UNLOCKING OPPORTUNITIES

Potential alternative and supplementary livelihoods in Liberia's coastal communities

Funded by the European Union

Implemented by Environmental Justice Foundation

In partnership with National Fisheries & Aquaculture Authority, Liberia

ENVIRONMENTAL JUSTICE FOUNDATION

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EJF works internationally to inform policy and drive systemic, durable reforms to protect our environment and defend human rights. We investigate and expose abuses and support environmental defenders, Indigenous peoples, communities and independent journalists on the frontlines of environmental injustice. Our campaigns aim to secure peaceful, equitable and sustainable futures.

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The Environmental Justice Foundation (EJF) and the National Fisheries and Aquaculture Authority (NaFAA) are working in partnership on the European Union-funded Communities for Fisheries project to reduce illegal, unreported and unregulated (IUU) fishing and improve the sustainability of Liberia's fisheries.

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Contents

Acronyms

EJF	Environmental Justice Foundation
GDP:	Gross domestic product
IMM:	Integrated Marine Management Ltd
IUCN:	International Union for Conservation of Nature
SLED:	Sustainable livelihoods enhancement and diversification
SSF:	Small-scale fisheries
VSLA:	Village Savings and Loans Associations

Executive summary

Fish landing site, Picnicess, Grand Kru.

Liberia's coastline provides food and job security for thousands of fishers and fish workers and revenue for the government. The fisheries sector is divided into small-scale and industrial fleets, with small-scale fisheries (SSF) producing 86% of the total landings and directly employing around 51,000 fishers.[1]

Kru and Fanti canoes are the two types of small-scale vessel fishing in Liberia's waters, targeting pelagic and demersal species using set nets, hook and line, purse seines and gillnets. The industrial sector includes trawlers and tuna vessels.

The number of canoes has grown from 3,470 boats in 2007[2] to nearly 5,648 boats in 2020.[3] This growth has been driven by the profitability of the SSF and ease of entry into the sector, which is largely unregulated. This increase, coupled with illegal fishing by both the small-scale and industrial trawl fleets, has led to the overfishing of some fish populations. This threatens the sustainability of the fisheries and the livelihoods of thousands of fishers and fish workers, further impoverishing coastal communities. To address these challenges, fisheries resource managers have proposed introducing alternative or supplementary livelihood opportunities that reduce the overall dependency of coastal communities on fisheries resources.

The introduction of livelihood interventions in Liberia's coastal communities presents several critical challenges due, among other things, to the weaknesses in the natural, financial and physical assets needed to build alternative livelihood opportunities. Experience in other contexts has also highlighted the difficulty of sustaining alternative livelihood interventions beyond the lifespan of individual projects.

This study explores opportunities for alternative and supplementary livelihood interventions in Liberia's coastal communities. We evaluate the status of earlier interventions, document economic ventures available to fishers and fish workers and gather fisher perspectives on financial or other support sources for alternative livelihood interventions. The study then proposes recommendations, including the promotion of sustainable fishing practices to ensure the long-term viability of marine ecosystems, the incorporation of livelihood interventions into fisheries management policies, and collaboration between government agencies and NGOs to provide a holistic approach to alternative or supplementary livelihood development programmes.

Key findings

Fishers are willing to invest in the education of their children to break the cycle of dependency on fisheries. However, half of the survey respondents were unwilling to leave the fisheries sector completely to pursue an alternative livelihood, especially if a higher return on investment was not guaranteed. The reluctance to abandon the fisheries sector is linked to the fact that fisheries are an integral part of the identity, cultural heritage, and way of life of coastal communities. Below is a summary of the key findings of this report:

- Fishers reported a decline in profitability in the last five years, which they attributed to increasingly unpredictable weather conditions, the use of illegal fishing methods, and the fishing activities of industrial trawlers and migrant fishers from neighbouring countries.

- Livelihood interventions introduced by fisheries managers have traditionally focused on managing and expanding fishing activities rather than encouraging fishers to exit the sector. Other interventions targeted ex-combatants to equip them with employable skills and vocations after the civil war. Non-fishery livelihood options have been initiated by fishers to supplement income during low or bad fishing periods.

- 83% of fishers surveyed expressed willingness to leave fisheries, while 50% of fish workers were willing to leave the fisheries sector if given viable alternative options.

- Selling fishing equipment, providing transportation, offering construction, mechanic or printing services, and engaging in retail activities accounted for 81% of the alternative and/or supplementary livelihood options reported by fishers. Meanwhile, 89% of women fish traders preferred trading, teaching, tailoring, pastry-making, and farming as alternative or supplementary livelihood options. Selling fishing equipment and trading were the most popular choices for fishers and women fish traders, respectively.

- Entry costs into these alternative/supplementary livelihood options varied from US$650 to US$5,000 for fishers and from US$250 to US$1,000 for fish traders. The estimated economic returns were higher for livelihood options identified by fishers (US$100 to US$1500 monthly) than for fish traders (US$50 to US$400 monthly).

- Although fishers listed what they considered viable alternative or supplementary livelihood options, they were generally unwilling or unable to use their resources to finance the options. They would instead take loans or other financial assistance from the government, NGOs, and families to start the ventures.

Fishers mending fishing nets, Buchanan, Grand Bassa.

1. Introduction

Liberia's 590 km coastline and exclusive economic zone of 246,152 km² harbour valuable demersal and pelagic fishery resources, which in turn are a vital source of food and nutrition security and livelihood for thousands of Liberians, as well as a critical source of government revenue[4], accounting for around 10% of Liberia's GDP.[5] The Liberian fisheries sector comprises inland and marine subsectors. The marine fishery in Liberia can be split into small-scale and industrial sectors, the latter including trawlers and tuna vessels.[6] The small-scale fisheries (SSF) sector accounts for approximately 86% of total landings in the country and directly employs around 51,000 fishers[7], making the sub-sector the most important in Liberia's fisheries. Two main types of small-scale fishing fleets operate in the coastal waters in Liberia, namely the local Kru canoes that are largely non-motorised and the migrant Ghanaian Fanti boats that are mostly motorised.[8] The fishing methods employed by the Kru canoes include hook and lines, longlines, gillnets, cast nets and traps, primarily targeting demersal fish species such as cassava fish/croakers (*Pseudotolithus* spp.), lesser African threadfin (*Galeoides decadactylus*), sole-fish (*Cynoglossus* spp.), sparids (*Dentex* spp.), groupers (*Epinephelus* spp.), snappers (*Lutjanus* spp.), grunts (*Pomadasys* spp.) and crustaceans (marine crabs and lobster). The Fanti canoes generally deploy large ring nets and primarily target small pelagics such as sardinella (*Sardinella* spp.), known locally as 'bonny', Atlantic bumper (*Chloroscrombus chrysurus*), known locally as 'porjoe', and Atlantic flying fish (*Cheilopogon melanurus*).[9]

The intensity of the fishing effort in Liberia's SSF sector has generally been unregulated and poorly managed, resulting in increased fishing effort, reduced catches and overharvesting of key fish populations.[10,11] The total number of small-scale vessels increased from 3,470 canoes in 2007[12] to 5,648 canoes in 2020[13], representing an increase of about 63% in fleet size over this period. Over the years, growth in the small-scale fleet has mainly been driven by profit.[14] The number of non-motorised Kru canoes grew from 3,193 in 2007 to around 4,671 vessels in 2020. The number of motorised canoes increased from fewer than 277 in 2007[15] to around 977 in 2020.[16] The total SSF catch increased from 2,800 tonnes in 2005[17] to around 18,086 tonnes in 2020.[18]

Despite the reported increase in SSF catch, the fisheries sector is threatened by several challenges, including overharvesting of the coastal fishery resources,

Smoked *Sardinella* spp. ready for the market, Robertsport, Grand Cape Mount County.

unregulated expansion of fishing efforts,[19] and unsustainable fishing practices, including the illegal activities of foreign fishing fleets.[20,21] Recent empirical analyses of the coastal fisheries in Liberia showed the main target fish species of the small-scale fishers such as small pelagics (e.g. bonny *Sardinella* spp.) [22] and shallow-water demersals (e.g. cassava croaker *Pseudotolithus senegalensis*) are over-exploited.[23,24] Illegal and unsustainable fishing practices are commonplace in the fisheries sector.[25]

Liberia is particularly vulnerable to declines in fisheries resources because of its low adaptive capacity[26] to the unprecedented impacts of climate and environmental changes.[27] Fisheries decline does not just threaten coastal livelihoods and raises the socio-economic vulnerability of Liberia's fishing-dependent coastal communities, but also endangers food and nutrition security. Fish provide key micronutrients such as iron, zinc, omega-3 fatty acids and vitamins[28], contributing to the health and well-being of many rural communities.[29] While the Liberian government has yet to implement concrete measures to address declines in fish populations and excess fishing effort, in other countries, such measures include input controls such as regulating fishing effort and gear restrictions, among others.[30] With over 4,000 active canoes currently operating in Liberia's SSF sector, input control measures would have implications for the incomes of many small-scale actors who depend solely on the fisheries for their livelihoods, indicating the need for sustainable alternatives or even supplementary economic opportunities. A lack of alternative or supplementary livelihoods has been reported as a driver of increased vulnerability to poverty in SSF.[31]

One solution that resource managers and development practitioners have offered to counter overfishing and excess fishing effort is the provision of sustainable alternative or supplementary economic opportunities to fishing communities. Such interventions aim to discourage individuals from engaging in activities deemed environmentally detrimental by introducing or promoting lower-impact livelihood activities that offer similar or enhanced benefits.[32] Creating sustainable livelihood opportunities helps communities deal with and recover from physical, environmental, and social shocks and may be offered over short and longer periods.[33] They may include initiatives that enhance traditional livelihood activities already practised in the communities or involve the rollout of new interventions.[34] Approaches may include the provision of alternative resources in place of marine fisheries, providing an alternative occupation or source of income, or promoting an alternative method of harvesting a resource with a lower environmental impact than the original method.[35] All methods have the common objective of providing options to meet livelihood needs that minimise pressure on a particular element of biodiversity.[36]

Previous studies have shown that coastal fishing communities in Liberia are highly vulnerable to poverty[37], as a result of the seasonality of fishing activities, high prices of fishing inputs, and inadequate livelihood capital assets.[38] A recent analysis found that small-scale fishers were more willing to exit the fishing profession if fisheries are declining and alternative livelihood options are available.[39] Small-scale fishers appear to be willing to consider alternative occupations if they are economically attractive and viable to sustain their livelihoods in the long term.[40]

In almost all fishing communities along the coast of Liberia, small-scale fishers are already engaged in supplementary activities such as farming and petty trading in addition to fishing activities.[41] However, the introduction of alternative livelihood interventions in Liberia's fishing communities presents challenges due to the limited natural, financial and physical assets needed to build livelihood opportunities and the lack of necessary skills to benefit from available options.[42] These factors have hampered the introduction of alternative livelihood opportunities in Liberia's coastal fishing communities.[43]

A significant challenge of alternative livelihood interventions is sustaining the interventions beyond the lifespan of the individual projects. There is, furthermore, a lack of empirical evidence concerning the effectiveness of alternative livelihood interventions in limiting fishing efforts and stress on fishery resources, as well as in enhancing biodiversity conservation.[44] According to one assessment, alternative livelihood initiatives encourage unsustainable solutions that are weakly adapted to local capacities, are not market-driven and fail to reflect the ambitions of people for the future.[45] Alternative livelihood projects often fail to consider essential factors such as the capacities, ambitions, specific needs or historical development of the communities receiving the interventions.[46]

In the fisheries sector, the limited success of alternative livelihood interventions may be attributed, in part, to a lack of understanding of fisher livelihoods and what drives them to engage in fishing as their source of livelihood.[47] The readiness of fishers to leave the fishing profession appears to be influenced significantly by the social and cultural background of their community.[48] Efforts to encourage fishers to leave the fishing profession will likely remain ineffective until these contexts are understood and incorporated.

This requires understanding what livelihoods mean to the people, their connections to that livelihood, and the cultural or social processes and policies that compel them to engage in it.[49] Others have cautioned against the unintended outcomes of alternative livelihood projects, where additional incomes create opportunities for new capital investments in fishing inputs and activities, leading to overharvesting of fishery resources.[50,51,52] Commentators have therefore called for additional research into the connection between livelihood diversification strategies and fishing pressure to guide the development of holistic programmes that incorporate policy actions for alternative livelihoods and resource conservation.[53] Grey literature underscores the need for the meticulous design of local, condition-specific alternative livelihood interventions that are evaluated against existing options for activities and individual ambitions.[54]

The success of potential livelihood options is, therefore, largely contingent on the full and active participation of fishers and other key stakeholders.[55,56] Seeking the holistic and active involvement of resource users aligns with the principles of the *Sustainable Livelihoods Approach for Sustainable Livelihoods Enhancement and Diversification* (SLED) (**Box 1**), which asserts that all development interventions should start by prioritising people and understanding their capacities and potentials.[57] Fisheries authorities and development partners can do this by tackling the underlying factors limiting fishers from engaging in alternative livelihoods before introducing such interventions[58] and mainstreaming the facilitation of alternative livelihoods into their policies and practices.[59] This will help to ensure that alternative livelihood options are appropriate for the local context and take into account the capacity of the communities to engage and succeed in the introduced endeavours. It has been observed that alternative livelihood activities where locals demonstrate interest and have the needed knowledge are more likely to succeed.[60] The best way to begin to find solutions to problems in the fisheries sector is to engage with the resource users directly.[61]

Box 1: Key principles of the Sustainable Livelihood Approach for SLED[62]

Key principles that should guide all actions that aim to support the development of sustainable livelihoods include:

1. **Being people-centred**:

   Actions should focus on the impact it will have on the livelihoods of people (not on institutions, resources or technology).

2. **Building on strengths**:

   Actions should seek to build on people's capacities, skills, knowledge, and aspirations.

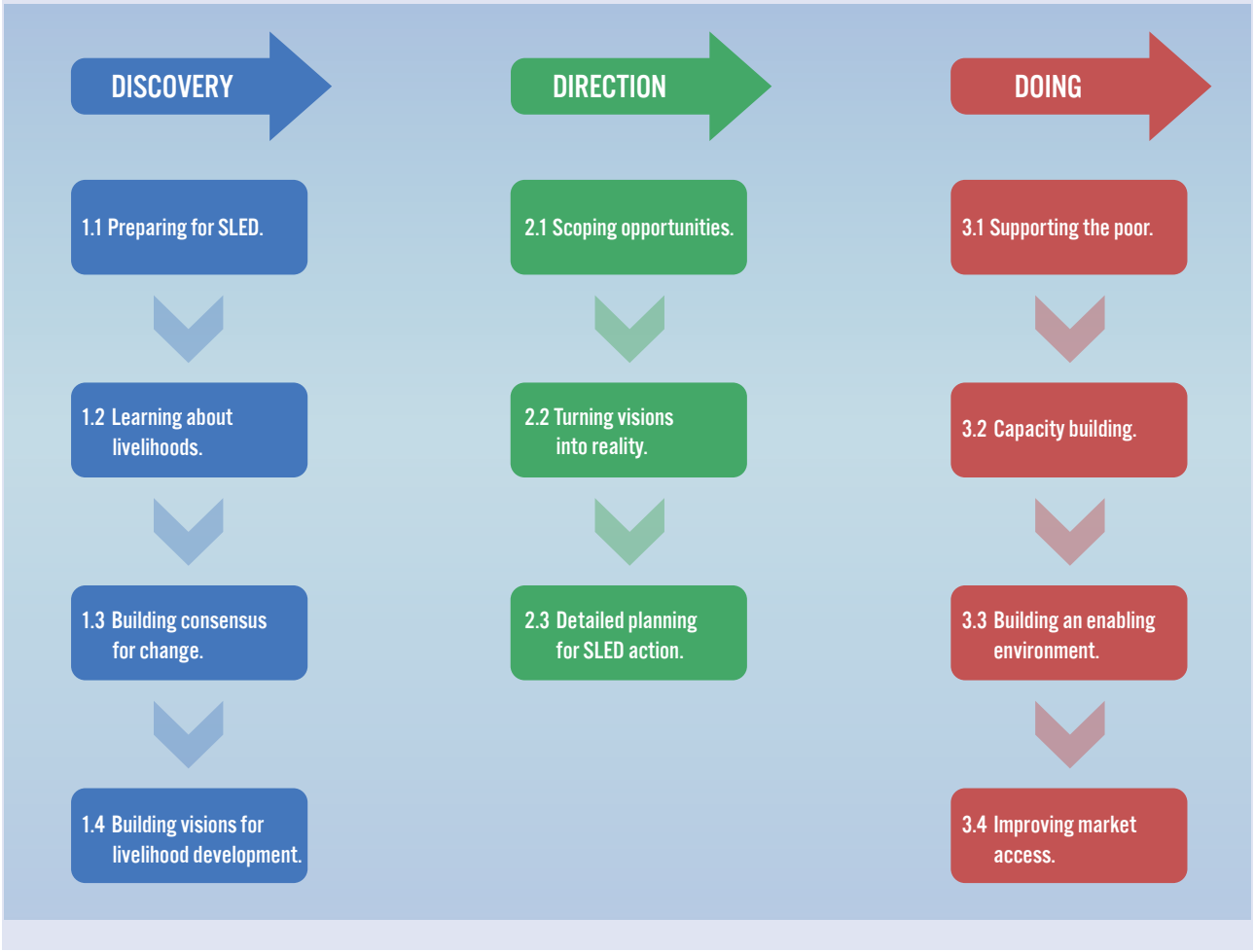
3. **Giving voice and choice**:

   Actions should always seek to increase people's capacity and opportunity to give voice to their concerns, and it should aim to increase their choices and their capacity to make informed choices.

4. **Focussed on sustainability**:

   Actions should always take account of economic, social, institutional, and environmental sustainability.

Phases of the SLED (adapted from IMM, 2008)



1.1 Research objective

In view of recent declines in catches and expansion of fishing efforts (**Figure 3**) in Liberia's fisheries sector, the Communities for Fisheries project[63] commenced a scoping analysis to gather fisher and fish worker opinions on non-fisheries livelihood opportunities in four coastal counties (Grand Cape Mount, Margibi, Grand Bassa and Grand Kru). The study focused solely on non-fisheries livelihood opportunities, as opposed to opportunities for improving livelihoods based on improved harvesting methods or fish processing. This anticipates management interventions in the short- to medium-term that will seek to regulate entry into the fishery through, for example, a cap on the total number of canoes in the SSF sub-sector. In particular, the study aims to provide an initial step towards the design of sustainable livelihood programmes that:

- diversify the non-fisheries livelihood opportunities available to fishers, fish workers and their families;
- reduce reliance on fishing and vulnerability of fishers and fish workers in the face of fisheries declines and the implementation of policy measures (such as closed seasons and capacity reduction); and
- result in a reduction of fishing effort (number of canoes) in the long term, thereby contributing to the recovery of fish populations.

Such livelihood programmes will consider strengthening and improving current non-fisheries livelihood opportunities while identifying and promoting new livelihood options and supporting the creation of an enabling environment for their development.

2. Methodology and study area

The primary objective of this research is to shed light on alternative and supplementary livelihood opportunities that are acceptable to fishers and fish workers in coastal communities in Liberia. The research involved the following elements:

1. An assessment of successful and failed livelihood interventions in Liberia's coastal communities.

2. An evaluation of potential economic ventures available to fishers and fish workers in the coastal communities according to the following parameters:

   a. Requirements and entry costs
   b. Projected economic benefits and marketing opportunities
   c. Challenges

3. Gathering fisher and fish worker perspectives on potential financing or other sources of support for the selected interventions.

Fish landing site, Marshall, Margibi County.

Primary data and information for this study were collected from fishers and fishmongers (fish traders) and processors from November 10, 2022, to April 15, 2023, in four fishing communities along the coast of Liberia: Robertsport (Grand Cape Mount county), Margibi (Margibi county), Buchanan (Grand Bassa county) and Grand Cess (Grand Kru county). The study sampled communities in which the Communities for Fisheries project operates, which represent Liberia's major fishing coastal counties.

Data was collected on the demographics of the respondents, the state of the fishing and fish processing and trading professions, alternative livelihood options, livelihood requirements, financing of alternative livelihoods, livelihood succession for children and general concerns (see **Appendix A**).

This was obtained through focus group discussions (FGD) with fishers and fish workers. Participants in the FGD were selected using a purposive sampling method[64] to reflect the different fishing methods and social groups (e.g. Kru and Fanti fishers, fishmongers, and fish processors, among others) in the SSF sub-sector. Questionnaires were developed and used to guide the group discussions. Eight FGDs were carried out: four with fishers and four with fish processors and traders. Each FGD consisted of 15 male fishers and 15 female fish workers, including community leaders of the respective groups. Each discussion lasted for around four hours.

Following the initial data collection, another round of data was collected from 76 community members who were already engaged in the preferred livelihood options the fishers and fishmongers mentioned. These participants were only asked Question 4: Livelihood requirements (see **Appendix A**). This round of data collection gave us an informed and accurate insight into what it will require, including the cost, for fishers to start their preferred livelihood options and the potential challenges they might encounter if they engage in these options.

Purposive and simple random sampling methods[65] were employed for the key informant interviews. A total of 196 interviews were conducted using a structured interview guide. The data was processed and analysed in Excel. Content analysis was employed, and text responses were grouped into broad themes. Secondary data on livelihood programmes and projects within Liberia and beyond were obtained, and their content was analysed. Where required, qualitative information was coded for quantitative analysis.

3. Results and discussion

3.1 Demographic characteristics

Fishers interviewed were between 19 and 55 years old. Fish processors and traders ranged from 18 to 55 years (**Table 1**).

Table 1: Ages of fishers and fish workers in FGD

Participants	**Counties**			
	Grand Bassa	Grand Cape Mount	Grand Kru	Margibi
	Age range			
Fishers	39 - 55	28 - 52	19 - 45	31- 48
Fish processors and traders	35 - 52	28 - 52	27- 55	18 - 49

The majority of fishers (78%) and fish workers (63%) surveyed were single[66] (**Figure 1**). 10% of fish workers were either divorced or widowed. The remaining interviewees were married. Married fishers and fish workers work in an enterprise, with the man responsible for fishing and the woman responsible for processing and selling the fish and managing the money. Single women who do not own canoes often struggle to get fish to sell because of high competition on the beaches. In contrast, single men sometimes sell their fish on credit on the beach to random customers or regular customers. Some single fishermen have complained that single women who buy on credit struggle to repay their money compared to married women who run enterprises with their husbands.

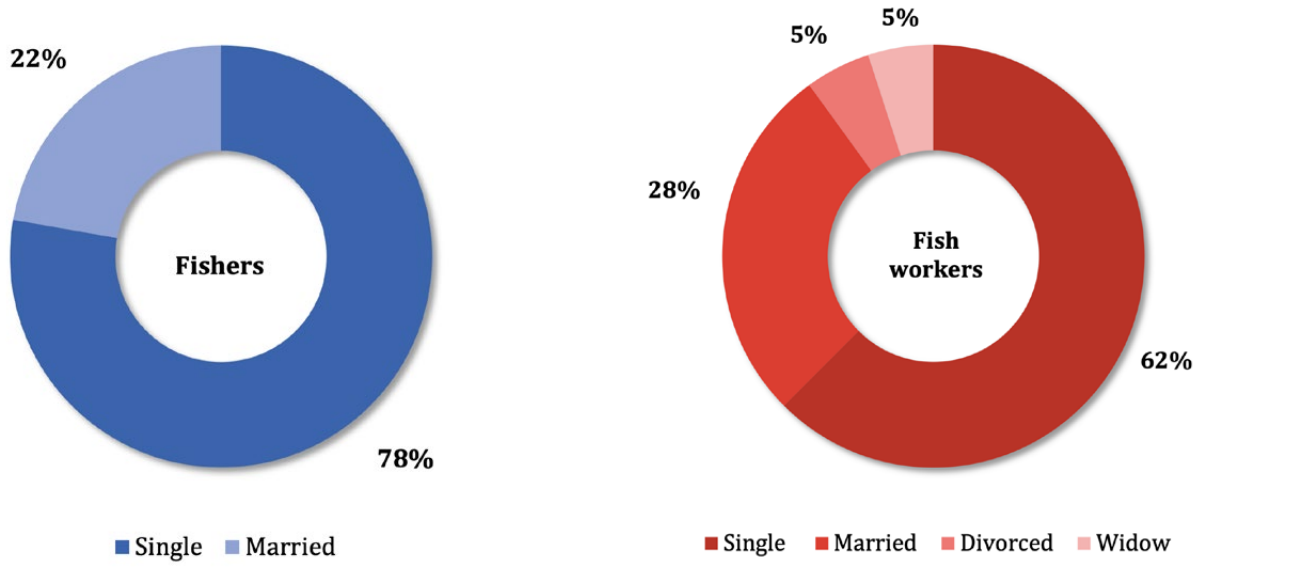


Figure 1: Marital status of participants

The majority (80%) of fishers interviewed were formally educated to at least primary school level, half of whom had attended high school (**Table 2**). None of the fishers interviewed had a college education. 21% of fish workers surveyed were educated to at least primary school level. 18% had received a high school education, and 9.1% had a college education (**Table 2**). Contrary to the common perception that fishers and fish workers are generally uneducated[67,68], these findings suggest a good number of workers along the SSF value chain in Liberia could be well-placed and have the capacity to transition to alternative livelihoods.

When asked how long they have worked in the fisheries sector, fishers reported years of fishing ranging from as recent as one month to as long as 48 years (**Table 3**). For fish processors and traders, years in the profession varied between 2 and 36 years (**Table 3**). The findings indicate that the SSF sector is not only a source of income, food, and nutrition security but also a way of life and a lifetime profession for many fishers and fish workers.

Table 2: Reported level of education of fishers and fish workers in FGD

Education Level	**Fishers**		**Fish worker**	
	Freq	**%**	**Freq**	**%**
Elementary	7	20	9	21
Junior high	7	20	4	9
High school	14	40	8	18
College education	-	0	4	9
No formal education	7	20	19	43
Total	**35**	**100**	**44**	**100**

Source: EJF analysis from survey data

Table 3: Reported years in the fisheries for fishers and fish workers in FGD

Participants	**Counties**			
	Grand Bassa	Grand Cape Mount	Grand Kru	Margibi
	Experience range			
Fishers	13 - 30 years	5 - 30 years	1 month - 33 years	3 - 48 years
Fish workers	10 - 36 years	3- 30 years	2 - 33 years	3 - 33 years

Source: EJF analysis from survey data

3.2 State of the fishing business

The majority (53%) of fishers surveyed believed the current state of the fishing profession, in terms of profits, to be good, while around 19% considered it to be bad or very bad (**Figure 2a**). There was a near consensus among fishers that the fishing profession was more profitable five years ago compared to the present day (**Figure 2c**).

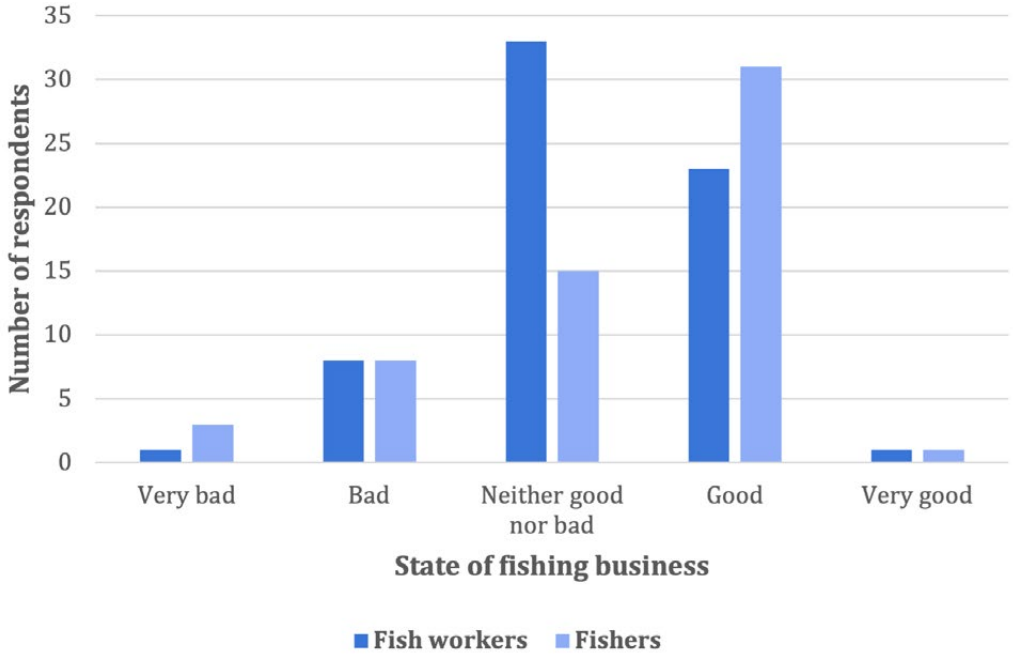


Figure 2a: Current state of fishing business in terms of profits based on fisher and fish worker responses

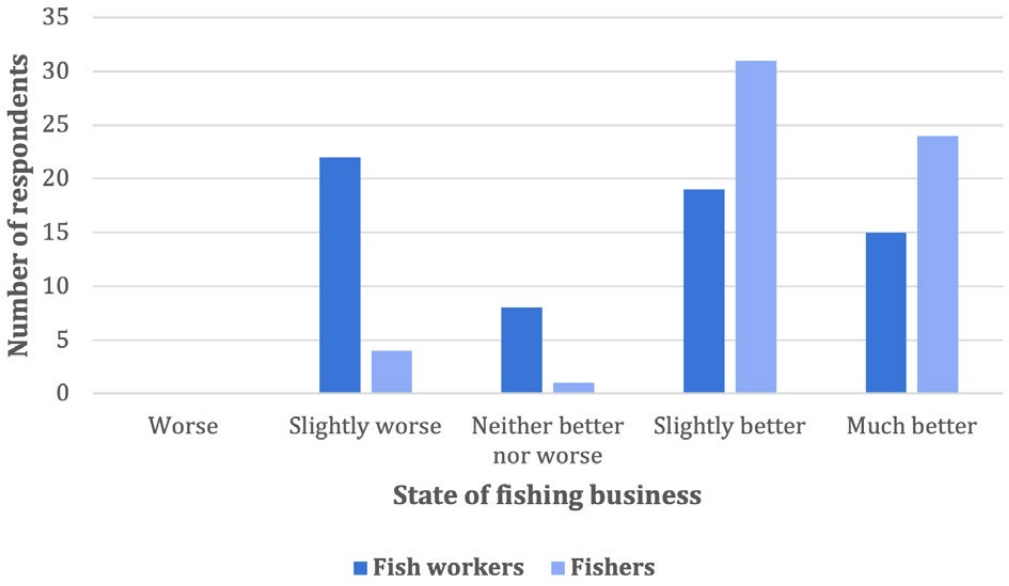


Figure 2b: State of fishing business one year ago in terms of profits based on fisher and fish worker responses

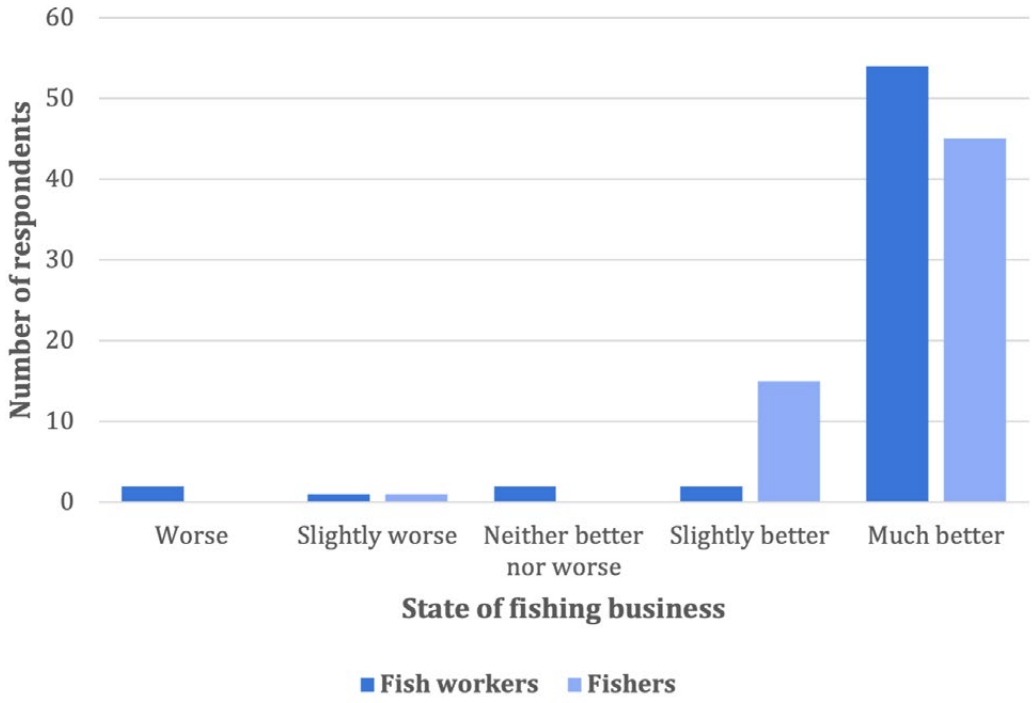


Figure 2c: State of fishing business five years ago in terms of profits based on fisher and fish worker responses

The number of canoes in the SSF sub-sector has increased by around 256 vessels, on average, annually since 2004. The catch per vessel declined sharply between 2004 and 2006 before fluctuating between 3.68 and 5.85 tonnes per vessel per year (**Figure 3**).

Fishers reported having to travel long distances in search of fertile fishing grounds but could still return with little or no catch after these expeditions. They also noted that some fish species that were abundant in their catches five years ago are now caught infrequently or have disappeared.

Fishers gave varied reasons for the decline in fish catches and profits compared to five years ago. These included the proliferation of fishers in their communities, increasingly unpredictable weather conditions, and illegal fishing methods by small-scale fishers, such as fishing with light, monofilament nets and small mesh sizes and using chemicals and dynamite in fishing. Many fishers also blamed industrial trawlers and migrant fishers from neighbouring countries (Senegal and Côte d'Ivoire) for their low catch. They outlined the high cost of fishing inputs, fuel, and basic needs as underlying factors for declining profits gained from the fisheries.

Fishmonger with her fish purchase of the day, Buchanan, Grand Bassa County.

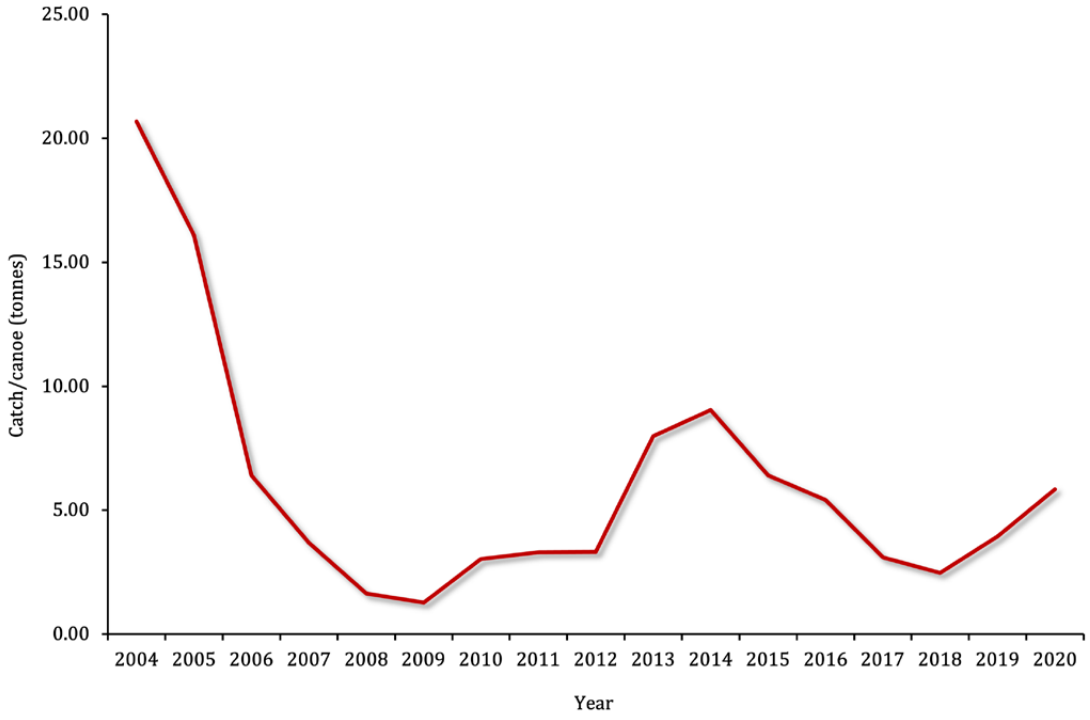


Figure 3: Catch per vessel in the SSF sub-sector. Source: EJF's calculations from NaFAA Statistics (2023)

Half of fish processors and traders surveyed believed the current state of their profession, in terms of profit, is neither good nor bad (see fish workers in **Figure 2a**), while 14% considered it to be bad. In line with the responses from fishers, the majority (88.5%) of fish processors and traders considered their profession less profitable than five years ago (see fish workers in **Figure 2c**).

Fish processors and traders lamented how, in the past, they would visit the landing beaches and have access to a variety of fish species, but now there are a limited number of species that can be landed. In addition to lower fish catch, there has been a rise in the number of fishmongers meeting fishers on the beach to buy their haul. The women interviewed claimed that this has increased competition for fish, as fishers cannot land enough fish to meet demand. Fishmongers in Grand Kru also blamed the poor road conditions for the decline in their businesses and profit. This, they explained, hampers their ability to travel to bigger cities like Plebo and Harper to sell fish while also discouraging customers from visiting their communities to purchase fish.

Although fishmongers complained about the decline in their trade, those in the Village Savings and Loans Associations (VSLAs) stated that, despite declining profits, they are now understanding, managing, and investing their earnings, which was not the case five years ago. Before the introduction of the VSLAs, they were not saving and managing their income and were unable to sustain themselves and their families during lean fishing seasons, even where the profits from their businesses were viable. They explained how the VSLAs have empowered them to manage their income through savings and provided a buffer for them during periods of low sales and closed seasons. This has increased their capacity to make investments and enabled them to provide to a greater extent for themselves and their families compared to five years ago.

3.3 Previous alternative livelihood interventions – failures, successes and challenges

Fisheries regulators and partners have introduced a limited number of livelihood programmes in Liberia's fishing communities, focused on improving fishers' capacity to manage and expand their fishing businesses rather than encouraging them to exit the business.

In Grand Cape Mount County, livelihood programmes were introduced that targeted ex-combatants who participated in the country's civil war, with a number of fishers also benefiting from the programme and learning driving skills. According to respondents, fishers were unable to use their new driving skills as a source of livelihood because they lacked the capital required to start a transportation business and were unable to find opportunities to work as professional drivers. Since the rehabilitation programme ended, the county has not benefited from any other livelihood projects.

In other communities, especially in Grand Kru County, respondents considered that livelihood programmes have failed to reach them due to their remote location and poor road conditions. Some communities have introduced their own non-fisheries livelihood opportunities including the establishment of shops selling provisions, tailoring, carpentry and food businesses and farming. However, these options are generally considered more as supplementary activities that are aimed at augmenting the income gained from fishing businesses. Respondents reported that these activities are mostly undertaken during poor fishing seasons or when there are no fishing activities due to the rains and rough sea conditions. Many of the activities also rely on fishing seasons to thrive, as fishing communities experience an influx of people and heightened economic activities during active and productive fishing seasons.

3.4 Hierarchy of livelihood options

When asked about their favourite aspects of the fishing profession, fishers responded that they enjoyed the thrill of pulling fish from the ocean, returning to shore with a good catch, and counting money from their fish sales. For women fish workers, the most enjoyable aspects included buying and selling raw/fresh fish, selling dried fish, counting returns from their fish sales, and the profits earned from selling smoked fish.

Most of the fishers surveyed reported that they were influenced to join the fishing profession due to the opportunity to make a quick profit and the limited/lack of other livelihood opportunities in their communities. Fishing was considered to provide a means of survival, livelihood, and sustenance for fishers and their families. Women fish processors and traders were similarly drawn to their profession to make a quick profit, as a means of providing sustenance for their families, and due to a lack of other livelihood opportunities. They also noted that there were no regulations on entering the profession nor any restriction on the level of education required to establish a fish-selling business.

When asked about their preferences for alternative and/or supplementary livelihoods, fishers put forward nine potential options (see fishers in **Figure 4**). Selling fishing inputs (fishing gear and equipment, safety gear) was the most popular option, followed by transportation, construction, retail, mechanic, and printing. Fishers also mentioned working as an electrician and in the carpentry business, and engaging in the sale of fuel.

Women fish traders cited seven preferred alternative or supplementary livelihood options (see fish workers in **Figure 7**). The most popular option was different forms of trading, followed by teaching, tailoring, pastry-making, and farming, with catering and cosmetology also mentioned as possible options.

The following sections consider the main alternative and/or supplementary livelihood options reported by fishers and women fish workers in terms of their technical and training requirements, entry cost, economic benefits and marketing opportunities. The problems and challenges associated with each option are also presented and discussed.

3.4.1 Preferred alternative and/or supplementary livelihood options for fishers

(a) Businesses (provision shops & petty trading)

Many fishers preferred owning and operating a provision shop or doing petty trading as an alternative livelihood activity (**Figure 4**). According to the respondents, they preferred this option because there is always a need for provision items in their communities. Their preference might also be spurred by the proliferation of provision shops in Liberia, especially in commercial cities, and the belief that these shops are profitable.

Entry requirements

The participants admitted that although they prefer this option, many would need training on owning a business and managing a shop. The major skills respondents requested to start and sustain this livelihood option are business and financial management training to ensure that shop proceeds are managed properly. However, some respondents explained that they have friends who own provision shops and are convinced they can learn from them. At the same time, a few fishers already run businesses and do petty trading at a small scale and thus have already acquired technical skills from these businesses that could be upscaled if the funds are available.

Entry cost

The estimated average entry cost for this activity is around US$1,033 (**Table 4**). This money covers purchasing land, purchasing assorted items for the shop, and electricity bills.

Net profit and marketing opportunities

Fishers estimated they could gain US$300 monthly from the provision shops (**Table 4**). For example, in Grand Cess (Grand Kru County), fishers explained that residents travel to Barclayville or Harper cities to purchase provision items because the provision shops in their communities provide limited options. If they were to start a shop with a variety of items, community members would support their businesses and would not have to travel so far to purchase these materials.

In Buchanan (Grand Bassa County), people engaged in this livelihood option reported lower monthly profits due to the existing presence of many provision shops in the city and many of the communities. However, they see a potential to gain income if they focus on the business and provide quality and various options to customers.

Challenges

The major challenge identified by fishers was poor management of the business and its proceeds (**Table 4**). Respondents were concerned that they might use funds meant to expand the business to cater to family needs and other emergencies that might arise. They were also sceptical of customers' requests to purchase shop items on credit and concerned about the risk of them failing to pay their debts on time or at all. Another concern related to distance. In remote fishing communities like Sass Town, Grand Cess, and Robertsport, fishers were concerned about the cost they would incur to transport themselves and goods to their communities. They believe that this might affect the prices of their goods and their profits.

Fishmongers waiting at the beach to buy fish.

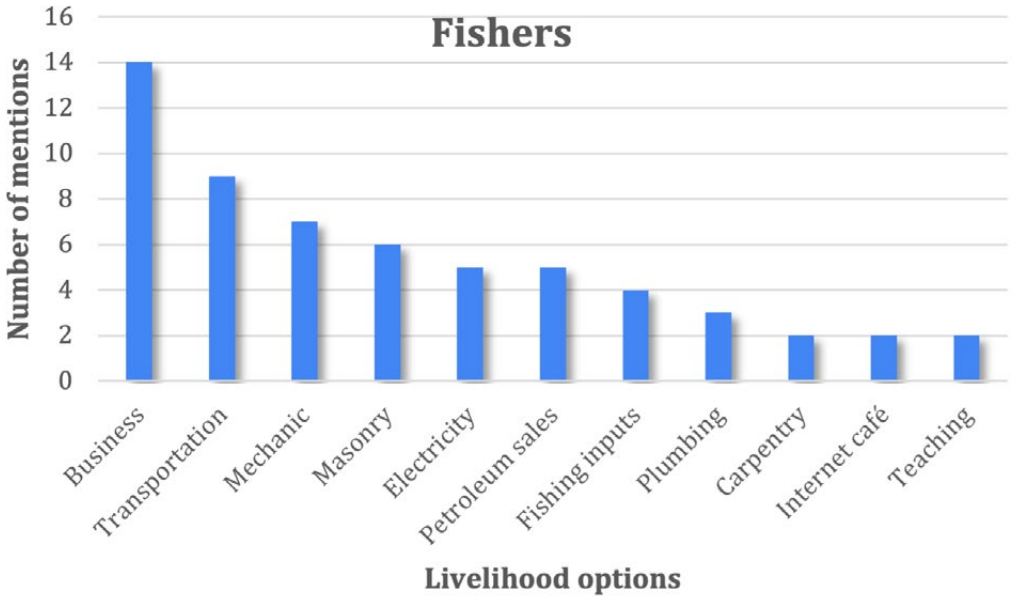


Figure 4: Types of alternative and supplementary work reported by fishers

Fisher mending fishing net.

Table 4: Summary of preferred alternative/supplementary livelihood options proposed by fishers

Location	Livelihood options	Requirements*	One-off entry cost (average) (US$)	Net monthly profit (average) (US$)**	Potential to serve multiple communities	Challenges
Grand Bassa County Grand Kru County Margibi County Grand Cape Mount County	Provision/ grocery shop	Business management training, financial management training	1,033	300	All nearby communities	Poor management of business and proceeds, customers defaulting on payments of goods taken on credit, selling on credit, lack of funds to reinvest in the business, distance from fishing communities to markets
	Selling fishing inputs	Business management training and goods for sale (fishing nets, ropes, hooks, lines, corks), rent.	500	144	Serving all nearby fishing communities	Customers defaulting on payments of goods taken on credit, selling on credit, lack of funds to reinvest in business
Grand Bassa County Grand Cape Mount County	Transportation (motorbike/ tricycle)	Training (riding/ driving) equipment, etc.	1,000-3500	240	Serving diverse social groups in the fishing communities	Poor maintenance of motorbike/tricycle, lack of adequate knowledge on how to operate the motorbike/ tricycle, lack of customers
Margibi County	Masonry/ construction work	Apprenticeship	250	125	Entire Margibi county	Community members and friends expecting free services, lack of customers
Grand Bassa County Grand Kru County Margibi County	Mechanic	Technical training on vehicle repair	575	130	Serving neighbouring communities and other drivers who travel to their communities	Customers defaulting on payments for services/ mismanagement of business capital and profits to meet other needs
Grand Kru County	Internet café/ printing	laptops, printers, roll of wire, extension cords, cartoons of sheet, generator, shop	650	140	Serving neighbouring communities	Lack of customers, travelling long distances to restock printing materials, price of gasoline
Grand Bassa County Margibi County	Electrician	Training tools	350	180	Serving neighbouring communities	Community members and friends expecting free services, technicians delivering poor services if not trained properly, which might result in fire outbreaks or other unfortunate incidents
	Carpenter	Training & tools	230	260	Serving diverse communities	Community members and friends expecting free services
Grand Kru County Grand Cape Mount County Grand Bassa County	Fuel sales	Business management training, funnels, barrels, jars	1,415	165	Serving neighbouring communities	Customers defaulting on payments of fuel taken on credit, use/mismanagement of business capital and profits to meet other needs

* *The majority of the respondents involved in these livelihood options mentioned they did not receive any formal training but recommended that this training be used to build the capacity of people interested in engaging in the livelihood options.*

***These are estimates given by community members already involved in the businesses proposed by the fishers. This may differ across the various coastal counties.*

Challenges

The respondents anticipated several challenges in establishing and running a business to sell fishing inputs, including the customers defaulting on payments of goods taken on credit, selling goods on credit, difficulty recouping money from customers, and a lack of capital to invest in the business. Fishers also noted they would find it difficult to leave fishing altogether for another job (**Table 4**). Most fishers buy fishing inputs on credit,[69] therefore the success of their businesses would depend largely on whether their customers would eventually pay any amounts owed. With such arrangements commonplace in small-scale fishing communities, any new business venture would likely have to operate under the same conditions.

In addition, most fishers generate nearly all of their investment capital from fishing activities. With the current state of the fisheries, they noted it would be difficult to obtain the funds needed to start a new fishing input business. Fishers also indicated that, regardless of the state of the fishing profession, it would be difficult to leave fishing entirely due to the ease of gaining access to fisheries resources and the prospect of quick returns.

(b) Other alternative and supplementary livelihood activities for fishers

According to fishers surveyed, younger fishers in the communities are increasingly engaging in the transportation business (motorbikes and tricycles), construction work, selling of fishing inputs and petty trading/retail, as well as becoming mechanics and running internet café/printing businesses (see fishers in **Figure 4**).

The transportation business involves the driving of motorcycles, tricycles, and vehicles to transport passengers, fish, and other market products. The business requires fewer skills and limited technical knowledge and has therefore been proposed as an alternative or supplementary livelihood for most young fishers. Fishers who lacked the knowledge to operate the vehicles indicated they could easily learn from their friends. With the necessary training, fishers expressed the willingness to operate the vehicles themselves. The entry cost for the transportation business, including the cost of the motorcycle/tricycle, training, licensing, and registration costs, ranged between US$1,000-3,500. According to the fishers interviewed, the transportation business can accrue significant economic benefits and a stable income, offering a guaranteed return for low-skilled fishers. Revenue was likely to increase during a good fishing season when vehicles could transport passengers and fish from the beach, with average economic benefits estimated at around US$240 per month (**Table 4**). The main challenges cited by fishers included the potential for mismanagement of the business, the lack of knowledge of running such a business, and a low customer base.

Fishers interviewed were also confident that masonry would be a promising vocation for young fishers due to the increase in construction work in the fishing communities, particularly under projects being implemented by NGOs. Construction work could involve both the construction of private homes and public facilities. According to fishers in Marshall, the masonry vocation is easy to access, and skill may be acquired through apprenticeship. Respondents involved in masonry estimated the average entry cost at US$250 and the mean economic benefits at around US$225 per month (**Table 4**). Key challenges cited by fishers included the potentially low number of available contracts and cash flow, as customers usually pay for construction services piecemeal. As such, the returns from the construction work, although certain, could be slow to come, creating some form of vulnerability for the fishers.

Fishers citing petty trading, which refers to selling items in push-trucks, wheelbarrows, on table tops or hawking of foods and other everyday items, as an alternative/supplementary livelihood noted that this would mainly involve the trading of groceries, including rice, oil, flour, bread, spices, butter, and sugar, among other essentials. Most fishers suggested they needed basic business management training to manage such a business but are willing to rent premises to run the shop themselves (**Table 4**). The entry cost, which would cover the initial cost of purchasing commodities to start trading, for running a petty provision (grocery) shop was estimated at US$5,000. Because petty trading could serve several communities, it seems to be a promising livelihood venture, although customer purchasing power is closely linked to the state of fishing activities in the community. The monthly net economic benefit was estimated at around US$100 (**Table 4**). Since the products sold in the petty provision shop were destined for domestic markets, increased returns could be expected during a good fishing season, while returns may be lower during a lean fishing season.

The major challenge cited by most fishers is the problem of "sell pay", a common trading arrangement in the fishing communities along the coast of Liberia where customers purchase goods on credit. In this case, the profitability and survival of such a livelihood activity would be dependent on those who have purchased goods on credit and whether they can be relied upon to pay in full at a later date.

Petty trading shop.

Selling fishing inputs was one of the preferred alternative/supplementary livelihood options for fishers, and according to respondents surveyed, an option that small-scale fishers need in their communities (**Figure 4**). It seems that while local fishers are aware of the declining state of the country's fisheries, they would prefer to remain connected to the fishing industry even if they are not actively engaged in fishing. This finding supports observations of the FAO[70], as many small-scale fishers regard fishing as the only skill they have and a way of life. The fishing inputs reported by fishers for trading were fishing nets, ropes, hooks, lines, and corks (**Table 4**).

Most of the fishers interviewed who are interested in selling fishing inputs as their preferred alternative or supplementary work indicated that they would need training to manage and run their fishing input businesses and seed funding to purchase stock for sale (**Table 4**). Some fishers in Grand Kru and Grand Cape Mount counties also indicated that they would need to rent or build a shop, although most fishers suggested they could handle that aspect alone. Based on reports from persons involved in the business, the average entry cost for selling fishing inputs would be around US$500 (**Table 4**). This includes the cost of purchasing the fishing inputs for sale but does not include the cost of renting retail premises, should that be required. Many of the fishers interviewed in Grand Cape Mount, Margibi and Grand Kru counties reported that the demand for fishing inputs in the fishing communities is relatively high, and the profit margin for engaging in such business ventures is encouraging. Based on interviewee reports, the estimated profit from selling fishing inputs could be around US$144 per month (**Table 4**). The fishers, especially the Fanti, estimated their profit using how much they spent to buy materials in Ghana and how much these materials were sold in Liberia. According to fishers, there is limited access to fishing inputs in the fishing communities, and local fishers typically purchase their fishing inputs from Monrovia or abroad (Ghana/Sierra Leone).

Fishers insisted that there is a vast local demand for fishing inputs and that fishers from other fishing communities would undoubtedly come to purchase their fishing inputs from the local businesses to reduce transportation and other costs incurred when obtaining inputs from Monrovia or abroad.

The provision of mechanic and internet café/printing services were also reported by fishers as potential alternative or supplementary livelihood activities (**Figure 4**). According to the respondents, mechanics are needed in the fishing communities to help repair motorbikes, tricycles, vehicles, and generators and venturing into such a vocation would appear promising. The availability of internet cafés in communities, particularly for printing work, is also considered lacking and offers a potential livelihood opportunity for fishers.

Around 81% of the fishers surveyed reported that they would consider taking on additional jobs to increase their income (**Figure 5**), while about 83% of the respondents also expressed the desire to leave fishing altogether (**Figure 6**), indicating a considerable willingness to take on supplementary and alternative livelihoods respectively. Fishers reported that the traditional fishing methods they deploy are relatively labour-intensive and that it takes considerable time, energy, and effort to travel to and from their fishing grounds, hence their willingness to consider other professions. Fishers who were open to alternative livelihood options were mostly ageing fishers who highlighted diminishing strength and agility as a key factor in their decision, with a preference to engage in less energy-consuming options for their livelihood. However, fishers generally across the survey complained about the lack of options, such as formal entry-level jobs, in most of the communities. In Grand Bassa and Margibi counties, the respondents noted that although jobs were available in the fields of security, driving, cooking, and domestic help, such occupations were not associated with the same job satisfaction and prestige as fishing. Hence, they would not consider them as alternative livelihood options.

The 17% unwilling to engage in any other job except fishing stated that this is mainly because this was all they knew and had learnt to do. Because of their age and academic level, these respondents felt it would be challenging to learn new skills to adopt an additional or alternative livelihood. They would rather the government and fisheries regulatory bodies ramp up efforts to combat illegal fishing, especially the illegal activities of the industrial trawlers and migrant fishers, control entry into the fisheries sector, and support them with fishing inputs and facilities (e.g. cold storage and drying sheds) to improve and expand their businesses.

Fishmonger smoking fish, Robertsport, Grand Cape Mount County.

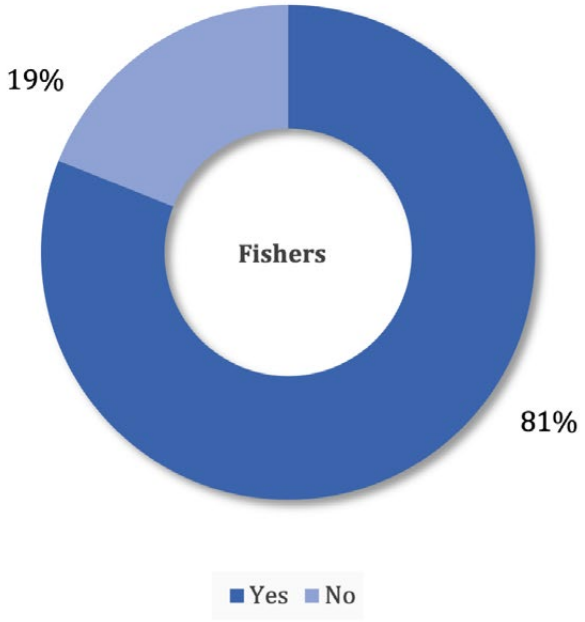


Figure 5: Fisher responses on whether they would be willing to take on additional jobs to supplement their income

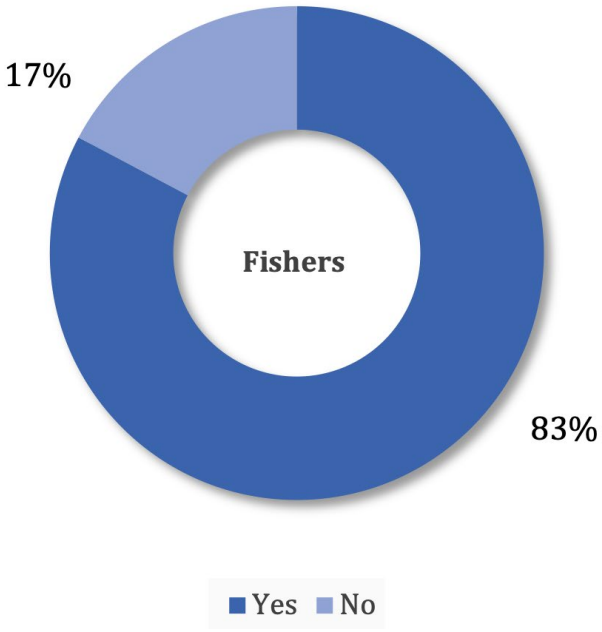


Figure 6: Fisher responses on whether they would be willing to leave fishing altogether based on interviews

3.4.2 Preferred alternative and supplementary livelihood options for fish workers

(a) Petty trading

Female fish workers identified ten preferred livelihood alternatives varying from cosmetology to business trading (see fish workers in **Figure 7**). Fish workers reported trading (i.e. running a provision or grocery shop, food sales, pastry-making, pepper sales, entertainment centres (drinking bars), and soap-making, among others) as their preferred alternative or supplementary livelihood option, which may be most acceptable to women.

According to the fish traders and processors surveyed, there is a considerable business opportunity for those engaged in trading due to the vast and regular demand for the various goods and products being traded. While women were open to considering opportunities beyond the fisheries sector, male fishers preferred to be connected to the fish harvesting sector even if they were not directly engaged in fishing. The goods and products reported by women fish traders and processors for trading were typical convenience items, such as rice, flour, gari, oil, pepper, detergents, beverages (soda and alcohol), water, textiles, curtains, raw and cooked food, charcoal, toiletries, and used clothes, among others (**Table 5**).

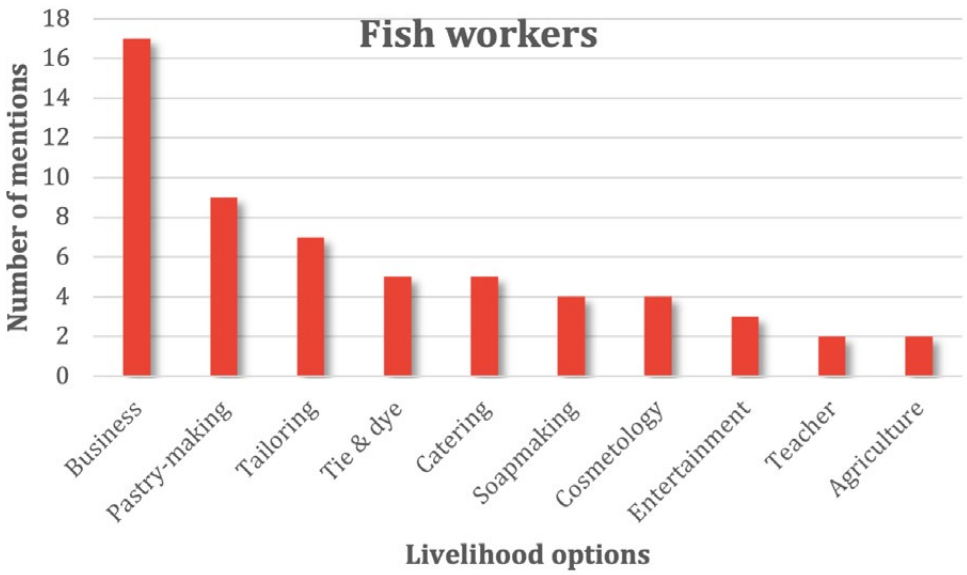


Figure 7: Types of alternative and supplementary work reported by fish workers

Requirements

The majority (56%) of women fish traders surveyed who expressed an interest in business trading as their preferred alternative and/or supplementary livelihood activity reported that they would need training in business management to help properly run and manage their enterprise, as well as furniture for arranging/displaying goods (e.g., shelves, chairs), starting capital to purchase stock, materials to build their provision shop, and technical training in soap-making and pastry (**Table 5**). Most women fish traders and processors reported that they would be able to find a space on which to build and run their shops.

Entry costs

The entry cost for establishing a petty trading business, as estimated by respondents involved in the business, is US$ 255 (**Table 5**). This includes purchasing convenience goods to sell, ingredients and materials (raw food materials, ovens, cooking utensils) for catering and pastry-making, soap-making materials, and technical training. The women in petty trading surveyed indicated that they do not need a physical shop for this activity because they use their homes as shops or sell by hawking on their heads or in wheelbarrows. Hence, their estimates did not include rental or shop construction and furniture costs.

Estimated profit and marketing opportunities

According to the majority of the female fish traders and processors interviewed, there is a high and regular daily demand for goods traded in provision shops, including food and soap for laundry, in the fishing and adjacent communities. They estimate that petty trading businesses, if appropriately managed, can generate net profits of US$ 25 to US$ 50 monthly (**Table 5**), with the maximum monthly net income nearly five times the minimum monthly wage for civil servants in Liberia.[71] Regarding marketing opportunities, female fish workers reported that investment in trading, ideally located and managed in the community, would serve locals in the fishing-dependent and adjacent communities.

Table 5: Summary of preferred livelihood options reported by fish traders and processors

Location	Livelihood options	Technical training requirements*[72]	Entry cost (average) (US$)	Net profit (average) (US$)**	Potential to serve multiple communities	Challenges
Grand Bassa, Grand Cape Mount, Grand Kru, and Margibi counties	Petty trading (i.e. provision shop, pastry-making/ selling, food sales and soap-making)	Training in pastry and soap-making, business management, materials, cooking utensils, starting capital, business premises, and goods, i.e. rice, flour, gari, pepper, other food items, and detergents.	211	50	Serving several nearby communities	Selling on credit, conflicts, mismanagement of business, low buying power, multiple competitors
Grand Kru County	Farming	Farming tools, cutlass, shovels, wheelbarrows, fertiliser, etc	100	250	Produce from the farm would serve several nearby communities	Lack of seed grant (capital), too much/heavy rainfall, pest attacks, low buying power of clients, buying on credit
Grand Bassa Grand Cape Mount	Teaching	Associate Degree of Arts/Science in field of interest, Teacher Training certificate, classroom materials	400	183	Potential to serve several nearby communities	Difficulty in getting on the government's payroll in public schools
Grand Bassa Grand Cape Mount Margibi	Tailoring	Sewing materials	250	80	Potential to serve several nearby communities	Lack of seed funding, number of regular clients, frequency of clients
Margibi and Grand Cape Mount counties	Cosmetology	Technical training, materials	500	60	Potential to serve several nearby communities	Lack of capital, frequency of clients, servicing on credit
	Catering	Technical training	864	121	Potential to serve nearby communities	Lack of capital, frequency of clients, availability of customers, catering on credit

* *The majority of the respondents involved in these livelihood options mentioned they did not receive any formal training but recommended that this training be used to build the capacity of people interested in engaging in the livelihood options.*

***These are estimates given by community members already involved in the businesses proposed by the fisher traders and processors. This may differ across the various coastal counties.*

Fishmongers waiting for canoes to return from fishing.

Challenges associated with the suggested supplementary livelihoods by fish traders and processors

Women fish traders and processors reported the low purchasing power of locals, selling on credit, conflicts, mismanagement of businesses and multiple competitors as the significant challenges that may cause their trading businesses to fail (**Table 5**). To deal with these trading issues, fish workers proffered suggestions such as providing business management training, trading on a cash basis, and maintaining good customer relationships. However, selling on credit was a significant challenge for small businesses, particularly when transactions involved insincere clients who do not pay their debts.

(b) Other alternative and supplementary livelihood activities for fish workers

Women fish traders and processors reported that farming, tailoring, and teaching have emerged as common alternative or supplementary livelihood activities for young people in the fishing and surrounding communities. Some respondents also mentioned catering and cosmetology (**Figure 5**).

Farming of rice, cassava, eddoes, and other cash crops was reported as the preferred alternative or supplementary livelihood by some fish workers. Farming in rural areas involves relatively low skills and is a subsistence and income-generating activity in many rural areas and communities along the coast.[73] Some interviewees who expressed interest in farming already had the necessary technical skills or were already engaged in such activity, with access to farmland. Entry costs for farming, which include farming equipment, labour and other inputs (such as herbicides and pesticides), were estimated by farmers at US$ 100**.** While many respondents believed that farming could generate significant economic benefits due to the considerable marketing opportunities for farmed produce in and around their communities, they were unable to estimate the net benefits. Respondents cited drawbacks such as the low workforce, lack of seed funding (capital), heavy rainfall, pest attacks, low purchasing power of clients, and buying on credit as significant drawbacks to the uptake of farming as a supplementary or alternative livelihood option. Given that the SSF profession today is less profitable, it might be difficult for fish traders and processors to raise the capital needed to venture into alternative livelihood activities such as farming.

Some respondents also cited teaching as an emerging potential economic activity for young people in their communities (**Figure 5**), with schools in rural areas ready to recruit teachers. While many women fish traders and processors lack the necessary training to become teachers, they believe that the required teaching skills could be acquired through formal technical teacher training for those with high school education. The entry cost for a teaching venture, which mainly includes technical training costs, was estimated at US$ 400 by teachers we interviewed. However, respondents also noted the critical challenge of getting on the government's payroll in public schools (**Table 5**).

Charcoal being bagged for sale.

Respondents also considered tailoring a promising economic activity. In some study sites, a few respondents were already engaged in tailoring. While most of the younger respondents reported lacking the technical skills required for this venture, they indicated that such skills could be acquired through formal technical training or apprenticeships with tailors currently operating in the fishing and surrounding communities, which would attract a cost. The entry cost was estimated at US$ 250 by tailors, however, the critical challenge reported by the fishers was the lack of seed funding to venture into tailoring (**Table 5**).

Cosmetology and catering were also reported as promising economic activities, with the market for these ventures already available in the fishing and adjacent communities. The estimated entry costs for these ventures varied between US$500 and US$864 (**Table 5**). Respondents highlighted significant challenges associated with these ventures, including lack of investment capital, frequency and availability of clients, and servicing on credit (**Table 5**).

Half the fish workers surveyed were unwilling to fully exit the fish trading profession (**Figure 8**). The majority (73%) of fish workers expressed willingness to take on supplementary (as opposed to alternative) livelihoods (**Figure 9**), mainly due to the health implications of smoking fish (e.g., eye burns from smoke, fatigue, sleeplessness). It's worth noting that this majority includes the 50% who expressed willingness to stay in the fisheries and 23% of those who expressed willingness to leave the fisheries (**Figure 8**). This shows that fish workers prefer to stay in the fisheries if they have viable supplementary work.

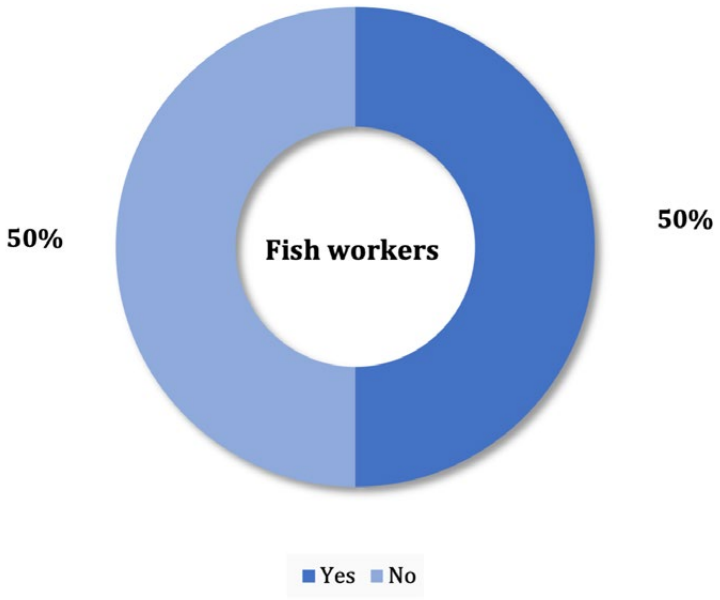


Figure 8: Fish workers' willingness to leave fish trading

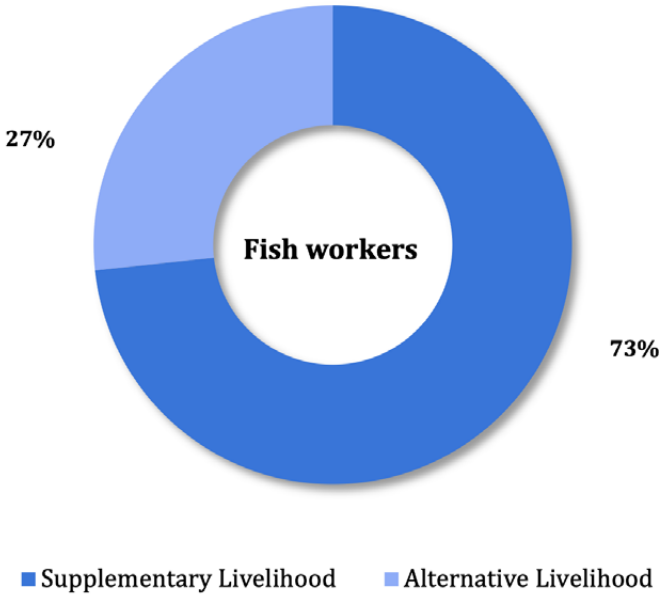


Figure 9: Fish workers' willingness to take up supplementary or alternative livelihoods

Fishmonger standing next to her canoe, Buchanan, Grand Bassa.

Fish workers expressed a general preference to take on supplementary rather than alternative livelihoods. Fish workers reported that fish trading is associated with quick profits, making switching to other jobs economically unattractive. Compared to fishers, fish workers were less willing to leave the fisheries sector altogether and only if they could be guaranteed a quick profit that would be higher than that generated from fish processing and trading. One of the fish workers confirmed this: *"I will only take a job that will provide me with more income than what my income from fish processing/selling provides."*

3.5 Entry cost and profit for alternative and supplementary livelihoods for fishers and fish workers

Based on these results, the entry cost for alternative and supplementary livelihood activities of fishers varied from US$650 to US$5000, averaging around US$2,068 ±US$1,512, while the monthly profit averaged around US$486 ±US$470, varying between US$100 to US$1,500 per month (**Table 6**). For the fish workers, entry costs ranged from US$250 to US$1,000, averaging around US$421 ±US$270, whereas profit averaged around US$160 ±US$125, varying between US$50 to US$400 per month (**Table 6**).

Table 6: Summary statistics of alternative and supplementary livelihoods entry costs and net profits, as reported by respondents

Alternative livelihoods - estimated costs and profits	Unit	Statistics	Fishers	Fish workers
Entry cost	US$	**Mean**	**2,068**	**421**
		SD	1,512	270
		Min	650	250
		Max	5,000	1,000
Net profit	US$	**Mean**	**486**	**160**
		SD	470	125
		Min	100	50
		Max	1,500	400

Source: EJF's calculations from survey data (2022/2023)

While the estimated mean entry cost of livelihood activities proposed by fishers is nearly five times the average entry cost for activities proposed by fish traders and processors, the mean monthly expected economic benefits for fishers for these activities are around three times higher (**Figure 10**).

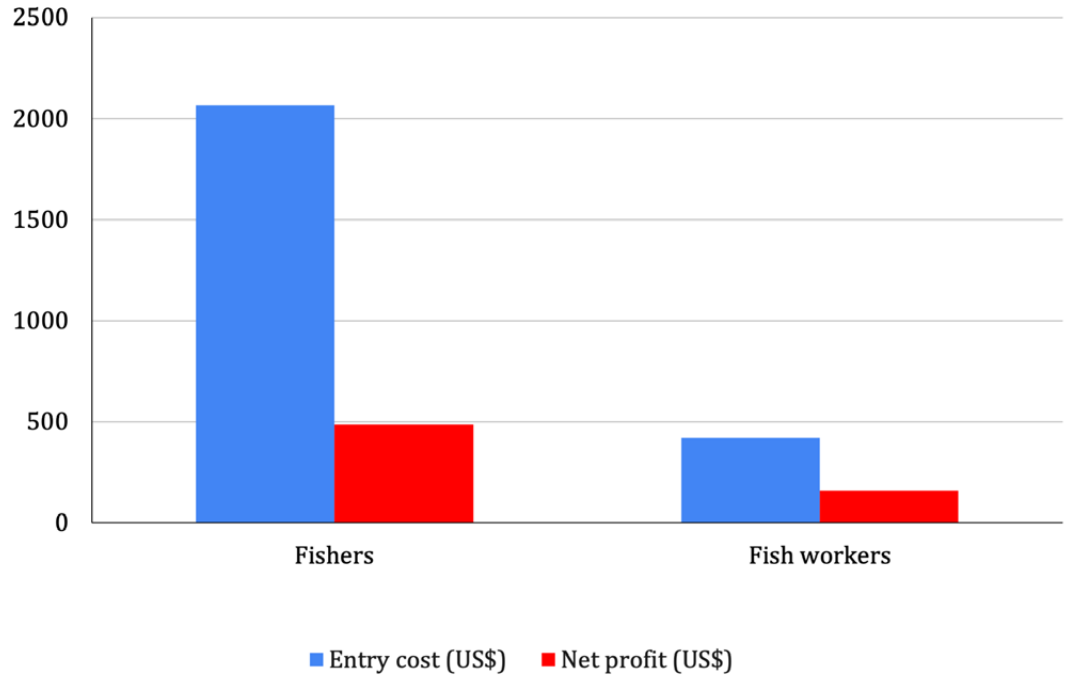


Figure 10: Comparison of estimated mean entry cost and net profits of livelihood activities proposed by fishers and fish workers.

3.6 Fisher and fish worker perceptions of introducing alternative livelihood activities in their communities

There was a consensus among the respondents that introducing alternative livelihood activities in the fishing communities was a good idea. Fishers, however, mentioned that "*people here have more interest in fishing and related activities due to the easy access and fast money (returns) they generate on a daily basis from fishing and the fish trade*". Respondents suggested that to sway fishers and fish workers to alternative livelihoods, information about alternative livelihoods and the likely benefits of such ventures would need to be adequately communicated to the fishing communities. As highlighted above, some of the challenges of introducing alternative livelihoods are related to low populations and customer bases, poor business management skills, limited marketing opportunities, inaccessibility to the fishing communities due to bad road conditions, the reluctance of fishers and fish workers to leave the fishing industry due to the fast returns from fishing and associated activities, and a lack of passion for engaging in alternative activities.

Several alternative livelihood activities have been introduced previously in the fishing communities, including carpentry, transportation (driving), construction (masonry), soap-making, tailoring, and provision shops. Respondents reported a number of reasons for the limited success (or failure) of such ventures, including irregularity of carpentry and construction contracts, failure to use acquired skills for commercial gain, lack of interest in training (driving and tailoring), and the lack of continuity and corruption from trainers (trainers collecting money under false pretences).

3.7 Financing of alternative livelihoods

All respondents indicated that VSLA schemes were available in the local communities, providing loans to fishers and fish workers, primarily women, although only members of the scheme could access the funds. Respondents also reported that Access Bank, microfinance organisations like BRAC and local saving clubs provide loans to fishers in the local fishing communities, but at a high interest rate. According to fishers, the main challenges to accessing the loans provided by these institutions are providing a guarantor (or lack of collateral), high interest rates, disorganisation of fishers, the insincerity of group members and limited access to VSLAs. All fishers and fish workers expressed willingness to take a loan to secure starting capital for their preferred livelihood option.

While fishers and fish workers noted that investing money from their businesses into alternative livelihoods would be possible, their main concern was whether they would get the same monetary returns from other livelihoods. Other participants stated they would be unwilling to channel their money into other ventures, preferring to re-invest and expand their fishing-related businesses as their preferred livelihood option.

Therefore, it may be concluded that, overall, fishers and fish workers would be unwilling to use their savings to fully finance alternative or supplementary livelihood options. Some mentioned they could take loans or other financial support and assistance from the government, NGOs, and families to start the ventures. Once supported, some of them stated that they were willing to finance up to 40% of the entry costs of those businesses.

3.8 Livelihood succession for children

Over half of the fishers (57%) and fish workers (59%) reported that some of their children are engaged in fishing, fish processing and/or trading (**Figure 11**). Half of the fishers stated they wouldn't want their children to continue their profession (**Figure 12**), while more than half of the fish workers interviewed indicated they would not want their children to continue after them.

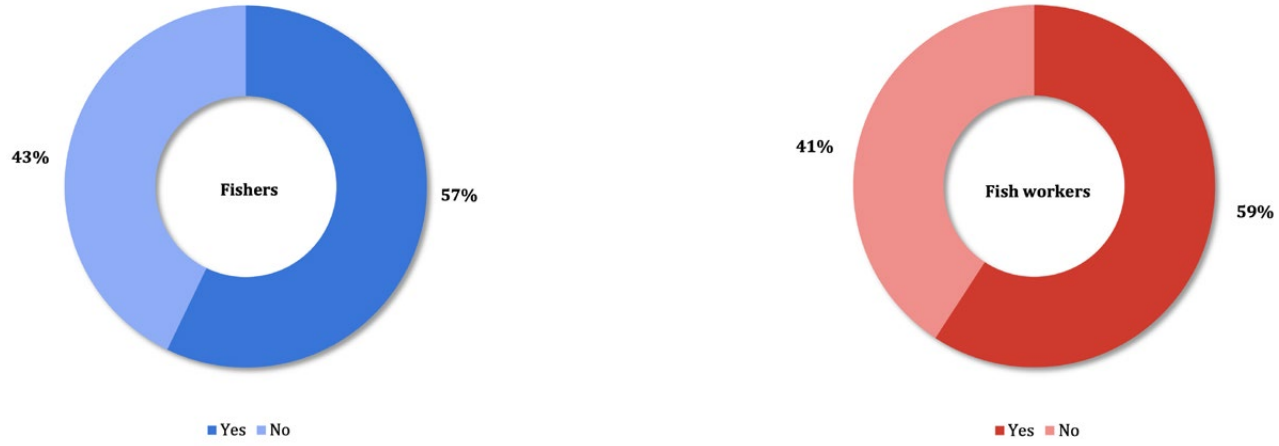


Figure 11: Fishers and fish workers' responses on whether their children are involved in fishing, fish processing, and selling.

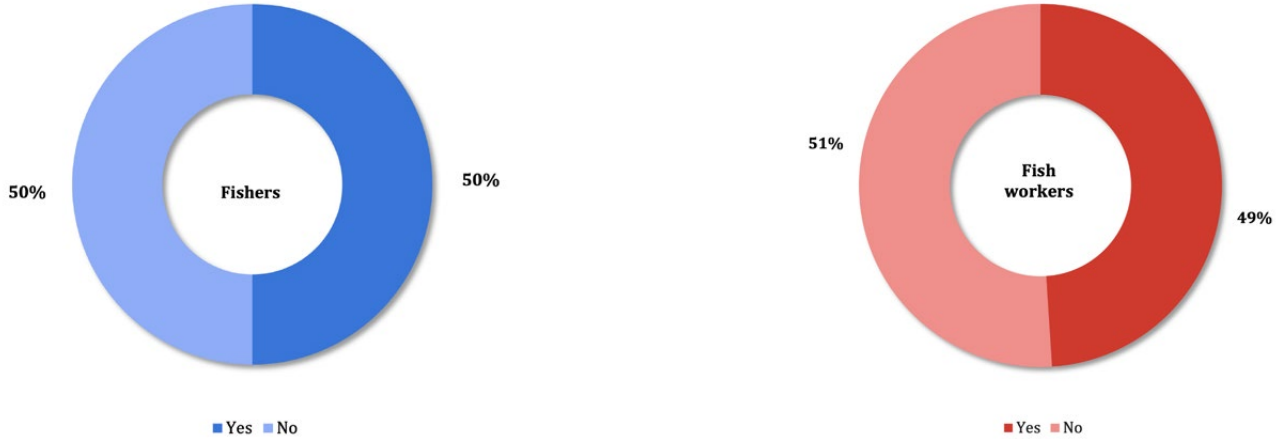


Figure 12: Fishers and fish workers' responses on whether they want any of their children to continue or engage in fishing, fish processing, and selling.

Fishers were concerned that fishing prevents children from attending school and that the quick profit obtained from fishing and related activities would discourage them from furthering their education. Because fishers want a better life for their children, they prefer them to go to school to acquire quality education (or skills outside of fishing activities). This was supported by one of the respondents who stated, "*I prefer my child to learn fisheries at a higher level than to do the practical fishing*". One respondent also indicated, "*I don't want my children to do fishing because it will increase the number of persons involved in the fishing business*". Another reason they gave for this is the benefit of formal education they have seen in their communities, with educated friends or parents who educated their children now benefiting financially and socially from their different professions. Respondents who preferred their children to take on their businesses indicated that due to the limited skills and job opportunities within their communities, and the lack of formal education of their children, it would be difficult for their children to support themselves outside of the fishing industry or profession.

General merchandise shop.

3.9 General perception of fishers and fish workers

Fishers and fish workers reported that there are limited jobs and alternative livelihood options in their communities and that the few that are available offer lower and slower returns compared to fishing and related activities. For these reasons, many prefer to remain in the local fishing industry and take on additional activities to supplement their income from fishing and the fish trade. Respondents indicated that fishers and fish workers would only leave the fisheries sector if alternative livelihood activities were to provide a higher income and quick profit compared to their fishing and associated activities. As a way forward, fishers suggested the introduction of alternative livelihoods in the fishing communities that provide a comparatively higher income, combined with vocational training for fishers and fish workers and opportunities for fishing and fish trading businesses to thrive through improved road networks.

Fishers preparing fish for the market, Buchanan, Grand Bassa County.

4. Conclusion and recommendations

This study focused on identifying alternative and supplementary livelihood opportunities for coastal fishing-dependent communities in Liberia. The objectives were to (i) identify alternative and supplementary livelihood options acceptable to male fishers and female fish workers in coastal communities, (ii) understand respondents' willingness to leave their fishing and related professions, and (iii) explore sources for financing alternative and supplementary livelihood options. The study analysed the entry requirements such as costs, technical training and resources, possible economic benefits, marketing opportunities, and related challenges for each identified option. Additionally, the study gathered information from fishers and fish workers on alternative livelihood options previously introduced in the fishing communities that had been of limited success or had failed.

The selling of fishing inputs such as fishing nets, ropes, hooks and lines, and corks, among others, was found to be the preferred alternative or supplementary livelihood for fishers. This allows them to stay connected to the fishing profession even if they are not directly engaged in harvesting due to the low skill requirement for operating such enterprises. Other alternative livelihood options reported as desirable by fishers included transportation (driving), masonry (construction), and the running of provision shops or internet cafes, as these activities require limited formal education and skills.

While fishers were less interested in ventures such as electrician work, carpentry, and fuel sales, they believed these ventures were needed in fishing communities, especially for the younger generation.

Trading was the most preferred alternative or supplementary livelihood option for most fish workers, including fishmongers and fish processors. This includes running provision shops, bakeries, food sales, and soap-making. Teaching, tailoring, and farming were other alternative and supplementary livelihood options reported by fish workers. Fish workers also expressed an interest in catering and cosmetology as alternative livelihood options and welcomed the introduction of such ventures in fishing communities, especially for younger generations.

Respondents surveyed expressed an unwillingness to channel the money used to support their fishing and related activities into fully sponsoring alternative livelihood and supplementary ventures. They expressed that they would prefer to take up loans as starting capital for their preferred livelihood or supplementary ventures. The study found most fishers were determined to send their children to school to break their dependence on fishing instead of passing down the fishing profession to them.

4.1 Recommendation

Based on the findings of this research, we provide the following recommendations for government and development agencies to guide livelihood interventions in Liberia's fishing communities:

- Promote sustainable fishing practices to ensure the long-term viability of marine resources for fishers unwilling to leave the fisheries sector. This could include training fishers in responsible fishing methods and resource management, encouraging size limits and closed seasons for certain species to allow stocks to replenish, addressing IUU fishing by industrial vessels, particularly trawlers, and enhancing coastal communities' resilience to climate change impacts.
- Fisheries management policies should include the provision of alternative and supplementary livelihood interventions. These policies should be supported with dedicated financing and a robust monitoring and evaluation system to assess the success of the interventions to ensure they are achieving their expected outcomes.
- Provide vocational and educational opportunities in coastal communities to improve employability. Vocational training could include mechanical engineering, carpentry, masonry, tailoring, electrical work, and sustainable agriculture.
- Improve infrastructure such as roads, electricity and market access to reduce post-harvest losses and increase profitability.
- Promote self-financing schemes such as VSLAs to provide a safety net and financing options for supplementary or alternative livelihood activities. These schemes should be supported by mentorship, financial literacy training, and business management skills to guide fishers and fish workers who are venturing into supplementary or alternative livelihood activities.
- Alternative or supplementary livelihood interventions should take into account the local market and the willingness of fishers and fish workers to participate. It is advisable to support those individuals who are willing to invest in identified livelihood options, but to ensure sustainability it is not recommended that interventions be fully funded by the government or development agencies. It is important to conduct research and document local livelihood options and local market needs, and to support existing supplementary livelihoods in order to scale up their investment in relation to the capacity of local markets.
- Government agencies, NGOs, and local organisations should collaborate to provide a holistic approach to alternative livelihood development, leveraging their resources and expertise to create a sustainable impact.

Fishers pulling their net, Buchanan, Grand Bassa.

APPENDICES

APPENDIX A:

Questionnaire: Study on potential alternative livelihoods in Liberia's coastal communities

For fishers

EJF is undertaking a study detailing the potential and alternative economic opportunities that can be undertaken by fishing communities to possibly redirect coastal communities from sole dependence on fisheries to other livelihoods. There is generally a lack of knowledge about alternative livelihoods and few opportunities to reduce the pressure on fish populations. For many artisanal fishers, fishing is seen as both a traditional and the most important vocation. Due to overcapacity in the small-scale fisheries sector, among other factors, catches are declining, and there are poor returns on investments. However, many of these fishers keep returning to the sea because they have no other livelihood options. This study will document and promote alternative livelihoods that contribute to income diversification for small-scale fishers.

Date: _____

Role: _____

Fishing community: _____

Research Asst. name: _____

Question 1: Demographic characteristics

Age					
	Single	**Married**	**Divorced**	**Separated**	**Widowed**
Marital status					
	Elementary school	**Junior High school**	**High school**	**College**	
Educational level					
Years of fishing					

Question 2. State of the current fishing profession

i. What do you think of the state of the current fishing profession in terms of profits?

Very bad	Bad	Neither good nor bad	Good	Very good	Don't know	Refused

ii. What do you think of the state of your fishing profession in terms of profits compared to one year ago?

Much worse	Slightly worse	Same/ no change	Slightly better	Much better	Don't know	Refused

iii. What do you think of the state of your fishing profession in terms of profits compared to five years ago?

Much worse	Slightly worse	Same/ no change	Slightly better	Much better	Don't know	Refused

iv. Do you receive any government support for your fishing activities?

v. If yes, how beneficial is the support to your fishing profession?

vi. Which other ways do you think the support could be used to help your fishing profession?

vii. If no, what type of government support would you like to receive?

viii. How much is needed on average to start a fishing business?

Item	Quantity	Unit Cost (US$)	Total Cost (US$)
Canoe			
Fishing gear			
Fuel			
Bait			
Outboard motor			
Floating cork			
Lead			
Rope			
Weaving rope			
Paddles/oars			
Anchor			
Anchor rope			
Torchlight			
Reflectors			
Sail			
Warning light			
Generator			
Ring			
Bucket			
Empty rice sack			

ix. How much on average is needed for your daily fishing activities?

Item	Quantity	Unit Cost (US$)	Total Cost (US$)
Fuel/gas			
Bait			
Engine oil			
Food			
Spirits			
Total			

x. Do you think you could channel these funds into business ventures other than fishing?

Yes:

No:

xi. If no, what are your reasons?

Question 3: A hierarchy of Alternative Livelihood options

i. What aspects of the fishing profession do you enjoy the most?

ii. What influenced you to take up fishing as a profession?

iii. What type of alternative or supplementary work would you be interested in doing?

   a. Can you name five in order of importance:

iv. Can you explain why?

v. Would you prefer to have another job to supplement your income from fishing activities?

vi. Would you be willing to leave the fishing industry altogether?

vii. What would you need from an alternative livelihood (e.g., in terms of income, other job satisfaction) that would allow you to leave the fishing profession?

viii. What five alternative livelihood options are available for fishers in this community? (Mention in order of importance)

ix. What other livelihood options can you create for yourselves with the resources in your community aside from fishing?

Question 4. Livelihood requirements (Ref. 2ii)

Livelihood Options	Requirements	Entry Cost (US$)	Economic benefits	Marketing Opportunities	Problems/ Challenges

Note: Examine each option in the table above (Q3) with the following questions:

i. Would you be willing to take up any of the livelihood options above: (i) as a supplementary livelihood to fishing; or (ii) as an alternative livelihood?

ii. How much of the entry cost can you provide on your own?

iii. Which of the training/technical requirements can you provide on your own?

iv. For those you can't provide on your own, what do you think can be done?

v. Which of these options offer a similar job satisfaction to fishing?

vi. What are some of the options that have been introduced in this community which failed?

vii What would you say contributed to the failure of those ventures?

In-depth interviews

i. What would you say about introducing alternative livelihoods to small-scale fisherfolks?

ii. What do you think are some of the challenges to such initiatives in this fishing community?

iii. What is the way forward with this, especially about reducing fishing effort in the small-scale fisheries sector?

Question 5: Financing of alternative livelihoods

i. Are there any savings and loans schemes in this fishing community?

ii. What other financing options (e.g., credit facilities) are available in your community?

iii. Who are these provided by?

iv. What are the challenges/barriers you face in accessing finance
(e.g., administrative burden, lack of knowledge of options, not available in the community, etc.)

v. Are you willing to take a loan as start-up capital for a preferred alternative livelihood option?

vi. If no, what other possible sources of financial assistance or support can assist you in these options?

vii. If yes, how much will you be willing to take as a loan for your start-up?

Question 6: Livelihood succession for children

i. Do any of your children engage in fishing, fish selling/processing activities?

ii. Would you want any of your children to continue with fishing, fish selling/processing?

iii. If no, what is your preferred option?

iv. If yes, why do you think fishing, fish selling/processing is a good profession for your child?

Question 7: General

So far, we have looked at a number of livelihood options available for fisherfolks. Following this discussion, what would you say is preventing people from leaving fisheries entirely to go into any of these?

APPENDIX B:

Questionnaire: Study on potential alternative livelihoods in Liberia's coastal communities

For women fish traders

EJF is undertaking a study detailing the potential and alternative economic opportunities that can be undertaken by the fishing communities, to possibly redirect coastal communities from sole dependence on fisheries to other livelihoods. There is generally a lack of knowledge about alternative livelihoods and few opportunities to reduce the pressure on fish populations. For many artisanal fishers and fish traders, fishing and fish trade are seen as both traditional and the most important vocation. This study will document and promote alternative livelihoods that contribute to income diversification for small-scale fishers.

Date: _____

Role: _____

Fishing community: _____

Research Asst. name: _____

Question 1: Demographic characteristics

Age					
	Single	**Married**	**Divorced**	**Separated**	**Widowed**
Marital status					
	Elementary school	**Junior High school**	**High school**	**College**	
Educational level					
Years in trading					

Question 2. State of the current fishing profession

i. What do you think of the state of the current fish selling/processing profession in terms of profits?

Very bad	Bad	Neither good nor bad	Good	Very good	Don't know	Refused

ii. What do you think of the state of your fishing profession in terms of profits compared to one year ago?

Much worse	Slightly worse	Same/ no change	Slightly better	Much better	Don't know	Refused

iii. What do you think of the state of your fishing profession in terms of profits compared to five years ago?

Much worse	Slightly worse	Same/ no change	Slightly better	Much better	Don't know	Refused

vi. Do you receive any government support for your fish selling/processing activities?

v. If yes, how beneficial is the support to your fish selling/processing profession?

vi. Which other ways do you think the support could be used to help your fish selling/processing profession?

vii. If no, what type of government support would you like to receive?

viii. How much is needed on average to start a fish selling/processing business?

Item	Quantity	Unit Cost (US$)	Total Cost (US$)
Canoe			
Fish product			
Ice			
Cooler			
Tub			
Transportation			
Smoking oven			
Stick			
Firewood			
Labor			
Paper			
Wire			
Food			

ix. How much on average is needed for your daily selling/processing activities?

Item	Quantity	Unit Cost (US$)	Total Cost (US$)
Fish product			
Ice			
Transportation			
Food			
Labor			
Stick			
Firewood			
Total			

x. Do you think you could channel these funds into business ventures other than fish selling/processing?

Yes:

No:

xi. If no, what are your reasons?

Question 3: A hierarchy of Alternative Livelihood options

i. What aspects of the selling/processing profession do you enjoy the most?

ii. What influenced you to take up selling/processing as a profession?

iii. What type of alternative or supplementary work would you be interested in doing?

   a. Can you name five in order of importance:

iv. Can you explain why?

v. Would you prefer to have another job to supplement your income from fish selling/processing activities?

vi. Would you be willing to leave the fishing industry altogether?

vii. What would you need from an alternative livelihood (e.g., in terms of income, other job satisfaction) that would allow you to leave the fish selling/processing profession?

viii. What five alternative livelihood options are available for fishmongers or fish processors in this community? (Mention in order of importance)

ix. What other livelihood options can you create for yourselves with the resources in your community aside from fish selling/processing?

Question 4. Livelihood requirements (Ref. 2ii)

Livelihood Options	Requirements	Entry Cost (US$)	Economic benefits	Marketing Opportunities	Problems/ Challenges

Note: Examine each option in the table above (Q3) with the following questions:

i. Would you be willing to take up any of the livelihood options above: (i) as a supplementary livelihood to fish selling/processing; or (ii) as an alternative livelihood?

ii. How much of the entry cost can you provide on your own?

iii. Which of the training/technical requirements can you provide on your own?

iv. For those you can't provide on your own, what do you think can be done?

v. Which of these options offer a similar job satisfaction to fish selling/processing?

vi. What are some of the options that have been introduced in this community which failed?

vii. What would you say contributed to the failure of those ventures?

In-depth interviews

i. What would you say about introducing alternative livelihoods to small-scale fisherfolks?

ii. What do you think are some of the challenges to such initiatives in this fishing community?

iii. What is the way forward with this, especially about reducing fishing effort in the small-scale fisheries sector?

Question 5: Financing of alternative livelihoods

i. Are there any savings and loans schemes in this fishing community?

ii. What other financing options (e.g., credit facilities) are available in your community?

iii. Who are these provided by?

iv. What are the challenges/barriers you face in accessing finance
(e.g., administrative burden, lack of knowledge of options, not available in the community, etc.)

v. Are you willing to take a loan as start-up capital for a preferred alternative livelihood option?

vi. If no, what other possible sources of financial assistance or support can assist you in these options?

vii If yes, how much will you be willing to take as a loan for your start-up?

Question 6: Livelihood succession for children

i. Do any of your children engage in fishing, fish selling/processing activities?

ii. Would you want any of your children to continue with fishing, fish selling/processing?

iii. If no, what is your preferred option?

iv. If yes, why do you think fishing, fish selling/processing is a good profession for your child?

Question 7: General

So far, we have looked at a number of livelihood options available for fisherfolks. Following this discussion, what would you say is preventing people from leaving fisheries entirely to go into any of these?

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64 A.G. Bluman (2009) Elementary Statistics: A Step by Step Approach (seventh ed.), McGraw-Hill Higher Education, New York.

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66 During the group interviews, most of the fishers who were cohabiting (or living together with a man or woman) believed they were married. It was only after a clarification was made on the legal status of marriage under the laws of Liberia that the fishers understood that most of them were unmarried.

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