the work is for the women. So, the women do the highest work because the fish will not get value and profit without them.

Creating women's groups, promoting women's participation in Co-management Association leadership (CMA), training on leadership and communication, and implementing VSLA have challenged traditional gender roles in Buchanan and Robertsport within the fishing communities. Women have gained access to education and awareness, enabling them to actively participate in fishing management activities, leading to a significant shift in power dynamics within the communities. While the interventions have provided women with the necessary knowledge of leadership, women still face challenges in fully benefiting as most men

still believe that the role of women is to process fish and not sit on decision-making tables, specifically as the head. Evidence of this was seen during the Grand Bassa County elections when a woman contesting for the presidency lost to a man due to the prevailing gender norms and power dynamics within the community.

5.2 Participation in Decision-making.

The research shows that in Buchanan and Robertsport fishing communities, women were not given equal opportunities to participate and contribute to the decision-making process despite their financial contributions; this can be seen in the fact that women never fully participate in fisheries management and decision-making processes in the community. Though women play numerous roles throughout fisheries value chains, they tend to be absent in corporate, government, and community leadership (IUCN 2019).

The research revealed that women were not officially invited to these meetings despite their roles in financing most of the men's fishing trips, purchasing fishing equipment, and owning canoes. *"Even when women attend these meetings, the men do not allow us to speak, and when we put our hands up to speak, they shut us up. Women were just observers in community meetings."* The interviewed men justified this by saying that women do not go fishing, so they do not know about the ocean.

The sea chief is the fishermen's leader; the women have their leader too. However, the sea chief is more powerful than the women leader. However, with the implementation of different intervention activities, including training and exchange programs by EJJ, FAO, and NaFAA, women can now speak in front of groups of people and take part in meetings and advocate for themselves and good fishing practices. Women occupy significant positions in the communities in Buchanan; a woman serves as the Co-management Association (CMA) constitution committee head, which allows her to participate in the major meetings. According to the women, the Communities for Fisheries project by EJJ organizes them into women groups

where they have one voice to advocate for their inclusion in fisheries management. This has helped build their confidence to compete for leadership roles, have space in decision-making processes, and promote good fishing practices. A first entry point to strengthen women's involvement in fisheries management is to support female leadership among post-harvest processors (Torell et al. 2019).

A woman also occupied the vice-chair position on the CMA formation committee. Also, in Buchanan, women occupy three significant CMA leadership positions: vice president, general secretary, and auditors. Quoting one of the participants, she said, *"The leadership and communication training EJJ gives us the women help us to be brave to talk and compete for a leadership position because we know our importance. Whatever a man can do, a woman can also do the same and even better."*

There is a significant change in Buchanan regarding women's participation in leadership and fisheries management. Women are no longer behind; they are now in leadership positions and have the chance to participate fully in Co-management activities. Women constitute 50% of Collaborative Management Associations (CMA) Leadership in Liberia (EJJ 2023). The interventions have provided opportunities for women to participate in decision-making processes related to fishing regulations and conservation efforts.

This increased women's collective voices through their women's groups and participation in community meetings and fisheries management discussions. Women's voices have been empowered and contribute to shaping fishing practices.

5.3 Access to Opportunities

The study findings indicate that women have access to capacity-building opportunities such as leadership and communication training, financial management training, and fish handling and processing skills training to enhance women's participation in fisheries governance. The Community for Fisheries Project implemented by EJJ trained the women

in *Leadership, Communication, and Financial Management*, and they were organized into Village Savings and Loan Associations (VSLA). The Food and Agriculture Organization (FAO) also took some women to Ghana on an exchange program and trained them on modern and hygienic ways to handle and process fish. FAO also held additional training in their communities (Buchanan and Robertsport). Women are also part of fisheries cooperatives and fishermen working together and managing their resources. As a result, of the different training and opportunities, the women claim to know the value of their role in the sector and the community and that they are now participating in fisheries discussions and governance.

5.4 Economic Empowerment

The study findings indicate that the interventions had played a significant role in empowering women economically by providing them with training and resources to engage in income-generating activities related to fisheries. Training in post-harvest processing business management and financial literacy has equipped women with the tools to improve their fish processing business (Torell et al. 2019). This has increased respect for women in the community and reduced dependence on men for decision-making and financial support. The VSLA helps women to save money and give out loans to their members. Getting loans or credit from banks or other financial institutions was difficult due to the request for huge collateral and high interest.

Nevertheless, because of the VSLA, women can easily access credit and loans with lower interest and collateral to improve their businesses, care for their families, and other personal needs. VSLA associations provide women with the financial freedom to improve their participation in fisheries governance (EFJ 2023). Microfinance and business support interventions successfully provided women better access to savings and loans to improve their business skills (Torell et al. 2019). This helps the women to realize profits from the business at the end of the year. According to one of the participants, she bought land from savings last year

and took a loan of 50,000 Liberian dollars to add to her business. *"Because of the VSLA and the fish-handling training, my business has improved; I no longer find it difficult to pay my children's school fees."* Another participant stated that due to her participation in the VSLA, her husband respects her because he also benefits from the credit and loans she takes from the association. Income-generating activities in post-harvest and alternative livelihood activities empower women's position in both domestic and productive roles (Fitriana R.2012).

5.5 Organization and Advocacy

The interventions have created community and organization among women by creating women's groups and VSLA associations. Specifically, the Communities for Fisheries project by EJJF organized women fishmongers and processors into groups (Fish for a Living, Women of Success, and Dependable Women). These groups have led to women having one voice to advocate for themselves. Due to the increased exposure to sustainable fisheries management, women are better qualified to advocate for good fishing practices and have demonstrated an active interest in doing so (Torell et al. 2019). It has increased unity among the women as they look out for each other during sickness, bereavement, and happy moments. The Women's groups meet monthly to discuss issues related to their business and well-being. Interventions that promote collaborative efforts among women (fishmongers and processors) associations can make them a potential force to advocate for sustainable fisheries management (Torell et al. 2019).

5.6 Addressing Gender Equality

FAO 2017 defines gender equality as when women and men have equal rights, opportunities, and entitlements in civil and political life regarding access, control, participation, and treatment. (FAO,2017, PG 4). Gender equality is when men, women, boys, and girls have equal rights, responsibilities, and opportunities (Fitriana and Satncey 2012). The research finds that interventions implemented in small-scale fishing communities in Buchanan and Robertsport

have to a more significant extent, addressed gender inequality by promoting equal participation and collaboration between fishermen and women – making women visible in community leadership and discussions. Previously, women were limited to certain positions, such as Treasurer and Chaplain. For activities that should have targeted both men and women (e.g., co-management activities), women's participation and contribution are limited to decision-making (Fitriana and Satncey 2012). However, now, women can take on diverse roles and actively contribute to the community and fisheries governance institutions such as the CMA.

The interventions have ensured that both men and women access fishing equipment equally, such as outboard engines they received from NaFAA in cooperatives. According to the women, they are now aware that they have equal rights as the men in fisheries management issues, and fisheries management is not solely a man thing. While discussing this, a fishmonger said, "*We, the women know our rights and that fishing is everyone's business.*" The interventions are helping to address gender equality because women and men are now working together collectively in managing fisheries resources. Women's abilities are now recognized, and men alone are not benefiting from interventions. For example, NaFAA outboard engines distribution to cooperatives that women and men are part of, and every member has equal rights to the machine. These interventions promote gender equality by breaking down barriers and ensuring women have the same opportunities as men to benefit from fishing resources. However, more needs to be done to address the issues of gender equality and equal participation, as some men still believe that women should not be on the decision-making table because they are not the ones who are fishing. Gender concerns require special attention to increase women's ability to conduct fishing-related activities to gain better access to and control the management of natural fisheries resources and services (Fitriana and Satncey 2012). Achieving a change in gender roles in society is complex, and empowering women in public decision-making must be gradual (Fitriana and Satncey 2012).

5.7 Social - Cultural Dynamics

The research finds suggest that social-cultural norms positively and negatively affect women's full participation in the sector, such as power dynamics, gender relations, and traditional law. The laws guide women on how to conduct themselves; for example, they are not permitted to fight or abuse others; if they do, financial fines are imposed on them. This cultural norm promotes nonviolent conflict resolution and deters aggressive behavior, which may be beneficial for fostering harmony within the community. Cultural restrictions also prevent women from performing physically demanding tasks like towing a canoe or boat on land, throwing a net, going fishing, and taking on the position of sea chief. Many African cultures, traditions, and myths exclude women from going to sea to fish; however, they are engaged in every step in the post-harvest sector (Torell et al. 2019).

A woman can own a canoe and other fishing equipment but is not allowed to fish at sea. However, the women are happy with their current role as fish processors, and they do not wish to go to sea to fish but want to be included in decision-making processes. Per societal and cultural norms, men are expected to perform most sea fishing duties and make decisions, while women are prohibited. At the household level, there is a cultural belief that men are the head of the home and a woman's voice should not be more than her husband's. These beliefs limit women's ability to express themselves and assert their opinions giving men more authority at home and in the community. According to the participants, community-based interventions positively impact these cultural and social factors through awareness and educating the community on the importance of men and women working together to manage fisheries resources and through capacity-building training for the women.

5.8 Impacts on Overall Well-being

Many participants noted that the interventions implemented in their community had enhanced the overall well-being of the fishmongers and processors, such as finances and health.

Previously, saving their money and accessing loans and credit was challenging in the fishing communities due to high-interest rates and collateral from banks and other financial institutions. However, introducing Village Savings and Loan Associations (VSLA) has enabled fishmongers and processors to save money and access credit and loans. They are ultimately improving their businesses, family, and livelihood. Interventions to improve women's entrepreneurial and negotiating skills have strengthened women's livelihoods through increased income and agency and better social and health outcomes (IUCN 2019). The traditional ways of drying (smoking) the fish cause eye problems for the women. The women anticipate that the FAO intervention, particularly the FTT fish processing kitchen, will help lessen health difficulties and other illnesses connected to the old ways of drying or smoking fish. These interventions have to improve the fishmongers' general health and well-being.

5.9 Environmental Conservation

According to most participants, their communities and interventions implemented in their communities have considered environmental protection and sustainable fisheries issues through traditional beliefs, technological advancement, education, and awareness. The community believes that washing hands or pans used to carry fish in the ocean after holding or checking fish will spoil the sea (reduce catch). Also, wastewater, most specifically water used to clean fish, is prohibited from being disposed of in the ocean. The Communities for Fisheries project implemented by EJF is conducting a community-based approach to monitoring illegal, unreported, and unregulated fishing by installing an app called *Dase App* on the phone of fishermen to collect evidence on IUU fishing activities at sea. The EJF program also carries awareness to stop fishermen from using chemicals and harmful substances while fishing. The EJF also trained men and women to participate in community science to collect data on (temperature, turbidity, and beach cleaning) –and raise awareness on open defecation and dumping of waste (plastics) on the beach. These actions promote environmental stewardship

by encouraging the participation of locals in protecting the environment. Women's involvement in local marine governance could help to increase social and ecological outcomes (Rohe et al. 2018).

NaFAA is also taking action to prevent the killing of protected species (turtles, sharks) and using chemicals for fishing like mercury and dynamites. According to the participants, NaFAA abolished **monofilament nets**, which catch juvenile species due to their size.

When asked what if these interventions were not implemented in the community, what would the condition of women look like? Responding to this question were conflicting viewpoints from the participants, as some believed that if the interventions were not implemented, women would not have had a voice in meetings and decision-making, and women also would not have had access to loans and credit. However, some believe that some participants also believe that without the interventions, they would have continued with business as usual such as focusing on their fish processing and selling. At the same time, the men do the fishing and decision-making.

5.10 Unintended Side Effects

The research has identified unintended side effects of intervention implemented in the research area, such as rivalry between men and women, increased workload for women, dissatisfaction, and potential conflict. Most participants stated that the interventions had increased the workload for women outside their fish processing business by attending meetings, training, and workshops; however, they see it as a positive increase in their workload because it exposes them to new experiences that improve their abilities. As women take on a more prominent role in fisheries management, they are still disproportionally burdened with managing household economics (Torell et al. 2019).

Due to persisting gender roles, most men in the community do not fully accept women's involvement in fisheries management and decision, thus seeing them as rivals. Men believe that

when their women are engaged in leadership or intervention activities, they will engage in extramarital activities that affect their homes. There were contrasting viewpoints as most participants expressed excitement about their participation in intervention activities and that they did not see any side effects. Some pointed out potential community dissatisfaction and conflict due to intervention activities. Pointing out the distribution of fishing equipment (machines and nets) by NAFAA, according to them, the Fanti fishing community did not benefit, leading to dissatisfaction and anger. Also, the FAO FTT fish processing kitchen does not accommodate all the fishmongers and processors causing some form of confusion among the women. These unintended effects emphasize the need for additional focus and measures to address gender dynamics, foster understanding, and lessen the likelihood of damaging effects on families and relationships.

6.0 Conclusion and Recommendation

The research provides new insight into the current community-based interventions implemented by government and nongovernmental organizations (NGOs), the women's response to the interventions, how it has enabled women's participation, and what challenges these women faced. The research also explored the impact of local social-cultural context on the success of implementing such interventions. The research assesses the experience of women with interventions aimed at access to resources, social inclusion, environmental sustainability, and unintended side effects, and how these interventions have promoted distributive, procedural, and social as well as unintended side effects.

From this case study, it can be said that interventions have significantly impacted the social-cultural component of the fishing communities. The interventions have prioritized women's empowerment in the sector. This has led to a significant increase in women's participation in fisheries decision-making and participation; women are in key leadership positions in the communities and CMA. Women benefiting from capacity-building training and added skills have improved their participation in leadership and decision-making processes. Women also participate in and lead ecological data collection through community science activities. Women have been empowered economically by having access to financial resources, loans, and credits to improve their businesses and solve family issues because of VSLA. Also, establishing the women's groups has built a sense of community and network for the women as they can gather to discuss matters that concern them—covering women's social well-being as they care for each other in challenging and happy times.

The study also discovered that existing social-cultural norms challenged women's sector improvement. Despite improving women's ability in the sector, men still frown on women holding leadership roles and participating in fisheries management and decision-making. The

existence of this cultural norm highlights the need for more effort to engage both men and women in the fishing communities through awareness education, dialogue, and workshops on the importance of gender equity and equality to defeat the power dynamic and stereotype and achieve equal participation of women in fisheries management and decision-making.

The result of this study adds to existing knowledge on the social-cultural impacts of interventions on women in fisheries communities. Governments, nongovernmental organizations (NGOs), and policymakers can look at the result of this study to craft interventions that promote gender and women's participation in fisheries management activities.

6.1 Recommendations

Based on the discussion, the following recommendations have been suggested:

- Fisheries management institutions both at the community and national levels like the CMA should have clear gender policies to ensure the equal participation of both women and men in fisheries governance and in thriving for sustainable fishing activities.
- Continue strengthening women's groups' organizational capacity to broaden women's participation in fisheries management and ensure they are seen as major stakeholders even after intervention activities.
- Implementing more interventions to promote women's participation in the sector. Particularly women's involvement in leadership and economic empowerment. Interventions should also consider gender equity and equal participation of men and women. In so doing, the men or women will feel included.
- Active engagement with men through awareness, dialogue, and workshops to break stereotypes about women holding leadership roles and participating in fisheries

management activities. These engagements will also help change men's perception of women's participation. It will also reassure the men that women's participation in decision-making will not reduce the men's masculinity but instead, it will promote collective effort in protecting and managing their livelihood.

- To adequately address cultural and social barriers, traditional fisheries leadership structures should also be educated on the importance and benefits of women's participation in fisheries discussions.

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Appendix

Field Research Questions

1. What is your name?
2. How old are you?
3. Are you single, married, or divorced?
4. How many children do you have?
5. How far did you go in school?
6. What do you do for a living?
7. How long have you been doing this?
8. What does your spouse do?
9. Do you own any fishing equipment? If yes, what kind of equipment do you own?
10. Are there more or fewer women in the sector than when you first started?
11. In your opinion, what do you think has led to the increase or reduction in the number of women?
12. As a woman, do you have more specific roles or work in the fishery sector than men?
 - a. What are those?
13. Are there any cultural or traditional laws in the fishing community?
14. Are there any laws/norms specific to women's role in the fishing community?
15. Can you tell me more about cultural norms or laws and how they affect you?
16. Are any interventions implemented in your community to improve the fishing community?
17. Can you describe any interventions implemented in the fishery sector to improve the conditions of women?
18. Do you think these interventions have helped change women's role in the fishing community?
19. Can you provide any examples of specific changes, socially, culturally, and economically that have resulted from these interventions or policies?
20. What specific aspects of women's social well-being have these interventions particularly influenced?
21. Can you tell me about the time (s) when you fully participated in decision-making processes due to these interventions and what it was like for you?
22. Can you tell me more about any unintended consequences of these interventions that have affected women's social well-being in the fishery sector?
23. What if this intervention were not been implemented? What would the condition of women look like in this community?
24. Have the interventions led to negative consequences?
25. In your opinion, what are some key things that make up a fair fisheries sector?
26. Can you explain in what ways these interventions have addressed issues of justice based on your definition?
27. Have the interventions led to negative consequences on the environment?
28. What is the environment according to you?
29. Can you explain how these interventions are implemented to address potential environmental issues?
30. In your opinion, what further interventions or policies could be implemented to continue addressing gender roles and women's participation in the fisheries sector?
31. Is there any other information you would like to share or discuss?