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FEED THE FUTURE GHANA FISHERIES RECOVERY ACTIVITY (GFRA)

Market Analysis of Suitable Alternative and Supplemental Livelihoods in Coastal Regions of Ghana Report

May 2022

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Feed the Future Ghana Fisheries Recovery Activity
Market Analysis of Suitable Alternative and
Supplemental Livelihoods in Coastal Regions of Ghana

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COVER PHOTO: Fish Processors on the beach in Keta, Volta Region.
Photo Credit: Richard Amaning.

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ACRONYMS

BOG	Bank of Ghana
BNP	Big Numbers Project
CEWEFIA	Central and Western Fishmongers Improvement Association
CTVET	Council for Technical and Vocational Education and Training
DAA	Development Action Association
EAFM	Ecosystem Approach to Fisheries Management
EEZ	Exclusive Economic Zone
FC	Fisheries Commission
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GEA	Ghana Enterprises Agency
GFRA	Ghana Fisheries Recovery Activity
GOG	Government of Ghana
KEEA	Komenda-Edina-Eguafo Abrem
KII	Key Informant Interview
MOFAD	Ministry of Fisheries and Aquaculture Development
MoMo	Mobile Money
MSY	Maximum Sustainable Yield
NAFPTA	National Fish Processors and Traders Association
NEIP	National Entrepreneurship Innovation Program
NGO	Non-Governmental Organization
ROSCA	Rotating Savings and Credit Association
SDGs	Sustainable Development Goals
SFLP	Sustainable Fisheries Livelihood Program
SFMP	Sustainable Fisheries Management Project
SPSS	Statistical Package for Social Sciences
TV	Television
USAID	United States Agency for International Development
VSLA	Village Savings and Loans Association
YEA	Youth Employment Agency

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EXECUTIVE SUMMARY

The livelihoods of many small-scale fishing communities that directly depend on fisheries are under increasing threat and remain vulnerable to poverty primarily due to the overexploitation of Ghana's marine resources. Thus, growing numbers of fishers' livelihoods are increasingly squeezed in a vicious circle that signals an urgent need for livelihood diversification in fishing communities (Gordon et al., 2010).

This study has been conducted with an overarching aim to identify alternative and supplemental livelihood options that are financially and socially suitable for fisherfolks, specifically women and youth across the four (4) coastal regions of Ghana covered by the Feed the Future Ghana Fisheries Recovery Activity (GFRA). GFRA strives to reduce fishing overcapacity and improve small pelagic fisheries management to encourage ecological sustainability and marine biodiversity conservation while improving the socio-economic well-being, food security, and resilience of fishers and coastal communities.

The study covered fifteen (15) coastal communities across Ghana's four (4) coastal regions, 10 of which are GFRA sites. Data collection occurred at the national, regional, district, and community levels involving smallholder fishers, fish traders, and fish processors. The study applied a mixed approach to data collection and synthesis using qualitative and quantitative methods to collect primary and secondary data. The study focused mainly on youth between the ages of 15-35 who are fishers, processors, and traders. In selecting the research participants, the study used a stratified sampling approach constructed on age categories (under 15 years, 15 - 18 years, and 19 - 35 years) and the gender of the research participants. A total of 424 respondents were sampled and interviewed comprising of 40% females and 60% males.

Key Findings

The study reveals minimal (19.1%) engagement in supplemental livelihoods by fisherfolks across the coastal communities assessed. For those engaged in the supplemental livelihoods, a majority (63%) are new, start-ups, or emerging businesses. Some of the reasons given for the low adoption and engagement in supplemental livelihoods were the conservative nature of fisherfolks in engaging in other livelihoods apart from fishing, fear of anticipated risks of engaging in non-fisheries livelihoods, and frustration with the Government for emphasizing

fisheries management measures with severe economic repercussions and neglecting investment in coastal economies.

According to the study, the following supplemental livelihoods have the highest prevalence in the regions: petty trading in the Central Region (27.3%) and Greater Accra Regions (29.2%); construction and civil works (including plumbing, masonry, and others) in the Volta Region (28.6%); and food vending in the Western Region (17.4%).

In terms of respondents' consideration for pursuing supplemental livelihoods, more than three-quarters (76.2 %) will pursue supplemental livelihoods based on the amount of income they will earn from those ventures. A little more than one-third (35.6%) stated they would consider the type of supplemental livelihood activity, while less than a tenth will consider how easy or difficult it is to learn the livelihood venture (4.7%).

The study sought to understand what factors might affect respondents' willingness to replace their fishing-related livelihoods with alternative livelihoods. The majority (74.5 percent) of fisherfolk in coastal communities are willing to pursue alternative livelihoods based on the level of income they would earn. Other factors mentioned were the type of livelihood (42%). Few respondents would be motivated by how difficult or easy the livelihood is to learn (4.5%), how easy or difficult the livelihood enterprise is to run (0.5%), and influence from relatives (0.5%).

The study found the existence of multiple alternative livelihood options in coastal communities besides fishing. Notable among them are crop farming, electrical works (electrician), carpentry/woodworks, construction work (masonry, block molding), salaried work (government civil or public service), factory hand (laborers who work at the factory), petty trading, hairdressing and barbering, tailoring and dressmaking, driving and "okada" riding (commercial motorcycle riding), food vending, salt mining, mobile money merchant, auto mechanic, and livestock rearing.

Results from the study clearly show that approximately 7 in 10 (73.3%) of the fisherfolks perceive that, members of their communities, mainly the youth, travel outside to engage in alternative livelihood activities. Follow on interviews reveal that youth (male & female) are more willing to diversify their fisheries' livelihoods due to continuous disappointment. They lamented the consistently low fish catch in the last few months, resulting in an increasing number of youths in coastal fishing communities migrating to seek greener pastures in

mining and urban communities. Most of those privileged to travel outside of their communities are engaged in illegal mining, construction, labor work, street hawking in urban centers, restaurants, local "chop bars," and domestic work as house help.

The vast majority (80.9%) of study participants said there were no high-earning alternative livelihood opportunities for fishing communities in Ghana. This perception results from several factors including the lack of exposure to the prospects of non-fishery income-generating activities; a worldview and mindset that is limited to fisheries; the perception that other non-fisheries income-generating ventures would not fetch greater returns on investment; and the perception that the available alternative livelihoods are only trade or vocation related (i.e., hairdressing, tailoring, carpentry).

The general resource needs of the fisherfolks wishing to diversify their livelihoods includes training, start-up capital, a space or shop, tools, and equipment. The study results reveal that, for the proportion of youth (15 to 35 years) willing to undertake livelihoods outside of the fisheries, more than two-thirds (68.2%) stated that they would require tools and equipment. More than a half (57.8%) require training and apprenticeship fees, whereas slightly above a tenth (18.2%) need working capital. Other potential resources required were space or a shop (9.2%) and assistance in acquiring a driver's license (5.2%).

Among the out-of-school youth between the ages of 15 and 18 who were interviewed under this study, more than one-third (37.1%) said they were willing to return to school if given the needed resources and support (Table 15). In Shama and Dzelukope, both the females and males were not interested in returning to school. In Apam, Tema, and Biriwa in the Central Region, while some out of school female respondents were interested in returning to school, their male counterparts had no desire to go back to school. The situation was precisely the opposite in Azizanya, Prampram, Adina, Sekondi, and Denu; while the male out-of-school youths were desirous of returning to school, their female counterparts had no intentions of returning to school.

Conclusions

Participation of fisherfolk in supplementary livelihood programs is feasible because some fishers are already pursuing supplementary livelihoods and are making conscious efforts to add new livelihood opportunities to their existing fisheries business. The current state of the small pelagic fisheries in coastal communities has been a compelling catalyst in motivating

these fishers to diversify their livelihoods beyond what they have known and practiced for many years. However, a continuous effort to support supplementary livelihoods is necessary as many of these new businesses were established over the course of the past 5 years but show signs of business continuity and sustainability. The most common livelihoods are petty trading, construction and civil works (including plumbing, masonry, among others), and vegetable farming.

Even though some key informants believe that fishers will be hesitant to abandon their fishing livelihoods entirely, the research reveals that many youth travel outside of coastal communities to urban cities in search of alternative livelihoods, indicating a desire among youth fishers to pursue alternative livelihood ventures besides fisheries. As shown by the data obtained in this study, a significant number of fishers will explore other livelihood opportunities that provide a higher rate of return than fishing.

Fishers' engagement in supplemental and alternative livelihoods is not possible without meeting their essential resource needs. Although the respondents are willing to engage in additional livelihood options, they cited the need for additional resources such as training, start-up capital, space or a shop, tools, and equipment. These needs were the same for male and female respondents. Without these resources, participants may not be willing to adopt the livelihood or be committed to sustaining it in the long term.

Fishers' capacity building is crucial to the adoption of alternative and/or supplemental livelihoods. According to the findings of the study, many of the respondents have not had the opportunity to benefit from livelihood-related capacity building. Those few opportunities that have been available in the past favored female beneficiaries over their male counterparts.

Recommendations

Based on the study findings, the following are some recommendations for GFRA in identifying and establishing suitable supplemental and/or alternative livelihood programs for youth in coastal communities.

Today's youth are more inclined to look to alternatives to fishing and fishing related businesses due to the general economic insecurity that has resulted from depleted small pelagic fish stocks. Internal and external factors in the local economy such as market

opportunities, start-up support, business enhancement support, and training sponsorship are significant drivers for youth to adopt alternative livelihood options. Even with these inputs, fisherfolks are also motivated by the income earning potential of the livelihoods, the nature of the business, and the ease of learning the trade. The project should ensure that these motivating factors are fully considered when selecting the type of livelihood that will be promoted and ensuring participants sustain the livelihoods.

GFRA should also develop partnerships with private enterprises, master tradesmen, and existing technical and vocational education and training opportunities to take advantage of active workforce development resources. Partnerships with these institutions should ensure that livelihoods are well oriented toward existing or potential markets and that these businesses become well established and formalized, resulting in the business's long-term sustainability. Similarly, the project can support fisheries associations and the Fisheries Commission (FC) to partner with national level youth employment agencies to ensure they target coastal communities with skills initiatives and job modules. These systematized approaches to expanding livelihoods resources to fishing communities will allow GFRA to be more successful at scale and for livelihood support for fishing communities to continue without donor support, particularly if training is meeting the needs of private sector employers.

Supplemental livelihoods must be tailored to the individual's specific needs as well as economic opportunities in coastal communities. Beneficiary engagement is critical in understanding the specific beneficiary needs and ensuring proper targeting as this will boost their confidence and trigger their interest in seeing the gains from the supplementary livelihood options. Understanding the unique challenges, barriers, and constraints that both men and women face is essential for crafting a gender equitable livelihood strategy targeting fisheries-dependent households. Livelihoods programs should also involve mentoring and coaching to encourage youth to pursue supplemental livelihoods until the initiative becomes self-sustaining, as training alone does not result in job creation.

SECTION 1: INTRODUCTION

1.1 Background

The Feed the Future Ghana Fisheries Recovery Activity (GFRA) is a five-year (2021-2026), $17.8 million activity funded by the United States Agency for International Development (USAID) that aims to mitigate the near-collapse of Ghana's small pelagic fisheries—sardines, mackerel, and anchovies—and establish a durable basis for its recovery. The health of Ghana's fisheries is critical to maintaining economic opportunity and food security for Ghanaian fishers and coastal communities and conserving coastal and marine biological diversity. Ghana's fisheries face pressing challenges from overharvesting by industrial and small-scale fishing operations, habitat loss, pollution, and climate change.

GFRA strives to reduce fishing overcapacity and improve small pelagic fisheries management to encourage ecological sustainability and marine biodiversity conservation while improving the socio-economic well-being, food security, and resilience of fishers and coastal communities. GFRA is currently working in ten fishing villages and landing sites across Ghana's four (4) coastal regions; Axim, Half Assini, Sekondi, and Shama in the Western Region; Elmina and Mumford in the Central Coast; Tema and Azizanya in the Greater Accra Region; and Denu and Keta in the Volta Region.

Tetra Tech and partners are implementing the project's activities under an overarching framework using an ecosystem approach to fisheries management (EAFM) inclusive of relevant strategic interventions to collectively achieve the GFRA's five interdependent strategic approaches, as follows.

- Strategic Approach 1: Align fisheries capacity with ecological carrying capacity of the smallpelagic fisheries while enhancing the socio-economic well-being and resilience of artisanal fisherfolk.
- Strategic Approach 2: Increase the quality and value of artisanal fish products to maintain household income and enhance availability of nutritious foods for local and regional markets.
- Strategic Approach 3: Strengthen transparency, accountability, and co-management ingovernance practices for fisheries policymaking, regulation, and enforcement.
- Strategic Approach 4: Strengthen constituencies to promote and implement sustainable fisheriesmanagement.
- Strategic Approach 5: Improve use of science and research for policy and management decisions.

1.2 Research Study Objectives

The overarching aim of this study is to identify alternative and supplementary livelihood options for fisherfolk across the four (4) coastal regions of Ghana that are financially and socially suitable for women and youth exiting or reducing their engagement in the fisheries sector. In this context, appropriate livelihoods refer to those that provide regular and decent income, sufficiently replace or decrease dependency on fishing income, incentivize youth to pursue non-fishery livelihoods with vocational skills training, and have local and national support as livelihood options.

In achieving this objective, the study specifically sought:

1. To identify existing alternative and supplementary livelihood options in the coastal and neighboring communities
2. To identify potential livelihood options and resource demand for these livelihood options in the coastal and neighboring communities.
3. To identify potential employment and labor agencies in the coastal and neighboring communities.
4. To outline the skills and expertise required for each potential employment and labor agency identified.
5. To assess fisherfolk's skills, interests, and expectations, particularly the youth (18 years to 35 years) in alternative and supplemental livelihood options.
6. To identify young people of school-going age (1 5years to 18 years) who are willing to give up their fishing jobs to return to school and identify incentives for going to school.
7. To identify and prioritize training programs of interest to women and youth starting non-fishery businesses and their resource demand.
8. To identify potential/existing risks of abuse of women and youth in alternative livelihoods
9. To identify opportunities for developing alternative livelihood interventions in coastal communities.
10. To identify barriers to the development and uptake of viable alternative livelihoods in fishing communities and propose measures to overcome them.

SECTION 2: GHANA'S FISHERIES SECTOR

2.1. Overview of Ghana's Fisheries Sector

Ghana's fisheries sector is one of the key sectors supporting the nation's socio-economic development and creates jobs for 20% of the active labour force (2.7 million people), including women who engage in processing and trading (Akpalu et al., 2018). Bordered on the south by the Gulf of Guinea, Ghana, spanning an area of 238 500 km^2, has a narrow continental shelf with a total area of about 24,300 km^2. Ghana has a territorial sea of 12 nautical miles (nm), a contiguous zone of 24nm, and an Exclusive Economic Zone (EEZ) of 200 nm, covering an area of 225,000 km (Bank of Ghana, 2008). In 2020, fishing in Ghana contributed close to around 1.6 billion Ghanaian cedis (GHS), roughly 263.2 million U.S. dollars, to the country's Gross Domestic Product (GDP). In the preceding year, the added value of the industry amounted to approximately 1.4 billion Ghana Cedis. Within the period reviewed, the contribution of fishing to Ghana's GDP generally fluctuated (Dokua, 2021).

The fishing industry comprises the marine and inland sectors, with the marine sector producing around 85% of total catches (EJF, 2018). The marine fishery consists of the artisanal, inshore, and industrial sub-sectors. Artisanal fishing is the most critical sub-sector in terms of its contribution to production and local fish supply (FAO, 2004). The sector contributes approximately 70 to 80% of the total annual marine fish landings and employs about 107,518 fishers (Dovlo et al., 2016). Ghana's artisanal fishing sector comprises over 14,000 motorized and non-motorized wooden canoes (Lazar et al., 2018), which target a range of species, including the small pelagic such as Sardinella aurita (Round Sardinella), Sardinella maderensis (Flat Sardinella), Engraulis encrasicolus (European Anchovy), and Scomber colias (Atlantic Chub Mackerel).

Sardinella populations have crashed in recent years, from peak landings of around 140,000 metric tonnes in the early 1990s to annual landings of approximately 20,000 tonnes between 2011 and 2016 (EJF, 2019). The worrying trend has negatively impacted the livelihoods of fishers with many coastal communities and fishers expressing frustration at low catches.

Ghana's fisheries governance is underpinned by the Fisheries (Amendment) Act 2014 (Act 880). The Ministry of Fisheries and Aquaculture Development (MOFAD) is the organ responsible for fisheries resource development policy and the FC as its implementation agency. It is regulated under the Fisheries (Amendment) Regulation 2015 (LI 2217). Under these Laws and Acts,

regulations such as banning fishing in some areas and seasons, control on mesh sizes of nets, protection of juvenile fish or berried crustaceans, and fishery licensing have been introduced.

2.2. Fisheries Livelihood in Ghana

The global trend of fisheries overexploitation has resulted in the need to reduce fishing efforts across the globe, especially in Ghana. Fishing in Ghana is not just an income-generating activity but is a way of life that is embedded in the culture of the people along the coast and cannot, therefore, be easily severed. The human dimension is recognized as a component of ecosystems that integrates economic, social, and cultural factors, interdependent with biodiversity (CBD, 1993; Khakzad et al., 2015). For instance, Gómez et al. 2020 asserted that market and non-market-values are interconnected in activities such as fishing and as such, it is a livelihood rooted in social institutions and cultural values that have interacted with natural ecological cycles throughout history. The social and cultural norms and institutions produced this complex socio-ecological relationship produce identity and define heritage.

Adopting a livelihoods approach requires understanding the diversity of coastal people and communities, especially in relation to their livelihood strategies. It also requires understanding how households adapt to reduce their risks, the incentives that drive the decisions of resource users, and the sources of their vulnerability to stresses and shocks (Pomeroy et al. 2013). Diverse livelihood portfolios are often viewed as an essential part of household economies and a way to manage economic risk in developing countries, especially rural economies. The relationship between fishing and livelihood diversification is important because fishing is an important component of the rural livelihoods of households in the coastal areas (Amevenku et al., 2019).

The Big Numbers Project (BNP) (2008) estimates that between 93 and 97 million rural households in developing countries are either directly or indirectly involved in fishing or are into the processing and marketing of small-scale fisheries. Fishing in Ghana is a highly gender-segregated profession, with men catching fresh fish, and women processing fish (Onumah et al, 2020).

Box 1: Livelihoods Defined

A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household (Chambers and Conway. 1992)

Enhanced livelihoods primarily focus on adding value to ongoing traditional or historical activities. Strategies that enhance livelihoods move communities and stakeholders up the value chain by improving ongoing economic activities that could, with support, provide higher and more sustainable income streams. For example, supporting fisherfolks to develop more effective crab fattening and marketing or more effective fish drying and marketing; connecting products to markets to increase opportunities to sell sustainably harvested or produced goods (i.e., value chain); or encouraging more ecologically sensitive use of local resources for income-generating activities such as creating mangrove nurseries in communities for seedling sale and replanting activities, cultivating seaweed, etc. (Pomeroy et al. 2013)

Supplemental and diversified livelihoods are somewhat different, intended to reduce household dependence on a single livelihood for income and food (e.g., fishing or coral harvesting). A diversification strategy sometimes includes elements of enhancing existing livelihoods and adopting "supplemental" strategies (making current practices more sustainable). This strategy is less risky than alternative livelihoods, but it requires greater investment than simply enhancing current, ongoing livelihoods activities. Supplemental or diversified livelihoods can potentially reduce pressure on natural resources. For example, even if fishermen continue fishing, they might reduce their individual fishing effort if they are able to get some income from another livelihood. Supplemental livelihoods can also be a step towards switching to an alternative livelihood (Pomeroy et al. 2013).

Alternative livelihoods require considerable extension support to set up and sustain – often involving financial, technical, and material input from government, communities, and the business sector. Because of the additional time and support needed, government roles are critical including forming and sustaining extension and outreach support. Alternative livelihood development presents the promise of reduced pressure on resources (Pomeroy et al. 2013).

Fishing along Ghana's coast is the main livelihood for local communities, and it contributes significantly to their incomes. Fishing supports livelihoods that are beyond the act of fishing itself such as provision of goods and services on which fishing and fish marketing and selling depend. Fishing also provides disposable income to spend on many other consumer items, food security, and access to better health care. However, the fishing industry has been saddled with many challenges in recent times, which has led to low landings (Danquah et al. 2021). Fishery resources

in Ghana are under pressure due to high demand for fishery products, poverty, population growth, and particularly inadequate alternative livelihood options. Like most developing countries, Ghana's fishing communities have been observed to "rhyme with poverty" (Bene 2003) because of inadequate alternative livelihoods. Fishers, in their bid to increase daily harvests and increase their income, contribute to growing pressure on marine resources and fish-based livelihoods. They increase fishing effort by deploying multiple numbers of gears and canoes, deploying illegal methods to catch more fish, engage in many trips, and spend longer fishing hours at sea. All these efforts put excessive pressure on fishery resources, leading to their overexploitation. The threat of depletion of the resource is not only due to over-fishing but also attributable to weak regulation and ineffective management of the sector (Dzantor et al. 2020). Recent assessments estimate that Ghana's small pelagic fishery could soon collapse in the absence of robust management interventions. These population declines affect the profitability of fishers and increase the economic vulnerability of many small-scale fishing communities that depend on fisheries as their primary source of livelihood. Owing to the above, assisting fishers to diversify their livelihood is critical in Ghana as their very survival is threatened by the depletion of fish stock (EJF, 2020). Thus, growing numbers of fishers' livelihoods are being increasingly squeezed in a vicious circle that signals an urgent need for livelihood diversification in fishing communities. Indeed, inadequate supplementary livelihoods has been identified as a factor contributing to increased vulnerability to poverty in Ghana's artisanal fisheries sector.

Fish capture, processing, marketing, and associated services constitute a significant source of livelihood – certainly in coastal areas. There has been relatively little work done on multipliers in fisheries, however the Sustainable Fisheries Livelihood Program (SFLP) study in Ghana suggested that one fishing job creates a chain of supplementary livelihoods (Gordon, et al. 2010). The household security effect is even wider – since each of these incomes will help support an extended family. Although fishing is becoming more difficult, there is no doubt that it remains a critical economic driver in coastal Ghana (Finegold et al., 2010).

As part of efforts to reverse the declining trend in fisheries resources and rebuild fish populations, the MoFAD, in its 2015-2019 Fisheries Management Plan, clearly set out measures to reduce current levels of fishing effort and capacity. In the Plan, the Government envisaged reducing the number of currently active canoes from over 14,000 to about 9,000 based on the ecological carrying capacity of the fishery (EFJ, 2018). This implied a loss of livelihood for some actors in the fishery sector and the need for alternative or at least supplementary economic

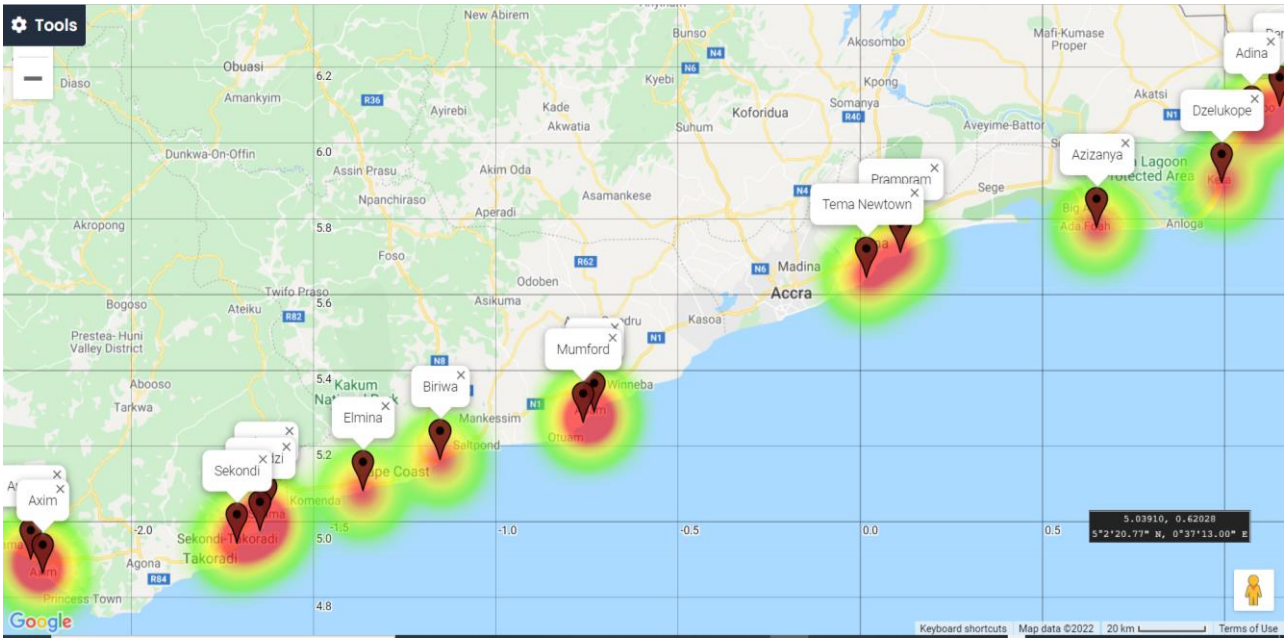
opportunities. This, however, could not be achieved due to the lack of political will on the part of government and other factors on the part of the major stakeholders in the fisheries sector.

SECTION 3: THE STUDY METHODOLOGY

3.1 Study Sites

The study covered fifteen (15) coastal communities across Ghana's four (4) coastal regions, ten of which are the designated GFRA target communities. The remaining five communities were purposefully selected on the assumption that their capacity and socioeconomic characteristics are comparable to those of the GFRA communities in that region. This allows for a comparable impact assessment at the project endline. The level of consultation used was across national, regional, district, and community levels which involved smallholder fishers, fish traders, and fish processors. (Image 1). These communities are engaged in fishing activities and are destinations for many migrant fishers.

Image 1: Study Sites across the four coastal regions of Ghana



3.2 Sampling Approach

The study focused mainly on youth between the ages of 15-35 who are fishers, processors, and traders. The Youth Policy of the Government of Ghana (GOG) defines youth as those between ages of 15-35 years. Youth were selected as the focus for this study because of GFRA's focus on youth for livelihoods to encourage a generational shift out of the fisheries sector. The study further disaggregates participants into two categories as follows:

a. 15-18 years: Out of school youth who should be in school or formal apprenticeships

b. 19-35 years: Working age youth who can be enrolled in informal apprenticeships

In selecting the research participants, the study used a stratified sampling approach. The stratification was constructed based on age categories (below 15 years, 15 - 18 years, and 19 - 35 years) and the gender of the research participants. The study further applied simple random sampling in selecting the specific research participants to interview. A list of fishermen, fish processors and traders constituted the sampling frame.

In determining the sample proportion for the respondents, the study used data from the Fisheries Commission's Ghana Marine Canoe Frame Survey report (2016), which estimates the number of fishers along the coast as 107,518 fishermen in 186 fishing communities with 292 landing sites. The number of fish processors and traders was generally estimated at 30,000 based on the number of canoes and fishers.

The estimation of sample size was determined primarily by the statistical properties of the population under consideration. Using a 95% confidence level, 5% margin of error and population proportion of 50%, the sample estimate was 385 determined using an unlimited population size. The sample is further increased by 10% to account for contingencies such as non-response or recording error, resulting in a final target sample size of 424.

3.3 Methods of Data Collection

The study applied a mixed method approach to data collection and synthesis using both qualitative and quantitative methods to collect primary and secondary data. Quantitative data collection took the form of direct interviews using a structured questionnaire with 424 randomly selected fishers, processors, and traders between the ages of 15 - 35 years in communities across the four coastal regions. This was supplemented by qualitative data collection utilizing key informant interviews, focus group discussions, and direct observations of the intricate activities of the fisherfolks, fish processors, and traders. A total of twenty-four (24) focus group discussions were held across the four coastal regions of Ghana, six (6) in each region. 424 in-depth interviews were conducted among both male and female young fishers, involving 324 youths between the ages of 19 and 35 and 100 youths aged 18 and below.

The study reviewed existing literature to gain insight into the current state of knowledge regarding alternative and supplementary livelihood options pursued or desired by fisherfolk. Publications produced by institutions, groups, civil society organizations, and individuals, including

previous alternative livelihoods interventions targeting fishers such as those implemented by Sustainable Fisheries Management Project (SFMP) in 2021, Far Dwuma Nkɔdo (Securing Sustainable Fisheries), and Far Ban Bo (Protecting Fisheries) were also consulted. The study also examined documents generated (i.e., field notes and photographs) during the enumeration.

Site level data collection utilized participatory research approaches such as one-on-one interviews, key informant interviews (KII) with opinion leaders at the community level, local authorities, fisheries associations, and focus group discussions (FGD) with the youth that were held separately with out of school females and males. These in-depth discussions provided the opportunity to further explore participants' perspective on the availability of viable alternative and supplementary livelihoods, resource demands, barriers, and prospects. This study was supervised by GFRA's Market and Private Sector Specialist, Sustainable Coastal Livelihoods Specialist and Fisheries Value Chain Specialist.

Image 2: Focus group discussion session with female group (Axim) and male group (Ankobra)

3.4 Quality Control, Data Cleaning, Analysis, and Presentation

The study utilized the KoBo Collect application to automate the transmission and entry of interview data, as well as to validate and approve the data. Numerous quality checks were performed during the data analysis and presentation of the results to ensure that the study's objectives were met.

To ensure quality in the gathering of data, a 3-day training was conducted to train the enumerators on the data collection instruments. A pre-test was also conducted at the Nungua landing site in the Greater Region to test the tools. The lead Consultant directly supervised

the enumerators and provided general guidance on the data collection and logistics in the field. A data monitoring desk was set up at the Stronghold office in Accra to monitor the inflow of data on the KoBo Collect console which was managed by a dedicated officer.

Image 3: Enumerators' training session

Image 4: Enumerators interacting with fisherfolks during the Pre-Test at Nungua in the Greater Accra Region

SECTION 4: STUDY FINDINGS

4.1. Demographic Characteristics

This section presents the demographic characteristics of the respondents interviewed across the four coastal regions of Ghana. The emphasis is mainly on their gender, age, educational background, household size, and length of stay in the 15 communities assessed. These characteristics underpin the kind of livelihood options that will best suit each category of respondents in coastal communities.

4.1.1. Distribution of Study Respondents by Gender and Age

Figure 2: Distribution of study participants by gender

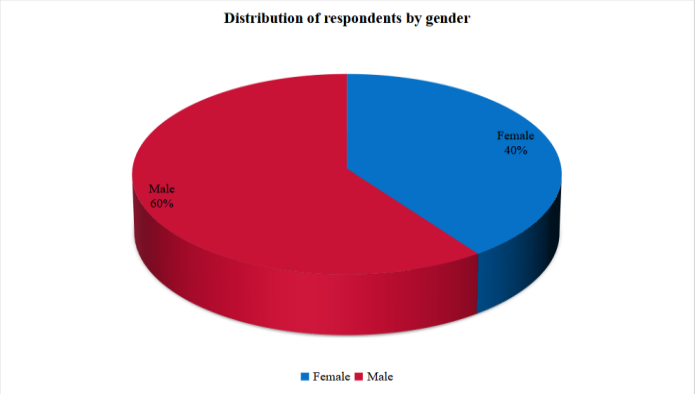
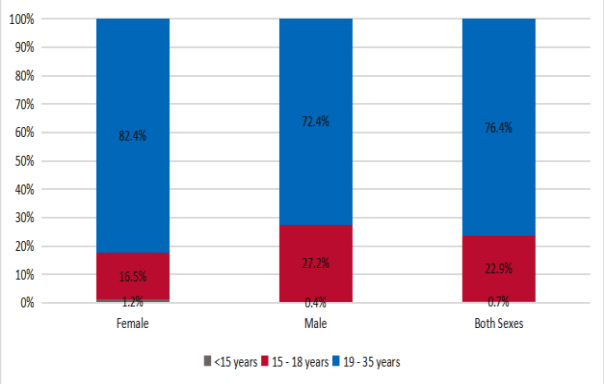


Figure 1: Distribution of respondents by age and sex

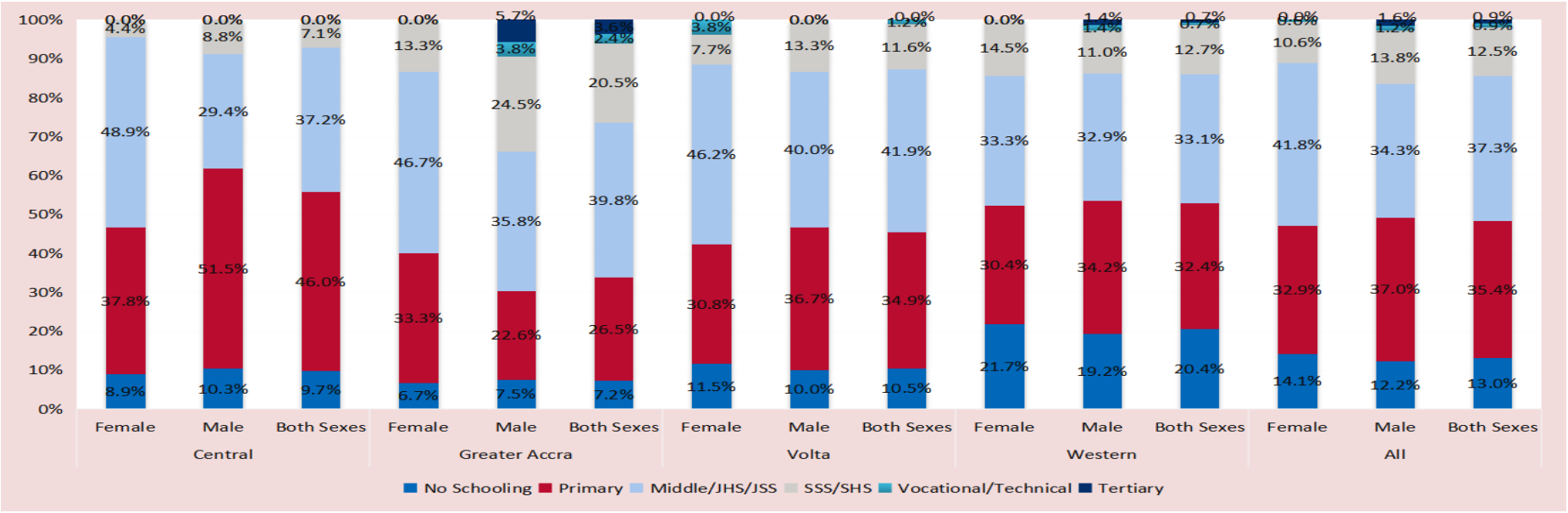


A total of 424 respondents were interviewed comprising of 40% females and 60% males (Figure 1). More than three-quarters (76.4%) of the respondents were between the ages of 19 - 35 years (Figure 2). A little above one-fifth (22.9%) were between 15 – 18 years and 0.7% were under 15 years. The proportion of males between the ages of 15 - 18 years (27.2%) was greater than the females (16.5%) within the same age cohort whereas female respondents between the ages of 19 - 35 years were greater (82.4%) than the male respondents (72.4%). These parallels field observations by the research team that many males of a younger age were engaged in fishing activities in the coastal communities. At Apam, Ankobra, and Aboadze for instance, young males between 8 - 10 years were seen working as crew on canoes and at Ankobra they were seen mostly assisting the dragging of beach seine net, and activity popularly referred to as “ntwee” in the local Akan language.

4.1.2. Educational Status of Respondents

A little above a tenth (13.0%) of the respondents across the 15 communities had never been to school. Approximately 7 in 10 (72.7%) of the fisherfolks had attained Primary and Middle/JHS level of education, and a little above a tenth (12.5%) reached Senior High School (SHS) education level. The proportion with vocational/technical training was negligible (0.9%) across all the regions. Greater Accra and Central Regions had the highest proportion of fisherfolks with at least a primary education, 92.8%, and 90.4%, respectively. In relation, the proportion of fisherfolk from the Volta and Western Regions that had never been to school were high at 10.5% and 20.4%, respectively (Figure 3). In the Volta Region, it was observed that native members of the community were particularly interested in schooling while community members that had migrated from other coastal communities had little or no interest. This likely accounts for the higher percentage of people that had never been to school in the region. In the Western Region, many youth participants had no interest in education due to the income they earned from fishing activities.

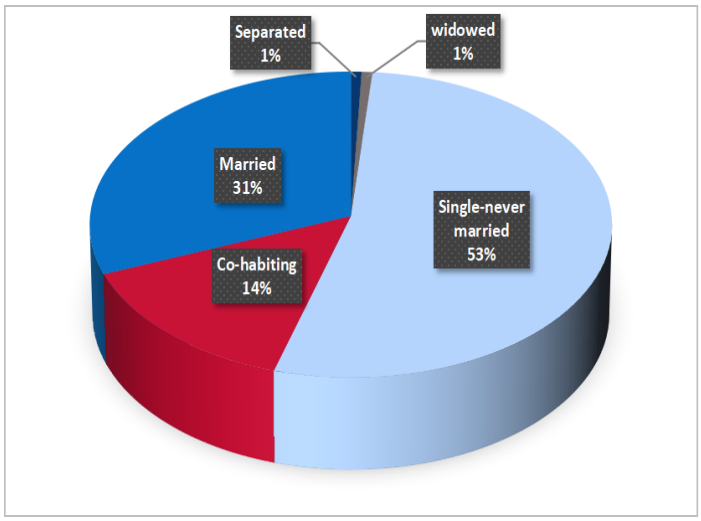
Figure 3: Educational status of fisherfolks



4.1.3. Marital Status of the Study Respondents

The study analyzed this variable to better understand how marriage influences choice and types of livelihoods. The results indicate that more than half (53.1%) of the respondents had never been married (Figure 4). The married proportion was below one-third (31.1%), while the percentage of young people co-habiting was more than a tenth (14.4%).

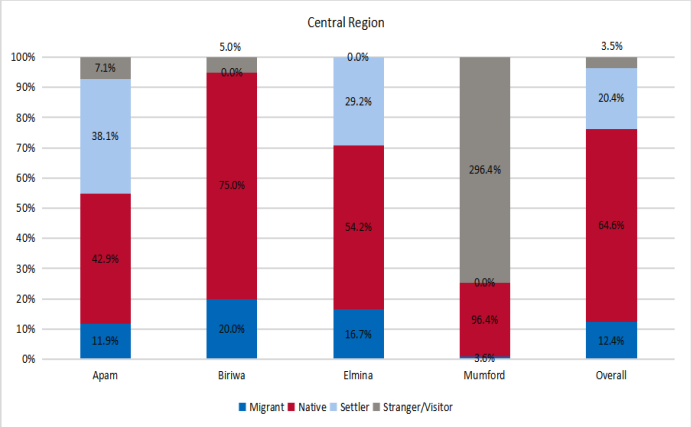
Figure 4: Marital status of fisherfolks



The study found that for the proportion of married youth, especially the males, the decision to undertake apprenticeship skills training is very challenging as they need financial resources to care for their families while undergoing the training. The decision-making process for married female youth requires that their spouse approve, implying less independence in decision making regarding income-generating ventures.

4.1.4. Migration Status of the Study Respondents

Figure 5: Status of Respondents in the Central Region



The study assessed the migration status of respondents in each community to understand the dynamics of their investments and contributions to the local economy at the community level. Migration status was divided into three categories: 1) native residents, 2) settlers, defined as fishers who move with their families to live in a new coastal community, and 3) migrants, defined as fishers who move temporarily from one coastal community to another in search for better living conditions or to engage in fishing activities.

Figure 6: Migration Status of Respondents in the Western Region

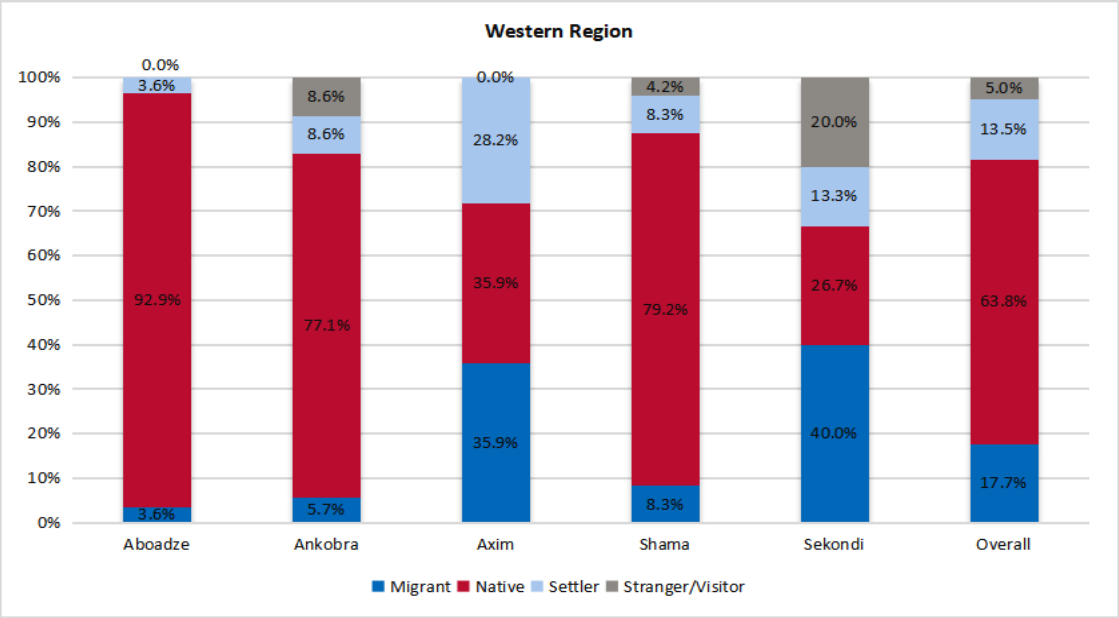
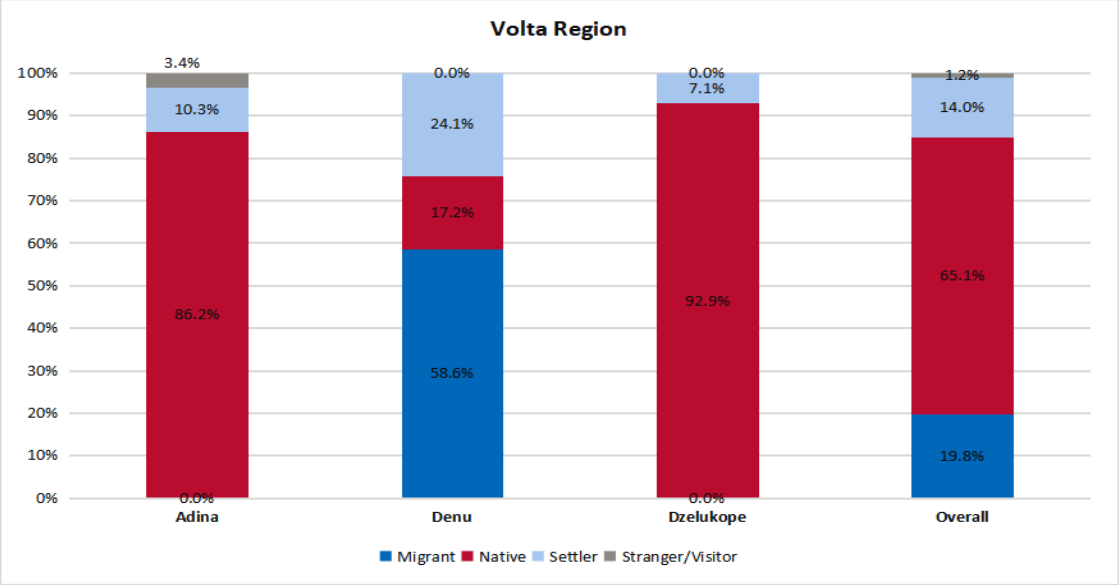


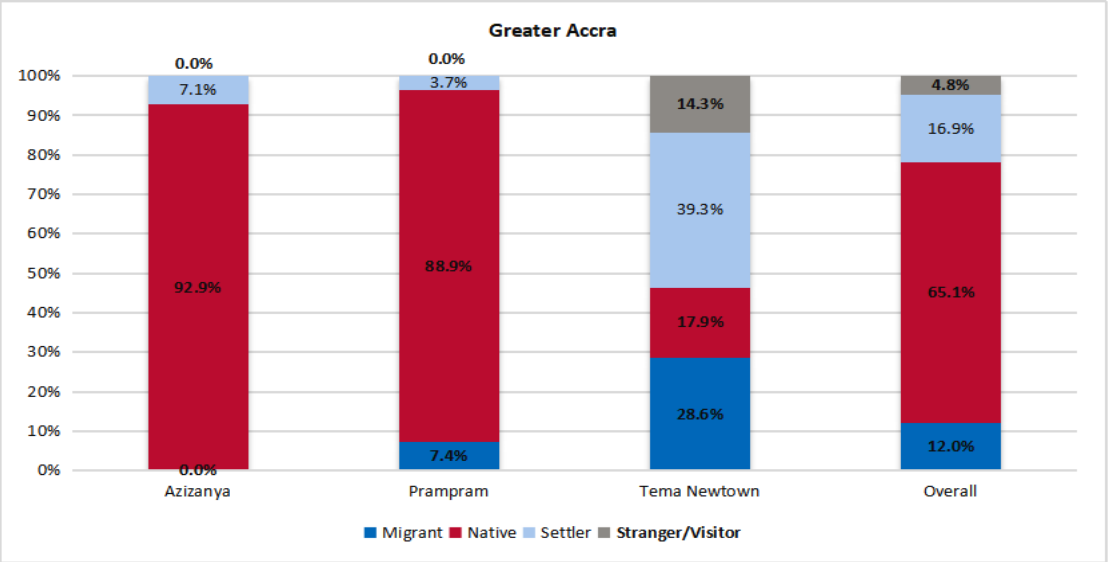
Figure 7: Migration Status of Respondents in Volta Region



Overall, the majority (approximately 60%) of study participants were natives with a few interesting exceptions. Tema Newtown in the Greater Accra Region, had fewer natives (17.9%), while more than one-third (39.3%) were settlers (Figure 8). Aboadze had the most negligible proportion of migrants (3.6%) in the Western region, followed by Ankobra (5.7%). At Sekondi in the Western Region, a high proportion (20%) of the study participants were migrants (Figure 6). This is due to the several fishing activities at the fishing harbor that draw many processors and smallholder fishers to transit there. Interestingly, more than half

(58.6%) of study participants in Denu in the Volta Region were migrants from the Ada enclave (Figure 7).

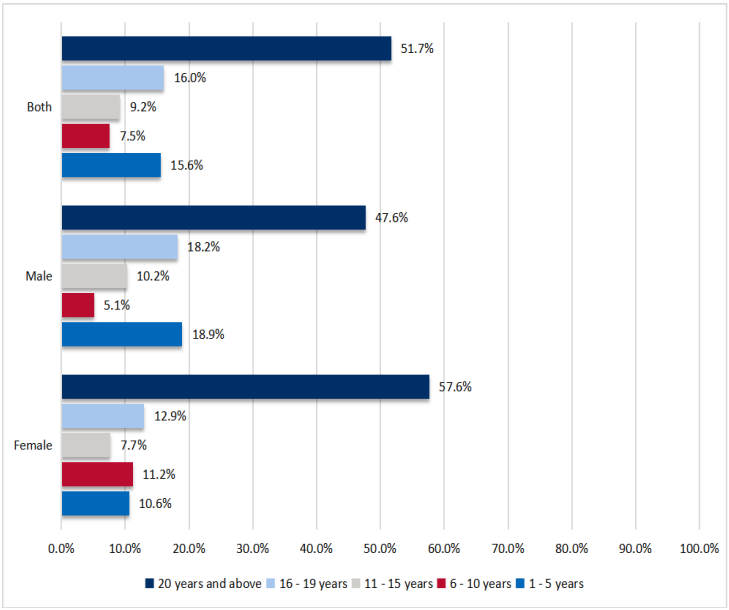
Figure 8: Status of Respondents in Greater Accra



4.1.5. Length of Stay in the Community

Figure 9: Length of Stay in the Community

The study analyzed the number of years respondents had stayed in the community to determine the iterant nature of some fisherfolk in the modeling of suitable livelihood interventions. A majority (51.7%) of the study participants had lived in the communities surveyed for over 20 years (Figure 9). More women (57.6%) had lived in the community for more than 20 years compared to males (47.6%). The results show that women are stable residents in coastal communities.



4.1.6. Household Size and Dependents

This demographic indicator gives insight into the average household size and the number of dependents under each household head. More than half (55.9%) of the respondents between 15 and 35 years old had dependents. The results further reveal that, of the proportion of fisherfolk with dependents, a little under half (45.6%) had dependents directly engaged in the fisheries business (Table 1). The proportion of females with dependents was high (65.9%) compared with males (49.2%) in coastal communities across the four regions.

Table 1: Average household size and average dependents

Region	Female		Male		Both		Average Household Size
	Proportion with dependents	Proportion with dependents engaged in fisheries	Proportion with dependents	Proportion with dependents engaged in	Proportion with dependents	Proportion with dependents engaged in fisheries	
Control Zone							
Central	27.4%	47.1%	14.4%	6.5%	53.2%	36.4%	5.5
Greater Accra	44.4%	58.3%	9.1%	7.4%	63.0%	52.9%	4.5
Volta	17.2%	40.0%	16.3%	6.9%	44.8%	30.8%	3.9
Western	11.6%	40.0%	22.4%	16.3%	51.2%	40.9%	5.0
All	24.2%	48.7%	15.8%	9.3%	52.8%	40.0%	4.7
Project Community							
Central	21.6%	72.7%	19.6%	10.0%	41.2%	42.9%	5.0
Greater Accra	19.6%	45.5%	32.1%	50.0%	51.8%	48.3%	4.0
Volta	19.3%	72.7%	43.9%	36.0%	63.2%	47.2%	3.8
Western	40.4%	60.0%	26.3%	38.5%	66.7%	51.5%	5.6
All	27.8%	61.6%	30.0%	36.7%	57.8%	48.7%	4.6

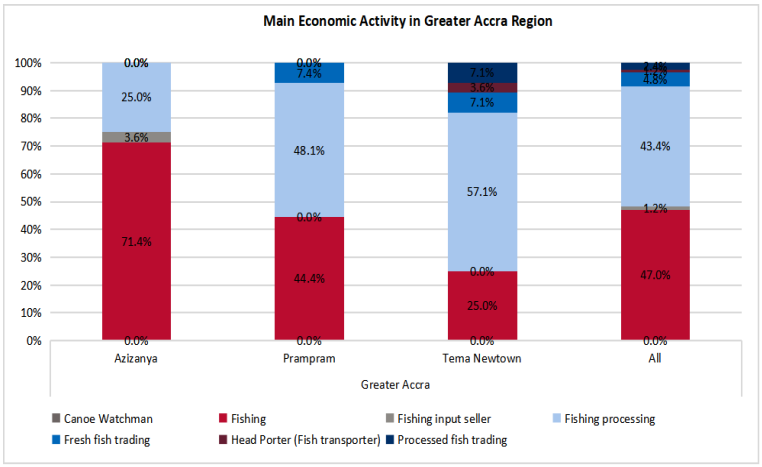
In the Greater Accra Region, the proportion of fisherfolk with dependents was slightly above two-thirds (76.7%), while the Central Region had a lower percentage of fisherfolk with dependents (60.9%). Results reveal that 3 in 5 (62.5%) of the fisherfolks in the Volta Region had dependents engaged in fisheries. The average household size was 4.6 across the four coastal regions. These figures are comparatively higher than the national average for rural and urban coastal of 3.8 and 3.6, respectively (Ghana Living Standard Survey Round 7). The household sizes in the Volta and Western Regions were far above the national average (5.0 and 5.3, respectively).

4.2. Existing Livelihood Options in Coastal and Neighboring Communities

4.2.1. Respondent's Main Economic Activities

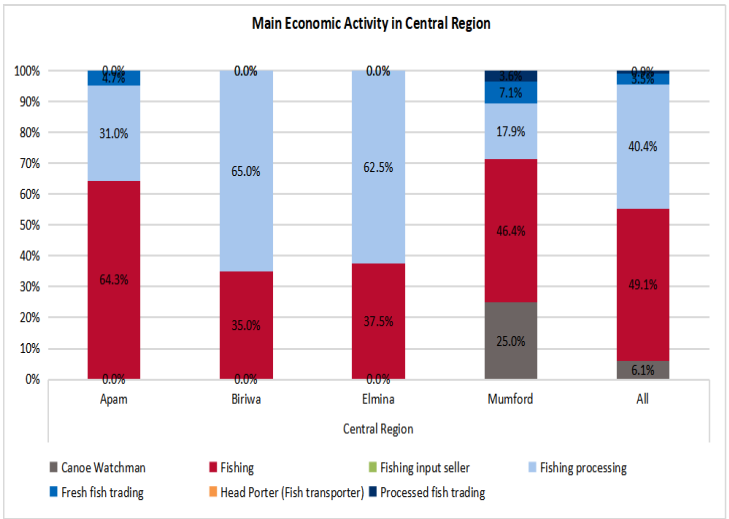
Fishing and fishing dependent livelihoods dominate interview participants' economic activities in all sites. Across the 15 coastal communities assessed during the study, more than half (52.1%) were fishers, while fish processors were a little below two-fifths (38.7%). Additionally, 4.7% were engaged in fresh fish trading, canoe watchman (2.1%), processed fish trading (1.2%), fish input trading (0.3%), and fish transporter -head porter (0.9%).

Figure 10: Main economic activity in the Greater Accra Region



In the Greater Accra Region, the proportion engaged in fishing was a little below half (47.0%), followed by fish processing (43.4%), fresh fish trading (4.8%), processed fish trader (2.4%), fish transporter [head porter] (1.2%), and fish input seller (1.2%). At Azizanya, a large majority of respondents (approximately 7 in 10) were fishers, while a quarter (25.0%) were fish processors, and less than a tenth (3.6%) were fish input dealers (Figure 10). At Tema, more than half (57.1%) were fish processors, and a quarter (25.0%) worked in the fishing business as their main source of income.

Figure 11: Main economic activity in the Central Region



In the Central Region, the proportion engaged in fishing was a little below half (49.1%), while about two-fifths (40.4%) were fish processors. In Elmina, the fish processors constituted three-fifths (62.5%) of the respondents interviewed (Figure 11). At Mumford, about a quarter (25.0%) of respondents were canoe watchmen, while a little under

half (46.7%) were fishers, and less than a tenth (7.1%) were into fresh fish trading. In Apam, about 64.3% were fishers, while approximately 3 in 10 (31%) were fish processors, and less than a tenth (4.7%) were into fresh fish trading.

Figure 12: Main economic activity in Volta Region

Approximately 27.9% were fish processors in the Volta Region, while the majority (65.1%) of respondents were fishers. The proportion engaged in fresh fish trading was below a tenth (3.5%), while fish transporters, mainly head porters, constituted 3.5% of the total respondents in the region (Figure12).

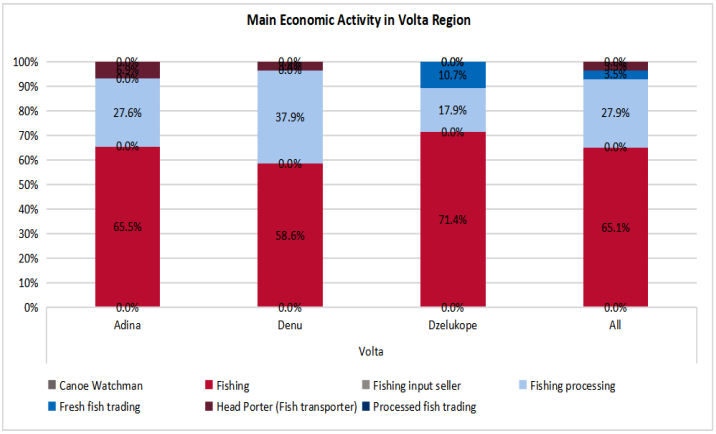
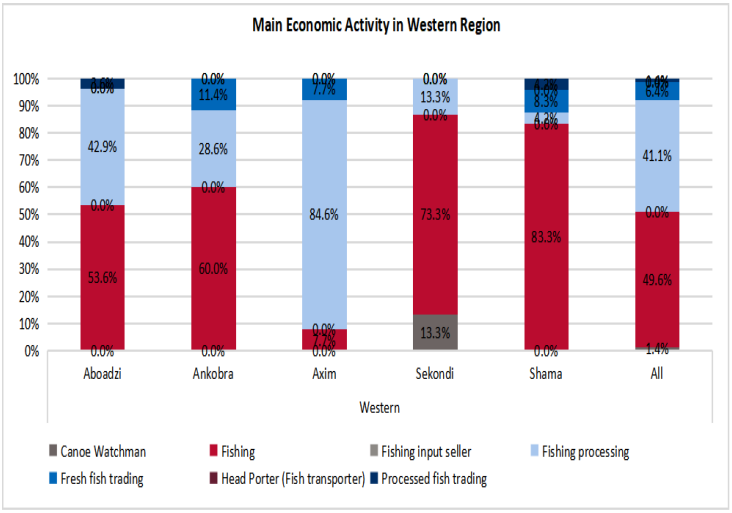


Figure 13: Main economic activity in the Western Region

In the Western Region, most of the respondents were mainly engaged in fishing (49.6%), while approximately two-fifths (41.1%) were in fish processing. Apart from Sekondi, which had more than a tenth (13.3%) engaged as canoe watchmen, none were involved in this economic activity in the other communities in the region (Figure 13). In Axim, approximately 8 in 10 of the respondents were engaged in fish processing, while 7.7% were in fresh fish trading.



4.2.2. Engagement in Supplementary Livelihoods to Fisheries

Less than one-fifth (19.1%) of the study participants are pursuing supplementary non-fishery income-generating activities in coastal communities (Table 2). The study also reveals that approximately 2 in 10 coastal women in the fishing industry have supplemental livelihoods, and this figure is higher than their male counterparts, who had less than one-fifth (17.7%). Comparatively, in the Greater Accra and Volta Regions, the percentage of fisherfolk

engaged in supplemental livelihoods in the past 12 months was higher, at 28.9% and 24.4%, respectively, than in the other regions. In the Central Region, the proportion of people with supplemental livelihoods was below a tenth (9.6%), which falls short of the other regions. Despite the higher proportion with livelihoods (3 in 10 of fisherfolks) in Biriwa, the percentage in other communities with supplemental livelihoods was low.

Region	Community Name	Proportion engaged in non-fisheries income generating		
		Female	Male	Both
Central Region	Apam	14.3%	3.6%	7.1%
	Biriwa	27.3%	33.3%	30.0%
	Elmina	15.4%	0.0%	8.7%
	Mumford	0.0%	0.0%	0.0%
	All	15.2%	5.9%	9.6%
Greater Accra	Azizanya	14.3%	33.3%	28.6%
	Prampram	30.8%	14.3%	22.2%
	Tema Newtown	30.0%	38.9%	35.7%
	All	26.7%	30.2%	28.9%
Volta	Adina	11.1%	20.0%	17.2%
	Denu	27.3%	11.1%	17.2%
	Dzelukope	50.0%	36.4%	39.3%
	All	26.9%	23.3%	24.4%
Western	Aboadzi	30.8%	13.3%	21.4%
	Ankobra	14.3%	28.6%	22.9%
	Axim	20.0%	0.0%	17.9%
	Sekondi	0.0%	0.0%	0.0%
	Shama	25.0%	15.0%	16.7%
	All	20.6%	15.1%	17.7%
Overall		21.2%	17.7%	19.1%

Table 2: Study participants already engaged in supplementary livelihoods in Coastal Communities

In Mumford, none of the fisherfolk were engaged in supplemental livelihoods. The proportion of people engaged in supplemental livelihoods in Elmina and Apam was below a tenth, at 8.7% and 7.1%, respectively. Apart from Aboadze and Ankobra in the Western Region, which had relatively high percentages (21.4% and 22.9%, respectively) of fisherfolk with supplemental livelihoods, the remaining communities were below one-fifth, Axim (17.9%), and Shama (16.7%). None in Sekondi had supplemental livelihoods.

Focus group discussions and key informant interviews shed more light on the low uptake of livelihoods among survey respondents. For participants in the Western Region, for example, regardless of their willingness to pursue additional income streams, the cost of feeding and caring for their basic necessities while enrolled in a free apprenticeship program is a challenge.

In Mumford and Elmina, even though the Ghana Enterprises Agency (GEA, formerly NBSSI) enrolled selected beneficiaries in vocational training, most of them abandoned the training program mid-way. Some of the reasons participants gave were that the youth preferred to return to fishing related businesses because of the income they could earn. The opportunity cost of staying in the skills training program and not earning an income is very high in the short term. Additionally, some of the youths are the breadwinners of their families, so even during the period of their training their dependents pressure them for money to care for the home, compelling them to return to fishing.

Some additional reasons given by key informants for the low uptake of new or different jobs include:

- Fisherfolks are naturally conservative in their engagement in other livelihoods apart from fishing. Fishing has been their way of life and tradition, making it difficult to uptake non-fishery livelihoods as many do not see the need to engage in such a venture.
- The fear of the unknown or the anticipated risks associated with non-fishing livelihoods. The situation was especially so for the women who have been involved in the fisheries business for so long that they fear losing their working capital to an unfamiliar livelihood.

- The lack of urgency to engage in non-fisheries activities as supplemental livelihoods is often the crux of the problem. Despite seeing the near collapse of their main income source, most small-scale fishers do not want to shift to non-fishery options. The obvious options for them are not to diversify but to hope for the restoration of the sea and use all other possible means to maintain their fish catch, including IUU fishing. Their worldview is mainly limited to fishing-related activities.

4.2.2.1. Types of Existing Supplementary Non-Fishing Livelihoods

Across the study sites, a little under one-fifth (19.1%) were already undertaking supplementary non-fishery livelihoods at the time of the study; the highest prevalence of additional livelihoods in the regions is as follows (Table 3): petty trading in the Central Region (27.3%) and Greater Accra Regions (29.2%); construction and civil works (including plumbing, masonry, among others) in the Volta Region (28.6%), and food vending in the Western Region (17.4%). See Annex 3 for a more detailed list of community specific supplementary livelihoods.

Table 3: Supplemental livelihood activities undertaken by the study participants at the time of the study

Region	Type of supplementary livelihoods the study participants are already undertaking	Gender		
		Female	Male	Both
Central	Construction/Civil Works (Masonry, Plumbing etc)	0.0%	50.0%	18.2%
	Petty trading	42.9%	0.0%	27.3%
	Sewing/Tailoring	28.6%	0.0%	18.2%
	Carpentry/wood works	0.0%	25.0%	9.1%
	Catering	14.3%	0.0%	9.1%
	Driving	0.0%	25.0%	9.1%
	Food vendoring	14.3%	0.0%	9.1%
Greater Accra	Carpentry/wood works	0.0%	12.5%	8.3%
	Electrical Works/Electrician	0.0%	6.3%	4.2%
	Farming	0.0%	6.3%	4.2%
	Graphic Design	0.0%	12.5%	8.3%
	Petty trading	75.0%	6.3%	29.2%
	Barbering	0.0%	6.3%	4.2%
	Construction/Civil Works (Masonry, Plumbing etc)	0.0%	6.3%	4.2%
	Food vendoring	25.0%	0.0%	8.3%
	Motor Ridder (Okada Ridder)	0.0%	31.3%	20.8%
	Labour Work	0.0%	6.3%	4.2%
	Salary Work	0.0%	6.3%	4.2%
Volta	Barbering	0.0%	14.3%	9.5%
	Construction/Civil Works (Masonry, Plumbing etc)	0.0%	42.9%	28.6%
	Electrical Works/Electrician	0.0%	14.3%	9.5%
	Food vendoring	28.6%	0.0%	9.5%
	Labour Work	0.0%	7.1%	4.8%
	Petty trading	42.9%	0.0%	14.3%
	Carpentry/wood works	0.0%	7.1%	4.8%
	Metal fabrication	0.0%	7.1%	4.8%
	Vegetable farming	28.6%	7.1%	14.3%
Western	Carpentry/wood works	0.0%	28.6%	8.7%
	Construction/Civil Works (Masonry, Plumbing etc)	0.0%	28.6%	8.7%
	Food vendoring	25.0%	0.0%	17.4%
	Catering	6.3%	0.0%	4.3%
	Petty trading	18.8%	0.0%	13.0%
	Sewing/Tailoring	18.8%	0.0%	13.0%
	Electrical Works/Electrician	0.0%	28.6%	8.7%
	Hairdressing	18.8%	0.0%	13.0%
	Metal fabrication	0.0%	14.3%	4.3%
	Farming Rubber plantation	6.3%	0.0%	4.3%
	Livestock rearing	6.3%	0.0%	4.3%

Image 6: Vegetable farm at Dzelukope

Image 5: Dressmaking/tailoring shop at Ankobra

4.2.2.2. Period Engaged in the Supplementary Livelihood Activity

The study found that the majority (63%) of the non-fishery income-generating activities undertaken by some fisherfolks are new, start-ups, or emerging businesses. In comparison, a little above one-third (37.2%) of the non-fishery income-generating ventures undertaken by the fisherfolks have survived past the start-up stage, that is, beyond 5 years. (Table 4). All the non-fisheries income-generating ventures at Biriwa in the Central Region were start-ups. Approximately 7 in 10 of the fisherfolk in the Central Region have engaged in non-fisheries income-generating activities in the last 5 years. The study participants in the following communities Adina (20%), Apam (33.3%), Dzelukope (9.1%), and Shama (25%), have been in the supplemental income-generating ventures for over 19 years.

The data provides a clear indication that some fisherfolk who made efforts to diversify their livelihoods have been able to maintain their non-fisheries businesses in the last 5 years. This shows a clear growth path for these businesses. This empirical data negates the prevailing perception among participants that non-fisheries income-generating ventures as non-profitable and high-risk investments.

Table 4: Period engaged in the non-fisheries income-generating activities

Region	Community Name	Period Engaged in the Livelihood				
		1 - 5 years	6 - 10 years	11 - 15 years	16 - 19 years	20 years and above
Central Region	Apam	66.7%	0.0%	0.0%	0.0%	33.3%
	Biriwa	100.0%	0.0%	0.0%	0.0%	0.0%
	Elmina	0.0%	50.0%	50.0%	0.0%	0.0%
	All	72.7%	9.1%	9.1%	0.0%	9.1%
Greater Accra	Azizanya	37.5%	50.0%	0.0%	12.5%	0.0%
	Prampram	83.3%	16.7%	0.0%	0.0%	0.0%
	Tema Newtown	80.0%	20.0%	0.0%	0.0%	0.0%
	All	66.7%	29.2%	0.0%	4.2%	0.0%
Volta	Adina	60.0%	20.0%	0.0%	0.0%	20.0%
	Denu	60.0%	40.0%	0.0%	0.0%	0.0%
	Dzelukope	54.5%	27.3%	0.0%	9.1%	9.1%
	All	57.1%	28.6%	0.0%	4.8%	9.5%
Western	Aboadzi	66.7%	0.0%	16.7%	16.7%	0.0%
	Ankobra	62.5%	12.5%	12.5%	12.5%	0.0%
	Axim	57.1%	28.6%	14.3%	0.0%	0.0%
	Shama	50.0%	25.0%	0.0%	0.0%	25.0%
	All	60.0%	16.0%	12.0%	8.0%	4.0%
Overall		63.0%	22.2%	4.9%	4.9%	4.9%

The female youth admitted during the FGD that they now realize the need to diversify their incomes with the fishery near collapse and their working capital dwindling. Some fishers said that external circumstances compelled them to undertake non-fisheries income-generating activities; for example, they had loans to repay to financial institutions, but their reliance solely on the income from fisheries business was not enough. Key informants at the community levels also said that their friends and relatives who already had non-fisheries related jobs told them to diversify their income sources because returns were better.

4.2.2.3. Training on Non-Fisheries Livelihoods and Source(s) of Training

The study found that among those currently engaged in non-fisheries income-generating activities, about 3 in 10 fishers (30.9%) had received training in a livelihood venture (Table 5). The proportion of males that had received training in the non-fisheries income-generating activities undertaken was high (42.2%) compared with the females (16.7%). In comparison, a higher proportion (42.9%) of Volta Region fishers reported receiving training in non-fisheries income-generating activities than in other regions, including Western (36.0%), Greater Accra (20.8%), and Central (18.2%). In the Western Region, the data reveals that approximately half (50%) in Aboadze, three-quarters (75%) in Shama, a little

above a tenth (12.5%) in Ankobra, and more than one-fifth (28.6%) in Axim had received training in non-fisheries income-generating activities.

In the Volta Region, approximately 8 in 10 of the fisherfolk in Adina engaged in non-fisheries income-generating activities had received training, while one-fifth (20%) in Denu and a little above one-third (36.4%) in Dzelukope had also received training in the non-fisheries venture.

In Greater Accra, none of the fisherfolk at Azizanya had received training on their non-fisheries income-generating activities. In the Central Region, apart from Apam where many respondents had received training in non-fisheries jobs, none of the fisherfolk at Mumford or Biriwa had been trained in the jobs they were doing at the time of the study.

Apprenticeships (80%), associations or groups such as NAFPTA, DAA, and CEWEFIA (16.0%), and non-governmental organizations (4.0%) were among the training sources mentioned. At the regional level, all fisherfolk at Apam in the Central Region received training through apprenticeship (100.0%) with a master craftsman.

Table 5: Proportion trained in non-fisheries livelihood

Region	Community Name	Proportion trained in the non-fisheries livelihood undertaken		
		Female	Male	Both sexes
Central Region	Apam	50.0%	100.0%	66.7%
	Biriwa	0.0%	0.0%	0.0%
	Elmina	0.0%	0.0%	0.0%
	All	14.3%	25.0%	18.2%
Greater Accra	Azizanya	0.0%	0.0%	0.0%
	Prampram	25.0%	0.0%	16.7%
	Tema Newtown	0.0%	57.1%	40.0%
	All	12.5%	25.0%	20.8%
Volta	Adina	0.0%	100.0%	80.0%
	Denu	0.0%	50.0%	20.0%
	Dzelukope	0.0%	50.0%	36.4%
	All	0.0%	64.3%	42.9%
Western	Aboadzi	50.0%	50.0%	50.0%
	Ankobra	0.0%	16.7%	12.5%
	Axim	28.6%	0.0%	28.6%
	Shama	0.0%	100.0%	75.0%
	All	28.6%	45.5%	36.0%
Overall		16.7%	42.2%	30.9%

Table 6: Sources of non-fisheries livelihood

Region	Community Name	Source(s) of Training		
		Apprenticeshi	NGO	Association/Group
Central Region	Apam	100.0%	0.0%	0.0%
	Biriwa	0.0%	0.0%	0.0%
	Elmina	0.0%	0.0%	0.0%
	All	100.0%	0.0%	0.0%
Greater Accra	Azizanya			
	Prampram	100.0%	0.0%	0.0%
	Tema Newtown	75.0%	0.0%	25.0%
	All	80.0%	0.0%	20.0%
Volta	Adina	100.0%	0.0%	0.0%
	Denu	100.0%	0.0%	0.0%
	Dzelukope	100.0%	0.0%	0.0%
	All	100.0%	0.0%	0.0%
Western	Aboadzi	33.3%	0.0%	66.7%
	Ankobra	0.0%	100.0%	0.0%
	Axim	50.0%	0.0%	50.0%
	Shama	100.0%	0.0%	0.0%
	All	55.6%	11.1%	33.3%
Overall		80.0%	4.0%	16.0%

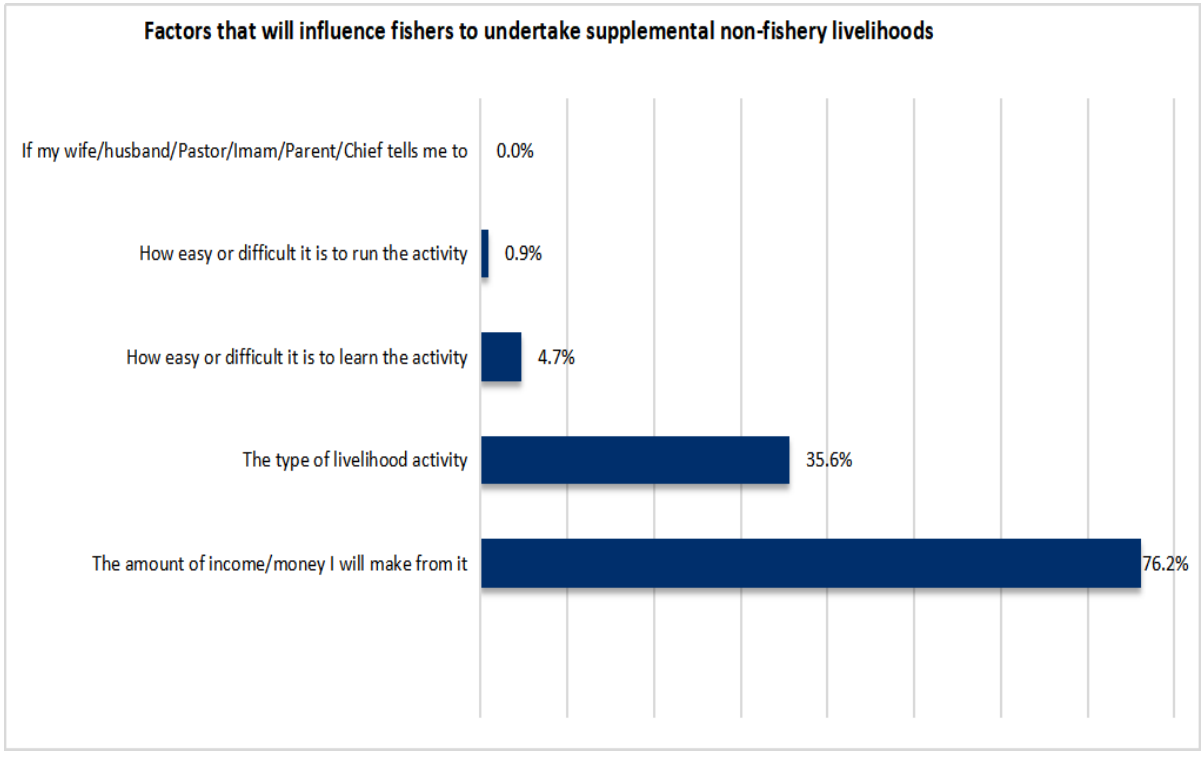
Study respondents from Tema attributed the high percentage to support they received from the Ghana Enterprises Agency (GEA) in 2020 as part of the COVID-19 relief package from the government to train the youth in the area. They were privileged to be part of the beneficiaries supported by the Government to undergo 6 months of apprenticeship training.

In Apam, the respondents said their Member of Parliament (MP) provided assistance to many of the youth who were interested in enrolling in apprenticeship programs prior to the December 2020 election. In the Greater Accra Region, 8 in 10 received training through apprenticeship programs, while one-fifth (20%) had training from an association/group (Table 6).

4.2.2.4. Factors Influencing Fishers to Undertake Supplemental Livelihoods to Fisheries

The study also sought study participants' opinions on the factors that will influence them to pursue supplemental non-fishery livelihoods in coastal communities. Respondents were allowed to select multiple responses to this question. Above three-quarters (76.2%) of the fishers stated they would take up supplemental livelihoods based on the amount of money or income they would make out of those income-generating ventures (Figure 14). A little above one-third (35.6%) said they would consider the nature or type of supplementary livelihood activity, while less than a tenth said their update would depend on how easy or difficult it is to learn the livelihood (4.7%). About 0.9% of the fishers said nothing could influence them to undertake supplemental livelihoods. (Table 8).

Figure 14: Factors that will influence fisherfolks to undertake supplemental livelihoods



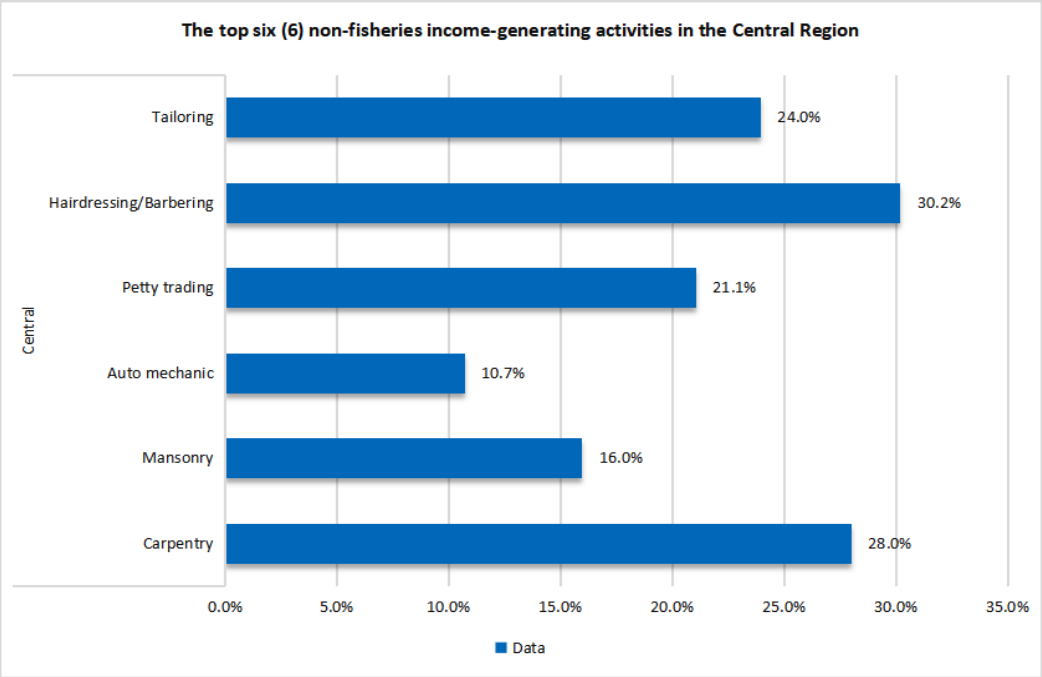
4.2.3. Perception About the Existence of Alternative Livelihood Options in Coastal and Neighboring Communities in Ghana

The study solicited participants' perspectives on alternative livelihood options besides fishing in coastal and neighboring communities. The goal of this study was to identify existing and potential alternative livelihoods available to fishers that could lure them to leave fisheries entirely, as well as to assess their perceptions of these alternative livelihood options.

Study participants mentioned several alternative livelihoods available in their communities that other people not involved in fisheries business are pursuing including crop farming, electrical carpentry/woodworks, construction work (masonry, block molding), salaried work (civil/public service receiving payment from Government and private sector workers), factory hand (laborers working in manufacturing companies), petty trading, hairdressing and barbering, tailoring and dressmaking, driving, and motor taxi popularly known as "okada", food vending, salt mining, mobile money merchant, auto mechanic, and livestock rearing. The detailed community listings can be found in Annex 3 of this report.

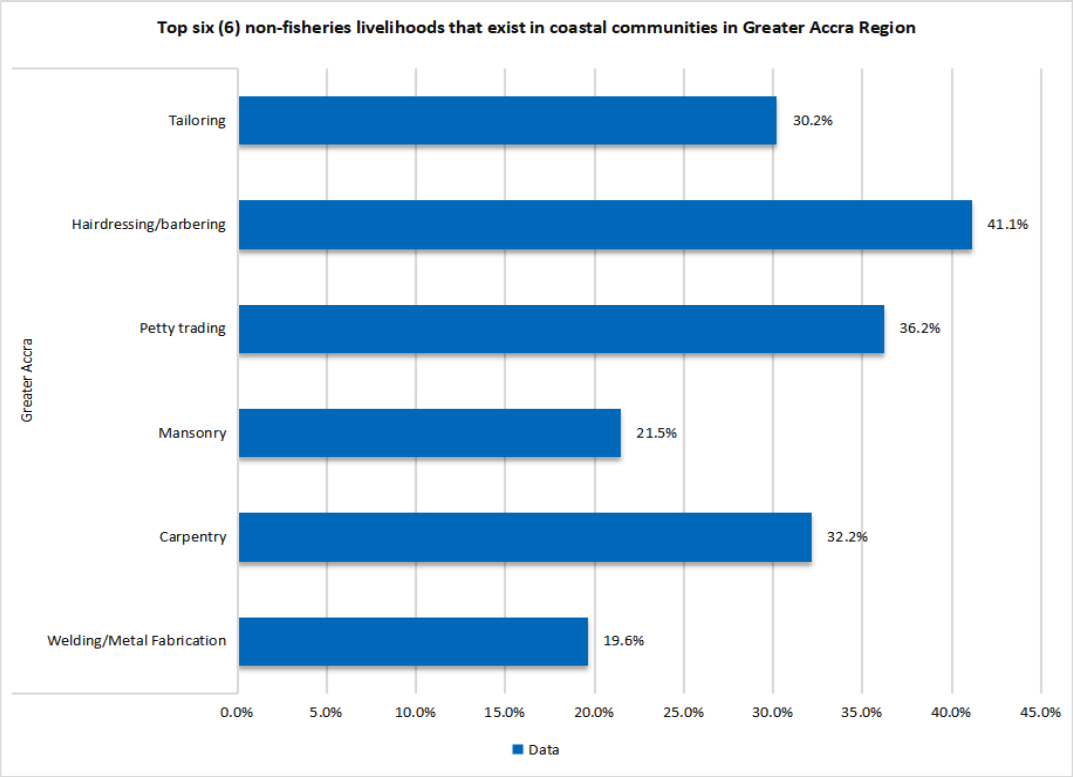
In the Central Region (Figure 15), the top alternative livelihoods in the coastal communities were; hairdressing and barbering (30.2%), carpentry/woodworks (28%), tailoring/dressmaking (24%), and petty trading (21.1%).

Figure 15: Top six (6) alternative income-generating activities that exist in the Central Region



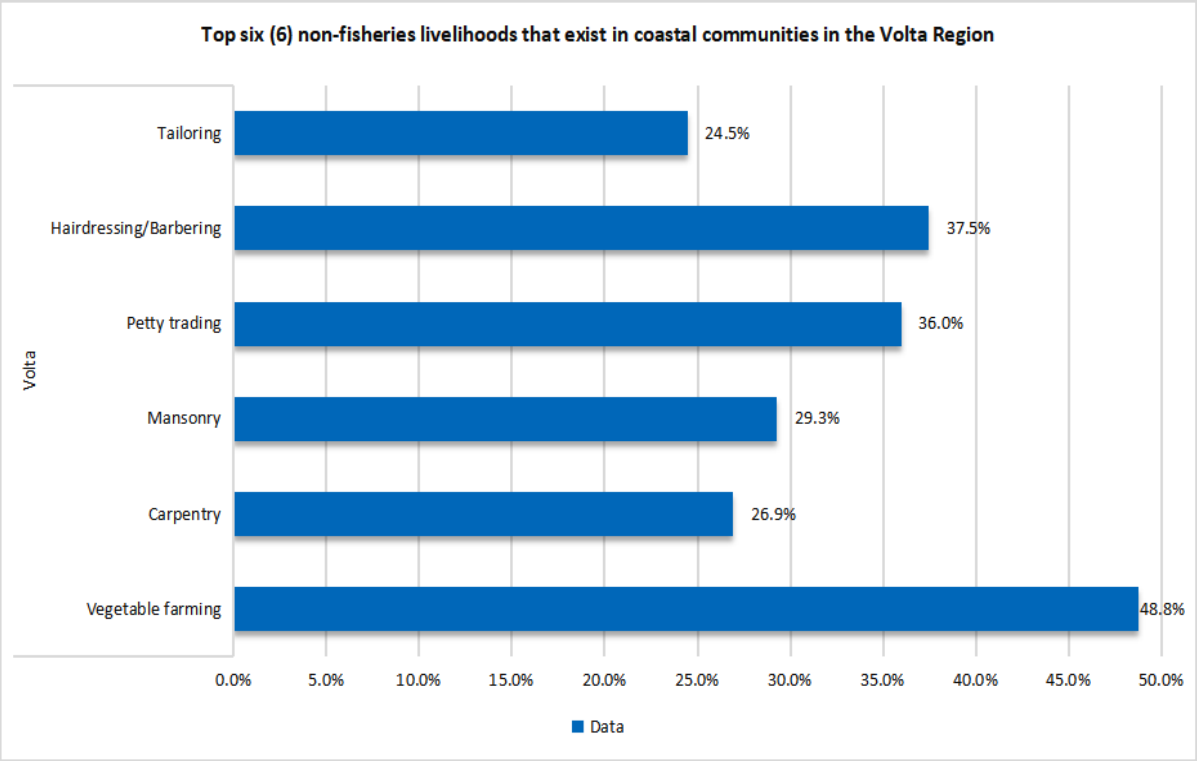
In the Greater Accra Region (Figure 16), key among the alternative livelihood options mentioned were: hairdressing and barbering (41.1%), petty trading (36.2%), carpentry/woodworks (32.2%) and tailoring/dressmaking/seamstress (30.2%).

Figure 16: Top six (6) alternative livelihoods that exist in the Greater Accra Region besides fishing



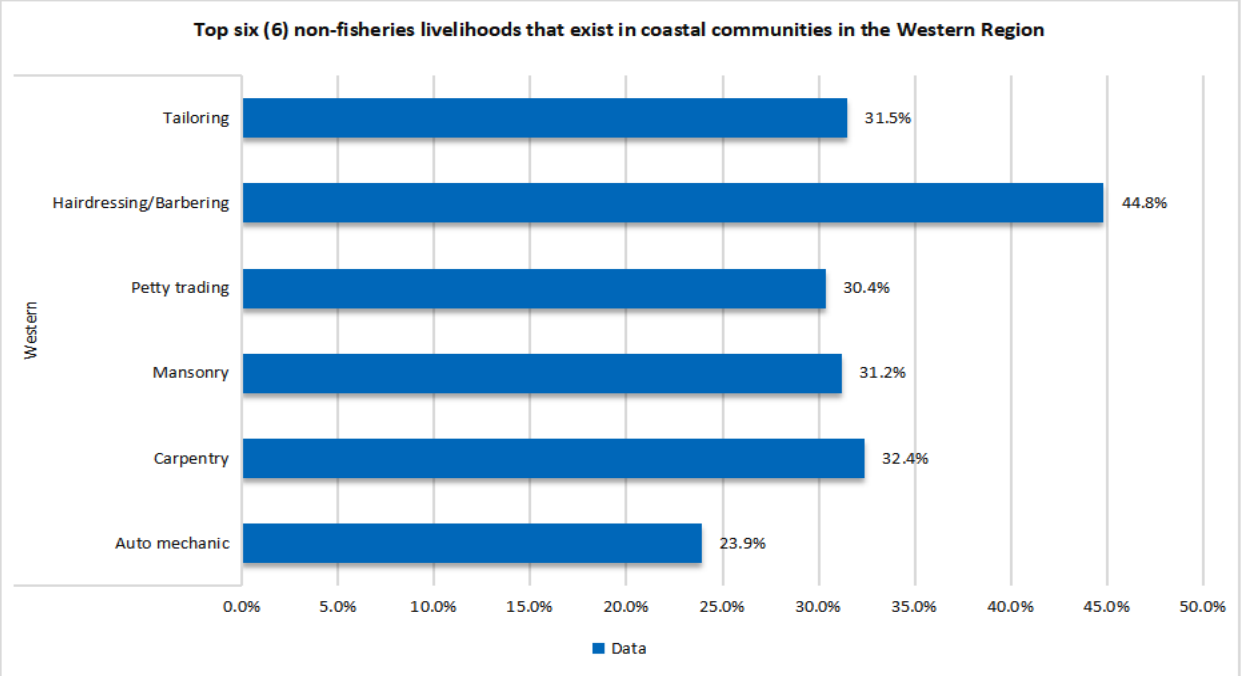
In the Volta Region (Figure 17), the dynamics differed in the perception of non-fisheries. Vegetable farming (48.8%), hairdressing/barbering (37.5%), and petty trading (36%) were among the top alternative livelihood options in the three communities at the time of the study. Vegetable farming was predominant and visible in the communities in the Volta region. Field observations revealed that farmers mainly used irrigation on the farms from dug out wells and cultivated crops such as carrots, cabbage, onions, lettuce, maize, and cassava.

Figure 17: Top six (6) alternative livelihoods that exist in coastal communities in the Volta Region



In the Western Region (Figure 18), the most predominant alternative livelihoods besides fishing were mainly vocational trade-related income-generating such as hairdressing/barbering (44.8%), carpentry (32.4%), tailoring (31.5%), masonry (31.2%), petty trading (30.4%) and auto mechanic (23.9%).

Figure 18: Top six (6) alternative livelihoods that exist in coastal communities in the Western Region



The focus group discussion session with youth in Denu and Dzelukope indicated vegetable farming as a predominant non-fisheries income-generating activity deployed by adults and youth. They mentioned that the farms are usually subsistence due to the available land size, capital, and others.

Image 8: Irrigation farm, Denu landing beach, Volta Region

Image 7: Chemical seller outlet, Ankobra,

4.2.3.1. Perception of Fishers of Alternative Livelihoods Outside of Coastal Communities

Results from the study clearly show that approximately 7 in 10 (73.3%) of the fisherfolks have the perception that members of their communities, mainly the youth, travel outside to engage in alternative livelihood activities (Table 7). Western (78.7%), Greater Accra (77.1%), and Central (75.4%) region participants had the highest perception of youth migrating to engage in non-fisheries while Volta Region surprisingly had a much lower perception (58.1%).

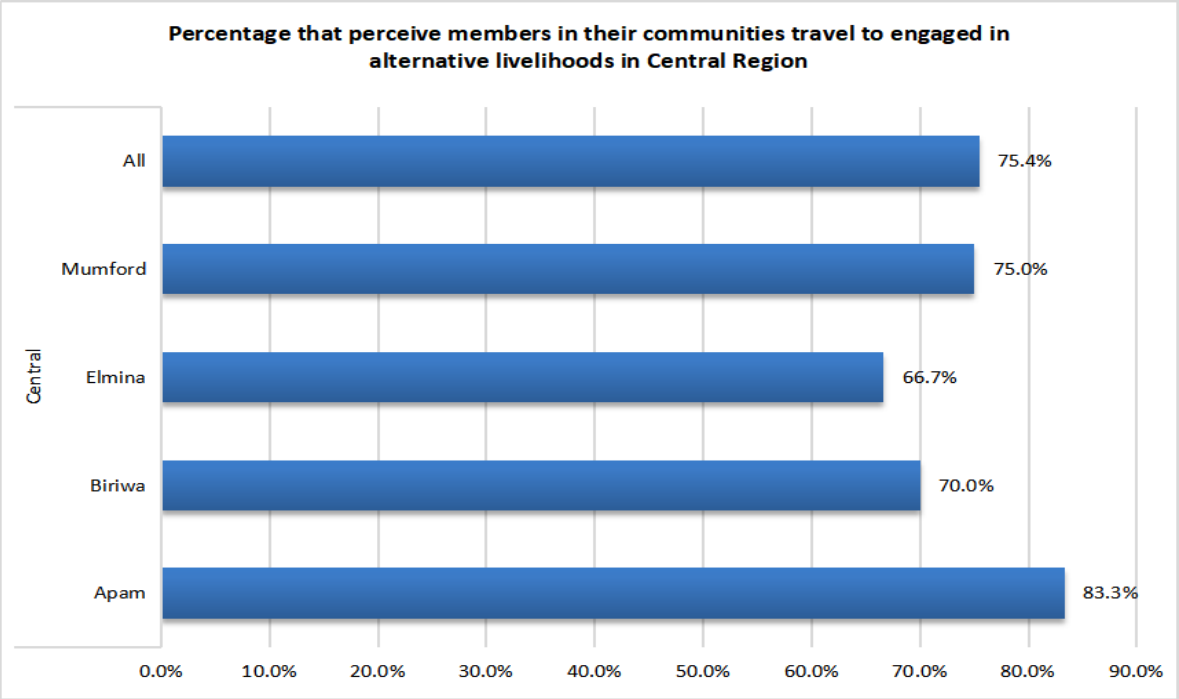
Table 7: Perception about community members travelling to engage alternative livelihoods

Region	Community	Percentage that perceive members in their communities travel to engaged in alternative livelihoods
Central	Apam	83.3%
	Biriwa	70.0%
	Elmina	66.7%
	Mumford	75.0%
	All	75.4%
Greater Accra	Azizanya	78.6%
	Prampram	85.2%
	Tema Newtown	67.9%
	All	77.1%
Volta	Adina	65.5%
	Denu	37.9%
	Dzelukope	71.4%
	All	58.1%
Western	Aboadzi	89.3%
	Ankobra	77.1%
	Axim	71.8%
	Sekondi	86.7%
	Shama	75.0%
	All	78.7%
Overall		73.3%

Sekondi participants show a high rate of perception of youth migration (female 100% and male 63.6%) to pursue alternative livelihood activities. Aboadze was similar with high perception levels among females (92.3%) and males (86.7%) regarding migration to other parts of the country to engage in non-fisheries livelihoods. Information gathered during the focus group discussion session confirmed that youth from coastal communities are migrating, mostly to major cities, in search of alternative livelihoods opportunities.

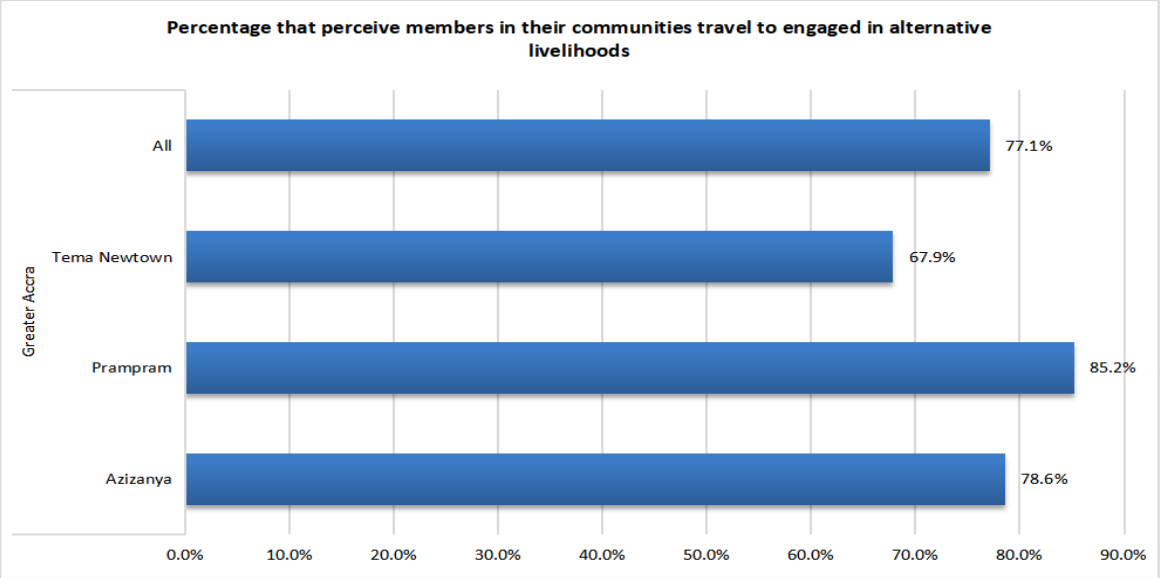
Respondents attributed this situation to the declining nature of the fisheries businesses in coastal communities, compelling the youth to migrate to other communities for work. Others also opined that the youth, especially in the Central and Western regions, are primarily attracted to illegal mining because they perceive it to yield better returns than the fisheries business. People also travel outside of their communities in the Central Region (Figure 19) to do laborer work (100%), street hawking (98.8%), illegal mining (35.6%), farming (18.4%), and restaurant/local chop bar (7.5%).

Figure 19: Respondents' perception of migration to pursue livelihoods in the Central Region



For respondents' perception analysis (Figure 20), majority of the population living in coastal communities in Greater Accra travel to engage in alternative livelihood works outside of their homes. The other alternative livelihood activities they were engaged in include laborer work (89.4%), illegal mining (28.6%), farming (13.0%), and carpentry work (9.4%).

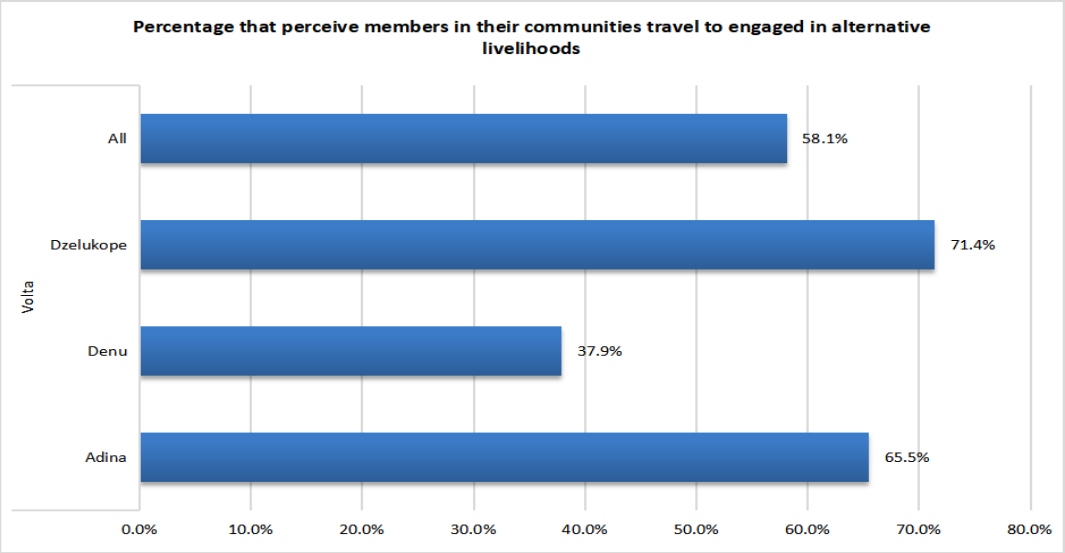
Figure 20: Respondents' perception of migration to pursue livelihoods in the Greater Accra Region



When probed why the youth in the region travel to the Eastern Region to engage in illegal mining, or "galamsey", key informants from Prampram said they were encouraged or influenced by friends, colleagues and acquaintances who boasted of high and substantial income.

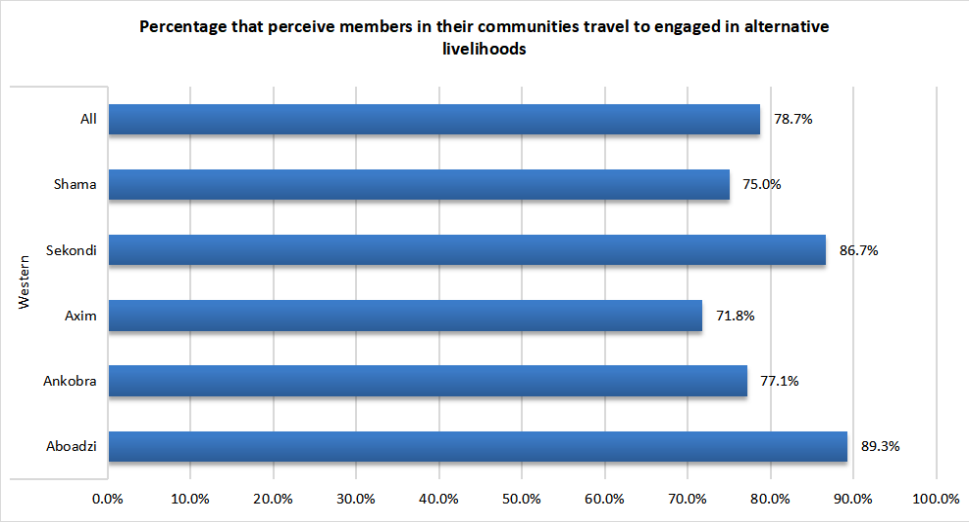
In the Volta Region, there is a high perception across communities surveyed about youth leaving coastal communities to pursue alternative livelihoods (Figure 21). For the population that had an opportunity to travel outside of their communities, a majority (89.9%) were engaged in labour work, mostly at construction sites. More than three-quarters (79.9%) were engaged in street hawking while a little above a quarter (26.2%) worked at restaurants or local chop bars.

Figure 21: Respondents' perception of migration to pursue livelihoods in the Volta Region



Fisherfolks in Western Region perceived that youth travels outside of their communities to engage in alternative livelihoods (Figure 22). Most of the people who travel outside of the coastal communities were mostly engaged in street hawking (93.7%) and labour, mainly construction (85.8%). Unlike in the other regions, the proportion engaged in farming outside of their communities were below a tenth (9.3%) in the Western Region.

Figure 22: Respondents' perception of migration to pursue livelihoods in the Western Region

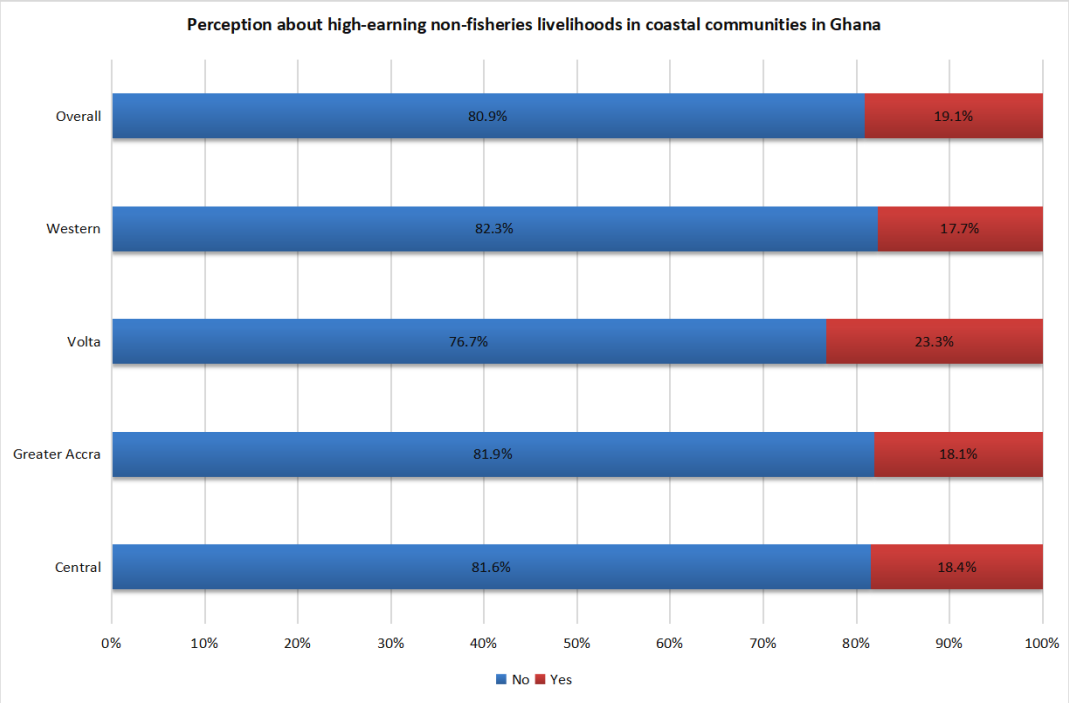


4.3. Key Potential Livelihood Options and Resource Requirements in Coastal Communities

4.3.1. Perception about the Existence of High-Earning Livelihood Options in Coastal Communities

There was a high (80.9%) negative perception among fisherfolks in coastal communities about the existence of high-earning non-fisheries livelihoods comparable to the fisheries-related businesses (Figure 23). The proportion with a positive perception of high-earning livelihood options in Ghana's coastal communities was less than one-fifth (19.1%).

Figure 23: Perception about high-earning non-fisheries livelihood options in Ghana's coastal regions



The Volta Region had a higher proportion (23.3%) of smallholder fishers, processors, and traders that perceived that there were high-earning alternative livelihood options (Figure 24). The fisherfolks mainly attributed the high perception levels to the cross-border trade and other income-generating activities in Lomé, Togo. Others also said vegetable farms' income was considerably better than the fisheries businesses.

Figure 24: Perception about high-earning non-fisheries livelihoods in coastal communities in the Volta Region

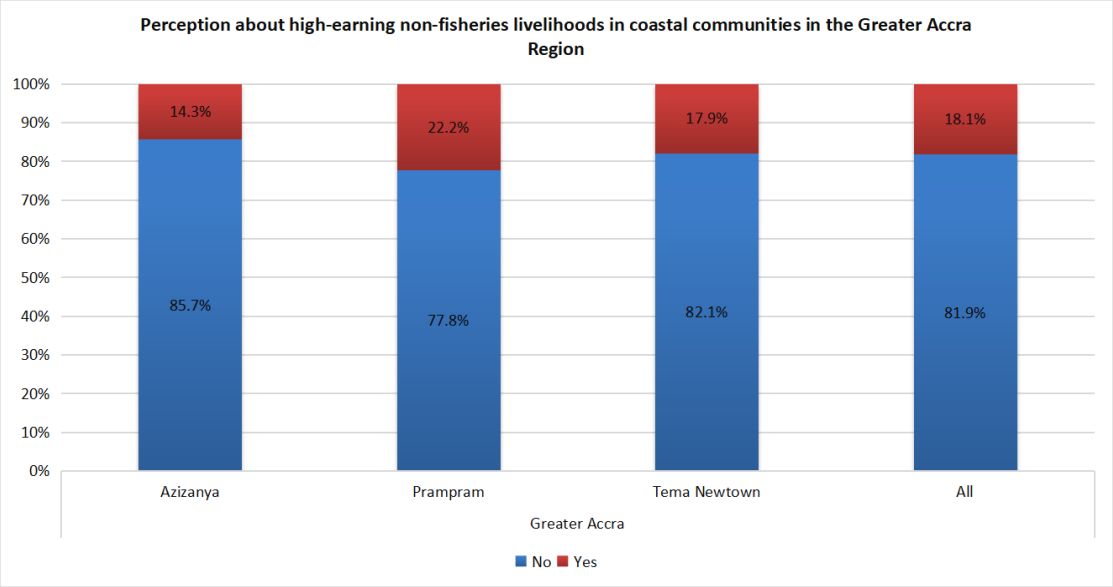
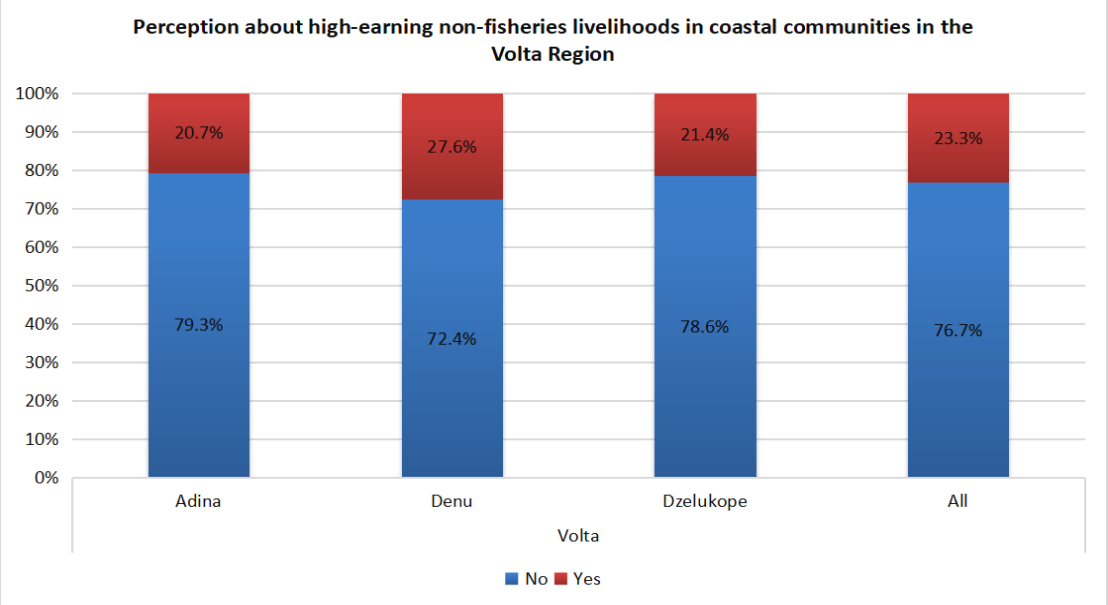
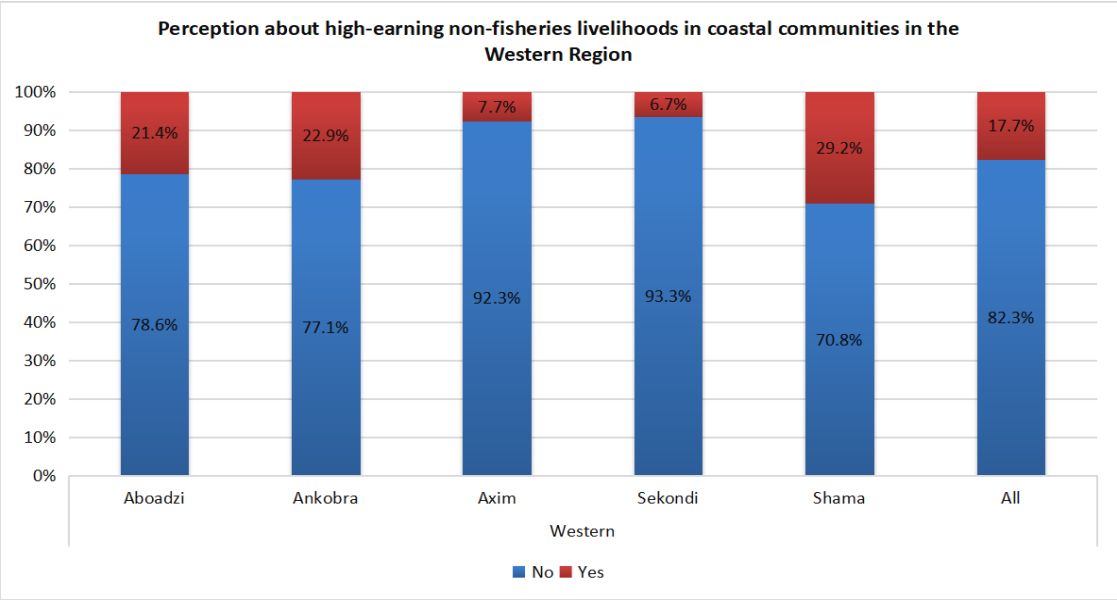


Figure 25: Perception about high-earning income in coastal communities in the Greater Accra Region



In Greater Accra Region (Figure 25), apart from Prampram (22.2%), the perception about high-earning non-fisheries income was low in Azizanya (14.3%) and Tema Newtown (17.9%).

Figure 26: Perception about high-earning non-fisheries livelihoods in Western Region



Focus group discussions with both youth and adults revealed a general disbelief that there are livelihood options with high earnings potentials in their coastal community compared with the fisheries business. According to the female discussants in the Western and Central Regions, any income-generating activities with higher returns than the fisheries business are likely to attract youth. They mentioned that when illegal mining was generally perceived to have higher returns than the fisheries business, most young people moved out of Axim, Ankobra, and surrounding coastal communities to participate.

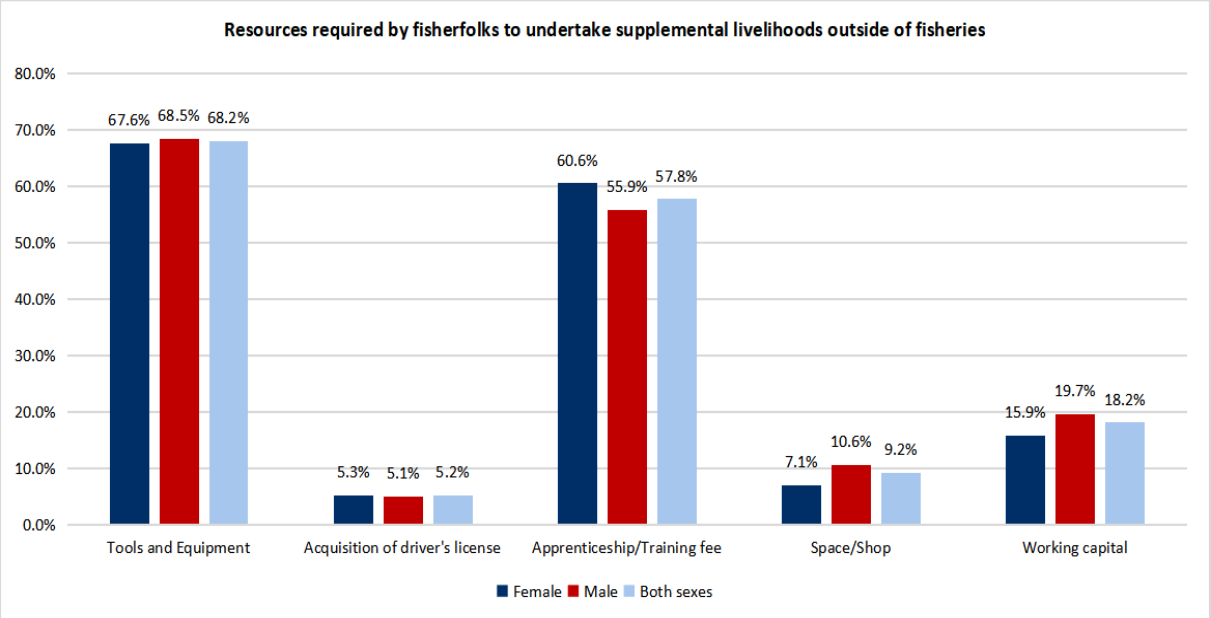
Additionally, to convince the population living in coastal communities about supplemental livelihoods, a majority would wait until they see their peers make better earnings. The wait-and-see attitude resulting from peer influence is the main influence in their adoption of livelihoods. Those early adopters who are willing to risk undertaking supplemental livelihoods will provide significant incentive for their peers to adopt these same livelihoods if they can see increased earnings. There are some who will remain in the fisheries business because they are forced into labor as crew members against their will by their parents. For example, some youth (below 15 years) fisher focus group discussion participants from Aboadze and Ankobra said the decision to pursue a supplemental livelihood would be very challenging for them because their captains (boosin) and parents will not allow them to stop working as crew members.

4.3.2. Potential Resources Required to Undertake the Supplemental or Alternative Livelihoods

The study delved into resource requirements needed by the fishers, fish processors, and traders to engage in non-fisheries supplemental or alternative livelihoods across the coastal communities. The purpose was to help implementers to better understand and appreciate the resource needs of the fisherfolks in planning for specific interventions.

The general resource needs of the fisherfolks wishing to diversify their livelihoods includes training, start-up capital, space or a shop, tools, and equipment. It is important to note that there isn't much difference in needs across the male and female respondents. The study results reveal that, for the proportion of youth (15 to 35 years) willing to undertake livelihoods outside of the fisheries, more than two-thirds (68.2%) require tools and equipment. More than a half (57.8%) require training and apprenticeship fees, whereas slightly above a tenth (18.2%) need working capital (Figure 27). Other potential resources required were space/shop (9.2%) and assistance in acquiring a driver's license (5.2%).

Figure 27: Resources required by fisherfolks to undertake supplemental livelihoods outside of fisheries



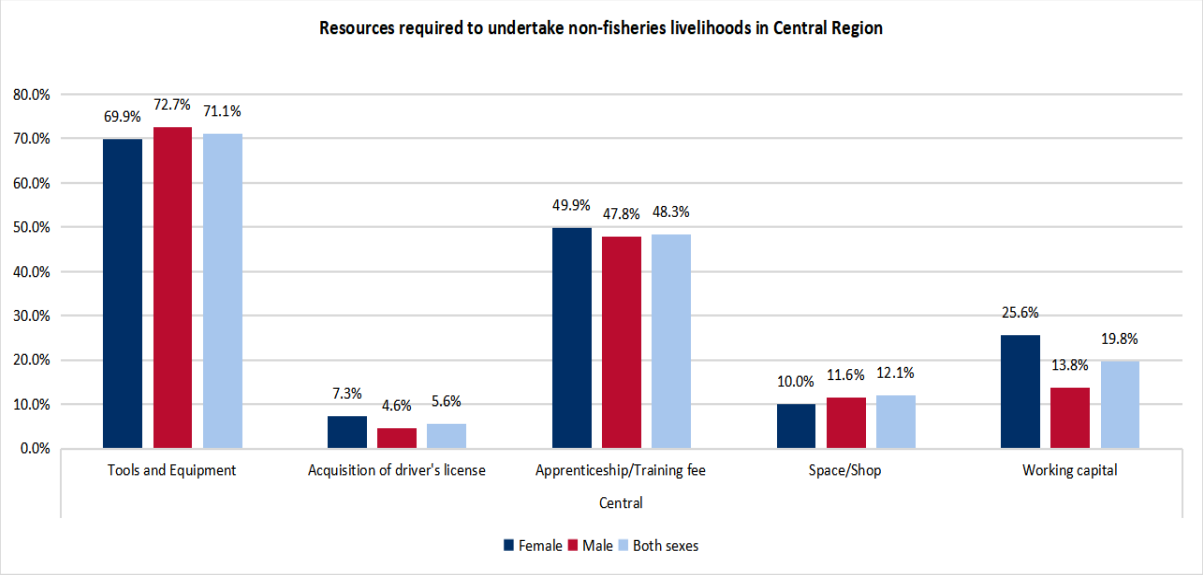
The cost of training and/or apprenticeship varies depending on the type of vocation and trade being pursued. In the Western Region, the cost of apprenticeship fees for tailoring/dressmaking ranges between GHS1,000 to GHS1,500.00. Other associated costs include a sewing machine, uniform fee, and essential tools (tape measure, tailor's chalk, pins, and chair). In the Central Region, the apprenticeship fee ranges from GHS350.00 to

GHS2,000.00 depending on the vocation trade. In the Greater Accra and Volta Regions, the cost of apprenticeship is highly dependent on whether it is formal or informal training, of which the training fee ranges from GHS1,500.00 to GHS5,000.00.

The study results further reveal that approximately 7 in 10 fisherfolks in the Central Region will require tools and equipment to undertake supplemental livelihoods outside of fisheries, while less than half (48.3%) will need support to pay for the apprenticeship and support their transportation and meals while they undertake apprenticeship training. Additionally, a little above a tenth (12.1%) will require space/shop, whereas a little below one-fifth (19.8%) will need working capital support to start the livelihood (Figure 28).

In the Greater Accra Region, a little below two-thirds (65.0%) will require tools and equipment to undertake supplemental livelihoods outside of fisheries (Figure 29). In comparison, three-fifths (60.3%) said they would need support in paying apprenticeship fees, and slightly below one-fifth (19.2%) will require working capital support, particularly for those interested in undertaking petty trading).

Figure 28: Resources required by fisherfolks to undertake livelihoods outside of fisheries in the Central Region



The resource requirements by the fisherfolks in the Volta Region to undertake supplemental livelihoods outside of fisheries was slightly different from the other regions as the proportion that needed a space/shop (7.0%) and working capital (15.1%) were low as compared with those in Greater Accra, Western and Central Regions (Figure 30). For the fisherfolk who were interested to engage in driving as supplemental livelihood, about 4.7% needed support in the acquisition of driver's license in the Volta Region.

Figure 29: Resources required by fisherfolks to undertake non-fisheries livelihood in the Greater Accra Region

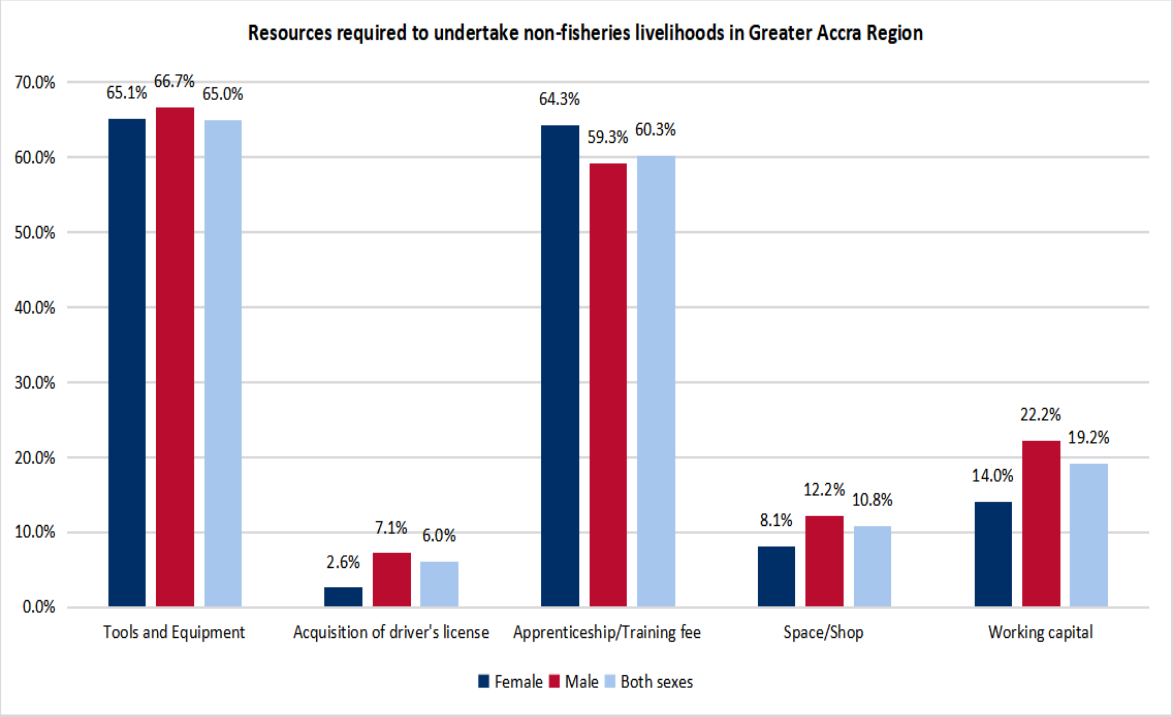
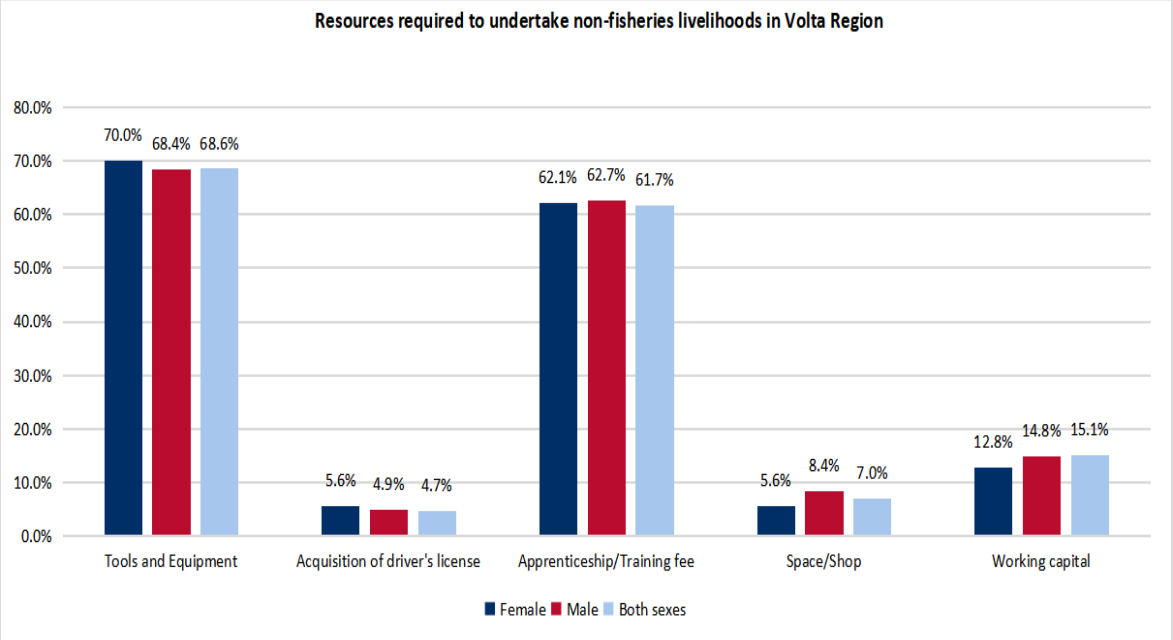
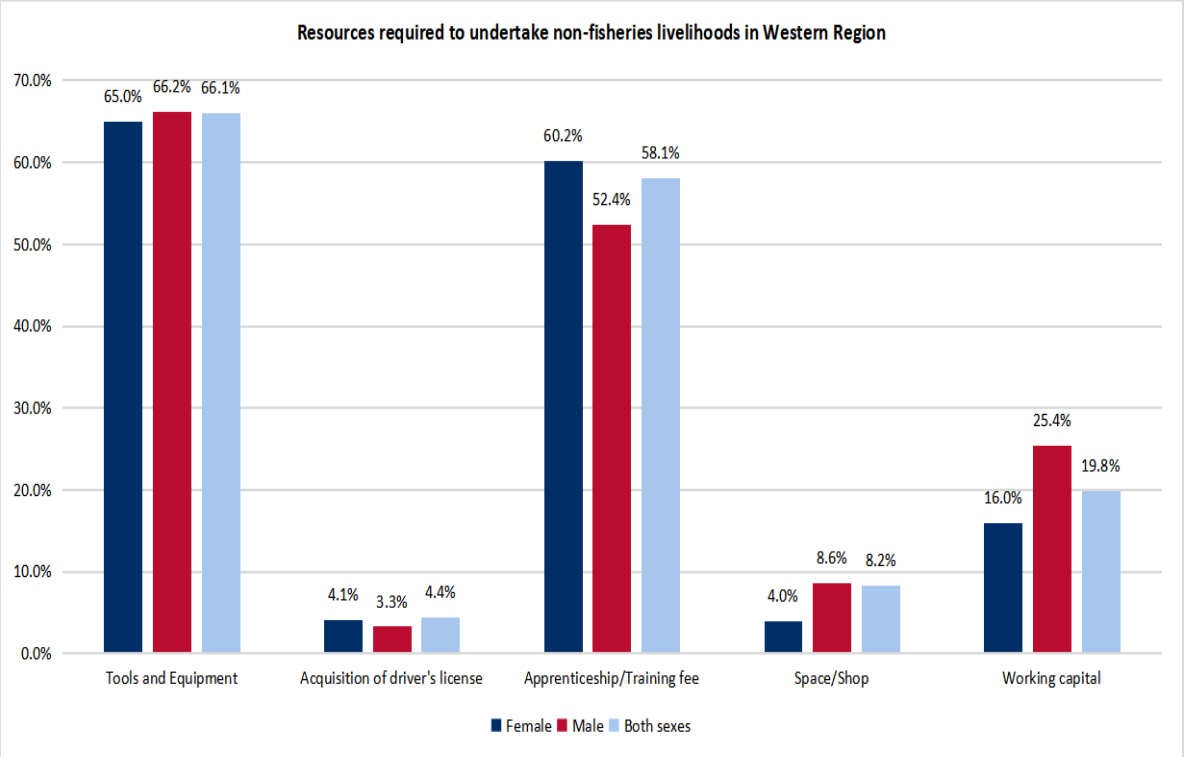


Figure 30: Resources required by fisherfolks to undertake non-fisheries livelihood in the Volta Region



In the Western Region, approximately two-thirds (66.1%) will need tools and equipment to engage in supplemental livelihood outside of fisheries, while a little above half (58.1%) said they would require support in paying for the apprenticeship fees (Figure 31). The proportion that needed help in acquiring a driver's license was low (4.4%).

Figure 31: Resources required by fisherfolks to undertake non-fisheries livelihood in the Western Region



4.4. Involvement in Business Enhancement and Livelihood Programs in the Past

Among the fisherfolks interviewed across the four coastal regions, the proportion that had benefited from business enhancement interventions were quite low (5.9%). Female respondents were involved in past business enhancement programs at a slightly higher percentage (6.5%) than their male counterparts (5.5%) (Table 8). Comparatively, the proportion in the Volta and Greater Accra Regions involved in business enhancement and livelihood programs in the past was relatively higher, 7.0% and 7.2% respectively, than in the Central and Western Regions, 4.4% and 5.7% respectively.

Overall, a little below half (47.5%) of the fisherfolks involved in business enhancement and livelihoods received the intervention through apprenticeship training (Figure 32). When probed further among the fisherfolks that had the enhancement program through an NGO support mentioned the organizations CEWEFIA, NAFPTA, and DAA, with support from the SFMP Project, Far Ban Bo, and Hen Mpoano.

In the Greater Accra and Central Regions, the study participants that received apprenticeship training was high, 60.0% and 57.1%, respectively, while in the Volta and

Western Region, the proportion that had apprenticeship training was low, 40.0% and 37.5% respectively (Figure 32).

Table 8: Involvement in Business Enhancement and livelihood Programs in the Past

Region	Community Name	Gender		
		Female	Male	Both sexes
Central	Apam	7.1%	0.0%	2.4%
	Biriwa	0.0%	22.2%	10.0%
	Elmina	7.7%	9.1%	8.3%
	Mumford	0.0%	0.0%	0.0%
	All	4.3%	4.4%	4.4%
Greater Accra	Azizanya	14.3%	9.5%	10.7%
	Prampram	0.0%	14.3%	7.4%
	Tema Newtown	0.0%	5.6%	3.6%
	All	3.3%	9.4%	7.2%
Volta	Adina	11.1%	10.0%	10.3%
	Denu	9.1%	0.0%	3.4%
	Dzelukope	0.0%	9.1%	7.1%
	All	7.7%	6.7%	7.0%
Western	Aboadzi	23.1%	0.0%	10.7%
	Ankobra	14.3%	4.8%	8.6%
	Axim	2.9%	0.0%	2.6%
	Sekondi	0.0%	0.0%	0.0%
	Shama	0.0%	7.7%	6.7%
	All	8.8%	2.7%	5.7%
	Overall	6.5%	5.5%	5.9%

Figure 32: Sources of Business Enhancement and Livelihood Programs

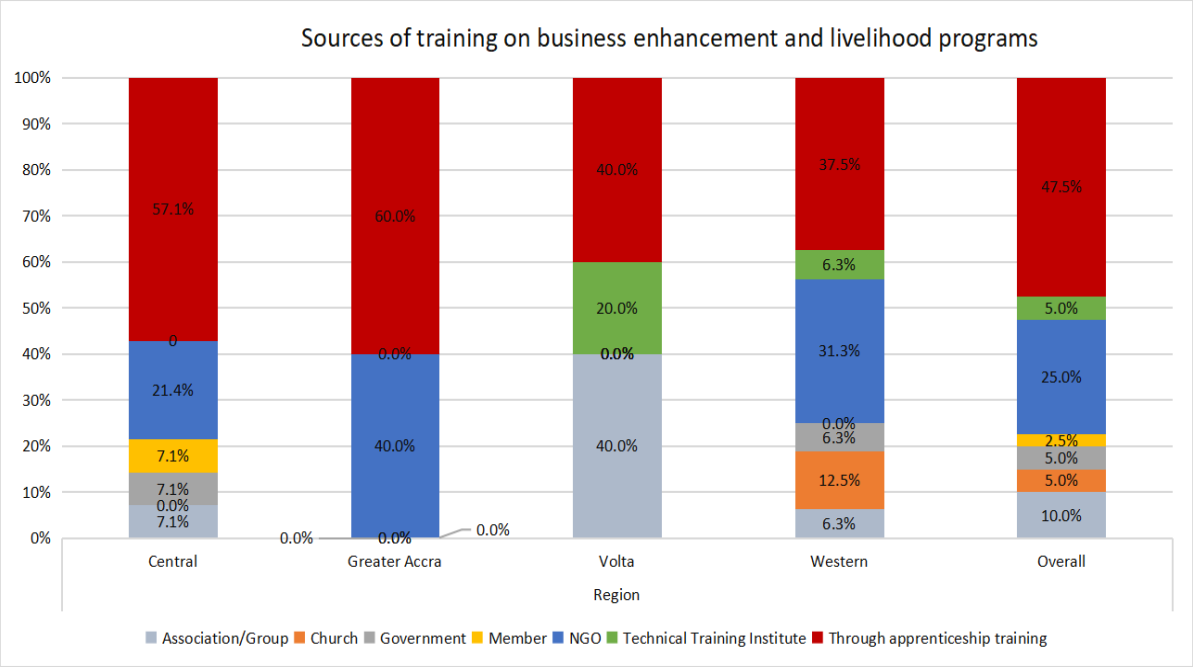


Image 9: An apprentice in dressmaking at Ankobra in the Western Region

4.5. Access to Financial Services (Savings and Credit)

4.5.1. Affiliation to Community level Savings and Credit Group (ROSCA/VSLA)

The study also examined fisherfolks' affiliation with community-level savings and credit groups such as Rotating Savings and Credit Association (ROSCA), or Village Savings and Loan Association (VSLA). The results reveal that a little above one-fifth (21.2%) were members of the community or savings group (Table 9).

Table 9: Fisherfolks affiliation with ROSCA

Region	Community Name	Gender		
		Female	Male	Both
Central	Apam	21.4%	7.1%	11.9%
	Biriwa	54.5%	0.0%	30.0%
	Elmina	23.1%	0.0%	12.5%
	Mumford	62.5%	5.0%	21.4%
	All	37.0%	4.4%	17.5%
Greater Accra	Azizanya	57.1%	14.3%	25.0%
	Prampram	30.8%	14.3%	22.2%
	Tema Newtown	20.0%	16.7%	17.9%
	All	33.3%	15.1%	21.7%
Volta	Adina	44.4%	15.0%	24.1%
	Denu	9.1%	11.1%	10.3%
	Dzelukope	33.3%	9.1%	14.3%
	All	26.9%	11.7%	16.3%
Western	Aboadzi	38.5%	0.0%	17.9%
	Ankobra	35.7%	9.5%	20.0%
	Axim	42.9%	25.0%	41.0%
	Sekondi	100.0%	15.4%	26.7%
	Shama	100.0%	10.0%	25.0%
	All	45.6%	9.6%	27.0%
	Overall	38.2%	9.8%	21.2%

Comparatively, the Western Region had on average a high (27%) proportion of fisherfolks that were affiliated to community groups or savings groups such as ROSCA and VSLA than the Greater Accra (21.7%), Volta (16.3%), and Central Regions (17.5%).

FGD and KII explored why participants did not belong to any savings group. Some participants openly admitted that they were members of VSLA in the past, but when the project(s) ended and the officers stopped visiting the community, most women also stopped contributing and withdrew their savings. Other reasons provided were that during the closed season in 2019, most fishers were out of business and could not continue with savings, rendering VSLA groups dormant. A few distrusted the savings group leaders,

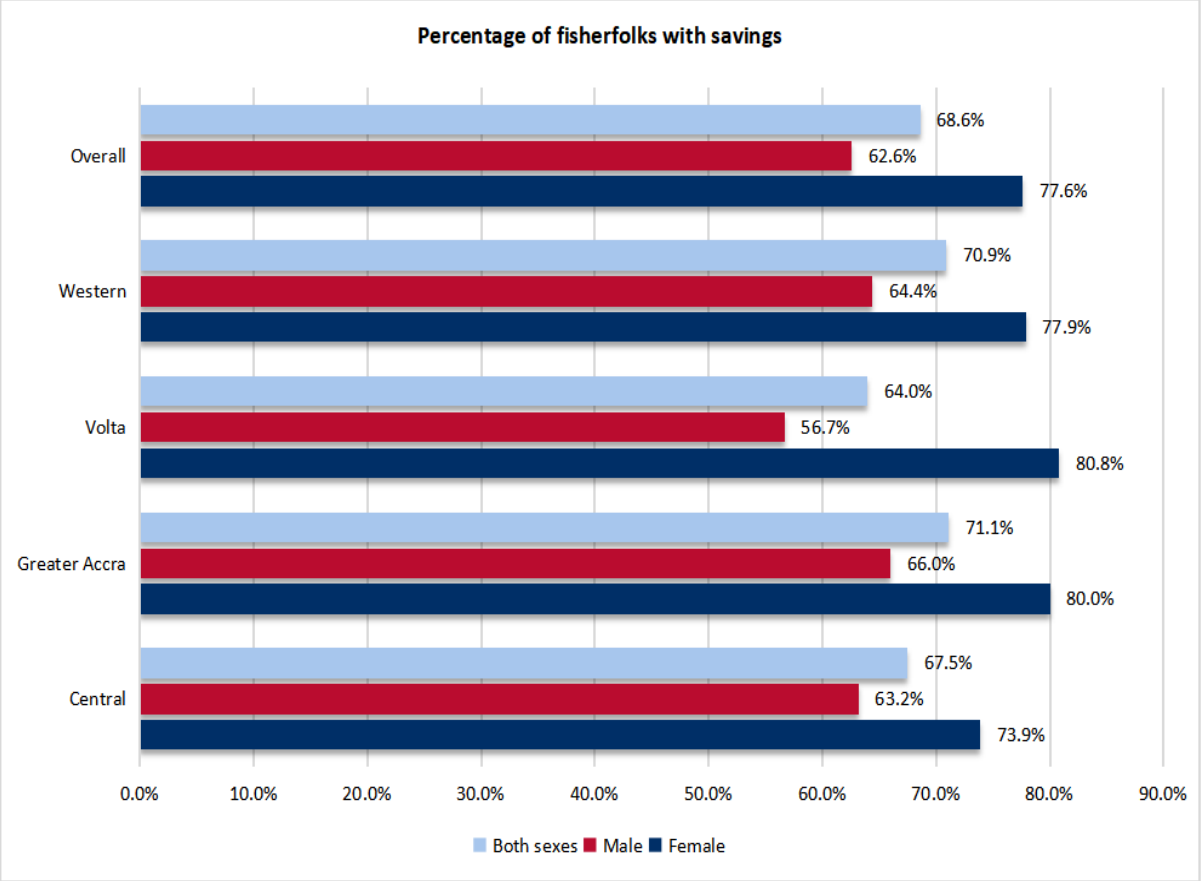
believing them to be selfish and not advocating on their behalf or keeping donations or other support for themselves.

4.5.2. Savings Culture Among the Fisherfolks

Results from the study reveal that a little above two-thirds (68.6%) of fisherfolks save their money (Figure 33). The proportion of females with savings was higher (77.6%) than the males (62.6%).

At the Regional level, the proportion of fisherfolks that had savings was high (71.1%) in the Greater Accra than in the other three regions.

Figure 33: Percentage of fisherfolks with savings



Key informants at the community level indicated that the women saved their monies after each market day compared to the males who earn wages at the end of each catch. Many males are also breadwinners for their families, so they spend all they have on the household leaving nothing to save. Some women lamented that due to the poor fish catch in recent times, their working capital has dwindled, hence their inability to save their money. While

others say they do not save due to bad experiences with financial institutions and susu collectors in the past, such as losing their money as a result of the closure of financial institutions by the Bank of Ghana or susu collectors disappearing with their savings.

4.5.3. Fisherfolk saving mechanisms

The study reveals multiple avenues of savings by the respondents through financial institutions, mobile money wallets, insurance companies, and community-level savings and loan groups. Approximately 8 in 10 (79.7%) saved their monies at home (Table 10). A significant proportion also kept their funds with financial institutions (36.4%) and mobile money wallets (29.6%). Interestingly, a little above a tenth (11.7%) had savings with insurance companies. It was observed from the responses that some of the fisherfolks saved their money in multiple places.

At the regional level, all fisherfolks in the Greater Accra Region kept their savings at home (100%) while about half (50.8%) also had their savings with financial institutions. When probed on why they do not keep their savings with financial institutions, some of the fisherfolks shared their experiences of money lost to fraudulent institutions that were closed by the Bank of Ghana in 2017. Others also had negative perceptions about keeping funds with financial institutions because they feared the institutions would fold up or be closed by the Central Bank.

In the Volta Region, a little above half (54.5%) had their savings with ROSCA, while about 7 in 10 kept their savings at home. When probed about the high percentage that saves with ROSCA, the respondents mentioned that within the Denu and Aflao enclave, they traditionally have several groups that operated as ROSCA for many decades. These self-help groups mainly seek to promote thrift and loans among their members. The average membership of these groups ranges from 30 to 50 members, and meetings are held weekly for members to make contributions. Interestingly, about one-fifth (20%) said they made monthly contributions to insurance companies covering life assurance, funeral benefits, and child education in the region.

In the Western and Central Regions, the proportion that saves their money at home was about 7 in 10. The percentage that had their savings with VSLA groups was very low in both Western (4%) and Central (6.5%) Regions.

At Ankobra and Axim in the Western Region, the adult women interacted with opinioned that they had active women groups such known as DAASGIFT, which were mainly VSLA and group lending mechanisms. However, after time passed, the groups became weaker, and some members stopped contributing due to the hardship relating to days and, in some instances, weeks without fish processing activities.

The adult women in Axim and Ankobra said that the lack of participation and interest by the fish processors and traders in the group's activities at the community level as well as poor monitoring by the organizations that set them up, is among the many reasons leading to the ineffectiveness of the VSLA groups.

Table 10: Where fisherfolks save their money (The multiple avenues of saving)

Region	Where money is saved	Female	Male	Both sexes
Central	Home	73.5%	72.1%	72.7%
	VSLA	5.9%	7.0%	6.5%
	ROSCA	0.0%	0.0%	0.0%
	Financial Institution	38.2%	41.9%	40.3%
	Insurance Company	11.8%	4.7%	7.8%
	Mobile Money wallet	20.6%	30.2%	26.0%
Greater Accra	Home	100.0%	100.0%	100.0%
	VSLA	0.0%	2.9%	1.7%
	ROSCA	4.2%	0.0%	1.7%
	Financial Institution	50.0%	51.4%	50.8%
	Insurance Company	0.0%	11.4%	6.8%
	Mobile Money wallet	37.5%	17.1%	25.4%
Volta	Home	81.0%	67.6%	72.7%
	VSLA	0.0%	5.9%	3.6%
	ROSCA	57.1%	52.9%	54.5%
	Financial Institution	23.8%	35.3%	30.9%
	Insurance Company	9.5%	26.5%	20.0%
	Mobile Money wallet	42.9%	44.1%	43.6%
Western	Home	79.2%	74.5%	77.0%
	VSLA	1.9%	6.4%	4.0%
	ROSCA	0.0%	4.3%	2.0%
	Financial Institution	20.8%	36.2%	28.0%
	Insurance Company	13.2%	12.8%	13.0%
	Mobile Money wallet	22.6%	31.9%	27.0%
Overall	Home	81.8%	78.0%	79.7%
	VSLA	2.3%	5.7%	4.1%
	ROSCA	9.8%	12.6%	11.3%
	Financial Institution	31.1%	40.9%	36.4%
	Insurance Company	9.8%	13.2%	11.7%
	Mobile Money wallet	28.0%	30.8%	29.6%

4.5.4. Frequency of saving money

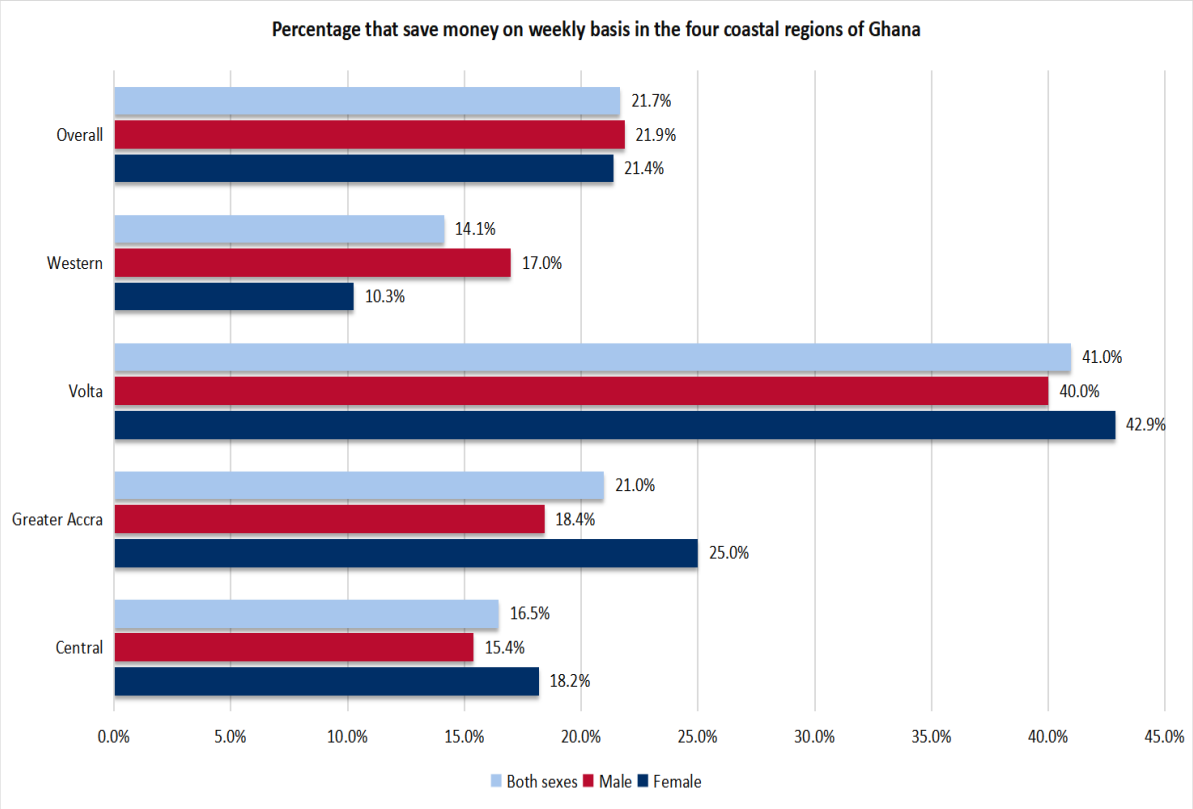
The study found that more than two-fifths (47.0%) of the fisherfolks usually save as and when they have available money (Table 11). The proportion that makes daily savings was below one-fifth (17.7%) across the four coastal regions. The percentage that made regular monthly and once-in-month savings were low (5.3% and 8.3%, respectively), while weekly savings were above one-fifth (21.7%).

Table 11: Frequency of saving money

Region	Frequency of saving money	Female	Male	Both sexes
Central	As and when money is available	42.4%	48.1%	45.9%
	Daily	18.2%	21.2%	20.0%
	Monthly	15.2%	3.8%	8.2%
	Once in a while	6.1%	11.5%	9.4%
	Weekly	18.2%	15.4%	16.5%
Greater Accra	As and when money is available	58.3%	50.0%	53.2%
	Daily	12.5%	15.8%	14.5%
	Monthly	0.0%	7.9%	4.8%
	Once in a while	4.2%	7.9%	6.5%
	Weekly	25.0%	18.4%	21.0%
Volta	As and when money is available	28.6%	20.0%	23.0%
	Daily	14.3%	27.5%	23.0%
	Monthly	4.8%	5.0%	4.9%
	Once in a while	9.5%	7.5%	8.2%
	Weekly	42.9%	40.0%	41.0%
Western	As and when money is available	64.1%	56.6%	59.8%
	Daily	17.9%	11.3%	14.1%
	Monthly	2.6%	3.8%	3.3%
	Once in a while	5.1%	11.3%	8.7%
	Weekly	10.3%	17.0%	14.1%
Overall	As and when money is available	50.4%	44.8%	47.0%
	Daily	16.2%	18.6%	17.7%
	Monthly	6.0%	4.9%	5.3%
	Once in a while	6.0%	9.8%	8.3%
	Weekly	21.4%	21.9%	21.7%

The results also reveal that the male youth (18.6%) make slightly higher daily savings compared to their female counterparts (16.2%). Comparatively, the proportion who made weekly savings was very high (41.0%) in the Volta Region compared with the other coastal regions in Ghana (Figure 34).

Figure 34: Percentage that save money on weekly basis in the four coastal regions of Ghana



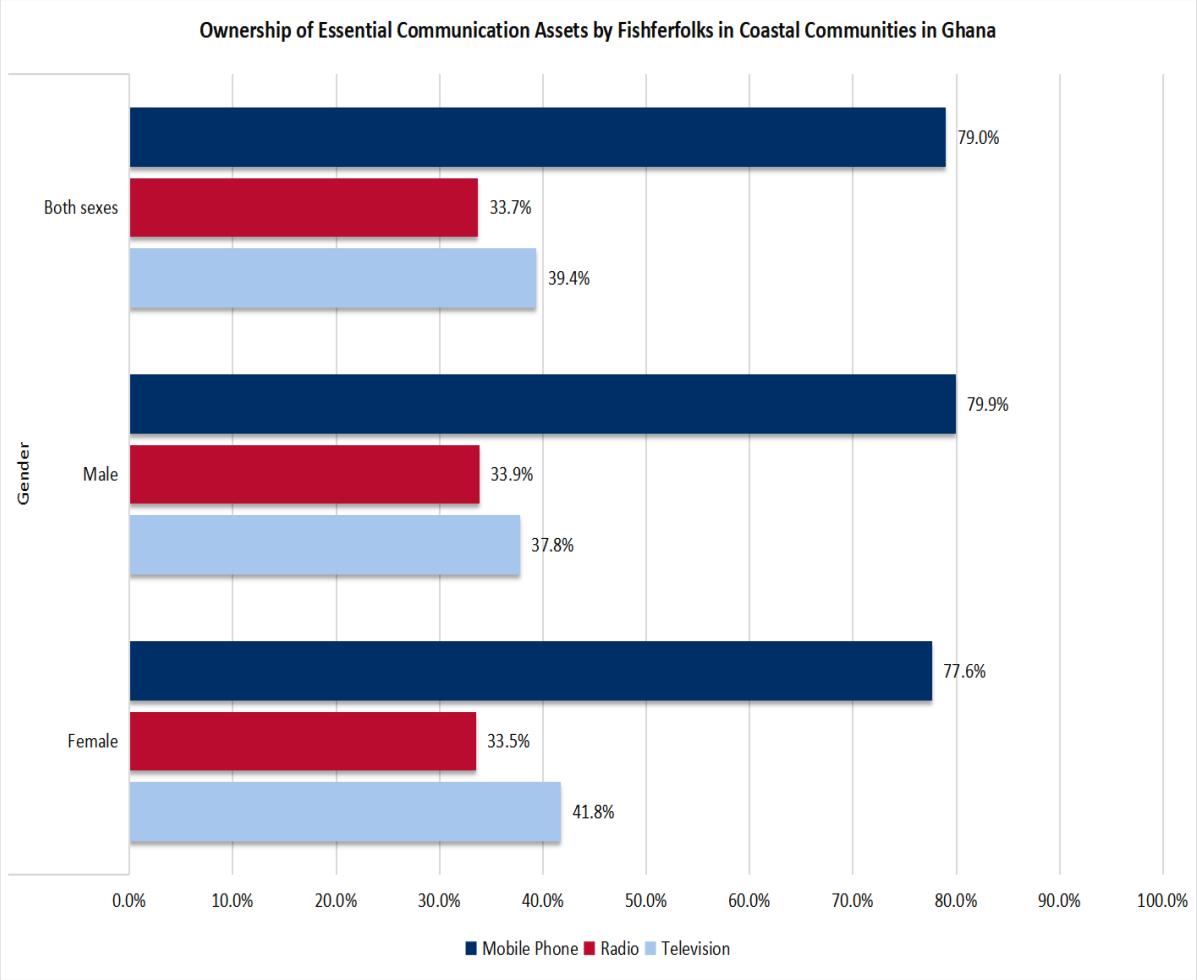
4.6. Effective Communication Channels in Coastal Communities

To identify the most suitable and effective channels of communication in reaching fisherfolks in Ghana's coastal communities, these variables were analyzed.

4.6.1. Ownership of Essential Communication Assets

More than three-quarters (79.0%) of the fisherfolks owned personal mobile phones (see next section for a description of the types of phones) in the coastal communities assessed, while approximately one-third (33.7%) had radio sets, and 39.4% had a television (Figure 35). The results reveal that the mobile phone is the most common communication tool owned and used by fisherfolks across the four coastal regions of Ghana.

Figure 35: Ownership of essential communication assets by fisherfolks in coastal communities in Ghana



Ownership of mobile phones in the coastal regions was very high among the fisherfolks (Table 12). In the Greater Accra, Central, and Volta Regions about 8 in 10 of the fisherfolks owned mobile phones while in the Western Region mobile phone ownership is a little above three-quarters (78.0%). Some young persons interacted during the study at Apam, and Mumford mentioned that they transact their fisheries business on their phone. Whenever they land at the beach site, they usually call the fish mother, potential buyers, and canoe owners before reaching the landing site.

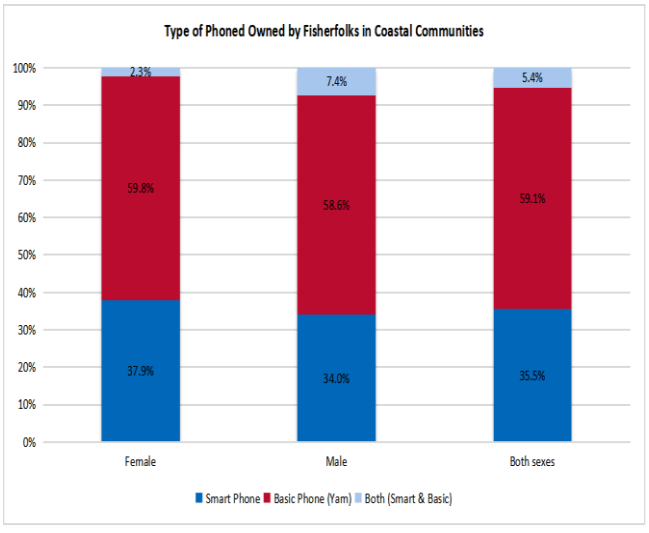
Table 12: Ownership of Essential Communication Assets by Fisherfolks in Ghana's Coastal Regions

Region	Communication Asset	Gender		
		Female	Male	Both sexes
Central	Television	37.0%	45.6%	42.1%
	Radio	37.0%	35.3%	36.0%
	Mobile Phone	82.6%	80.9%	81.6%
Greater Accra	Television	50.0%	18.9%	19.3%
	Radio	36.7%	20.8%	20.5%
	Mobile Phone	83.3%	79.2%	80.7%
Volta Region	Television	38.5%	38.3%	38.4%
	Radio	23.1%	38.3%	33.7%
	Mobile Phone	76.9%	81.7%	80.2%
Western	Television	42.6%	32.9%	37.6%
	Radio	33.8%	26.0%	29.8%
	Mobile Phone	76.5%	79.5%	78.0%
Overall	Television	41.8%	37.8%	39.4%
	Radio	33.5%	33.9%	33.7%
	Mobile Phone	77.6%	79.9%	79.0%

4.6.2. Type of Mobile Device Owned by Fisherfolks

More than half (59.1%) of all fisherfolks respondents owned and used a basic phone, locally referred as "Yam" for communication (Figure 36). This a simple phone capable of making calls and texting that cannot run any of the social media applications. A little above one-third (35.5%) owned Smartphones, while less than a tenth (5.4%) owned both smart and basic (Yam) phones.

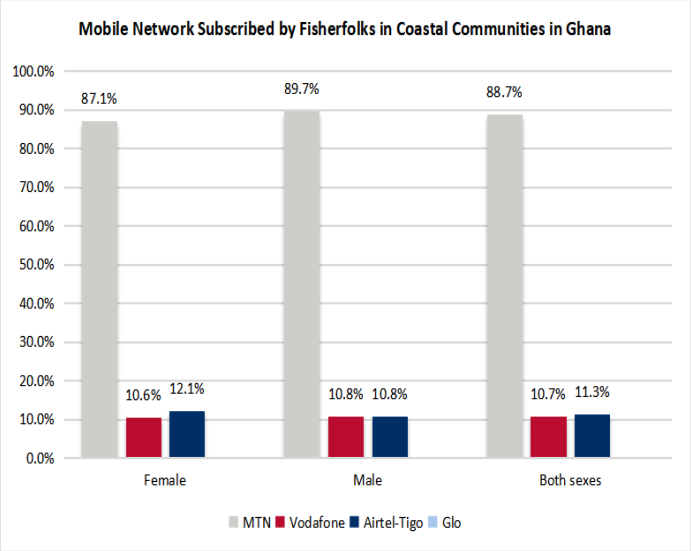
Figure 36: Type of Phone Owned



4.6.3. Type of Mobile Network Service Subscribed by Fisherfolks in Coastal Communities

Figure 37: Type of Mobile Network Service Subscribed

The study reveals that the most predominant mobile network service subscribed by fisherfolks in Ghana's coastal communities was MTN (88.7%). Apart from the MTN service, the fisherfolks had subscribed to other network services such as Vodafone (10.7%) and Airtel-Tigo (11.3%). None had subscribed to the Glo network across the 15 communities in the four coastal regions assessed (Figure 37).



4.6.4. Mobile Money Subscription by Fisherfolks in Coastal Communities

Table 13: Mobile Money Subscription in study Communities

The study found that above two-thirds (69.6%) of the fisherfolks that participated in this study in Ghana's regions had subscribed to mobile money (MoMo) with their respective network providers. Comparatively, the proportion of female youth that had mobile money subscriptions was slightly higher (70.5%) as compared with their male (69%) counterparts across all the communities assessed (Table 13).

Region	Community	Female	Male	Both sexes
Central	Apam	54.5%	66.7%	62.9%
	Biriwa	30.0%	87.5%	55.6%
	Elmina	100.0%	87.5%	93.8%
	Mumford	100.0%	66.7%	75.0%
	All	71.1%	77.1%	71.8%
Greater Accra	Azizanya	66.7%	94.1%	87.0%
	Prampram	75.0%	70.0%	72.7%
	Tema Newtown	100.0%	53.3%	68.2%
	All	80.6%	72.5%	76.0%
Volta	Adina	83.3%	75.0%	77.3%
	Denu	66.7%	73.3%	70.8%
	Dzelukope	75.0%	62.5%	65.0%
	All	75.0%	70.3%	71.0%
Western	Aboadzi	80.0%	41.7%	59.1%
	Ankobra	90.9%	70.0%	77.4%
	Axim	60.7%	66.7%	61.3%
	Sekondi	50.0%	63.6%	61.5%
	Shama	50.0%	62.5%	60.0%
	All	66.3%	60.9%	63.9%
Overall		70.5%	69.0%	69.6%

4.6.5. Availability of MOMO Vendors in Coastal Communities

The presence of MOMO vendors cut across all the coastal communities assessed (97.0%). All fisherfolks interviewed in Apam, Elmina, Azizanya, Dzelukope, and Adina, said MOMO vendors are available in their communities (Table 14). In the Western Region, approximately 9 in 10 said the mobile money vendor are available in their communities.

Table 14: Availability of MOMO vendors in Coastal Communities

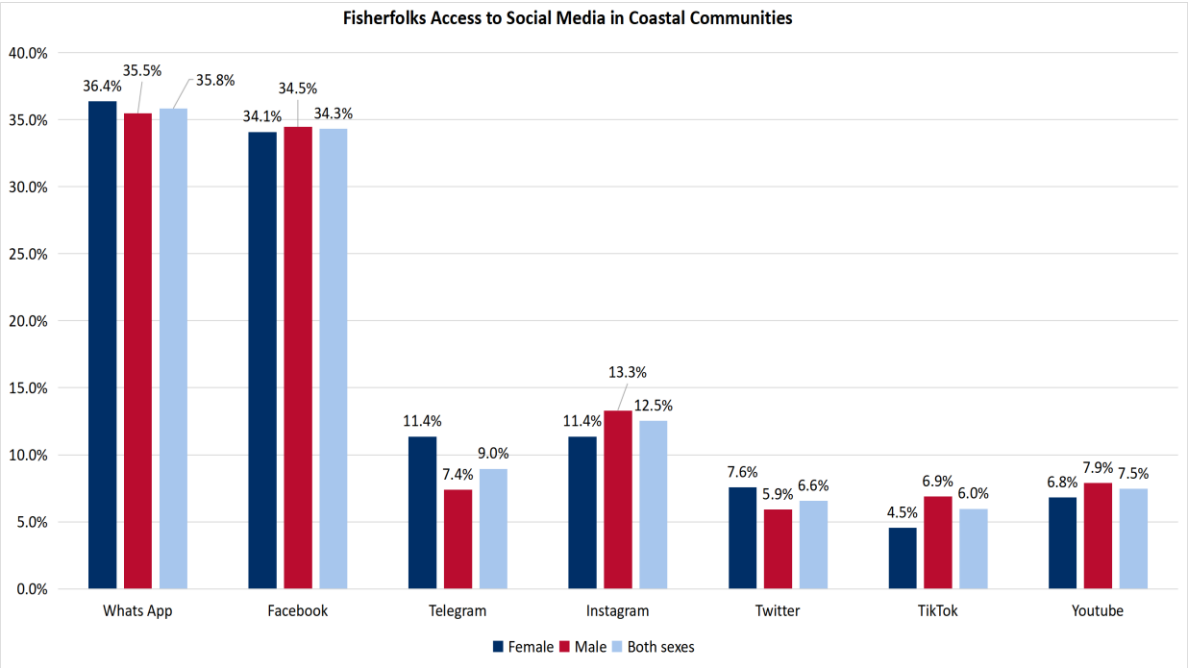
Region	Community Name	Female	Male	Both sexes
Central	Apam	100.0%	100.0%	100.0%
	Biriwa	80.0%	100.0%	88.9%
	Elmina	100.0%	100.0%	100.0%
	Mumford	100.0%	93.8%	95.0%
Greater Accra	Prampram	83.3%	90.0%	86.4%
	Azizanya	100.0%	100.0%	100.0%
	Tema Newtown	100.0%	93.3%	95.5%
Volta	Adina	100.0%	100.0%	100.0%
	Denu	100.0%	86.7%	91.7%
	Dzelukope	100.0%	100.0%	100.0%
Western	Aboadzi	100.0%	83.3%	90.9%
	Prampram	83.3%	90.0%	86.4%
	Ankobra	100.0%	95.0%	96.8%
	Axim	85.7%	66.7%	83.9%
	Shama	100.0%	93.8%	95.0%
Overall		93.9%	99.0%	97.0%

4.6.7. Fisherfolks Access to social media in Coastal Communities

Despite most coastal communities being rural, fisherfolks' access to social media was very encouraging. The data available reveals that more the one-third (35.8%) of the fisherfolks in Ghana's coastal communities had access to WhatsApp (Figure 38). This data is not surprising given the data above that indicates that approximately 35% of interviewees have smart phones so clearly these are the respondents using social media.

The other social media applications used by fisherfolks in coastal communities were Facebook (34.3%), Instagram (12.5%), Telegram (9.0%), YouTube (7.5%), Twitter (6.6%), and Tik Tok (6.0%). The study shows female dominance in the use of social media applications such as WhatsApp (36.4%), Telegram (11.4%), and Twitter (7.6%).

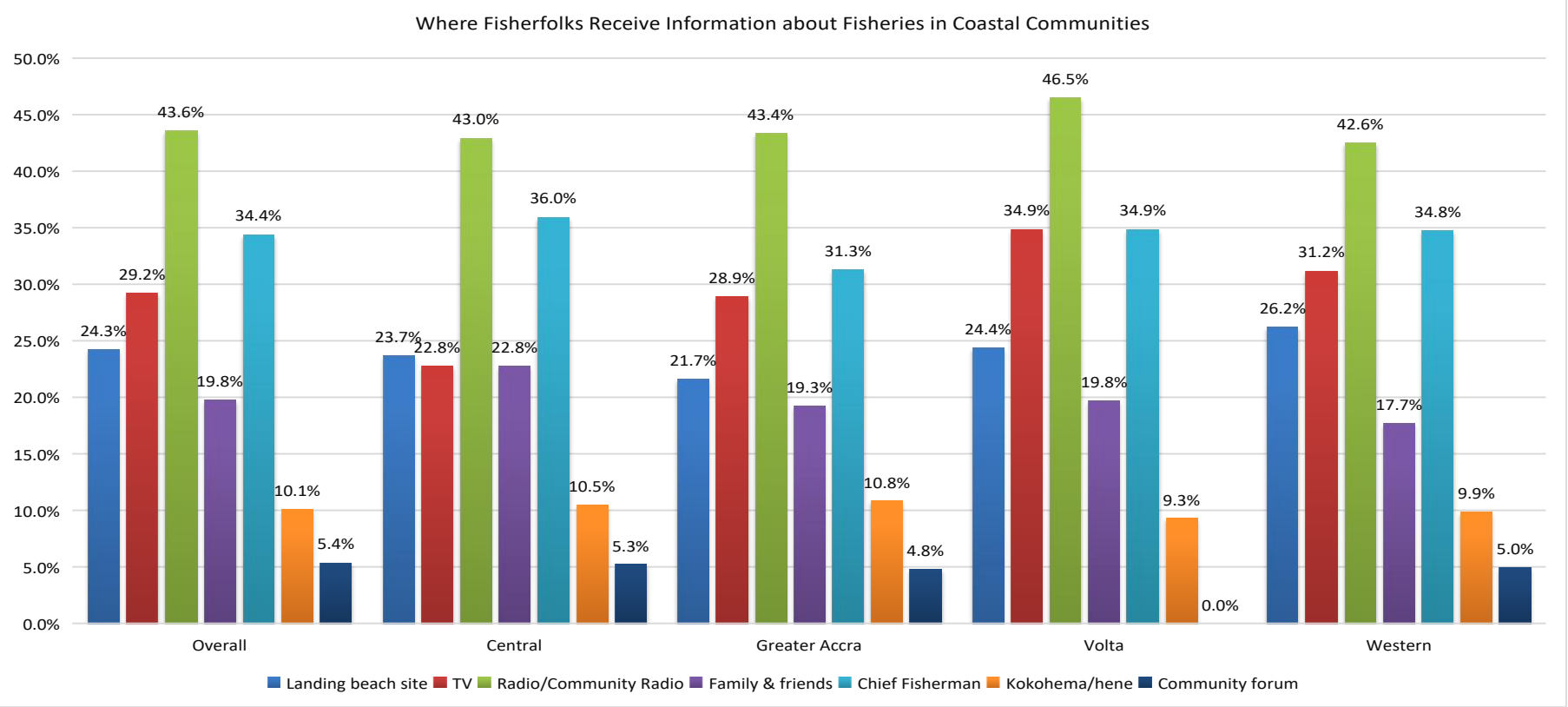
Figure 38: Access to social media by Fisherfolks in Coastal Communities


Fisherfolks Access to Social Media in Coastal Communities
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
36.4%
35.5%
35.8%
34.1%
34.5%
34.3%
11.4%
7.4%
9.0%
11.4%
13.3%
12.5%
7.6%
5.9%
6.6%
4.5%
6.9%
6.0%
6.8%
7.9%
7.5%
Whats App
Facebook
Telegram
Instagram
Twitter
TikTok
Youtube
Female
Male
Both sexes

4.6.4. Where Fisherfolks Receive Information About Fisheries in Coastal Communities

Results from figure 39 indicate that the fisherfolks receive information about fisheries in their communities through various communication channels. Notable among the channels were radio including the community radio (43.6%), Chief fisherman (34.4%), TV (29.2%), landing site (24.3%), Family/friends (19.8%), and Konkohene[1] (10.1%) and Community forum (5.4%).

Figure 39: Where information about fisheries is received in coastal communities



[1] The Konkohene is the leader of the konkofo – an actor in the fisheries value chain responsible for negotiating and setting prices of fish at the landing site on behalf of the processors. She also provides leadership for all the women in the fishing trade.

4.7. Out of School Youth (15 to 18 years) Current Livelihoods, Challenges, and Incentives to Return to School in Coastal Communities

4.7.1. Out of School Desire to Return to School

Among the out-of-school youth participants between the ages 15 - 18 years within the coastal communities assessed, more than one-third (37.1%) said they were willing to return to school if given the needed resources and support (Table 15). More out of school female respondents (43.6%) were ready to return to school compared to their male counterparts (32.8%).

In Shama and Dzelukope, both the females and males were not interested in returning to school. In Apam, Tema, and Biriwa in the Central Region, while some out of school females were interested in returning to school, their male counterparts had no desire to go back to school. The situation was precisely the opposite in Azizanya, Prampram, Adina, Sekondi, and Denu; while the male out-of-school youth was desirous of returning to school, their female counterparts had no intentions of returning to school.

Table 15: Out of School Desire to Return to School

Region	Community Name	Gender		
		Female	Male	Both sexes
Central	Apam	20.0%	0.0%	7.7%
	Biriwa	80.0%	0.0%	80.0%
	Elmina	66.7%	60.0%	62.5%
	Mumford	100.0%	16.7%	28.6%
	All	57.1%	21.1%	36.4%
Greater Accra	Azizanya	0.0%	75.0%	50.0%
	Prampram	0.0%	66.7%	33.3%
	Tema Newtown	100.0%	0.0%	37.5%
	All	37.5%	41.7%	40.0%
Volta	Adina	0.0%	75.0%	50.0%
	Denu	0.0%	33.3%	25.0%
	Dzelukope	0.0%	0.0%	0.0%
	All	0.0%	35.7%	25.0%
Western	Aboadzi	100.0%	33.3%	42.9%
	Ankobra	33.3%	100.0%	50.0%
	Axim	57.1%	50.0%	55.6%
	Sekondi	0.0%	50.0%	50.0%
	Shama	0.0%	0.0%	0.0%
	All	54.5%	38.5%	45.8%
Overall		43.6%	32.8%	37.1%

Across the four coastal regions, the proportion of out-of-school youth willing to return to school was higher in the Greater Accra (40%) and Western Regions (45.8%) compared to Central (36.4%) and Volta Regions (25.0%). In the 15 communities assessed, about 8 in 10 female out-of-school youth in Biriwa were willing to return to school. In the following communities, Elmina (62.5%), Axim (55.6%), Adina (50%), Azizanya (50.0%), and Ankobra, more than half of the out of school youth had the desire to return to school if given the needed assistance.

For the proportion with a strong desire to return to school, the key motivating factors and their needs were explored during KIIs and FGDs. These included financial assistance to purchase educational supplies such as textbooks, exercise books, uniforms, and stipends for meals when in school. Respondents also encouraged the enactment of community by-laws that prevent young people between the ages of 0 - 18 years from engaging in fisheries businesses. They also mentioned support from teachers to create a supportive enabling environment for youth who do chose to return to school and prevent stigma. In addition, youth who dropped out of school need a special bridging program to catch up with the education level of their peers. Finally, respondents mentioned the need for sponsorship to help with paying for the school fees up to completion.

4.7.2. Options for Out of School who do not wish to Return to School

Among the out-of-school youth, about 6 in 10 prefer to learn an apprenticeship program of their choice if given the opportunity and support (Table 16) rather than return to school. A high proportion of the out-of-school youth in Dzelukope (100%), Shama (100%), and Apam (92.3%), had a strong desire to enroll in an apprenticeship program.

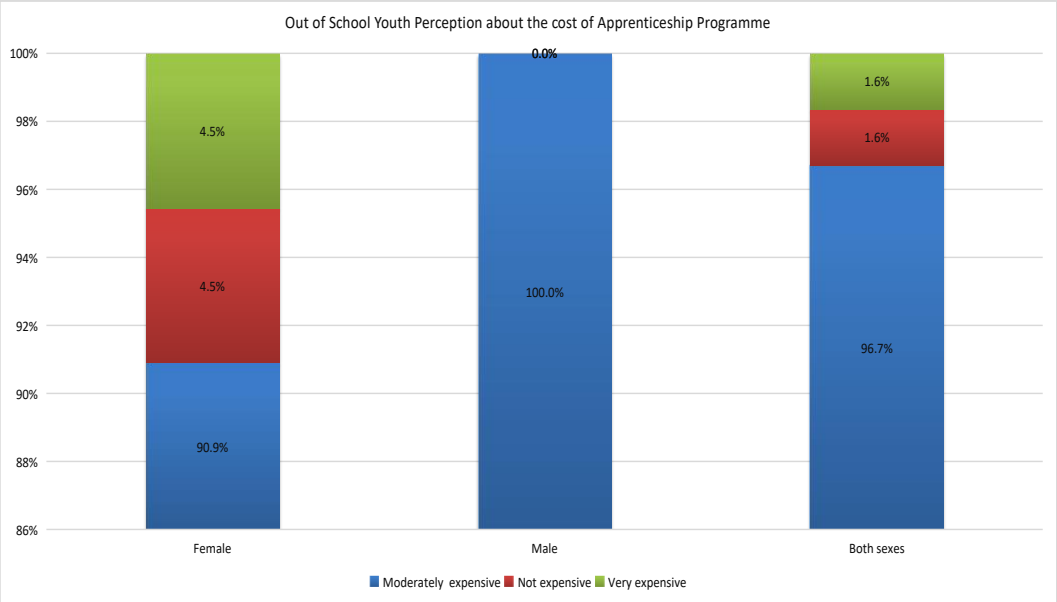
Table 16: Out of School Youth Desiring to learn Apprenticeship Training

Region	Community Name	Gender		
		Female	Male	Both sexes
Central	Apam	80.0%	100.0%	92.3%
	Biriwa	20.0%	0.0%	20.0%
	Elmina	33.3%	40.0%	37.5%
	Mumford	0.0%	83.3%	71.4%
	All	42.9%	78.9%	63.6%
Greater Accra	Azizanya	100.0%	25.0%	50.0%
	Prampram	100.0%	33.3%	66.7%
	Tema Newtown	0.0%	100.0%	62.5%
	All	62.5%	58.3%	60.0%
Volta	Adina	100.0%	25.0%	50.0%
	Denu	100.0%	66.7%	75.0%
	Dzelukope	100.0%	100.0%	100.0%
	All	100.0%	64.3%	75.0%
Western	Aboadzi	0.0%	66.7%	57.1%
	Ankobra	66.7%	0.0%	50.0%
	Axim	42.9%	50.0%	44.4%
	Sekondi	0.0%	50.0%	50.0%
	Shama	0.0%	100.0%	100.0%
	All	45.5%	61.5%	54.2%
Overall		56.4%	67.2%	62.9%

During focus group discussion, out of school youth across the four coastal regions were most interested in the following skills and vocations: hairdressing, tailoring/seamstress, cosmetology, catering, interior, and exterior decoration, carpentry, masonry, vegetable farming, driving, and auto mechanic. The study observed that the options suggested by the out-of-school youth were, to a large extent, dependent on the resources available in the community concerned as well as their market opportunities.

When asked why they were not engaged in the apprenticeship program, most out-of-school youths said it was moderately expensive (96.7%). Comparatively, about 4.5% of out of school females believed apprenticeship programs are very expensive and 4.5% of the females also perceive that the apprentice program is less expensive (Figure 41).

Figure 40: Perception About the Cost of Apprenticeship Program



4.8. Potential Employment Agencies and Key Marketable Vocational Skills and Expertise Requirements in Coastal Communities

In almost all the 15 coastal communities assessed, no employment agencies offered job opportunities to the youth in these communities. According to some opinion leaders interviewed through KIIs, youth that completed their education up to tertiary level are without jobs after attending several job interviews and submitting applications. They have no option but to return to engage in fisheries to earn a living. Key informant interviews with government agencies that offer employment opportunities to the youth in the country revealed that they do not have any tailor-made interventions for coastal communities. Specific information from these key informant interviews is summarized below.

The Ghana Youth Agency (YEA) said they had a partnership program with Zoomlion dubbed "Youth in Coastal Sanitation," which focused on engaging the youth as sanitation guards to maintain environmental sanitation along the coast in Ghana. The Government discontinued the program about two years ago and hoped to reintroduce the program soon. According to the YEA, the coastal sanitation module is usually open to all interested youth and there are no specific entry requirements to enroll.

The National Entrepreneurship and Innovation Programme (NEIP), provides employment opportunities to youth in Ghana with a specific focus on equipping and facilitating beneficiaries to start their own businesses. According to the NEIP, their focus in

the next 3 years will be on providing 1 million sustainable jobs for the youth under the Ghana Care Obatanpa Project (2022 - 2025) The key areas NEIP will support under this initiative are agriculture, tourism, and information and communications technology. The Youth in Innovation in Agriculture was launched in early 2022 to get youth to engage in farming of vegetables, poultry, and piggery as well as agro-processing. According to the NEIP, the U-Start Program will be a huge opportunity for youth in coastal communities.

The Ghana Enterprises Agency (formerly NBSSI), has been created to respond to the growing needs of MSMEs and has 190 District Offices in Ghana. During the outbreak of the novel COVID-19 pandemic, the GEA provided opportunities to Ghanaian youth under the Youth in Africa Works Project funded by the MasterCard Foundation. Some youth from coastal communities benefitted. They were provided with support to undertake apprenticeship training with master craftsmen in the areas of fashion, catering, auto spraying, cosmetology among others.

The Commission for Technical and Vocational Education and Training (CTVET) is responsible for regulating, promoting, and administering technical and vocational education and training for transformation and innovation for sustainable development. According to the Council, their focus is to transform a majority of the informal vocational trades into formal entities through upgrade programs for the master trainees. The Council has oversight on 179 skills training providers, including 114 training institutions in Ghana. The Council mainly works with about 68 vocational trade associations in providing sustainable formal skills training opportunities for the youth in Ghana. Some of the trade areas whose curriculum the Commission is formalizing include:

- Construction / Welding
- Automotive Repair
- Consumer Electronics
- Garment Making
- Cosmetology/Hairdressing
- Plumbing
- Catering/ Hospitality
- Electrical Installation
- Furniture Making
- Block Laying/Tiling

SECTION 5: MAIN CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

This study assessed markets and livelihood options across the four coastal regions of Ghana to identify alternative and supplemental livelihoods available in these communities and the potential of uptake by the youth fishers. These conclusions have been reached through the analysis of data gathered through interviews with the fishers and key informants, considering their perspectives on alternative and supplementary livelihood options.

Fishers' engagement in supplemental livelihoods is highly possible in coastal communities in Ghana. It is worth noting that some fishers are already pursuing supplementary livelihoods besides fisheries. The fishers themselves are making conscious efforts to add new livelihood opportunities to their existing fisheries business. The current state of the small pelagic fisheries in coastal communities has been a compelling catalyst in motivating the fishers to diversify their livelihoods beyond what they have known, practiced, and received from their ancestors. However, a continuous effort to support supplementary livelihoods is necessary. Many of these new businesses were established over the course of the past 5 years and show signs of business continuity and sustainability after this period of time. The most common livelihoods encountered among fisherfolk are petty trading, construction and civil works (including plumbing and masonry), and vegetable farming.

The study found that of the over 80 percent of respondents that were not engaged in supplementary livelihoods, their primary reasons were the perceived high risk of losing their working capital to an unfamiliar income-generating venture and counting on the possible recovery of the fisheries. Two key factors would convince study participants to adopt supplemental livelihoods, first the income earning potential of that livelihood and whether they are interested in the nature of the supplementary livelihood activity. These motivating catalytic drivers should constitute the approaches taken by any intervention seeking to facilitate the fishers' engagement in supplementary livelihoods in coastal communities.

There are alternative livelihood options available to coastal communities. Even though some key informants have argued that fisherfolk are generally reluctant to leave fishing-related livelihoods entirely, the perception about the increasing migration among the

youth in coastal communities to urban cities indicates that some are shifting entirely from fisheries business. As earlier established from the data gathered in this study, the fishers have interests and motivation to pursue any livelihoods that offer better monetary returns than fisheries. Some of these livelihoods include vegetable crop farming, skilled trades (electrician, carpentry, and construction work), petty trading, hairdressing and barbering, and tailoring/dressmaking.

Fishers' engaging in supplemental livelihoods have essential resource needs. Respondents are willing to engage in livelihood options, but a major barrier to interest, commitment and update is the need for additional resources such as training, start-up capital, tools, equipment and a space or a shop for those interested in auto mechanic, tailoring and dressmaking, and hairdressing trades. These needs are the same regardless of whether the respondent is female or male. For many youth fishers, the cost of apprenticeship fees is a significant barrier in their willingness to diversify their livelihoods.

Capacity building is critical in ensuring replicability and adoption of livelihoods in coastal communities. The study observed that not many of the respondents had had the opportunity to benefit from programs, services or other investments to support training and adoption of livelihoods and other business enhancement interventions. Participants from some regions, such as the Western Region, had more access likely due to donor investment. Overall, female respondents reported slightly more opportunities than their male counterparts. Despite the many years of fisheries interventions in coastal communities, livelihoods intervention programs have not received enough attention or funding.

Fishers have built a considerable culture of saving their money through multiple avenues. Ghana's past financial troubles has had a negative effect on fishers' trust in saving their money with financial institutions. As a result, most respondents have resorted to saving their monies at home to mitigate the risk of losing money. Respondents also reported the use of other mediums for savings, including mobile money wallets, insurance companies, and community-level savings and loans groups. Insurance companies have penetrated coastal communities with their products and services. Overall, respondents are regularly saving whatever extra money they can put away from their livelihood endeavors.

Transmitting information to fishers could be easier now than it was in the past. Mobile phone ownership among fisherfolk is high. Despite most coastal communities being

rural, fisherfolks' access to social media was also very encouraging. Ownership of these communication assets by the fishers provides an enabling environment for effective dissemination of fisheries, livelihoods and other pertinent information. In addition to phone-based communication, multiple channels of communication exist in coastal communities that combine traditional and contemporary mediums such as community radio, Chief fisherman, TV, Kokohene[2], and Community forums. The study points to community radio and Chief Fishermen as the most effective channels of communication in reaching fisherfolks in coastal communities.

5.2. Recommendations

The development of coastal livelihood programs should seek to address the root causes of the vulnerability of coastal people and communities and to build their resilience to future threats and build their capacity to take advantage of opportunities. The development of coastal livelihoods is not merely about giving people jobs; it requires addressing fundamental cultural, social, economic, and environmental reforms that affect coastal communities and livelihoods. Achieving progress in this direction means any livelihood program must engage coastal communities in a dialogue about the future they envision, the steps needed to get there, and the resource required along the way. At the same time, it requires engaging a much broader array of actors across government, civil society, and the private sector to build both an understanding of the reforms needed and the commitment to undertake them (Jayaweera, 2010).

Based on the study findings, the following are some of the conclusions GFRA should take into consideration in supporting financially and socially suitable alternative and supplemental livelihood options for youth in coastal communities. First, youth fisherfolk are more open now than in the past to proactively secure their livelihoods, as they are witnessing firsthand the devasting impact of depleting small pelagic stock. Second, the study has identified a handful of essential factors that are necessary to support youth fisherfolk to successfully adopt a livelihood that is not fishing. Most important is the ability to continue to earn an income even while they are learning a new trade or skill. Equally important is support in the form of stipends, access to credit, and training that must go together if alternative income

[2] The Konkohene is the leader of the konkofo – an actor in the fisheries value chain responsible for negotiating and setting prices of fish at the landing site on behalf of the processors. She also provides leadership for all the women in the fishing trade

sources for fishers are to be sustained. Participants will also need help to access the startup capital and/or equipment that is needed when embarking upon a new trade or livelihood. Third, to ensure long term commitment to the livelihood, study participants point to the potential earning income as the most motivating factor. Secondary factors are personal preference for the livelihoods and the ease of learning the new livelihood.

There is a dearth of vocational training, job creation, and skills building programs operating in Ghana's coastal communities. GFRA can play a catalytic role by linking existing and emerging job creation investments to these coastal areas and to interested and willing participants. Partnerships with private enterprises, master tradesmen, and existing technical and vocational education and training opportunities are essential to ensuring a scalable and sustainable approach to livelihood adoption. GFRA can support the Fisheries Associations and MOFAD to build partnerships with the national level youth employment agencies, so they target coastal communities with skills initiatives and job modules. GFRA alone cannot support a sea change in livelihood adoption but by linking with existing opportunities and the private sector, a larger proportion of coastal communities can be reached. Master tradesman are also another opportunity as they live and work in the communities, have a ready built market they are serving, and can provide long-term apprenticeships for interested youth and connect them to future employment opportunities.

Supplemental livelihoods must be tailored to the specific needs of the individual and the economic opportunities available in each community. GFRA should use the results of this study to profile beneficiaries to understand and address underlying needs and then target livelihood support accordingly. Livelihoods programs should also involve hands on and long-term mentoring and coaching to encourage youth to pursue supplemental livelihoods until the initiative becomes self-sustaining, as training alone does not result in job creation. Finally, understanding the unique challenges, barriers and constraints that men and women face is essential for crafting a gender equitable livelihood strategy for fisheries dependent households.

Even while recognizing that livelihoods must be tailored, this study suggests GFRA should focus on livelihoods in the trade vocations such as tailoring, hairdressing, auto-mechanics, electrical, and small business management practices.

Finally, given the deplorable state of the country's fisheries and the fact that fisheries remain an important livelihood for coastal communities, the government must speed up work on implementing a new fisheries management plan for the sector. The new plan should reduce the excessive pressure on the marine stock, provide clear guidelines and opportunities on alternative and supplemental livelihood options for coastal communities, effect legislation to support these management decisions, strengthen participatory decision-making, and meet regional and international obligations. The plan must help to ensure the long-term conservation of Ghana's waters, the marine stocks therein, and the coastal communities that depend upon them.

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ANNEXES

Annex 1: Study Communities

Region	Community	GPS Location (Longitude)	GPS Location (latitude)
Central	Apam	5.2870247	-0.7308563
	Biriwa	5.1618471	-1.1501891
	Elmina	5.0796684	-1.3638101
	Mumford	5.2617554	-0.7567792
Greater Accra	Azizanya	5.7748014	0.6517935
	Prampram	5.7052101	0.1145122
	Tema Newtown	5.6443779	0.0179324
Volta	Adina	6.0404554	1.0750777
	Denu	6.0932689	1.1521883
	Dzelukope	5.8917251	0.9951825
Western	Aboadze	4.9742897	-1.6447294
	Ankobra	4.9020517	-2.2703204
	Axim	4.8618006	-2.2405331
	Sekondi	4.9410045	-1.708753
	Shama	5.0132154	-1.6298697

Annex 2: Non-fisheries supplementary livelihoods in communities

Region	Community Name	Type of non-fisheries income-generating activity engaged in by respondents	Gender		
			Female	Male	Both
Central Region	Apam	Construction/Civil Works (Masonry, Plumbing etc)	0.0%	100.0%	33.4%
		Petty trading	50.0%	0.0%	33.3%
		Sewing/Tailoring/Dressmaking	50.0%	0.0%	33.3%
	Biriwa	Carpentry/wood works	0.0%	33.4%	16.7%
		Catering	33.3%	0.0%	16.6%
		Construction/Civil Works (Masonry, Plumbing etc)	0.0%	33.3%	16.6%
		Driving	0.0%	33.3%	16.7%
		Food vendoring	33.4%	0.0%	16.7%
		Petty trading	33.3%	0.0%	16.7%
	Elmina	Petty trading	50.0%	0.0%	50.0%
		Sewing/Tailoring/Dressmaking	50.0%	0.0%	50.0%
Greater Accra Region	Azizanya	Barbering	0.0%	14.3%	12.5%
		Construction/Civil Works (Masonry, Plumbing etc)	0.0%	14.3%	12.5%
		Food vendoring	100.0%	0.0%	12.5%
		Motor Ridder (Okada Ridder)	0.0%	71.4%	62.5%
	Prampram	Food vendoring	25.0%	0.0%	16.7%
		Labour Work	0.0%	50.0%	16.7%
		Petty trading	75.0%	0.0%	50.0%
		Salary Work	0.0%	50.0%	16.7%
	Tema Newtown	Carpentry/wood works	0.0%	28.6%	20.0%
		Electrical Works/Electrician	0.0%	14.3%	10.0%
		Farming	0.0%	14.3%	10.0%
		Graphic Design	0.0%	28.6%	20.0%
		Petty trading	100.0%	14.3%	40.0%
Volta Region	Adina	Carpentry/wood works	0.0%	25.0%	20.0%
		Construction/Civil Works (Masonry, Plumbing etc)	0.0%	50.0%	40.0%
		Electrical Works/Electrician	0.0%	25.0%	20.0%

		Food vendoring	100.0%	0.0%	20.0%
	Denu	Food vendoring	33.3%	0.0%	20.0%
		Hairdressing	0.0%	50.0%	20.0%
		Metal fabrication	0.0%	50.0%	20.0%
		Petty trading	66.7%	0.0%	40.0%
	Dzelukope	Barbering	0.0%	25.0%	18.2%
		Construction/Civil Works (Masonry, Plumbing etc)	0.0%	50.0%	36.4%
		Electrical Works/Electrician	0.0%	12.5%	9.1%
		Food vendoring	33.3%	0.0%	9.1%
		Labour Work	0.0%	12.5%	9.1%
		Petty trading	66.7%	0.0%	18.2%
Western Region	Aboadzi	Construction/Civil Works (Masonry, Plumbing etc)	0.0%	50.0%	16.7%
		Electrical Works/Electrician	0.0%	50.0%	16.7%
		Food vendoring	50.0%	0.0%	33.3%
		Hairdressing	25.0%	0.0%	16.7%
		Sewing/Tailoring/Dressmaking	25.0%	0.0%	16.6%
	Ankobra	Electrical Works/Electrician	0.0%	50.0%	20.0%
		Hairdressing	66.7%	0.0%	40.0%
		Metal fabrication	0.0%	50.0%	20.0%
		Petty trading	33.3%	0.0%	20.0%
	Axim	Catering	14.3%	0.0%	14.3%
		Food vendoring	14.3%	0.0%	14.3%
		Hairdressing	14.3%	0.0%	14.3%
		Petty trading	28.6%	0.0%	28.6%
		Sewing/Tailoring/Dressmaking	28.6%	0.0%	28.6%
	Shama	Carpentry/wood works	0.0%	66.7%	50.0%
		Construction/Civil Works (Masonry, Plumbing etc)	0.0%	33.3%	25.0%
		Food vendoring	100.0%	0.0%	25.0%

Annex 3: Existence of Alternative Livelihoods that exist in coastal communities

Region	Community Name	Alternative and Supplemental livelihood Options that exist in the community	Gender		
			Female	Male	Both
Central	Apam	Crop Farming	7.10%	0.00%	2.40%
		Salt mining	0.00%	3.60%	2.40%
		Electrical Works/Electrician	0.00%	3.60%	2.40%
		Carpentry/wood works	7.10%	14.30%	11.90%
		Mobile Money Merchant	0.00%	7.10%	4.80%
		Masonry, Block molding, construction laborer	21.40%	10.70%	14.30%
		Petty trading	21.40%	14.30%	16.70%
		Hairdressing/Barbering	7.10%	17.90%	14.30%
		Tailoring/Dressmaking/Sewing	14.30%	17.90%	16.70%
		Food vendoring	7.10%	3.60%	4.80%
		Driving/"Okada Riding"	0.00%	7.10%	4.80%
	Biriwa	Masonry, Block molding, construction laborer	0.00%	11.10%	5.00%
		Petty trading	0.00%	11.10%	5.00%
		Hairdressing/Barbering	9.10%	22.20%	15.00%
		Tailoring/Dressmaking/Sewing	0.00%	11.10%	5.00%
		Driving/"Okada Riding"	0.00%	11.10%	5.00%
	Elmina	Livestock rearing	15.40%	0.00%	8.70%
		Sand weaning	7.70%	0.00%	4.30%
		Carpentry/wood works	38.50%	45.50%	43.50%
		Mobile Money Merchant	0.00%	9.10%	4.30%
		Masonry, Block molding, construction laborer	46.20%	45.50%	47.80%
		Petty trading	15.40%	45.50%	30.40%
		Hairdressing/Barbering	53.80%	45.50%	52.20%
		Tailoring/Dressmaking/Sewing	23.10%	45.50%	34.80%
		Food vendoring	0.00%	18.20%	8.70%
		Driving/"Okada Riding"	0.00%	9.10%	4.30%
	Mumford	Crop Farming	12.50%	5.00%	7.10%
		Tiling/Painting	0.00%	10.00%	7.10%
		Auto mechanic	12.50%	10.00%	10.70%
		Welding/Metal Fabrication	0.00%	5.00%	3.60%

		Plumbing	12.50%	0.00%	3.60%
		Electrical Works/Electrician	0.00%	5.00%	3.60%
		Carpentry/wood works	25.00%	30.00%	28.60%
		Masonry, Block molding, construction laborer	37.50%	25.00%	28.60%
		Petty trading	37.50%	30.00%	32.10%
		Hairdressing/Barbering	62.50%	30.00%	39.30%
		Tailoring/Dressmaking/Sewing	50.00%	35.00%	39.30%
		Food vendoring	0.00%	5.00%	3.60%
		Driving/"Okada Riding"	12.50%	10.00%	10.70%
Greater Accra	Azizanya	Crop Farming	14.30%	4.80%	7.10%
		Salt mining	0.00%	4.80%	3.60%
		Catering	0.00%	4.80%	3.60%
		Auto mechanic	0.00%	9.50%	7.10%
		Welding/Metal Fabrication	0.00%	9.50%	7.10%
		Electrical Works/Electrician	0.00%	4.80%	3.60%
		Carpentry/wood works	14.30%	42.90%	35.70%
		Masonry, Block molding, construction laborer	14.30%	33.30%	28.60%
		Salaried work (Security, teaching, nursing, Zoomlion etc)	0.00%	4.80%	3.60%
		Factory hand/labourer	14.30%	9.50%	10.70%
		Petty trading	28.60%	42.90%	39.30%
		Hairdressing/Barbering	28.60%	38.10%	35.70%
		Tailoring/Dressmaking/Sewing	28.60%	28.60%	28.60%
		Food vendoring	0.00%	4.80%	3.60%
		Driving/"Okada Riding"	0.00%	14.30%	10.70%
	Prampram	Mobile Money Merchant	0.00%	7.10%	3.70%
		Mansonry, Block moulding, construction labourer	7.70%	0.00%	3.70%
		Factory hand/labourer	0.00%	7.10%	3.70%
		Petty trading	53.80%	28.60%	40.70%
		Hairdressing/Barbering	53.80%	57.10%	55.60%
		Tailoring/Dressmaking/Sewing	38.50%	35.70%	37.00%
		Food vendoring	0.00%	7.10%	3.70%
		Driving/"Okada Riding"	7.70%	7.10%	7.40%
	Tema Newtown	Crop Farming	10.00%	0.00%	3.60%
		Auto mechanic	0.00%	5.60%	3.60%

		Welding/Metal Fabrication	40.00%	27.80%	32.10%
		Electrical Works/Electrician	10.00%	0.00%	3.60%
		Carpentry/wood works	20.00%	33.30%	28.60%
		Mobile Money Merchant	0.00%	11.10%	7.10%
		Masonry, Block molding, construction laborer	30.00%	33.30%	32.10%
		Salaried work (Security, teaching, nursing, Zoomlion etc)	0.00%	5.60%	3.60%
		Factory hand/labourer	20.00%	5.60%	10.70%
		Petty trading	30.00%	27.80%	28.60%
		Hairdressing/Barbering	30.00%	33.30%	32.10%
		Tailoring/Dressmaking/Sewing	20.00%	27.80%	25.00%
		Food vendoring	0.00%	22.20%	14.30%
		Driving/"Okada Riding"	0.00%	11.10%	7.10%
Volta	Adina	Crop Farming	15.80%	45.90%	30.85%
		Salt mining	66.70%	45.00%	51.70%
		Tiling/Painting	0.00%	5.00%	3.40%
		Electrical Works/Electrician	0.00%	10.00%	6.90%
		Carpentry/wood works	0.00%	20.00%	13.80%
		Mobile Money Merchant	11.10%	10.00%	10.30%
		Mansonry, Block moulding, construction labourer	0.00%	30.00%	20.70%
		Salaried work (Bank, Security, teaching, nursing, etc)	0.00%	5.00%	3.40%
		Petty trading	44.40%	25.00%	31.00%
		Hairdressing/Barbering	11.10%	20.00%	17.20%
		Tailoring/Dressmaking/Sewing	0.00%	15.00%	10.30%
		Food vendoring	11.10%	0.00%	3.40%
		Driving/"Okada Riding"	0.00%	10.00%	6.90%
	Denu	Crop Farming	45.50%	33.30%	37.90%
		Auto mechanic	0.00%	5.60%	3.40%
		Welding/Metal Fabrication	0.00%	5.60%	3.40%
		Carpentry/wood works	18.20%	27.80%	24.10%
		Mobile Money Merchant	0.00%	11.10%	6.90%
		Masonry, Block molding, construction laborer	9.10%	22.20%	17.20%
		Petty trading	45.50%	44.40%	44.80%
		Hairdressing/Barbering	18.20%	44.40%	34.50%
		Tailoring/Dressmaking/Sewing	36.40%	27.80%	31.00%

		Food vendoring	0.00%	16.70%	10.30%
		Driving/"Okada Riding"	9.10%	38.90%	27.60%
	Dzelukope	Crop Farming	80.00%	75.00%	77.50%
		Media (Photography)	16.70%	0.00%	0.00%
		Tiling/Painting	0.00%	4.50%	3.60%
		Auto mechanic	0.00%	9.10%	7.10%
		Electrical Works/Electrician	0.00%	4.50%	3.60%
		Carpentry/wood works	83.30%	31.80%	42.90%
		Masonry, Block molding, construction laborer	83.30%	40.90%	50.00%
		Salaried work (Security, teaching, nursing, Zoomlion etc)	0.00%	4.50%	3.60%
		Factory hand/labourer	0.00%	9.10%	7.10%
		Petty trading	16.70%	36.40%	32.10%
		Hairdressing/Barbering	100.00%	50.00%	60.70%
		Tailoring/Dressmaking/Sewing	33.30%	31.80%	32.10%
		Food vendoring	0.00%	4.50%	3.60%
		Driving/"Okada Riding"	0.00%	13.60%	10.70%
Western	Aboadzi	Crop Farming	30.80%	0.00%	14.30%
		Electrical Works/Electrician	7.70%	13.30%	10.70%
		Carpentry/wood works	15.40%	20.00%	17.90%
		Masonry, Block molding, construction laborer	23.10%	13.30%	17.90%
		Salaried work (Bank, Security, teaching, nursing, etc)	0.00%	6.70%	3.60%
		Factory hand/labourer	15.40%	6.70%	10.70%
		Petty trading	46.20%	40.00%	42.90%
		Hairdressing/Barbering	30.80%	46.70%	39.30%
		Tailoring/Dressmaking/Sewing	7.70%	40.00%	25.00%
		Food vendoring	7.70%	6.70%	7.10%
		Driving/"Okada Riding"	7.70%	6.70%	7.10%
	Ankobra	Crop Farming	21.40%	4.80%	11.40%
		Livestock rearing	34.30%	50.00%	35.90%
		Electrical Works/Electrician	0.00%	14.30%	8.60%
		Carpentry/wood works	35.70%	33.30%	34.30%
		Mobile Money Merchant	7.10%	0.00%	2.90%
		Masonry, Block molding, construction laborer	28.60%	33.30%	31.40%
		Factory hand/labourer	7.10%	9.50%	8.60%

		Petty trading	14.30%	28.60%	22.90%
		Hairdressing/Barbering	50.00%	42.90%	45.70%
		Tailoring/Dressmaking/Sewing	28.60%	38.10%	34.30%
		Driving/"Okada Riding"	14.30%	4.80%	8.60%
	Axim	Crop Farming	11.40%	0.00%	10.30%
		Sand weaning	2.90%	0.00%	2.60%
		Tiling/Painting	5.70%	0.00%	5.10%
		Auto mechanic	11.40%	0.00%	10.30%
		Welding/Metal Fabrication	5.70%	0.00%	5.10%
		Electrical Works/Electrician	2.90%	0.00%	2.60%
		Carpentry/wood works	20.00%	25.00%	20.50%
		Mobile Money Merchant	5.70%	0.00%	5.10%
		Masonry, Block molding, construction laborer	34.30%	50.00%	35.90%
		Salaried work (Security, teaching, nursing, Zoomlion etc)	2.90%	0.00%	2.60%
		Factory hand/labourer	5.70%	0.00%	5.10%
		Petty trading	40.00%	50.00%	41.00%
		Hairdressing/Barbering	31.40%	50.00%	33.30%
		Tailoring/Dressmaking/Sewing	17.10%	75.00%	23.10%
		Food vendoring	5.70%	0.00%	5.10%
		Driving/"Okada Riding"	5.70%	0.00%	5.10%
	Sekondi	Sand weaning	0.00%	7.70%	6.70%
		Carpentry/wood works	0.00%	69.20%	60.00%
		Mobile Money Merchant	50.00%	0.00%	6.70%
		Mansonry, Block moulding, construction labourer	0.00%	38.50%	33.30%
		Factory hand/labourer	0.00%	15.40%	13.30%
		Petty trading	50.00%	15.40%	20.00%
		Hairdressing/Barbering	100.00%	53.80%	60.00%
		Tailoring/Dressmaking/Sewing	50.00%	30.80%	33.30%
	Shama	Crop Farming	0.00%	5.00%	4.20%
		Sand weaning	0.00%	5.00%	4.20%
		Auto mechanic	75.00%	30.00%	37.50%
		Welding/Metal Fabrication	0.00%	5.00%	4.20%
		Plumbing	25.00%	0.00%	4.20%
		Electrical Works/Electrician	25.00%	5.00%	8.30%
		Carpentry/wood works	50.00%	25.00%	29.20%

		Masonry, Block molding, construction laborer	75.00%	30.00%	37.50%
		Factory hand/labourer	0.00%	10.00%	8.30%
		Petty trading	0.00%	30.00%	25.00%
		Hairdressing/Barbering	50.00%	45.00%	45.80%
		Tailoring/Dressmaking/Sewing	25.00%	45.00%	41.70%
		Food vendoring	0.00%	10.00%	8.30%
		Driving/"Okada Riding"	25.00%	0.00%	4.20%

Annex 4: The most effective source of information in coastal communities

Region	Most effective source of information	Female	Male	Both sexes
Central	Landing beach site	26.1%	22.1%	23.7%
	Newspaper	0.0%	1.5%	0.9%
	TV	28.3%	14.7%	20.2%
	Radio	50.0%	38.2%	43.0%
	Brochures	0.0%	0.0%	0.0%
	Family & friends	23.9%	19.1%	21.1%
	Religious leaders	0.0%	1.5%	0.9%
	Chief Fisherman	26.1%	39.7%	34.2%
	Kokohema/hene	8.7%	16.2%	13.2%
	Fisheries Commission Officials	0.0%	0.0%	0.0%
	Community forum	0.0%	0.0%	0.0%
Greater Accra	Landing beach site	16.7%	24.5%	21.7%
	Newspaper	0.0%	0.0%	0.0%
	TV	23.3%	30.2%	27.7%
	Radio	36.7%	49.1%	44.6%
	Brochures	0.0%	0.0%	0.0%
	Family & friends	10.0%	17.0%	14.5%
	Religious leaders	3.3%	0.0%	1.2%
	Chief Fisherman	36.7%	30.2%	32.5%
	Kokohema/hene	26.7%	5.7%	13.3%

	Fisheries Commission Officials	0.0%	0.0%	0.0%
	Community forum	0.0%	0.0%	0.0%
Volta	Landing beach site	19.2%	30.0%	26.7%
	Newspaper	0.0%	1.7%	1.2%
	TV	30.8%	35.0%	33.7%
	Radio	30.8%	48.3%	43.0%
	Brochures	0.0%	0.0%	0.0%
	Family & friends	19.2%	16.7%	17.4%
	Religious leaders	0.0%	1.7%	1.2%
	Chief Fisherman	42.3%	31.7%	34.9%
	Kokohema/hene	15.4%	8.3%	10.5%
	Fisheries Commission Officials	0.0%	0.0%	0.0%
	Community forum	0.0%	0.0%	0.0%
Western	Landing beach site	33.8%	21.9%	27.7%
	Newspaper	0.0%	0.0%	0.0%
	TV	32.4%	24.7%	28.4%
	Radio	41.2%	37.0%	39.0%
	Brochures	0.0%	0.0%	0.0%
	Family & friends	20.6%	15.1%	17.7%
	Religious leaders	1.5%	0.0%	0.7%
	Chief Fisherman	32.4%	35.6%	34.0%
	Kokohema/hene	10.3%	8.2%	9.2%
	Fisheries Commission Officials	0.0%	0.0%	0.0%
	Community forum	0.0%	0.0%	0.0%
Overall	Landing beach site	26.5%	24.4%	25.2%
	Newspaper	0.6%	0.8%	0.7%
	TV	29.4%	25.6%	27.1%
	Radio	41.2%	42.5%	42.0%
	Brochures	0.0%	0.0%	0.0%
	Family & friends	19.4%	16.9%	17.9%
	Religious leaders	1.2%	0.8%	0.9%

	Chief Fisherman	32.9%	34.6%	34.0%
	Kokohema/hene	13.5%	9.8%	11.3%
	Fisheries Commission Officials	0.0%	0.0%	0.0%
	Community forum	0.0%	0.0%	0.0%

Annex 5: Ownership of essential communication assets

Community Status	Community Name	Communication Asset	Gender		
			Female	Male	Both sexes
Control Zone	Aboadzi	Television	69.2%	33.3%	50.0%
		Radio	61.5%	46.7%	53.6%
		Mobile Phone	76.9%	80.0%	78.6%
	Adina	Television	33.3%	40.0%	37.9%
		Radio	22.2%	30.0%	27.6%
		Mobile Phone	66.7%	80.0%	75.9%
	Apam	Television	57.1%	42.9%	47.6%
		Radio	35.7%	28.6%	31.0%
		Mobile Phone	78.6%	85.7%	83.3%
	Biriwa	Television	9.1%	44.4%	25.0%
		Radio	18.2%	55.6%	35.0%
		Mobile Phone	90.9%	88.9%	90.0%
	Prampram	Television	30.8%	35.7%	33.3%
		Radio	30.8%	28.6%	29.6%
		Mobile Phone	92.3%	71.4%	81.5%
	Sekondi	Television	50.0%	38.5%	40.0%
		Radio	50.0%	30.8%	33.3%
		Mobile Phone	100.0%	84.6%	86.7%
Project Community	Ankobra	Television	42.9%	81.0%	65.7%
		Radio	14.3%	38.1%	28.6%
		Mobile Phone	78.6%	95.2%	88.6%
	Axim	Television	31.4%	75.0%	35.9%
		Radio	31.4%	25.0%	30.8%

		Mobile Phone	80.0%	75.0%	79.5%
	Azizanya	Television	85.7%	47.6%	57.1%
		Radio	71.4%	52.4%	57.1%
		Mobile Phone	85.7%	81.0%	82.1%
	Denu	Television	45.5%	33.3%	37.9%
		Radio	27.3%	38.9%	34.5%
		Mobile Phone	81.8%	83.3%	82.8%
	Dzelukope	Television	33.3%	40.9%	39.3%
		Radio	16.7%	36.4%	32.1%
		Mobile Phone	66.7%	72.7%	71.4%
	Elmina	Television	38.5%	63.6%	50.0%
		Radio	61.5%	54.5%	58.3%
		Mobile Phone	61.5%	72.7%	66.7%
	Mumford	Television	37.5%	40.0%	39.3%
		Radio	25.0%	25.0%	25.0%
		Mobile Phone	50.0%	60.0%	57.1%
	Shama	Television	50.0%	25.0%	29.2%
		Radio	25.0%	50.0%	45.8%
		Mobile Phone	100.0%	80.0%	83.3%
	Tema Newtown	Television	50.0%	16.7%	28.6%
		Radio	20.0%	27.8%	25.0%
		Mobile Phone	70.0%	83.3%	78.6%
Overall		Television	41.8%	37.8%	39.4%
		Radio	33.5%	33.9%	33.7%
		Mobile Phone	77.6%	79.9%	79.0%

Annex 6: Resources Required to engage in supplemental livelihoods

Community	Resources Required	Gender		
		Female	Male	Both
Aboadzi	Tools and Equipment	61.5%	60.0%	60.7%
	Acquisition of driver's license	7.7%	6.7%	7.1%
	Apprenticeship/Training fee	76.9%	40.0%	57.1%
	Space/Shop	0.0%	13.3%	7.1%
	Working capital	0.0%	20.0%	10.7%
Adina	Tools and Equipment	88.9%	75.0%	79.3%
	Acquisition of driver's license	0.0%	0.0%	0.0%
	Apprenticeship/Training fee	66.7%	70.0%	69.0%
	Space/Shop	0.0%	5.0%	3.4%
	Working capital	11.1%	5.0%	6.9%
Apam	Tools and Equipment	64.3%	71.4%	69.0%
	Acquisition of driver's license	0.0%	7.1%	4.8%
	Apprenticeship/Training fee	64.3%	39.3%	47.6%
	Space/Shop	0.0%	14.3%	9.5%
	Working capital	14.3%	25.0%	21.4%
Biriwa	Tools and Equipment	81.8%	66.7%	75.0%
	Acquisition of driver's license	9.1%	11.1%	10.0%
	Apprenticeship/Training fee	54.5%	55.6%	55.0%
	Space/Shop	9.1%	22.2%	15.0%
	Working capital	9.1%	11.1%	10.0%
Prampram	Tools and Equipment	53.8%	71.4%	63.0%
	Acquisition of driver's license	7.7%	7.1%	7.4%
	Apprenticeship/Training fee	61.5%	64.3%	63.0%
	Space/Shop	0.0%	7.1%	3.7%
	Working capital	7.7%	14.3%	11.1%
Sekondi	Tools and Equipment	50.0%	53.8%	53.3%
	Acquisition of driver's license	0.0%	0.0%	0.0%
	Apprenticeship/Training fee	50.0%	30.8%	33.3%

		Space/Shop	0.0%	15.4%	13.3%
		Working capital	50.0%	38.5%	40.0%
	Ankobra	Tools and Equipment	64.3%	61.9%	62.9%
		Acquisition of driver's license	7.1%	4.8%	5.7%
		Apprenticeship/Training fee	50.0%	76.2%	65.7%
		Space/Shop	14.3%	9.5%	11.4%
		Working capital	21.4%	28.6%	25.7%
	Axim	Tools and Equipment	74.3%	75.0%	74.4%
		Acquisition of driver's license	5.7%	0.0%	5.1%
		Apprenticeship/Training fee	74.3%	50.0%	71.8%
		Space/Shop	5.7%	0.0%	5.1%
		Working capital	8.6%	25.0%	10.3%
	Azizanya	Tools and Equipment	71.4%	61.9%	64.3%
		Acquisition of driver's license	0.0%	14.3%	10.7%
		Apprenticeship/Training fee	71.4%	52.4%	57.1%
		Space/Shop	14.3%	23.8%	21.4%
		Working capital	14.3%	19.0%	17.9%
	Denu	Tools and Equipment	54.5%	66.7%	62.1%
		Acquisition of driver's license	0.0%	5.6%	3.4%
		Apprenticeship/Training fee	36.4%	50.0%	44.8%
		Space/Shop	0.0%	11.1%	6.9%
		Working capital	27.3%	16.7%	20.7%
	Dzelukope	Tools and Equipment	66.7%	63.6%	64.3%
		Acquisition of driver's license	16.7%	9.1%	10.7%
		Apprenticeship/Training fee	83.3%	68.2%	71.4%
		Space/Shop	16.7%	9.1%	10.7%
		Working capital	0.0%	22.7%	17.9%
	Elmina	Tools and Equipment	46.2%	72.7%	58.3%
		Acquisition of driver's license	7.7%	0.0%	4.2%
		Apprenticeship/Training fee	30.8%	36.4%	33.3%
		Space/Shop	30.8%	0.0%	16.7%
		Working capital	53.8%	9.1%	33.3%

	Mumford	Tools and Equipment	87.5%	80.0%	82.1%
		Acquisition of driver's license	12.5%	0.0%	3.6%
		Apprenticeship/Training fee	50.0%	60.0%	57.1%
		Space/Shop	0.0%	10.0%	7.1%
		Working capital	25.0%	10.0%	14.3%
	Shama	Tools and Equipment	75.0%	80.0%	79.2%
		Acquisition of driver's license	0.0%	5.0%	4.2%
		Apprenticeship/Training fee	50.0%	65.0%	62.5%
		Space/Shop	0.0%	5.0%	4.2%
		Working capital	0.0%	15.0%	12.5%
	Tema Newtown	Tools and Equipment	70.0%	66.7%	67.9%
		Acquisition of driver's license	0.0%	0.0%	0.0%
		Apprenticeship/Training fee	60.0%	61.1%	60.7%
		Space/Shop	10.0%	5.6%	7.1%
		Working capital	20.0%	33.3%	28.6%
Overall		Tools and Equipment	67.6%	68.5%	68.2%
		Acquisition of driver's license	5.3%	5.1%	5.2%
		Apprenticeship/Training fee	60.6%	55.9%	57.8%
		Space/Shop	7.1%	10.6%	9.2%
		Working capital	15.9%	19.7%	18.2%

Annex 7: Factors that will influence fisherfolks to take-up supplemental livelihoods

Region	Factors that will influence people to take supplemental livelihoods (in addition to fishery)	Gender		
		Female	Male	Both
Central	The amount of income/money I will make from it	78.3%	77.9%	78.1%
	The type of livelihood activity	37.0%	32.4%	34.2%
	How easy or difficult it is to learn the activity	4.3%	2.9%	3.5%
	How easy or difficult it is to run the activity	0.0%	0.0%	0.0%
	If my wife/husband/Pastor/Imam/Parent/Chief tells me to	0.0%	0.0%	0.0%
	Nothing can influence me	2.2%	0.0%	0.9%
Greater Accra	The amount of income/money I will make from it	76.7%	69.8%	72.3%
	The type of livelihood activity	36.7%	41.5%	39.8%
	How easy or difficult it is to learn the activity	0.0%	7.5%	4.8%
	How easy or difficult it is to run the activity	0.0%	0.0%	0.0%
	If my wife/husband/Pastor/Imam/Parent/Chief tells me to	0.0%	0.0%	0.0%
	Nothing can influence me	0.0%	0.0%	0.0%
Volta	The amount of income/money I will make from it	80.8%	75.0%	76.7%
	The type of livelihood activity	38.5%	38.3%	38.4%
	How easy or difficult it is to learn the activity	3.8%	10.0%	8.1%
	How easy or difficult it is to run the activity	0.0%	0.0%	0.0%
	If my wife/husband/Pastor/Imam/Parent/Chief tells me to	0.0%	0.0%	0.0%
	Nothing can influence me	3.8%	0.0%	1.2%
Western	The amount of income/money I will make from it	73.5%	79.5%	76.6%
	The type of livelihood activity	30.9%	34.2%	32.6%
	How easy or difficult it is to learn the activity	5.9%	1.4%	3.5%
	How easy or difficult it is to run the activity	1.5%	0.0%	0.7%
	If my wife/husband/Pastor/Imam/Parent/Chief tells me to	0.0%	0.0%	0.0%
	Nothing can influence me	2.9%	0.0%	1.4%
Overall	The amount of income/money I will make from it	76.5%	76.0%	76.2%
	The type of livelihood activity	34.7%	36.2%	35.6%
	How easy or difficult it is to learn the activity	4.1%	5.1%	4.7%
	How easy or difficult it is to run the activity	0.6%	0.0%	0.2%
	If my wife/husband/Pastor/Imam/Parent/Chief tells me to	0.0%	0.0%	0.0%
	Nothing can influence me	2.4%	0.0%	0.9%

Annex 8: Data Collection Tools

GHANA FISHERIES RECOVERY ACTIVITY

Market Analysis of Suitable Alternatives & Supplemental Livelihoods for Fishing Communities Research

CONSENT FORM

Tetra Tech ARD is implementing a Feed the Future Ghana Fisheries Recovery Activity (GFRA). The purpose of the Ghana Fisheries Recovery Activity (GFRA) is to prevent the collapse of the small pelagic fishery sector in Ghana while improving the supplemental livelihoods, resilience, and food security. The project is researching into market analysis of suitable alternative and supplemental livelihoods to identify, assess and activate a set of livelihood options available for people exiting or reducing their engagement in the fisheries sector. The results of the study would assist the project in developing its strategies and interventions for objective one.

Any information obtained shall be treated as confidential

Do you agree to participate in this research? Yes [ ] No [ ]

Name of Respondent:

Contact Phone Number

A. Socio-demography

Community:_____

District: _____ Region:_____

1. Age : 1. under 15 [ ]2. 15 – 18 [ ] 3. 19 – 35 [ ] 4. 36 - 50 [ ] 5. 51 – 60 [ ] 6. 61 and above [ ]

2. Gender: 0. Male [ ] 1.Female [ ]

3. Marital status: 1. Single-never married [ ] 2. Married [ ] 3. Divorced [ ] 4. Widowed [ ]

5. Separated [ ] 6. Co-habiting [ ]

4. Level of formal education: 1. None [ ] 2.Primary [ ] 3.Middle/JSS [ ] 4.Secondary/SSS/SHS [ ]

5.Tertiary [ ] 6. Vocational/Technical [ ]

5. Which of these are you? 1. Native [ ] 2.Migrant [ ] 3.Settler [ ] 4. Stranger/Visitor [ ]

6. How long have you been in this community? 1. Less than a year [ ] 2. 1-5 years [ ] 3. 6-10 [ ] years 4. 11-15 [ ] 5. 16 - 19 years [ ] 6. 20 years and above [ ]

7. Counting yourself what is the size of your household? _____

8. Number of spouses _____

9. Number of your dependents _____

a. is any of them involved in fisheries? A. yes b. no

b. if yes, how many are in the following age brackets? under 15_____ 2. 15 – 18 _____

3. 19 – 35_____ 4. 36 - 50 _____ 5. 51 – 60_____ 6. 61 and above_____

B. Livelihoods (This section applies only19 years - 35 years)

10. What is the main source of income for your household? 1. Fishing [ ] 2. Fresh fish trading [ ] 3. Fish processing [ ] 5. Processed fish trading [ ] 6. Processed fish retailing [ ]

7. Fish mother [ ] 8. Fishing input seller [ ] 9. Fuelwood seller [ ] 10. Stove artisan [ ] 11.Other (specify) ……..……

11. Besides fisheries, is there another trade/income generating activity you have been involved in the last 12 months? 1. Yes [ ] 0.No [ ]

a. If yes, what income generating activity is it? 1. farming [ ] 2. Petty trading [ ] 3. Sewing/Tailoring [ ] 4. Hairdressing [ ] 5. Labour work [ ] 6. Mobile money vendor [ ] 7. livestock rearing/poultry [ ] 8. Agro Processing (gari, coconut oil extraction, etc) [ ] 9. Carpentry/wood works [ ] 10. Food vendoring 11. Salt Mining/Trading [ ] 13. Other (Specify):……

b. If No, what are your reason(s):……

c. How long have you been engaged in this income generating activity? 1. 1-5 years [ ] 2. 6-10 [ ] years 3. 11-15 [ ] 4. 16 - 19 years [ ] 5. 20 years and above [ ]

12. Have you been trained in this? 1. Yes [ ] 0.No [ ]

a) If Yes, from which institution or organization? Fisheries Commission [ ] 2. NGO [ ] 3. Association/Group [ ] 4. District Assembly [ ] 5. Member of Parliament [ ] 6. Other (Specify):……..

13. How often are you engaged in this income generating activity? 1. Daily [ ] 2. weekly [ ] 3. Monthly [ ] 4. As and when money is available [ ] 5. Yearly [ ] 6. During festive seasons [ ] 7. Seasonal [ ]

14. How many hours do you engage in it?

15. How much of your income comes from this activity?

16. How many family members are involved in this income generating activity?

17. Do you pay them in any form in assisting you with the income generating activity? 1. Yes [ ] 0.No [ ]

18. If Yes, in what form do you compensate them for the support? 1. Cash [ ] 2. In-kind [ ] 3. Profit-sharing [ ] 4. Other (Specify):…….

19. Have you been trained in any other income generating activity in the past? 1. Yes [ ] 0.No [ ]

a. If yes, what kind of other income generating activity is it? 11. farming [ ] 2. Petty trading [ ] 3. Sewing/Tailoring [ ] 4. Hairdressing [ ] 5. Labour work [ ] 6. Mobile money vendor [ ] 7. livestock rearing/poultry [ ] 8. Agro Processing (gari, coconut oil extraction, etc) [ ] 9. Carpentry/woodworks [ ] 10. Food vendors 11. Salt Mining/Trading [ ] 13. Other (Specify):…….

20. What livelihood options outside of the fishery exist in this community (in neighboring communities)? List

21. Do community members travel to other communities to engage in non-fishery income generating activities: 1. Yes [ ] 0.No [ ]

22. If yes, what are these livelihood options? 1. Farming [ ] 2. Mining [ ] 3. Labour work [ ]

4. Petty trading [ ] 5.Other (Specify):…….

23. Which ones are targeted at young persons? 1. Farming [ ] 2. Mining [ ] 3. Labour work [ ] 4. Petty trading [ ] 5. Other (Specify):……

24. Which ones are targeted at women? 1. Farming [ ] 2. Mining [ ] 3. Labour work [ ] 4. Petty trading [ ] Other (Specify):…….

25. Do the activities of these options involve the use of children as labor? 1. Yes [ ] 0.No [ ]

26. If Yes, list them?

27. What are the average earnings/returns from these livelihood options

27a. per day_____

27b. week _____

27c. month_____

28. Are the earnings regular? 1. Yes [ ] 0.No [ ]

29. How does it compare to earning from fishing? 1. Same [ ] 2. Better [ ] 3. Worse [ ]

30. What will influence you to take up a livelihood in addition to your fishery business?

1. The amount of income/money I will make from it [ ] 2. The type of livelihood activity [ ] 3. How easy or difficult it is to learn the activity [ ] 4. How easy or difficult it is to run the activity [ ] 5. If my wife/husband/Pastor/Imam/Parent/Chief tells me to [ ] 6. Nothing can influence me [ ] 7. Other (specify) …….

31. What will influence you to take up a livelihood outside of the fishery? 1. The amount of income/money I will make from it [ ] 2. The type of livelihood activity [ ] 3. How easy or difficult it is to learn the activity [ ] 4. How easy or difficult it is to run the activity [ ] 5. If my wife/husband/Pastor/Imam/Parent/Chief tells me to [ ] 6. Nothing can influence me [ ] 7. Other (specify) …….

32. How much income would you like to earn from this livelihood per month?

33. What alternative/supplementary livelihood would you consider meaningful

34. why? …….

35. In your opinion, what can be done to increase the potential of meaningful earnings in the livelihood option you proposed?

36. What kind of resources or skills would you require to engage in the livelihood option of your interest?

37. What resources do you have to enable you to do so?

38. What can you contribute?

39. What are the risks/dangers in existing livelihood options, or those being proposed?

40. In your opinion, what can be done to reduce the risks/dangers in livelihood activities?

41. In your opinion are there any high-earning livelihoods options in your community? Yes [ ] No [ ]

42. If Yes, which gender is more likely to engage in high-earning livelihood options?

43. Have you been involved in a business enhancement program before? 1. Yes [ ] 0.No [ ]

44. Have you been involved in any livelihood program before? 1. Yes [ ] 0.No [ ]

b) If yes, with which organization: 1. Fisheries Commission [ ] 2. NGO [ ] 3. Association/Group [ ] 4. District Assembly [ ] 5. Member of Parliament [ ] 6. Other (Specify):…….

If NGO, probe to find out the name of the organization [Enumerators to note]:……

45. Do you belong to a community group or savings group e.g. Rotating Savings and Credit Association (ROSCA) , or Village Savings and Loan Association (VSLA)? 1. Yes [ ] 0. No [ ]

46. Where do you save? 1. VSLA [ ] 2. Home [ ] 3. Financial Institution [ ] 4. Insurance Company [ ] 5. ROSCA [ ] 6. Individual susu collector [ ] 7. Mobile money wallet [ ]

47. How often do you save? 1. Daily [ ] 2. Weekly [ ] 3. Monthly [ ] 4. Once in a while [ ] 5. As and when money is available [ ] 6. Other (Specify):……

48. Do you own [Check all that apply]. 1. A TV set [ ] 2. Radio set [ ] Smart phone [ ] Simple phone (yam) [ ]

49. Where do you receive your information on fisheries the most? 1. Fisher-to-fisher at the landing beach [ ] 2. Newspapers [ ] 3. TV [ ] 4. Radio [ ] 5. Brochures, posters, and other printed materials [ ] 6. Family, friends [ ] 7. Religious leaders [ ] 8. Chief fisherman [ ] 9. Kokonhemaa [ ] 10. Fisheries Commission officials [ ] 11. Community forum [ ] 12.Other ……..

50. What sources of information do you think can most effectively reach fisherfolk, especially you? 1. Fisher-to-fisher at the landing beach [ ] 2. Newspapers [ ] 3. TV [ ] 4. Radio [ ] 5. Brochures, posters, and other printed materials [ ] 6. Family, friends [ ] 7. Religious leaders [ ] 8. Chief fisherman [ ] 9. Kokonhemaa [ ] 10. Fisheries Commission officials [ ] 11. Community forum [ ] 12. Other …….

51. What do you think is the current state of the small pelagic fisheries? 1. it is collapsing/declining [ ] 2. It is the same [ ] 3. It is booming [ ] 4. I don't know/no answer [ ] 5. Other specify ……

52. What is the reason for your answer?

    a. Are you worried about the current state of the fisheries stock? Yes [ ] No [ ]

    b.If Yes, what are your reason(s):……..

53. What worries you most when you think about the current state of the fisheries sector and how it affects fisherfolk like you? 1. Losing my livelihood and source of income [ ] 2. High rate of unemployment in the community [ ] 3. Scarcity of fish for consumption [ ] 4. The future generations being angry at us for finishing the fish [ ] 5. I am not worried because the sector is not collapsing [ ] 6. I don't know/No answer [ ]

54. What telecommunication network are you on? 1. MTN [ ] 2. Vodafone [ ] 3. Airtel Tigo [ ] 4. Glo [ ] Tick as many that applies

55. Do you have a money mobile account? 1. Yes [ ] 2. No [ ]

56. Do you have mobile money vendors in your community? 1. Yes [ ] 2. No [ ]

57. Are you on: 1. Whatsapp [ ] 2. Facebook [ ] 3. Telegram [ ] 4. Instagram [ ] 5. Twitter [ ] 6. Other specify …….. [Tick all that applies]

<u>Out of school youth (15yrs to 18yrs)</u>

58. Whom do you live with? 1. Biological parents [ ] 2. Guardian [ ] 3. Other family relations [ ] 4. Spouse [ ] 5. Hired employee [ ] 6. Other (specify):……

59. Would you like to go back to school, if you had the opportunity? 1. Yes [ ] 0.No [ ]

60. If Yes, what will motivate you to go back to school?

61. What would you need in order for you to go back to school:

62. Would you like to consider any form of apprenticeship program if you had an opportunity? Yes [ ] No [ ]

63. If Yes, which of these? Hair dressing/beautician/cosmetology [ ] Dressmaking/Tailoring [ ] Masonry [ ] Catering [ ] Interior/exterior decoration [ ] Undertaker [ ] Carpentry/wood works [ ] Other (specify):……

64. How expensive do you think it is, to learn a livelihood activity? 1. Not expensive [ ] 2. Moderately expensive [ ] 3. Very expensive [ ]

65. From your estimation, how much do you think will cost to learn this livelihood activity?

66. If you could, would you be able to contribute towards the cost? 1. Yes [ ] 0.No [ ]

67. How much would you be able to contribute per day/week/month towards your training?

68. Would you learn a livelihood activity if it is free? 1. Yes [ ] 0.No [ ] 3. I will even if it is not free

69. Would you undertake a livelihood activity aside from fishing if most of the fisherfolk in your community are also engaging in alternative livelihood activities? 1. Yes, I will [ ] 2. No, I am not influenced by what other fisherfolk do [ ]

70. How easy or difficult do you think it is to learn a livelihood activity aside from fishing? 1. Very difficult [ ] 2. Moderately difficult [ ] 3. Very easy [ ] 4. Moderately easy [ ]

71. Do you think you will make more money if you have an alternative/additional source of income? 1. Yes [ ] 2. No [ ] 3. I think it will depend on the livelihood activity [ ] 4. I don't think it will make any significant difference [ ]

72. After learning a livelihood activity, what do you think will prevent you from practicing? 1. Cost of business set up and start-up materials [ ] 2. Getting raw materials [ ] 3. Time constraints [ ] 4. Getting customers [ ] 5. Other (specify)……

73. Can these challenges cause you to give on your livelihoods? 1. Yes [ ] 2. No [ ]

74. Do you own a mobile phone? 1. Yes [ ] 2. No [ ]

75. If yes, is it a 1. Smartphone [ ] 2. Basic phone ("Yam") [ ]

76. 61. What telecommunication network are you on? 1. MTN [ ] 2. Vodafone [ ] 3. Airtel Tigo [ ] 4. Glo [ ] Tick as many that applies

77. Do you have a money mobile account? 1. Yes [ ] 2. No [ ]

78. Do you have mobile money vendors in your community? 1. Yes [ ] 2. No [ ]

79. Are you on: 1. Whatsapp [ ] 2. Facebook [ ] 3. Telegram [ ] 4. Instagram [ ] 5. Twitter [ ] 6. Other specify …….. [Tick all that applies]

80. Who do you listen to the most/trust on issues related to your livelihood? . My spouse [ ] 2. My parents [ ] 3. My religious leader [ ] 4. The chief [ ] 5. My friends [ ] 6. Relatives [ ] 7. Fellow fisherfolk [ ] 8. No one [ ]

81. Can you describe the social aspect of your working relationship with the fishermen? Healthy [ ] Monopolised [ ] Abusive [ ] Intimidation [ ] Other (specify):

82. Do you have concerns about this relationship? 1. Yes [ ] 2. No [ ]

83. If yes, in what ways?

a. I feel cheated [ ]
b. I feel abused [ ]
c. I feel disrespected [ ]
d. I feel insecure [ ]

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