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SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)



Lessons Learned: 2020 – 2021 Volume 3

THE UNIVERSITY OF RHODE ISLAND GRADUATE SCHOOL OF OCEANOGRAPHY



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Cover photos (Credit): Upper Left: A scene at the Mbayinmpoano landing beach in Senya Beraku showing crowding of fishers during fishing hours (UCC); Lower Left: The Monitoring and Evaluation officer interviewing one of the beneficiaries at Axim (Hen Mpoano); Upper Right: Hand washing station in use at Old marine landing beach, Elmina, Central Region. (Stephen Benjamin Eshun); Lower Right: Nuggets made with fish and potato baked on the Ahoror oven (Doris Owusu).

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ACRONYMS

ACECoR	African Center of Excellence Program
AOR	Administrative Officer Representative
CDA	Coastal Development Authority
CEWEFIA	Central and Western Region Fishmongers Improvement Association
CIC	Canoe Identification Card
CLaT	Child Labor and Trafficking
COVID-19	Coronavirus Disease 2019
CRC	Coastal Resources Center
CSIR	Council for Scientific and Industrial Research
CSO	Civil Society Organization
DAA	Development Action Association
DCPC	District Child Protection Committee
DFAS	Department of Fisheries and Aquatic Sciences
DOPA	Densu Oyster Pickers Association
FAO	Food and Agricultural Organization of the United Nations
FC	Fisheries Commission
FDA	Food and Drugs Authority
FEU	Fisheries Enforcement Unit
FON	Friends of the Nation
FSSD	Fisheries Statistical Survey Division
FTT	FAO Thiaroye Processing Technique
FWV	Fisheries Watch Volunteers
GHS	Ghana Cedis
GIFA	Ghana Inshore Fishermen's Association
GITA	Ghana Industrial Trawlers Association
GIS	Geographic Information System
GNCFC	Ghana National Canoe Fishermen's Council
GOG	Government of Ghana
GPS	Geographic Positioning System
HFIAS	Household Food Insecurity and Access Score
HM	Hen Mpoano
ICFG	USAID/Ghana's Integrated Coastal and Fisheries Governance Project
IEC	Information, Education and Communication
IR	Intermediate Results
IUU	Illegal Unreported Unregulated
LABEC	Landing Beach Enforcement Committee
LEAP	Livelihood Empowerment Against Poverty
MASLOC	Microfinance and Small Loans Center
MDDS-W	Minimum Dietary Diversity for Women Score

MMDA	Metropolitan, Municipal and District Assemblies
MOFAD	Ministry of Fisheries and Aquaculture Development
MOGCSP	Ministry of Gender, Children and Social Protection
MOH	Ministry of Health
MOI	Ministry of Information
MPU	Marine Police Unit
MSMEs	Micro, Small, and Medium-scale Enterprises
MTDP	Medium Term Development Plan
NAFAG	National Fisheries Association of Ghana
NAFPTA	National Fish Processors and Traders Association
NCCE	National Commission for Civic Education
NDPC	National Development Planning Commission
NGO	Non-Governmental Organization
NTS	National Targeting System
OCA	Organizational Capacity Assessment
PAHs	Polycyclic Aromatic Hydrocarbons
PHE	Population Health Environment
PPI	Poverty Probability Index
SFMP	Sustainable Fisheries Management Program
SNV	Netherlands Development Organization
STWG	Scientific and Technical Working Group
UAV	Unmanned Aerial Vehicle
UCC	University of Cape Coast
URI	University of Rhode Island
USAID	United States Agency for International Development
VPF	Virtual Platform for Fishers
VSLAs	Village Savings and Loans Associations
WARFP	West Africa Regional Fisheries Program

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LESSONS LEARNED AND THE LEGACY COLLECTION OF DOCUMENTS FROM THE USAID GHANA SUSTAINABLE FISHERIES MANAGEMENT PROJECT

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This report, referred to as “Legacy Set Document”, is a collection of relevant policy and management documents and short essays on thematic areas/issues covered during the implementation of the USAID/Ghana Sustainable Fisheries Management Project (SFMP). The short essays describe the context at the start of the project, the project implementation approach, results, accomplishments, lessons learned and recommendations for the way forward. The report is organized into three Volumes. Volume 1 covers: legal and policy reform; co-management and constituencies; science for management and institutional strengthening. Volume 2 covers: post-harvest improvements; gender mainstreaming; and combatting child labor and trafficking. Volume 3 covers the SFMP efforts to prevent the spread and mitigate the economic effects of COVID-19 among vulnerable households in fishing communities in Ghana.

INTRODUCTION

The goal of the five-year USAID/Ghana Sustainable Fisheries Management Project (SFMP) was to contribute to rebuilding of Ghana’s important marine fish stocks through adoption of responsible fishing practices. The project contributed to the U.S. Government’s Feed the Future Initiative (see [Fisheries and Food Security Brief](#)) and the Government of Ghana’s fisheries development objectives. Funded by USAID/Ghana with matching support from the University of Rhode Island and other implementing partners, the inception of the project in October 2014, coincided with the implementation of a regional investment initiative in the fisheries sector by the World Bank of which Ghana was one of the beneficiary countries, the West Africa Regional Fisheries Program (WARFP). SFMP started just as Ghana’s National Fisheries Management Plan (included in this legacy document collection) was being revised for adoption and implementation. The efforts of the project generated intense spotlight on the multiple challenges facing fisheries governance in Ghana and advocated for sustainability principles to be included in the National Fisheries Management Plan. The project was given a no-cost extension from the original completion date of October 2019 to September 2020, and further extended to April 2021 with a supplemental budget to address COVID-19 related challenges within the marine fisheries sector, following the outbreak of the disease in Ghana.

The SFMP was led by the University of Rhode Island’s Coastal Resources Center at the Graduate School of Oceanography (CRC/URI), leveraging its experiences in the successful stewardship of a previous project, USAID/Ghana’s Integrated Coastal and Fisheries

Governance Project ([ICFG Lessons Learned, 2013](#)) which focused on both fisheries and coastal management concerns in the Western Region of Ghana from 2009 to 2014.

The SFMP worked with a number of international and local implementing partners that were sub-recipients under the CRC/URI led banner. These included: Hen Mpoano and Friends of the Nation, both local advocacy and environmental Non-Governmental Organizations; Development Action Association and the Central and Western Region Fishmongers Improvement Association, both of which are membership based Civil Society Organizations focusing on capacity development for women fish processors and traders, and farmers; Daasgift Quality Foundation, a micro-finance NGO serving mostly a clientele of women in the Western Region, Spatial Solutions, a local consulting firm involved in coastal spatial planning; and two international groups – Resonance which led the public-private partnership activities focused on demonstrating mobile phone-based micro-insurance and savings plans in Ghana, and SNV Netherlands Development Organisation which supported post-harvest improvement, capacity development and gender mainstreaming strategies. For the COVID initiative, the University of Cape Coast’s Centre for Coastal Management was added as an additional sub-recipient for assistance on monitoring and evaluation.

The SFMP team was committed to making the results of its efforts available to the public, by publishing plans and policies, technical studies and reports on the implementation of the project at several online sites and electronic platforms including: The [CRC webpage for the SFMP](#), [Ghanalinks](#), and [The USAID Development Experience Clearinghouse](#).

An online [SFMP Activity Tracker](#) was created linking together the key SFMP thematic areas and related project activities, their location along the coast of Ghana, information on performance indicators, the extent to which project targets have been met and links to key documents, providing additional details on project activities and outcomes. The Activity Tracker serves as a useful tool for quickly accessing specific information about the project now, and in the future. The SFMP Activity Tracker is being upgraded into a Mapper to integrate spatial information on all SFMP COVID Response activities in addition to spatial information on all key original SFMP activities.

Finally, three video documentaries were produced that summarize SFMP accomplishments, lessons learned and the way forward for the marine artisanal fisheries sector in Ghana. These video documentaries which cover the same topics as the three volumes contained in this legacy set can be found on the CRC YouTube channel (<https://www.youtube.com/user/URICRC>).

Many members of the ICFG team transitioned to the SFMP project, building on their previous experiences with the Coastal Resources Center which places a strong emphasis on documentation and learning from experiences through an action-oriented learning approach. Good documentation provided a solid foundation and facilitated cross portfolio learning and knowledge sharing. Eighty-six documents were completed and posted online at the [CRC ICFG Project webpage](#). The same philosophy of placing importance on documentation, learning and knowledge sharing was adopted in the implementation of the SFMP as evidenced by this legacy set document and associated outreach materials on the SFMP. The project implementation approach is based on the philosophy and perspective that building from past experiences has higher inclination towards avoidance and duplication of the same missteps, failures, and mistakes, and increases the potential of achieving desired outcomes, and subsequently advancing lessons captured and knowledge sharing.

In January of 2021, USAID/ Ghana requested proposals for a new project–Feed The Future Ghana Fisheries Recovery Activity (GFRA) –“to mitigate the near-collapse of the small

pelagic fisheries sector in Ghana and establish a durable basis for its recovery.” It builds directly on the SFMP, noting that the

“SFMP helped the Government of Ghana to implement its first fishing closed season, which reduced fishing efforts significantly and tested the conditions for future efforts to more closely align a closed season with the peak spawning period. USAID/Ghana helped to achieve the closed season by encouraging fisher-to-fisher dialogue (a platform to engage fishers and regulators to discuss sector issues); and collaboration with academia, civil society organizations, and industry to develop scientific evidence for MOFAD’s decision-making. SFMP contributed to the National Fisheries Co-management Policy, introduced a canoe registry and identification cards, and piloted post-harvest value chain technologies to improve the hygienic processing and trading of fish. (GFRA Statement of Objectives)”

The specific lessons learned that could influence the design and implementation of future projects, just as ICFG provided inputs towards the design and implementation of the SFMP are as follows:

Understanding governance structures and building interlinkages and networks

The SFMP aligned with and, to the extent possible, integrated project support with the priorities and functions of the Ministry of Fisheries and Aquaculture Development and the Fisheries Commission, the institutions with the mandate to manage the fisheries resources. The primary activity of SFMP’s engagements in this process was support for implementation of the National Marine Fisheries Management Plan. In addition, the SFMP opened new approaches for working with national fisheries membership organizations and associations representing the entire fisheries resource value chain including: The Ghana Industrial Trawlers Association (GITA), Ghana National Canoe Fishermen’s Council (GNCF), the National Fish Processors and Traders Association (NAFPTA), and the Ghana Inshore Fisheries Association.

Developing leadership and a shared vision

SFMP supported international study tours to the Philippines, Senegal, Gambia, Benin and the US for leaders and key players within the fisheries sector for them to see successful examples of fisheries management and value chain improvements, and to facilitate dialogue and adoption of improved management interventions within the fisheries sector in Ghana. The SFMP conducted regular fisheries leadership workshops, provided organizational capacity assessments for its implementing partners, national fisheries groups and the Fisheries Commission. Stakeholder events involving thousands of fishers and post-harvest workers were hosted or co-led by local or national organization leaders trained by SFMP.

Building greater capacity to facilitate stakeholder engagement in planning, policy, conflict resolution, and mediation

SFMP created and sustained support for the Fisheries Commission to formulate and carry out greater public engagement related to revision of fisheries policy and regulations. The strategic approach was to consciously model these engagements in the form that co-management was envisioned to be implemented following approval of the national co-management policy (drafted with assistance from SFMP). In this way, stakeholders; resource users and managers were involved in an action-oriented co-management learning process, focusing on such topics as; implementation of the national fisheries management plan, amendments to the National Fisheries Act, gender mainstreaming, anti-child labor and trafficking, and fisheries co-management.

As ground-level demonstration efforts began to yield results, and policy and legal reform efforts progressed, SFMP worked with MOFAD and the Fisheries Commission to intensify outreach and communications activities in support of policy reform efforts. Staff were enlisted to write articles for publication in various media, television, and national and local media outlets. SFMP supported regular ‘media soirees’ (all day discussion meetings) in which Fisheries Commission and MOFAD staff met directly with the media to highlight and explain the importance of various issues within the marine fisheries sector. To support this effort, SFMP engaged a media relations specialist with deep knowledge of how editors and journalist chose stories to follow and publish and hired a media tracking firm to provide real time feedback on whether messages were reaching intended audiences. As these activities progressed, MOFAD and the Fisheries Commission took over leadership of media outreach.

An integrated program of capacity building and field visits were carried out with stakeholders in several pilot community-based management communities. These programs included leadership training, conflict resolution, formation of village savings and loans associations, small business development and accounting. Cross-site field visits enabled community members from different sites to share their experiences to enhance further capacity building.

Developing a knowledge base of ecosystem dynamics and routinely assessing associated changes

The project recognized the centrality of trust and science-based discourse on successful management interventions in order to limit the adverse impacts of the existing polarizing dialogue within the political realm. The SFMP-supported the setting up of the Science and Technical Working Group (STWG). The STWG subsequently provided leadership, advise and expert opinion on a number of issues in connection with application of science and research to policy and management, captured under the SFMP Intermediate Result 2. In the implementation of policy and legal reform initiatives such as the closed season and registration of all artisanal vessels with the intention of transitioning from an open access resource regime to regulated access, the STWG was the most cited and trusted source of information supporting these actions. SFMP developed the capacity of the Fisheries Scientific Survey Division (FSSD) to conduct its own stock assessments for the small pelagic fishery and also supported efforts by partners to prepare scientifically sound fisheries co-management plans for the Densu, Ankobra and Pra River estuaries. In the Densu estuary, local women from the Densu Oyster Pickers Association (DOPA) were assisted in the recording and collection of ecological and scientific data including pH, turbidity, salinity, and other pieces of information that informed improved management decision making and interventions.

Using effective monitoring and evaluation strategies

Results-oriented program management strategies supported by a robust monitoring and evaluation system was a core element of the SFMP design. Stemming from the theory of change in the project proposal, the use of Feed the Future standardized and custom indicators formed the basis of a Monitoring, Evaluation, and Learning Plan. The staff of SFMP conducted research to establish baseline conditions for fisheries as well as social and economic parameters in fishing communities, tracked stakeholder engagement and participation, conducted regular performance and impact assessments of project activities, deployed new technologies such as use of tablets and cloud databases for data consolidation and analysis, and piloted the use of unmanned aerial drones for documenting and assessing changes in bio-physical and human settlement conditions in coastal landscapes and ecosystems. Monitoring and evaluation results were regularly compared with resource

expenditures to ensure that financial and asset resources were deployed in a way that ensured achievement of desired outcomes.

A Strategic Approach to Build on Emerging Opportunities

The call for proposals for USAID’s Ghana Fisheries Recovery Activity (GFRA) released in early 2021 set out five objectives that draw in large part upon the most promising approaches and advances made during the SFMP, seeking to “establish a durable basis for its recovery” given that “fish provides 60% of animal protein in the diets of coastal and far inland communities.” (GFRA Attachment J-1, P.1)

The GFRA sets out five inter-related objectives:

- Align fisheries capacity with ecological carrying capacity of the small pelagic fisheries while enhancing the socio-economic well-being and resilience of artisanal fisherfolk.
- Increase the quality and value of artisanal fishers’ products in order to better maintain household income and enhance availability of nutritious foods for local and regional markets.
- Strengthen transparency, accountability and co-management in government practices for fisheries policy-making, regulation, and enforcement.
- Strengthen constituencies to promote and implement sustainable fisheries management.
- Improve use of science and research for policy and management decisions.

The problems and their consequences described above are known by government and fisherfolk. The opportunities and a roadmap to recovery for stock rebuilding and economic recovery have been articulated recently in the [Communique of the 2nd National Conference on Fisheries Management Conference in 2019](#), and are addressed to some extent in the [previous Fisheries Management Plan \(2015-2019\)](#) and current draft (April, 2021) National Marine Fisheries Management Plan. The recent approval of the [Co-Management Policy for the Fisheries Sector](#) offers hope that improved participatory governance can be achieved and institutionalized through formal co-management structures and institutions. The approved Co-Management Policy is applicable to the small pelagic fishery and provides for the establishment of an institutional framework for effective stakeholder participation in fisheries management decision-making. It builds on successful local community-based management experiences in the Pra, Ankobra and Densu estuaries.

When the new USAID Ghana Fisheries Recovery Activity gets started, a suggested strategic approach should focus on the implementation of recently adopted policies and plans of the Ministry of Fisheries and Aquaculture Development (MOFAD) and the [Fisheries Commission \(FC\)](#), especially the [National Co-management Policy](#), and the draft National Marine Fisheries Management Plan (NMFMP). Those aspects related to the small pelagic stocks, the canoe fishery, and the cessation of trawler fleet incursions into areas exclusively reserved for the small pelagic fishery are especially important. The draft NMFMP is likely to be approved as policy on or about the planned start of the GFRA in 2021. The 2021-2025 plan includes an integrated set of actions emphasized during the SFMP such as a closed season on all fleets, a cap on the number of canoes, and reducing IUU fishing. The Fisheries Commission will need to promote development of alternative livelihoods for fisherfolk, and post-harvest improvements to relieve the social and economic effects of fishing restrictions as well as to create a sustained constituency to support better management towards realization of

the objectives in the GFRA. In addition, The [Gender Mainstreaming](#) and [Anti-Child Labor and Trafficking \(CLaT\)](#) strategies for the fisheries sector, developed through past USAID sector investments by the SFMP, also need better implementation to counter child labor and human trafficking in the sector and broaden the constituency for reform.

A focus on implementation of existing laws and policies will need to be accompanied by additional management measures to address existing gaps and ways to reduce barriers to action. For instance, even if the NMFMP is fully implemented, its outputs and or impacts may not be sufficient for full stock recovery. The 2021 draft plan still does not address canoe fleet reduction or input subsidies. While the efforts of SFMP on the legal reform front did not produce a new Fisheries Act as result inertia and inability of the Ministry to secure the necessary Cabinet approval, the project facilitated a comprehensive review of the existing Fisheries Act through extensive stakeholder engagement processes. The development of a new Fisheries Act therefore remains an outstanding issue to be taken up by a new project if there is expressed interest from the Ministry of Fisheries and Aquaculture Development (MOFAD) and the window of opportunity exists to do so. In this regard, the GFRA can educate stakeholders and increase awareness to facilitate demand for action.

Policy reform will be needed to address the persistent problem of political influence within the fisheries sector which compromises enforcement, compliance and prosecution of illegal fishing activities, both within the industrial trawl fishery sub sector with emphasis on the “saiko” problem, and illegal fishing practices in the artisanal fleet, particularly, the illegal use of light for fishing and fine mesh nets that have driven the small pelagic fishery to collapse. These issues are very difficult and challenging to address and require more than simple technical fixes. Behavior change by fishery stakeholder institutions and individuals is essential for a durable basis for recovery leading to long-term socio-economic improvements associated with a healthy and sustainable fishery, anchored on local ownership of initiatives.

An adaptive management approach that carefully prioritizes areas of action in the context of the problems in each fisheries sub sector stands the best chance of leveraging the transformational change in institutional and individual behaviors, and enabling environment needed for fishery recovery. The choice of actions must take into account the issues within the Fishery Commission’s area of control and influence as well as the strategies, capacity and capabilities of projects carried out under the USAID Global Food Security Strategy Country Plan for Ghana, the Ghana Country Development Cooperation Strategy, and other relevant US Government policies on biodiversity, as well as the policies and projects under other development partners including the World Bank, the European Union etc.

THE SFMP LEGACY DOCUMENT COLLECTION

A detailed record of the unfolding of the SFMP over the 26 quarters of its implementation is available on [CRC’s SFMP webpage](#) through quarterly and annual reports that highlight accomplishments, challenges and adjustments over the course of each project year since 2014. These reports capture both daily management issues of the project, and the annual review and project work plan preparation cycles. The executive summaries of the annual reports provide the best chronological overview of the project process in terms of the four main intermediate results areas (policy, science, communications, and applied management) and the three cross-cutting results areas (gender, public-private partnerships, and capacity development). The narratives on the complexity of the project reveals how many of the challenges encountered in the first two years of project implementation were resolved.

The aim of this Legacy Document Collection (lessons learned essays) and hyperlinks to a collection of key SFMP reports is to highlight some of the most important lessons and

accomplishments organized loosely around project intermediate results (IRs) areas. Most of the documents provided as links in the essays and in this introduction give more context and background to the specific work and were chosen because they represented key actions, insights, scientific findings, results or unique approaches adopted by the SFMP to accomplish, and in some cases, exceed project targets, objectives and outcomes. In its simplest form, the SFMP project implemented activities to strengthen the legal and policy enabling conditions (IR1), develop the scientific basis for decision-making (IR 2) and built constituencies (IR 3), to facilitate and create broad-based support for more effective and sustainable fisheries management. Central to the success of the project was the application of improved fisheries management and post-harvest value chain improvement initiatives (IR 4) in a way that demonstrated tangible and sustained benefits from the adoption of better fishing practices that can translate into recovery of fish stocks, increased yields, and increased household income in fishing communities. The ongoing efforts of the Fisheries Commission have been enhanced by expanding the role of women in policy advocacy and value chain improvements (IR 5), the creation of public-private partnerships (IR 6), a previously missing element in fisheries improvement initiatives, and addressing the need for individual and organizational capacity building (IR7), accomplished partly through collaboration with the University of Cape Coast. The final 11 months of the project focused on the COVID-19 interventions which sought to prevent infection and spread of the virus among fishers and also piloted Economic Safety Net Assistance to poor and vulnerable fisheries dependent households and diversification of livelihood options for fishing households.

Throughout the implementation of the USAID/Ghana Sustainable Fisheries Management Project (2014 to 2021) a variety of information, education and communication materials were produced. [A Compilation of USAID/Ghana Sustainable Fisheries Management Project Success Stories: 2014- 2021](#) captures 43 “success stories” and “Telling Our Story” materials submitted to USAID as part of quarterly and annual reports as well as on topics of special interest. These stories are organized by the key themes of the project, as described in detail in this Lessons Learned report.

LEGACY THEMATIC AREAS

The thematic areas in the legacy set do not exactly match the USAID theory of change intermediate result area constructs but reflect key highlights of the project implementation and achievements. While these thematic areas do not necessarily represent all the details of activities carried out by SFMP over its seven year implementation period, they focus on what the project team, stakeholders and executive editors considered as important within the context of the existing situation. Where possible, recommendations were made at the end of each essay with some suggestions of the way forward for Ghana post-SFMP and could guide the choice of operational actions and decisions under the Ghana Fisheries Recovery Activity (GFRA). These thematic areas are summarized below.

Legal and Policy Reform

The SFMP supported the Ministry and the Fisheries Commission on several fronts and levels to improve the legal and policy environment. Although not all of the activities on the legal and policy reform front translated into concrete results, enough momentum was generated for continued impact that can translate into improved fisheries management in the future, well after the project ends. Several activities including a study tour to the Philippines served as an eye opener for policy makers who were introduced to the practical realities of delegating fisheries management to municipalities, public-private partnerships and the value of information technology to management and value-chain enhancement ([Study Tour to the](#)

[Philippines](#)). A policy review was conducted on the adverse effects of fuel subsidies on over-exploitation of Ghana fish stocks that included an assessment of potentially beneficial alternatives to aiding the fisheries sector ([Subsidies in Ghana's Marine Artisanal Fisheries Sector](#)). Support was provided to advance the preparation of a new Fisheries Management Legislation, and training programs offered to improve the competence of fisheries law enforcement agents ([Selection of Key Competencies for a Ghana Marine Police Fisheries Law Enforcement Induction Curriculum](#)). The SFMP also helped design and initiated a pilot Fisheries Watch Volunteer program for a number of coastal communities including training ([FWC Volunteer Training Manual](#), [Supporting the Fisheries Commission's Community Watchdog Committees: Design Document](#)). However, this initiative faced a number of challenges during the official program launch and the effort was suspended. The Fisheries Watch Volunteer program has been reactivated under the EU supported 'Sustaining Fisheries Livelihoods' (*Far Dwuma Nkodo* or *FDN*), and now called Landing Beach Enforcement Committee (LaBEC). Updates on this activity is included in the legacy collection. The SFMP also helped the Fisheries Commission to complete the process of registering marine artisanal fishing canoes ([Canoes Authorization Cards and Control of New Entrants of Canoes \[now called Canoe Identification Cards\]](#)). The SFMP in collaboration with the Fisheries Commission has developed an application (software) to link the Canoe Identification Card (CIC) with the Canoe Register to facilitate various management functions including Monitoring, Control and Surveillance (MCS) activities and the sales and distribution of subsidized fuel through an interface (module) provided for access by the National Premix Committee to reduce corruption and slippage in the system. The Fisheries Commission with support from Government has extended the CIC program to the freshwater fisheries in the Volta Lake region. The SFMP has so far supported the printing of 10,000 cards with embedded Quick Response (QR) codes that can be read in the field by authorized enforcement personnel using the application developed with support of the SFMP.

The Fisheries Commission "Board" consists of a body of individuals that represent government agencies and fishing industry stakeholders that can be considered a form of a national co-management institution as it has the power and authority to make decisions on fisheries access and use, as well as determine management measures necessary to achieve national fisheries policy objectives. The Fisheries Commission has started implementation of the National [Policy Framework on Fisheries Co-Management](#) prepared with the assistance of the SFMP as one of its major policy instruments, setting the stage for approval of the first three co-management plans for coastal estuaries, as described in the next section. The Policy Framework provides for some delegation of authority to resource users and other stakeholders in the decision-making processes. There is no unique or specific right way for implementing co-management policies and the approach taken in Ghana considers the unique ecological, socio-economic and cultural characteristics of the fisheries industry. This Policy also provides an overview of Ghana's experience to date and lessons learned concerning fisheries co-management including assessment of the current policy and legal regime. It lays out the definition for co-management, the policy goal and objectives as well as the guiding principles for the Policy and its implementation. The Policy further provides the implementation arrangements including institutional roles and responsibilities to ensure a flexible framework, that can be adapted to suit the co-management system required, based on the unique nature of the various fisheries under the nation's jurisdiction.

Co-Management and Constituencies

In addition to publishing an edited and illustrated version of the National [Fisheries Management Plan of Ghana](#) to encourage broader readership and support, the SFMP aided the Fisheries Commission in elaborating a fisheries co-management policy (mentioned

above) that simultaneously provided the framework for SFMP partners Hen Mpoano, Friends of the Nation and the Development Action Association (DAA) to work with local stakeholders to formulate Ghana's second generation of coastal fisheries co-management pilots plans in the Pra and Ankobra rivers and Densu estuaries. One high point in the efforts of SFMP partners to engage fisheries stakeholders was the series of Fisher-to-Fisher dialogues ([Fishermen to Fishermen Dialogues Supporting the Directive Actions of the National Fisheries Management Plan](#)) led by the Ghana National Canoe Fishermen Council. Other important elements contributing to advances in fishery policies are the role of traditional leaders in fisheries governance ([Uplifting the Role of Traditional Authorities in Fisheries Governance](#)), working with the media ([Media Outreach Event](#)), addressing the broader concern of Illegal, Unreported and Unregulated fishing (IUU) ([Lessons Learned Report on IUU Video Screening](#)). Towards the final stage of the project, the first closed season for the small pelagics fishery was instituted by MOFAD in 2019, backed by information and proposals from the SFMP ([Closed Season Brief](#)). A proposed closed season in 2020 was suspended due to COVID-19 with expressions to reactivate this measure once the pandemic has ended.

Ghana's Fisheries Commission approved the first three local fisheries co-management plans in 2020. The efforts leading to the development of these Community Based Fisheries Management Plans provided learning experience for community participants, Fisheries Commission staff and the local partners who carried out technical work and guided these unique local plans. The approved plans provide for the first time in Ghana, use rights for specific fisheries in delineated geographic areas to local associations of fisherfolks.

The [Ankobra Estuary Community-Based Fisheries Management Plan, Western Region, Ghana](#) was prepared with the guidance of Hen Mpoano, a non-governmental organization based in Takoradi. The objective of this community-based fisheries management plan is to ensure sustainable management of the Ankobra River Estuarine fishery for improved food security and livelihood benefits, especially for participating estuarine fishing communities as well as those involved in the fishery value chain.

The [Pra Estuary Community-Based Fisheries Management Plan, Western Region, Ghana](#) was guided by the Friends of the Nation. This co-management plan is designed for management of the fishery in the Pra Estuary located in the Shama District of the Western Region of Ghana. The Pra estuary is approximately 100m wide at the point of entry into the sea and is an area of high landscape value covering a biologically rich and diverse ecosystem comprising mangrove forests, salt marshes and swamps. It falls within the geographic space lying to the South-South East border of Shama District.

The [Densu Estuary Community-Based Fisheries Management Plan, Greater Accra Region, Ghana](#) is a community-based Oyster Fishery Management Plan for the Densu Delta, guided by the Development Action Association along with help from the University of Cape Coast. It builds on the best practices and lessons learned from the 10-day Regional Study Tour on Women's Empowerment and Post-Harvest Improvements in the Gambia and Senegal in 2016 involving 11 members of five women-led Civil Society Organizations (CSOs) and the Fisheries Commission and supported by the Sustainable Fisheries Management Project (SFMP). The successes of TRY Oyster Group, a peer woman-based organization in the Gambia that developed successful community-based strategies for sustainable oyster and cockle fisheries management and value chain improvements, led to a realization that similar management practices could be implemented for the oyster fishery in the Densu estuary. The Densu estuary was designated as a RAMSAR site in 1992, recognizing it as a protected wetland of international importance under the International Convention on Wetlands. A

management plan for the estuary was developed in 1999 but did not make reference to oyster harvesting activities. The objective of this Community-Based Management Plan is to ensure sustainable management of the Densu oyster fishery for improved food security and other benefits, especially for women oyster harvesters and other participating estuarine communities who depend on this fishery resource for their livelihood. Unique to this plan and fishery is that it is predominantly women harvesters, and the Densu Oyster Pickers Association have been provided use rights to this fishery representing a great leap forward for empowering women in resource management.

Science for Management

SFMP drew upon its Science and Technical Working Group and collaboration with the Fisheries Scientific Survey Division (FSSD) to build Ghana's capacity for conducting fish stock assessments and improved data collection methods ([Baseline Assessment of the Demersal Fish Stocks of the Western Region](#), [Training Course Curriculum on Fish Stock Assessment Methods](#), [Terms of Reference: Science and Technical Working Group](#)). The project supported documentation and a specific analysis of the current crisis in the small pelagics fishery ([Status of the small pelagic fish stocks in Ghana and recommendations to achieve sustainable fishing](#)) and provided recommendations for using measures such as closed seasons for fishing to rebuild the collapsed fish stocks ([Rebuilding Depleted Small Pelagic Fish Stocks in Ghana: A Closed Fishing Season Proposal](#)). The SFMP sponsored international peer-reviews of previous stock assessment studies and updated its approach and applied standard fish stock modeling approaches to new data as it was released by the FSSD. The SFMP field tested and introduced digital approaches (tablet and computer-based survey techniques) that allowed scientists to remotely check the work of data collectors in real time via frequent cellphone-based data transfers that cut the time from data collection to analysis several fold. Additional scientific contributions included the project's social and economic baseline data ([Report on the Baseline Survey of Small Pelagic Fishing Households along the Ghana Coast](#)), plans to improve resilience of coastal settlements at risk from coastal erosion, flooding and storm events ([Resilience Planning Workshop for the Pra Estuary](#)) and the improvements made to the land use planning and environmental data analysis center in the Central Region ([A Planner's Guide to Integrated Coastal Management in the Central Region](#), [Advanced Training in the Application of GIS](#)) through refurbishment and upgrade of the Land Use and Spatial Planning Authority mapping facility for the Central Region in Cape Coast, and providing digital data and computers running geographic information system software.

The STWG updated the status of the small pelagic fish stocks of Ghana through 2017. ([Status of the small pelagic stocks in Ghana in 2018](#)). The data used in this assessment were provided by Fisheries Commission's Fisheries Scientific and Survey Division (FC/FSSD) and the Fridjof Nansen survey program. Annual landings of *sardinella* have declined from 100,000 tonnes in mid-1990s to 19,000 tonnes in 2017 as fishing effort increased from 8,000 in 1990 to 13,650 canoes in 2017. The STWG completed an additional status report of the situation in 2019 ([Status of the small pelagic stocks in Ghana in 2019](#)). This report provides an update of the status of the small pelagic fish stocks of Ghana through 2019. It was led by the FSSD, reviewed and validated by the Science and Technical Working Group (STWG). Annual landings of *Sardinella aurita* have declined to 9.9 per cent of their 1992 levels, from 119,515 tonnes. in 1992 to 11,834 tonnes in 2019. This drastic decline in landings is caused largely by the artisanal fishing fleet, which operates without proper management controls in an open access regime. In addition, the unit of effort of a canoe is more efficient today than in the past due to advanced technologies, modern fishing nets, powerful engines and big capital investments. For example, the average size of a purse seine was about 200-300 meters long in

the 1970s but today it is 3 times larger - between 600-1000 meters in length and the average crew members on a canoe doubled from 10 to 20 fishermen. Canoe gross tonnage and capacity increased by 2.5-fold (from 2 to 5 metric tons) while the Catch per Unit Effort (CPUE) declined dramatically and the cost and timing of a fishing trip increased as fishermen spend more time searching for fish offshore.

These stock assessment reports are based on recorded landings of the canoe fleet and of industrial trawlers. Unaddressed in these reports is the volume of unrecorded catch that is landed as “saiko” in various ports along the coast. Some [reports by EJF and Hen Mpoano](#) provided very high estimates of saiko landings. As a result, systematic survey and analysis of these saiko landings in the future, even though illegal catch and landings, would help to improve the accuracy of these stock assessments. Nevertheless, the STWG findings of severe overfishing and overfished stocks of small pelagics would not change and could show even greater overfishing occurring than is currently estimated.

The Ministry of Fisheries and Aquaculture Development (MOFAD) implemented a one-month fishing ban for artisanal and semi-industrial fisheries from May 15 to June 15, 2019 to protect the spawning brood stock of small pelagic species, mainly *Sardinella aurita*, *Sardinella maderensis*, *Engraulis encrasicolus* and *Scomber colias* and reduce fishing effort on these stocks. Following the closed season declaration, the Fisheries Scientific Survey Division of the Fisheries Commission (FC/FSSD) in coordination with the STWG and with the support of the SFMP, established a monitoring and evaluation plan to assess the biological and socio-economic effects of the closed season and report the findings back to MOFAD. The final Report: [Assessing the Biological Effects of the Closed Fishing Season Implemented for the Artisanal and Semi-Industrial Fisheries in Ghana, 2019](#), described the biological effects of the closed season. One of the key conclusions of the assessment was that the timing of the closure was not appropriate, and as result, the exercise likely had little effect on stocks recovery. In addition, the SFMP assessed the short-term socio-economic impacts - positive, neutral or negative of the closure on artisanal sector and the canoe fishing households ([Assessment of the Socio-Economic, Food Security and Nutrition Impacts of the 2019 Canoe Fishery Closed Fishing Season in Ghana](#)) The main methodology adopted for the study involved administration of a survey questionnaire by trained enumerators on a mobile network (paperless) KoBoToolbox Kit in eleven (11) communities during three designated phases relevant to the closed season: pre-closed, closed and post-closed seasons.

About 240 scientists and experts from Ghana’s universities and research institutions, civil society, private sector, fishermen and fishmongers, government ministries and agencies, representatives from the USAID Sustainable Fisheries Management Project (SFMP) of the University of Rhode Island, convened in Accra for the first Conference on Fisheries and Coastal Environment ([Conference on Fisheries and Coastal Environment, Accra, 2017, Book of Abstracts](#)). The participants issued a statement on recommendations to improve the sector. ([COMMUNIQUE from the Conference on Fisheries and Coastal Environment, Accra, 2017](#)).

An even more successful and influential conference was held two years later, attracting 282 participants. ([Conference on Fisheries and Coastal Environment, Accra, 2019, Book of Abstracts](#)) It was jointly organized by the Centre for Coastal Management (CCM) of the Department of Fisheries and Aquatic Sciences of the University of Cape Coast (UCC), the Sustainable Fisheries Management Project of the Coastal Resources Center (CRC) - University of Rhode Island (URI), and the Ministry of Fisheries and Aquaculture Development (MOFAD) Ghana. The Conference was designed to strengthen policy linkages and enable researchers, journalists, and think tanks connect their voices to the sustainable fisheries and coastal development agenda of Ghana. During the 2019 edition of the

Conference, an expanded opportunity was given to industry and projects within the sector to showcase key products and milestones as well as emerging technologies for the sustainable management of fisheries and coastal resources. The resulting statement ([Communique from the Conference on Fisheries and Coastal Environment, Accra 2019](#)) sought to once again draw national attention to the urgency of the fisheries management challenges. The conference recognized the national importance of marine and coastal ecosystems and fisheries to the people of Ghana, emphasized that the fish stocks were at an alarming stage of decline and on the verge of collapse, and argued for the need for more inclusive decision making for better fisheries and coastal management. Twelve specific recommendations were made to address these concerns.

Institutional Strengthening

Strengthening civil society organizations, including SFMP's implementing partners, national industry membership associations, Government of Ghana organizations and the University of Cape Coast was woven throughout activities carried out under each IR work stream. Organizational capacity assessments were carried out with key groups at the outset of the SFMP, and at the mid-point of the project ([Government of Ghana and Public University Units Mid-Term Assessment](#)). An additional combined assessment for civil society and government organizations was prepared in 2018 ([CSO and GOG Organizational Capacity Development Outcomes: Qualitative Snapshot](#)) followed by a final version of the civil society assessment completed in 2019 (Synthesis Report: Final Civil Society Organizations (CSO) Organizational Capacity Assessment (OCA)). The SFMP staff and its senior partners worked to improve civil society organization business and governance systems and engaged national level groups such as the Ghana National Canoe and Fishermen Council (GNCFC) and NAFPTA in leading stakeholder engagement activities. One of the highlights of this cross-cutting activity, which also had a strong gender element, was the 2016 regional study tour on women's empowerment and post-harvest improvements to Senegal and the Gambia ([Regional Study Tour on Women's Empowerment and Post-Harvest Improvements](#)). Lessons learned from that exchange led to further exchange of expertise within Ghana and strengthened local enthusiasm to work towards post-harvest value chain improvements. A key outcome of the OCA process was to ensure that local partners of the project have robust systems and structures to enable them improve upon their capacity to provide quality and sustainable services to their constituents by implementing and sustaining the fisheries sector results that SFMP supports, and also to improve their readiness and capacity to receive funding from donors, an increasingly important need, as donor strategies shift to more direct local project implementation.

Post-Harvest Improvements

Under SFMP, learning and leading by doing (action learning) underpinned the cluster of activities aimed at testing and putting into practice innovations in the fisheries sector of Ghana. Linked to various co-management policy ideas being tested in the Densu estuary, and Pra and Ankobra River estuaries, SFMP linked-in District and National level authorities and expertise to foster improvements in the post-harvest fisheries value chain ([Sardinella and other small pelagics value and supply chain of the fishery sector, Market Segmentation Study Report](#)). Through this effort, SFMP engaged thousands of women and built their skills as small business entrepreneurs and provided orientation on how they could make significant improvements on the cleanliness and safety of their products ([Training on Hygienic Handling of Fish: Class 1 Certification Guidelines](#)). The skill development was based upon a comprehensive training manual ([Class 1 Recognition Scheme \(Operational Guidance\)](#)) serving both processors who wanted to enroll on the scheme and government officials to serve as

auditors of the scheme. These activities were the subject of careful monitoring and impact assessment ([Adoption of Improved Smoking Technology among Fish Processors in Ghana](#)). The identification of a major adverse effect associated with a fish smoking technology slated for adoption and support (the “Morrison” fish smoker) at the initial phase of the SFMP post-harvest value chain improvement program, was in fact a blessing in disguise. When it was discovered that the “Morrison fish Smoker” produced unsafe levels of polycyclic aromatic hydrocarbons (PAH), the project embarked on the search for a better technology, and financing options. Although this search for the appropriate technology for fish smoking took close to two years as a result of the need for a new engineering design and testing, the resulting new technology, the *Ahotor (comfort)* stove, proved to be safer, more efficient, and more acceptable to many fish processors. ([Ahotor Oven Construction Manual](#), [Ahotor Oven Users Guide](#)). Even so, uptake has been slower than expected for several reasons, as explained in the post-harvest theme essay. SFMP and the Fisheries Commission under the WARFP constructed ahotor ovens for some fish processors. The assessment with respect to the uptake of the technology has been undertaken and the challenges outlined in two reports; the analysis of the market side challenges ([Final Report on Ahotor Oven Market Development and Financing Outcomes and Lessons Learned](#)) and the technology side challenges ([Documentation of the Pains and Gains of the Ahotor Oven Improvement Process](#)).

The SFMP facilitated credit for fish processors by the government backed Microfinance and Small Loans Centre (MASLOC) and the setting up of Village Savings and Loan Associations (VSLAs).

The innovative Fishers Future Plan is an affordable life insurance package for fisherfolk that is enabled on a mobile money platform for premium payments and a voluntary micro-savings plan. Once established, claims were made, and payments received on benefits owed to fishers. ([Fisheries Future Plan: Lessons Learned Report](#)). The micro-insurance and savings plans are now completely owned and driven by the private sector and continue to benefit fishers and fish processors in the post-harvest value chain.

Gender Mainstreaming: A Cross-Cutting Theme

In the face of declining fish catches and stocks in the artisanal sector, much still can be done to improve the quality of the fish that caught, reduce inefficiencies in the processing and trade of smoked fish. This put the spotlight on women who operate small- and medium-sized businesses that dominate the artisanal sector. It has long been clear that women who dominate the post-harvest sector bring special insights on what needs to be done in fisheries but these have been overlooked or set aside in the past. The SFMP [Gender Mainstreaming Strategy](#) building upon gender assessments ([Gender Needs Assessment](#), [Ghana Fisheries Gender Analysis](#)) has shaped how the SFMP, the Fisheries Commission, and its implementing partners set priorities to ensure not only participation but also capacity building and improved livelihood outcomes for women ([Gender Mainstreaming in Fisheries Management: a Training Manual](#)) and made a real change in the agency of women in the fisheries sector. Women’s advocacy and leadership training ([Advocacy and Leadership Training for Kokohenes in the Western Region](#)) included the emergence of a new approach, the “Hownam Dialogue” ([Hownam Dialogue Report: Leadership and Conflict Management Training](#)) and ultimately resulted in a key outcome: the adoption by the Ministry of Fisheries and Aquaculture Development of its own official gender strategy for the fisheries sector ([National Gender Mainstreaming Strategy for the Fisheries Sector](#)). Gender strategy implementation under SFMP emphasized tangible results ([A Formative Assessment of the USAID Ghana SFMP Mainstreaming Strategy](#)). Actions to establish village savings and loans

associations ([VSLA Financial Literacy Training](#)) were later assessed in the context of an evaluation of SFMP's gender program ([MSME and VSLAs Formative Evaluation Report](#)).

Other gender related assessments focused on key partners, Development Action Association and SNV Ghana ([Report on Gender Lens Assessment for SNV Ghana](#)). The study recognized the value of deliberate efforts by team members to include men, women and the marginalized in all programs and also make it convenient for nursing mothers and pregnant women to participate in meetings and activities conducted by the project. Reporting on attendance at all activities was segregated by gender. Training continued to target selected leaders from the various fishery associations (DAA, CEWEFIA, NAFPTA) in six SFMP communities in the Central and Western Region of Ghana. The communities included Ankobra, Axim, Shama, Elmina, Apam and Winneba. ([Training of Trainers for Leaders of Fisheries Associations in the Western and Central Region](#)). A broader case study ([Learning Initiative on Women's Empowerment, Access to Finance, and Sustainable Fisheries Ghana Case Study](#)) addressed learning questions on two hypotheses:

- Empowering women through access to finance and other capacity building interventions results in stronger fisheries management outcomes than programs lacking these elements, and
- Engaging women as key stakeholders in fisheries management and improving access to financial tools provides meaningful pathways for women's empowerment.

Interventions implemented through the Learning Initiative in Ghana included:

- Improving access to finance for women fish processors and traders through the establishment of Village Savings and Loan Associations (VSLA).
- Facilitating the acquisition of low interest loans from the Microfinance and Small Loans Center.
- Developing women's leadership skills and promoting gender inclusion in fishery decision-making and benefit sharing.
- Improving businesses of women processors and traders through business, literacy, and improved post-harvest training.

A case study was written based on this experience with several key lessons:

- VSLAs and Microfinance make women more resilient and increase their ability to cope with financial disruptions, especially during closed seasons.
- Banking crisis has increased mistrust of formal financial institutions.
- Grants have helped increase uptake of the Ahotor oven technology.
- Use of mobile money among women fisherfolks in general continues to increase.

Combatting Child Labor and Trafficking

The SFMP project included some activities related to anti-child labor and trafficking (CLaT) in the fisheries sector, with an emphasis on the Central Region, based in part on testimonials from fishers in the port of Elmina, as well as through extensive experience of partners such as the Central and Western Region Fishmongers Association (CEWEFIA) that is based in the area. The SFMP was encouraged by USAID to give additional attention to anti-CLaT activities given Ghana's placement on the Tier 2 [Watch List](#) for two consecutive years indicating the potential for imminent downgrade to Tier 3 that could have stopped all US assistance to Ghana. Focusing on the situation in the most highly trafficked coastal fishing

communities, SFMP built capacity at the local level to address CLaT at its source and among high-risk families and households. Key documents include the Anti-CLaT national strategy for the fisheries sector, adopted by MOFAD ([Strategy on Anti-Child Labor and Trafficking in Fisheries](#)) which is based upon a detailed literature review ([Child Labour and Literature Review and Scoping Study Report](#)) and situation assessment tools ([CLaT Assessment Tool Workshop Report](#)). Much of the work of the SFMP on Anti-CLaT was through partners including CEWEFIA, Friends of the Nation and the Development Action Association and included engagement meetings and drama performances led by Friends of the Nation, ([Community Communication Durbars and Drama Performances on CLaT in the Central Region](#)) regional workshops and training by FoN and SNV ([Training of MOFAD/FISHERIES COMMISSION on Child labor and Trafficking Strategy, Fisheries Child labor Policy Socialization Engagement Workshops with District Assemblies Child Protection Committees](#)), training of District Child Protection Committees and advocates by CEWEFIA ([Refresher Training for Community Child Protection Committee and Anti-CLaT Advocates, Training on Advocacy Skills for CCPCs and Anti-CLaT Advocates](#)) and the production of outreach materials such as the SFMP's Anti-CLaT factsheet ([Reducing Child Labor and Trafficking in Ghana's Fishing Communities](#)). In 2018, Ghana was moved off the Watch List and returned to Tier 2 ranking, indicating an improvement with additional work needed. The SFMP looked to successful examples within Ghana. The SNV Development Organisation guided groups on a tour to Torkor in the Volta Region to see the "Torkor model" ([Report on Learning Tour to Torkor for SFMP Partners and Selected Stakeholders](#)). Led by General Agricultural Workers Union (GAWU) the model involves organizing and mobilizing fish workers (including fishermen and fish processors) and employers (boat/canoe owners) and equipping them with the relevant knowledge, skills and motivation to combat child labor.

SFMP work against CLaT continued into 2019. Friends of the Nation (FoN) organized nine (9) separate District Child Protection Committees (DCPCs) meetings to Provide Support to District Assemblies for planning Anti- CLaT Intervention in MTDPs in March 2019. ([Provide Support to District Assemblies for planning Anti- CLaT Intervention in MTDPs](#)). The meetings were designed to assist the District Assemblies and the DCPCs to synchronize their action plans and community outreach programs for joint action (to increase efficiency, reduce duplication, and pool resources together to maximize efforts/results). In addition, Friends of the Nation organized a National level engagement meeting in collaboration with 10 Coastal Districts of the Central Region, MOFAD and Department of Social Welfare (DSW). ([National High Level Engagement Meetings](#)), to assist the Assemblies to design effective "messages" for their outreach programs on CLaT.

COVID-19 Prevent the Spread and Mitigate the Effects Among Vulnerable Households in Fishing Communities in Ghana

Following the outbreak of the COVID-19 pandemic in Ghana in March 2020, it was considered that this unanticipated development could have dire consequences on the artisanal fisheries sector, which is central to the economy and livelihoods of about 300,000 men and women in over 300 coastal communities given the communal nature of landing fish and the related post-harvest activities. To prevent infection and spread of the pandemic among fishing communities in Ghana, the project adopted a Social and Behavioral Change Communication (SBCC) Strategy. The SBCC strategy was informed by the perceived susceptibility, severity, benefits, and barriers to action of the fishers. The key elements of the strategy were:

- Fisherfolk believed they were immune to the disease due to their constant contact

with salty sea water.

- Fisherfolk believed the disease only affected rich folks.
- Fisherfolk did not believe the disease is fatal.

On the basis of these perceptions the SBCC Strategy employed various development communication, and health communication theories and strategies, especially the theory of planned behavior and the health belief model in the design and implementation of the components of the SBCC Strategy which were:

Development and dissemination of Information, Education and Communication (IEC) materials

The IEC materials were developed in collaboration with USAID Ghana, MOFAD/FC, GHS, Ministry of Health (MOH), Ministry of Information (MOI), GNCFC, and NAFPTA. The final materials were pre-tested and approved by all the aforementioned institutions before they were disseminated in the fishing communities. In the end, 10, 000 posters were printed. The posters covered 10 different themes on COVID-19. Three animations and jingles covering different themes on COVID-19 were produced and translated into 5 coastal languages. A campaign song with a video by one of Ghana's leading musicians, Kofi Kinaata was also produced. As of March 13, 2021, the music video had 364,826 views on [YouTube](#). These IEC materials incorporated information on COVID-19, symptoms, safety practices (handwashing, wearing of nose masks and social distancing), precautionary measures for fisherfolk before and after fishing expeditions, breaking the cycle of spread, how to make a hand washing station, disposal of nose mask and care for reusable cloth masks. The messaging was situated in the context of fisher folk's everyday life to help them relate to and understand the messages taking cognizance of their perceived susceptibility, severity, benefits, and barriers to action. The posters, animations and jingles were translated into five of the widely spoken local coastal languages (Ewe, Dangbe, Fante, Ga, and Nzema).

Set up of a virtual communication platform on WhatsApp for fisherfolk

The safety protocols of social distancing and avoiding social gathering as much as possible to limit infection and spread of the virus required the need to adopt innovative approaches to providing information to the fishers. The SFMP therefore replicated its innovative Fisher to Fisher (F2F) dialogue in a virtual form with the formation of social media groups (WhatsApp groups) across the entire coastal fishing communities, linked to a collaborative decision-making center, a **Virtual Platform for Fishers (VPF)**. The approach is in consonance with the vision of the [USAID Digital Strategy](#) of advancing progress in partner countries and communities on their journey to self-reliance through effective, efficient and responsible digital initiatives that enhance security and economic prosperity. A total of 21 WhatsApp groups representing both fishermen and fish processors at various levels were formed. All groups were interconnected or linked to one of the two groups representing the national executives of fishermen, the GNCFC, or fish processors, the NAFPTA, constituting a Virtual Platform for Fishers (VPF). The rest of the groups comprises; 8 groups each for GNCFC and NAFPTA at the district and community levels for the four coastal regions and 1 group each for NAFPTA, CEWEFIA, DAA at the community level. The 21 groups had a total membership of 787. Digital IEC materials such as video campaign song, posters and jingles and animations were disseminated throughout the groups and group members were provided with data to be able to access the materials and also disseminate same to other community members.

A COVID-19 safety competition for landing beaches and processing sites

The SFMP rolled out a COVID-19 safety practices competition amongst landing beaches in the 26 coastal districts. The competition dubbed “COVID-19 Safety Landing Sites Competition” sought to reward landing sites that best adhered to the COVID-19 safety practices, frequent handwashing, wearing of nose mask, and social distancing. The competition, which ran for three months, was held on a district-by-district basis. 242 landing sites in 26 districts in the 4 coastal regions participated in the competitions. Real time data was gathered by the SFMP through phone polling of site advocates trained to manage the handwashing stations provided by the project at 242 fish landing sites. Every month, these sites advocates were called to answer questions on behavior and practices of fisherfolk at the landing sites. Data provided was validated by routine announced and unannounced visits by the SFMP and its implementing partners and a committee made up of the Fisheries Commission and SFMP’s partners. Each month, the winning landing beach in each district is awarded plastic chairs and a plaque. While the plastic chairs are kept by the winning landing site for the month, the plaque is taken and given to the winner of the competition in the subsequent month. The competition was designed to encourage adoption of, and practice of the approved safety practices.

Provision of Handwashing Stations

A University of Cape Coast team mapped fish landing beaches, processing sites and markets as well as collected baseline data on handwashing facilities, adherence to social distancing and wearing of facemasks in all coastal fishing communities from July to August, 2020, to build a baseline and database that enables monitoring and evaluation of the SFMP’s COVID-19 response ([COVID-19: Mapping and Baseline Survey of Fish Landing Beaches, Processing Sites and Markets](#)). About 98% of the sites surveyed had inadequate hand washing facilities. There was gross disregard for key COVID-19 protocols on hand washing, physical or social distancing and wearing of face masks at most sites, which presented the need for behavior change communication at all sites.

As part of the project activities to provide hand washing equipment at landing beaches, sites advocates were trained to effectively manage the hand washing stations at selected landing beaches in project communities. Selection of site advocates (community volunteers) and their training was provided by SFMP’s implementing partners - CEWEFIA, Hen Mpoano, DAA and Friends of the Nation. ([Training of Handwashing Station Site Advocates From 76 Landing Beaches](#)). The selection of the site advocates was done in collaboration with Chief fishermen from the (GNCFC) based on a set of criteria. Site advocates had the role of managing the use of the hand washing stations and were provided a stipend for their time and effort to maintain supplies of soap.

While the project initially targeted placement of handwashing stations at all artisanal landing sites listed in the FSSD 2016 Canoe frame survey, in the end, handwashing stations were provided for 242 sites. Many of the FSSD sites were either seasonal, abandoned due to construction of shoreline protection works or were not considered for handwashing stations as they were too remote or small, or were in areas with local land conflicts. Over the several months of support by SFMP, challenges included high turnover of volunteers requiring new individuals to be recruited continuously, and initial challenges of sending stipends via mobile money transfers. Whatsapp groups were established that enabled quick communications among the site advocates and implementing partners for troubleshooting issues concerning repairs to stations that broke down periodically or regarding receipt of stipends. Over the period from October 2020 to January 2021, phone polling of site advocates showed improvements in adequacy of supplies and handwashing behaviors as well as social

distancing and wearing of face masks. Scores for social distancing and wearing masks were lower than handwashing demonstrating more emphasis needed on these behaviors.

Provision of Cash Benefits to Vulnerable Fisheries Dependent Households

Following the outbreak of COVID-19 in Ghana, it was conceptualized that the spread of the virus could have dire consequences for the livelihoods of approximately 300,000 fisheries dependent households most of whom are already vulnerable to economic shocks. Of particular concern was the poor and vulnerable segment of the fisheries dependent households who could be at risk of not meeting basic food needs and who have not benefited from any on-going Government of Ghana social safety net schemes including the COVID-19 economic assistance programs, detailed by the President of Ghana on April 19th.

When the decision was made to target 2000 poor and vulnerable fisheries dependent households with Economic Safety Net Assistance to make it possible for them to avert hunger as a result of the COVID-19 pandemic, it was also thought that the methodologies and procedures for targeting the poor and vulnerable households could also be considered for application to future economic shocks, as well as complement sustainable fisheries management measures such as closed seasons in Ghana's artisanal sector. This is in relation to recommendations emanating from the socioeconomic assessment of the 2019 fisheries closed season for the marine artisanal sector in Ghana ([Ofori-Danson et. al., 2020](#)).

The design, implementation, monitoring and evaluation elements of the SFMP economic safety net intervention were informed by analysis of Ghana's vulnerability and poverty (World Bank, 2016b), and guiding principles espoused by the FAO (Social Protection Framework, FAO, 2017) which include: social inclusion, gender equality and sustainability. The first step in the targeting of the poor and vulnerable households was the development of the criteria for selection of beneficiary households. The criteria were developed by representatives of beneficiaries and was defined around three main themes: a) Health, b) Education, and Standard of Living. To integrate the methodological design principles, the two main groups representing the fisheries dependent households, fishermen represented by the GNCFC and fish processors represented by NAFPTA were tasked to identify the poor and vulnerable households in their respective communities across the entire coastal region of Ghana using the criteria they developed. A quota of 2000 for either group operating independently was to generate a total list of 4000 potential beneficiary households from which the final 2000 was to be selected.

While it was thought that each of the two groups using the same selection criteria to independently select poor and vulnerable households from the same communities would present a high level of overlap representing the truly poor and vulnerable in those communities, this was not the case. At the end of the selection process, 3244 (instead of the 4000) households identified and selected as poor and vulnerable from the two independent selection processes, only 24 households overlapped and could be labelled as truly poor and vulnerable. The rest of the 3,220 households were subjected to a Proxy Means Test (Poverty Probability Index (PPI) to establish their levels of poverty and vulnerability. As a result of the COVID-19, the PPI was administered through phone polling. The choice of administering the Proxy Means Test survey questionnaire via telephone introduced some difficulties as many of the poor and vulnerable households selected did not have telephones and had to be reached through intermediaries. As a result, out of 3,220 only 2,204 were able to participate in the survey. The SFMP Economic Safety Net also considered payment of the Economic Safety Net Benefit through Mobile Money Accounts for the purposes of limiting elite capture and also reducing the risk of infection and spread of the virus through handling of physical cash. This element of the methodological design also introduced another level of difficulty in the

targeting process as many of the poor and vulnerable did not have mobile money accounts. Payment to verified beneficiaries had to proceed in batches as verified beneficiaries were contacted to register mobile money accounts to facilitate payment of their Economic Safety Benefits. Consequently, the total number of beneficiaries who could be processed into the Safety Net Scheme was 1,878 instead of the anticipated 2000.

The lessons learned in this process include the following:

- While it important to consider the mode of payment to beneficiaries at the design stage, it important to note that in most cases the very poor and vulnerable are not likely to be part of the formal financial system or the evolving digital economy and as such extra effort would be required to transition them to be part of the formal economy through any payment process adopted.
- As much as possible, beneficiaries of Economic Safety Net Scheme should be part of the development of the criteria to be used in the selection process, Extensive awareness creation and education should follow the development of the selection criteria. This approach helps in reducing misunderstanding and tension related to why some households get selected and others do not.
- There is the need to make provision for sufficient time for each of the distinct phases along the chain of events involving development of criteria through verification of potential beneficiaries until final payment. At least a year is required for effective engagement with beneficiaries when a target of 2000 or more beneficiaries are required. This is because the poor and vulnerable are usually the segment of the population that is difficult to access and excluded from most social and economic activities.
- In the absence of COVID-19, sufficient in-person engagement is required especially during the administration of a Proxy Means Test (PMT) which will allow project staff or staff of administrators of the Economic Safety Net Scheme or their representatives to have firsthand information about the potential beneficiaries.

Piloting Diversified Livelihoods

The current state of the small pelagic stocks at the point of near collapse urgently requires the need to transition some fishers to other forms of livelihood options if stock rebuilding management measures such as closed season and effort or capacity reduction can be implemented effectively. Over the years, the low levels of education among fishers and their limited access to financial resources has constrained their ability to access livelihood opportunities outside of fisheries, particularly for older generations who have worked in the sector their whole lives.

With limited options to pursue other diversified livelihood opportunities, coastal communities continue to rely on the already overstretched fishery as their primary source of income. As part of its COVID-19 interventions, the SFMP piloted three livelihood options targeted at the youth (18 years -35 years) to encourage them to explore income earning opportunities outside of the fishing. Given the high failure rate of past diversified livelihood activities in capture fisheries communities, the SFMP as part of the COVID19 response, developed a strategy for livelihood diversification with a focus on identifying desirable and marketable non-fisheries livelihoods that requires resources that can be accessed locally. Based on the synthesis of ideas from stakeholder engagements, three livelihood options were deemed suitable for piloting with the capacity to generate immediate income for beneficiaries. These were:

- Production of handwashing soap.

- Baking of confectionary.
- Installation and repairs of digital television and air condition.

The COVID-19 safety protocol of frequent hand washing has precipitated the demand for handwashing soap. A total of 98 persons (96 females and 2 males) were trained in the production of soap and also given startup kit (chemicals and fragrances) to enable them to produce their first line of products. Some of these beneficiaries have been supplying liquid soap to the hand washing facilities installed by the SFMP.

Following market survey to identify interest and demand for some types of snacks, such as fish nuggets (made with local potatoes and fish), fish/beef pasties, coconut cookies, bread rolls and maize dumpling (locally known as ‘*abolo*’), the project trained 60 women in the production, packaging, labeling and pricing of these items. A total of 12 youth (11 males, 1 female) were also trained on the installation and repairs of digital TV and Air Conditioning.

Diversification of livelihood options, especially on sustainable basis requires adequate resources and time towards partnerships development. There was limited time for partnership formation and development. There were companies such as Zaacoal and Sky Fox Services with innovative and profitable livelihood options that could not be explored due to insufficient time and resources. For the benefit of fishers, there is the need to prioritize activities that yield income in the shortest possible time and also active stakeholder engagement is required throughout the processes of identification of livelihood options, prioritization, skills training, business and financial management skills.

ACHIEVEMENTS, LESSONS LEARNED AND THE WAY FORWARD

The overall goal of the SFMP was to contribute to rebuilding Ghana’s marine fish stocks (see the [Award Document Program Description and Design](#)), with a focus on the small pelagic fishes consisting of anchovies, *sardinella* and chub mackerels. These fish are referred to as “the People’s Fish” because of their critical importance as the most important protein food source for food security (see [the Fisheries and Food Security Brief](#)). They are a low-cost and highly nutritious source of animal protein. Fish provide approximately 50 percent of the animal protein in local diets with the contribution being much higher in some fishing communities. The project also focused on the artisanal canoe sector that provides approximately 80 percent by volume of the national catch, almost all of which is consumed locally and provides livelihoods and direct and indirect employment for approximately 2.2 million Ghanaians.

The project made a significant contribution towards achieving the project goal, but fish stocks in Ghana are still under threat, on the verge of collapse, and have a long path ahead to full recovery. SFMP marked a number of accomplishments that contributed to the enabling conditions and foundations necessary to recover and achieve a sustainable fishery. While the project ends in 2021, the journey has not ended for Ghana’s fishery sector. Much remains to be done to achieve a sustainable and lasting fishery that can provide an abundant, nutritious, and locally sourced food supply, as well as help lift many fishing households out of poverty. The lessons learned essays in each volume of the legacy document collection provides the project story of accomplishments, lessons, and recommendations for Ghana’s way forward.

SOCIAL AND BEHAVIOR CHANGE COMMUNICATION

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BACKGROUND

Following the outbreak of the COVID-19 pandemic in Ghana in March 2020, it was considered that this unanticipated development could have dire consequences on the artisanal fisheries sector, which is central to the economy and livelihoods of about 300,000 men and women in over 300 coastal communities given the communal nature of landing fish and the related post-harvest activities.

Outbreaks of infectious disease, such as the COVID-19 pandemic present a significant risk to public health. It therefore became necessary to initiate interventions to keep fisherfolk safe and healthy to sustain seafood supply and distribution. Taking into consideration the mode of infection and spread of the virus and also the lifestyle and the social settings in fishing communities, it was anticipated that COVID-19 could have devastating effect on the lives and livelihoods of fishers. Against this background, the SFMP developed a Social and Behavioral Change Communication (SBCC) strategy to drive compliance with and adherence to COVID-19 health and safety protocols within fishing communities along the coast of Ghana. Addressing the challenges of effects of COVID-19 in coastal fishing communities was expected to yield the added benefits of protecting and sustaining the investments in fisheries management interventions supported or undertaken by the SFMP in the last seven years.

The development of the SFMP SBCC strategy was informed by specific factors and perceptions unique to fisher folks and prevalent in coastal communities in Ghana and these include: the fisher folk's perceived susceptibility, perceived severity, perceived benefits, perceived barriers to action, and low self-efficacy. Interactions with fishers revealed the following:

- Fisherfolk believed they were immune to the disease due to their constant contact with salty sea water.
- Fisherfolk believed the disease only affected rich folks.
- Fisherfolk did not believe the disease is fatal.

Fisherfolk were considered at higher risk of contracting and spreading the disease due to the communal nature of landing and processing fish, and the migratory nature of artisanal fishers. This meant that if fishing communities were hit hard, it could result in a partial or total lockdown of those communities, resulting in disruptions to the fisheries supply chain and ultimately threatening food security.

Meanwhile, the education being provided by the government was a "one size fits all" targeting the general Ghanaian populace, without taking into consideration the unique challenges of the various sectors and segmentations of the populace.

The response of fisherfolk to any behavioral change communication strategy in relation to COVID-19 safety practices was dependent on the availability and access to a properly managed handwashing facilities and soap, considering frequent handwashing is critical to

preventing infection and spread of the disease. Yet most fishing communities particularly landing and processing sites lack basic water and sanitation infrastructure.

The project's goal was to "To prevent the spread and mitigate the economic effects of COVID-19 among vulnerable households in fishing communities in Ghana." One of the three main objectives to achieve this goal was that "Fisherfolk at 300 landing sites, processing and/or fish market sites better adhere to COVID-19 disease prevention protocols." The project was provided an extension of 7 months through April 2021 to meet this goal and objective, representing an ambitious timeline to achieve results.

PROJECT IMPLEMENTATION STRATEGY

Considering the mode of spread of the virus, and the prevention practices needed to keep safe, it was realized that fisherfolk needed to change their behaviors. The preventive protocols require a person to start practicing actions they would rather not do on a regular day. SFMP collaborated with the Ministry of Fisheries and Aquaculture Development (MOFAD) and its Fisheries Commission (FC), Ministry of Health (MOH), Ghana Health Service (GHS), and the fisheries associations to develop and implement a Social and Behavior Change Communication (SBCC) Strategy for the artisanal fisheries sector. The strategy included the:

1. Development and dissemination of IEC materials.
2. Set up of a virtual communication platform on WhatsApp for fisherfolk.
3. A COVID-19 safety competition for fish landing sites.
4. Provision of handwashing stations and supplies to fish landing and processing sites.

The project in the planning stage of the strategy, included a radio discussion program where implementing partners in collaboration with Ghana National Canoe Fishermen's Council (GNCFC) and National Fish Processors and Traders Association (NAFPTA) would hold regular discussions on COVID-19 and the artisanal fisheries sector. However, after analyzing the risks associated with holding these discussions, where content could not be carefully managed in free wielding discussions, and misinformation might be spread, this activity was dropped.

The SBCC strategy, employed various development and health communication theories and strategies. Drawing on the theory of planned behavior and the health belief model, the strategy sought to intentionally influence fisherfolks' perceived susceptibility, the perceived severity, and the perceived threat of COVID-19 to address barriers to behavior change, provide cues to action, and provide an enabling environment for behavior change to ensure that fisherfolk in the coastal communities adhere to Ghana Health Service approved COVID-19 safety practices.

The strategy intentionally sought to develop information and education messages that were culturally sensitive and appropriate, situating them in the context of fisherfolk to better help them change behavior. This was realized through constant engagement with fisherfolk through the GNCFC and NAFPTA in the development, pretest, and finalization stages. Breaking myths that fisherfolk have believed in for centuries (salty sea water makes one immune to most diseases) required an approach that was respectful. It was also important to assess and understand the information ecosystems, in order to use the appropriate tools, people, and channels for communication and education. By engaging fisher leaders like the Chief Fishermen and *Konkohemaas*, (a traditional position as a chief fish trader at landing sites) trust was built and participation by fisherfolk was realized.

PROGRESS AND RESULTS

Social and Behavior Change Communication (SBCC) Strategy

Behavior change is a process. It sometimes can take many years for tangible behavior change to occur. Also, behavior change does not occur in a vacuum. There are many factors that influence a person's decision to change his or her behavior (theory of planned behavior).

The journey to behavior change involves stages; precontemplation, contemplation, preparation, action, and maintenance. Any SBCC strategy must take into consideration all these stages, providing the environment for an individual or group of persons to move from one stage to the other.

The SBCC strategy developed and implemented by the SFMP, was to feed into the national efforts being made by the Government to reduce the spread and infection of the virus. At a point, the education on the disease from the government, had waned. However, the SFMP continued its education on TV, Radio, WhatsApp platforms and at landing beaches. Hence, even though the government had reduced its education, the SFMP helped in bridging the gap by constantly reminding fisherfolk in particular, and the Ghanaian populace at large on the disease.

Data gathered by the SFMP trained site advocates showed that fisherfolk at fish landing and processing sites were better adhering to the COVID-19 safety protocols over time. This can be attributed to the successful SBCC campaign that has shown an increase in fisherfolk knowledge and attitudes towards COVID-19 and its safety protocols, as well as in the practice of the safety protocols. Monitoring by SFMP's implementing partners also indicated that due to the education fisherfolk were receiving, there was an increase overall awareness in hygienic practices.

Notwithstanding, the implementation period was too short for a bigger, wider campaign strategy to be developed and implemented. The project communications unit was unable to regularly monitor, evaluate and possibly update the strategy and messaging due to time constraints. It would have been very good regularly monitor the target audience to ascertain the stage in behavior change, know what support to provide, and what messaging to increase or decrease.

Information, Education and Communication (IEC) Materials

Key to the SBCC strategy was the development and dissemination of IEC materials. The IEC materials were developed in collaboration with USAID Ghana, MOFAD/FC, GHS, MOH, Ministry of Education (MOE), GNCFC, and NAFPTA. The final materials were pre-tested and approved by these institutions before they were released publicly. A total of 10 000 posters were printed covering 10 different COVID-19 themes (see Table 1 for specific topics of posters and Figure 1 for examples). Three animations and jingles covering different themes on COVID-19 were produced and translated into 5 coastal languages (Ewe, Dangbe, Fante, Ga, and Nzema). A campaign song with a video by one of Ghana's leading music stars, Kofi Kinaata was produced and disseminated.

These materials touched on general information on COVID-19, symptoms, safety practices (handwashing, wearing of face masks, social distancing), precautionary measures for fisherfolk before and after fishing expeditions, breaking the cycle of spread, how to make a hand washing station, disposal of face mask and care for reusable cloth masks. The

messaging was situated in the context of fisherfolks’ everyday life to help them relate to and understand the messages.

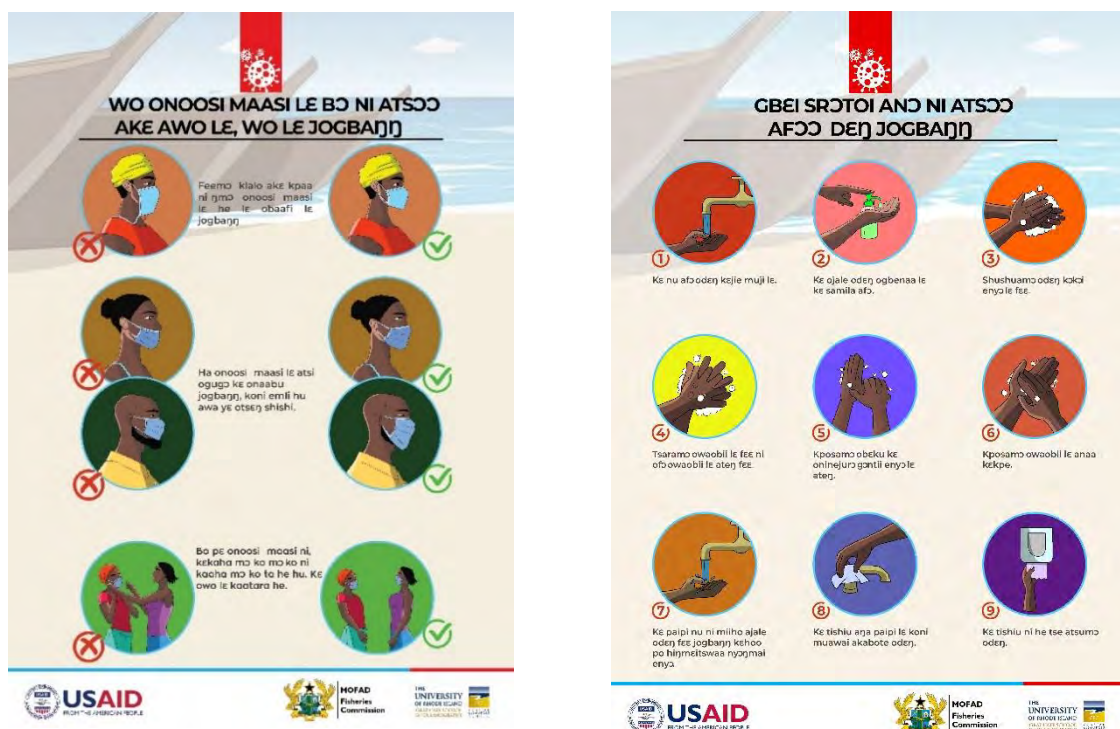


Figure 1 Posters on COVID-19 safety protocols

Left: A poster in Ga on the proper way to wear a face mask.
 Right: A poster in Ga on proper handwashing

Through SFMP’s implementing partners—Development Action Association, Central and Western Fish Improvement Association, Friends of the Nation, and Hen Mpoano— the posters were distributed across 249 fish landing sites in the four coastal regions (Greater Accra, Volta, Western, and Central). In the various regions, the jingles and campaign song aired on public address systems at the landing sites, and community information centers. Posters were also provided to the MOFAD and the Fisheries Commission. The GNCFC were also provided leaflet type posters for their canoes and outboard engines.

Table 1 List of Posters Printed and Distributed

Thematic Areas
COVID-19 SAFETY PROTOCOLS FOR FISHERFOLK
WEAR YOUR RECOMMENDED FACE MASK, THE RIGHT WAY
FACE MASK AND SOCIAL DISTANCING
REDUCE PHYSICAL CONTACT
PRECAUTIONARY STEPS BEFORE AND AFTER FISHING EXPEDITION
BREAK THE CYCLE, STOP THE SPREAD
GET INVOLVED, MAKE YOUR VERONICA BUCKET
DISPOSAL OF YOUR FACE MASK
THE RIGHT WAY TO WASH YOUR HANDS
WASHING YOUR CLOTH MASK THE RIGHT WAY

The jingles were aired on 13 widely listened to radio stations across these regions for 7.5 months (September 2020 to April 2021). The 18 animations aired on Ghana Television and United Television, which are some of the most watched TV stations by fisherfolk, for 7.5 months (September 2020 to April 2021).

SFMP also collaborated with Kofi Kinaata, one of Ghana’s leading pop stars to compose a song on COVID-19. The song was mainly in Fante, with lines in the other coastal languages. It became an instant hit, making it the official song for COVID-19 in the country. Through the song, fisherfolk and the general public were educated on the disease and safety practices. The song is still receiving airplay on radio stations across the country, with the music video enjoying airplay on television stations as well. The music video had 365,915 views on YouTube as of March 16, 2021.

WhatsApp Fisher-to-Fisher Platforms

In keeping with the SBCC Strategy, which aimed to influence all spheres of the fisherfolk information ecosystem, including the digital information ecosystem, 21 groups were created on the popular messaging app “WhatsApp Messenger” to share, discuss, and disseminate COVID-19 IEC materials and also discuss fisheries issues in the communities, while providing a platform for real time feedback on project interventions. The groups also played a role in the selection of cash beneficiaries for the economic safety net scheme.

The breakdown for the 21 groups formed are as follows: two groups at the national level constituting a Virtual Platform for Fishers (VPF), eight groups each for GNCFC and NAFPTA at the district and community levels for the four coastal regions and one group each for the National Inland Canoe Fishermen’s Council (NICFC), CEWEFIA, and DAA at the community level. The 21 groups had a total membership of 787 individuals with a roughly equal gender distribution (see Figure 2).

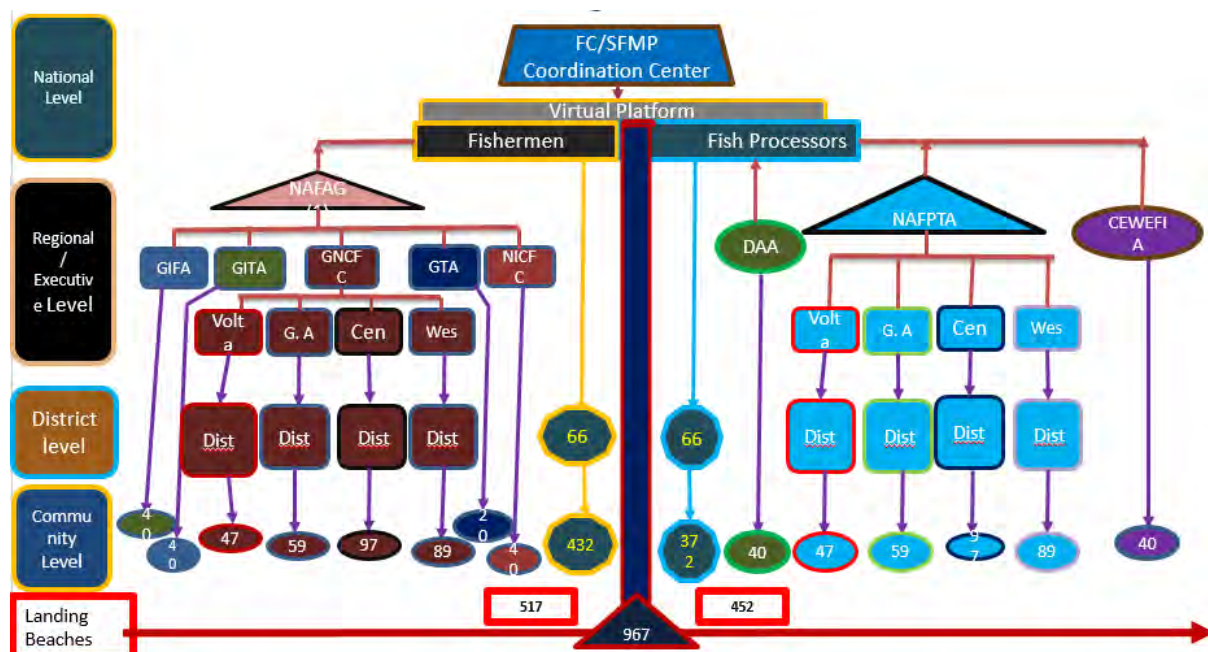


Figure 2 A graphical representation of the structure of the WhatsApp platforms

At the national level, the first group for fishermen consisted of:

- Representatives of the Fisheries Commission.
- SFMP Staff (Project Manager, Chief of Party, Communication Unit, Monitoring and Evaluation Unit, Fisheries Officer) and Partners (UCC, FON, HM).
- Representatives of all artisanal fisheries associations; GNCFC, and NICFC, but several of the industrial sector associations declined to participate.

The second group for fish processors consisted of representatives of NAFPTA, DAA, and CEWEFIA in addition to the SFMP and the FC representatives.

At the district level, the groups consisted of regional representatives of the association present in the VPF national level group, representatives of the association from the coastal districts in the region, and the regional director of the Fisheries Commission and SFMP Staff.

At the community level, the groups consisted of regional representatives of the association present in the VPF national level group, representatives of the association from the landing beaches in the region, and zonal officers of the Fisheries Commission and SFMP Staff.

COVID-19 IEC materials (posters, campaign song video, animations) in English and in the local languages were disseminated via the 21 WhatsApp platforms twice every week. The criteria for the selection of beneficiary households under the pilot Economic Safety Net Scheme and other messages related to the scheme were also shared.

Members were regularly encouraged to share the COVID-19 materials with friends and family in their communities on social media or through other channels. They also participated in group discussions through text, voice messaging, and images on adhering to COVID-19 safety protocols at landing sites, fisheries issues, and on specific community concerns (see Figure 3).

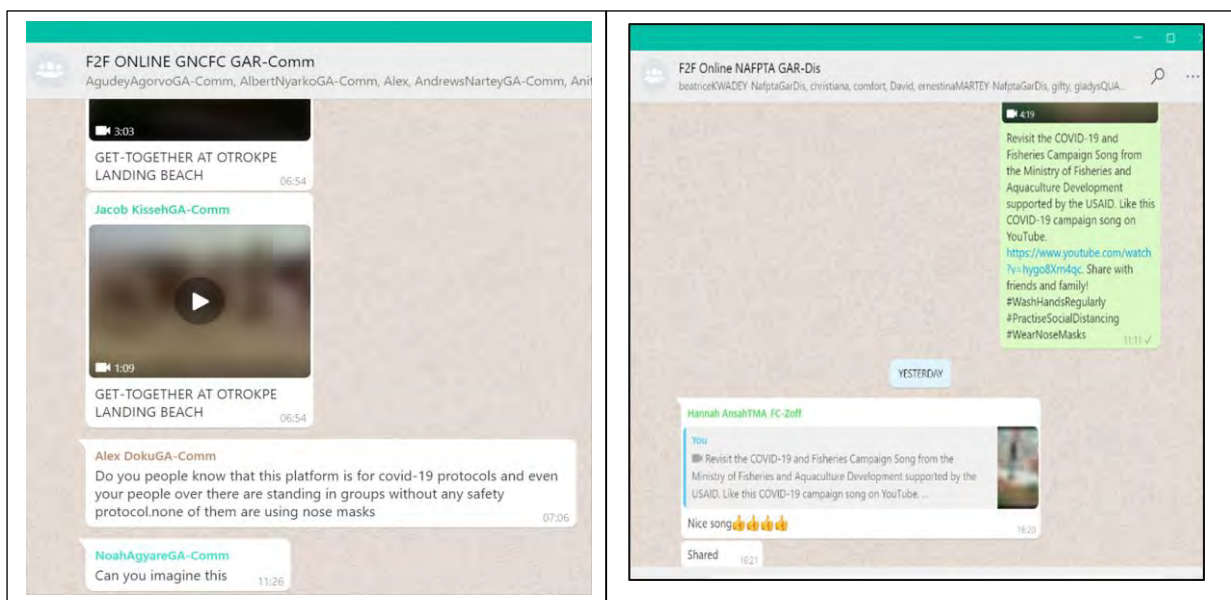


Figure 3 Screenshots of discussions on some of the WhatsApp platforms

Left: Group members admonishing another member for flouting safety protocols at a community event. Right: Campaign song on coronavirus posted in a group.

To incentivize active engagement among members and the sharing of the IEC materials, they were provided with 30 GHS (approximately US \$5.23) data top up and at the national and district levels, 30 GHS (approximately UUS\$5.23) of call credit was provided to the

representatives of the fisheries associations to facilitate the implementation of the pilot economic safety net scheme. This was done on a monthly basis for four months (September to December 2020).

Fifty-six messages comprising SFMP's IEC materials on fisheries issues and COVID-19, messages on the economic safety net scheme, and verification of monthly data/airtime top up were shared in the group on a weekly basis from September 2020 to March 2021. Eighty-eight percent of the total group membership of 787 persons accessed/opened the messages posted on the platform which shows a high engagement with posted content.

Using the services of a bulk digital payment service provider, Npontu Technologies, SFMP provided airtime and call credit top up to group members for four months. It is projected that the groups will be maintained through community driven social interests beyond the implementation of this COVID-19 response program even after the provision of airtime and data bundles ends.

Deployment of Handwashing Stations to fish landing and processing sites

To ensure easy access to running water and soap for use by fisherfolk, SFMP deployed 249 hand washing stations and consumables to active landing beaches and fish processing sites following a baseline survey of all landing sites along the four coastal regions of Ghana by the University of Cape Coast (UCC).

These handwashing stations came in two different sizes; 100 L for densely populated sites and 80 L for all other sites (see Figure 4).



Figure 4 Pictures of fisherfolk using the handwashing stations

Left: Fisherman at Adjoa landing site using the 100 L handwashing station.

Right: NAFPTA leader at Whuti landing site using the 80 L handwashing station.

A total of 246 persons were selected from the communities and trained as advocates to sensitize the community on the IEC materials and also maintain the handwashing stations by ensuring they have constant supply of water and soap.

The site advocates were provided with protective gear and also collect data on the frequency of use of the handwashing station to inform planning by project staff. The site advocates were compensated for their time with a monthly stipend of GHS 200 (\$US35) for those managing the 100L handwashing stations and GHS 150 (US\$26) for the 80L.

Landing Sites Competition

The SFMP rolled out a COVID-19 safety practices competition amongst landing beaches in the 27 coastal districts to award landing sites that best adhered to the safety protocols. The competition dubbed “COVID-19 Safety Landing Sites Competition” sought to reward landing sites that best adhered to the COVID-19 safety practices, particularly frequent handwashing, face mask wearing, and social distancing at fish landing sites (Figure 5). Not only did the competition encourage adoption of, and practice of the approved safety practices, it also created peer pressure influence amongst fisherfolk, acknowledged effective community-based health and safety management that allow for learning, and encouraged community participation and ownership of shared responsibility.

The competition, run for three months, was held on a district-by-district basis. There were 242 landing sites in 27 districts in the 4 coastal regions that participated in the competitions. Real time data was gathered by the SFMP through phone polling of site advocates trained to manage the handwashing stations provided by the project at 242 fish landing sites. Every month, these sites advocates were called to answer questions on behavior and practices of fisherfolk at the landing sites. Between October of 2020 and January 2021, phone poll data showed, on average, improvements in adherence to COVID-19 -safety practices with handwashing having slighter better adherence compared to social distancing and wearing of face masks. Phone polling data was validated by routine announced and unannounced visits by the SFMP and its implementing partners and a committee made up of the Fisheries Commission and SFMP’s partners.

The communal nature of fishing activities makes the artisanal fisherfolk community one that takes care of each other. The mode of infection of the corona virus also meant that they had to be each other’s keeper. Fishers also learn from each other. With the competition, fishers were able to mobilize themselves to make sure everyone at the landing site wore their face mask, regularly washed their hands and maintained a 6-foot social distance. When someone for example, forgot to wear his or her mask, another person would prompt him or her to do so. They owned the responsibly of their health safety.

Winning sites for each month were presented with plaques to acknowledge their achievements and plastic chairs to aid in meetings held at the landing sites (Figure 5). At the end of the three months, 73 sites won out of 242 landing sites in 27 coastal districts.



Figure 5 Pictures of award presentations for Landing Sites Competition

Top: FC Zonal officer of Nzema East Municipal Assembly presenting the best landing site plaque to the chief fisherman of Sowlo landing site for winning the November competition.

Bottom: Chief fisherman of La Abese in the La Dade Kotopon District holding the best landing site plaque for winning the December and January competitions.

Deployment of Handwashing Stations to fish landing and processing sites

Over time and with frequent use, some of the handwashing stations broke down, but were immediately fixed by plumbers from the community under the supervision of the site advocate and SFMP’s implementing partner in that region.

The site advocates kept records of the frequency of handwashing and adherence to the other safety protocols by fisherfolk at the landing or processing site. These records were used to determine the winners of the landing site competitions.

LESSONS LEARNED

Social and Behavior Change Communication (SBCC) Strategy

The strategy and its components developed and implemented were audience specific. The SFMP was able to achieve this by conducting audience research and engaging the stakeholders in the development and implementation. Community participation and involvement was critical for ensuring the acceptance and sustainability of the intervention.

The SFMP also used images that represent the audience. Frequently, images of Caucasians are used in communicating to Africans. This can lead to a rejection of the messages as the African audience does not believe he/she is vulnerable because the image depicted does not represent an African. The SFMP at all times used images, situations, and symbols that represented Ghanaians, and also fisherfolk.

Messages were developed to be culturally appropriate and sensitive. Taking into consideration the audience was from across the four coastal regions, it was important to develop messages that were culturally appropriate for all regions.

Fisherfolk are not just men but include women as well. Making sure all messages were gender appropriate and sensitive was at the core of the strategy. Women were not depicted in situations that did not accurately represent their roles in society. Women were depicted as equal resource users.

Since the intervention was addressing a global pandemic, the IEC materials developed had to undergo a robust review processes by USAID, URI/CRC, MOFAD/FC, MOH, MOI, and GHS. This was to ensure that the messages being put out were accurate and in line with the Government of Ghana's guidelines.

The SBCC strategy involved a monitoring and evaluation component. However, the task was solely assigned to the monitoring and evaluation unit of the SFMP. Unfortunately, the monitoring of behaviors at landing sites, processing sites and fish markets, particularly site visits did not involve the communications unit. This was a flaw in the implementation of the strategy and internal sharing of field visits could have been better. The communications unit should have been more involved and engaged with the M&E unit in field monitoring. The communications team could have identified the stages of behavior change fisherfolk were at and could have been in a better position to consider amendments or updates to the strategy or messages if needed. This is because, they look out for situations that the technical Monitoring and Evaluation team may miss. The behavior change communications team at sites, could participate in focus group discussions, make key observations at sites, and speak to key informants.

Substantive behavior change takes time and effort, regular monitoring and strategy reviews. The time period for developing and executing the SBCC strategy, and for strategy to realize impacts was too short.

Information, Education and Communication (IEC) Materials

Considering the literacy levels of fisherfolk, posters were produced in 5 local languages in addition to English. Ewe, Fante, Nzema, Ga, Dangbe. Also, the posters were more pictorial and had less text for easy understanding by fisherfolk. All pictorial, animations depicted everyday of fisherfolk at the landing sites, processing fish, and fish markets. Using images that fisherfolk identified themselves with, made it easy for them to relate to and understand that the messaging was for them. The fact that one can speak a language does not mean he or she can read the language. the literacy gap was bridged by using more pictures on the posters, the animations, jingles, and the campaign song.

Due to the nature of landing sites, it was difficult getting enough space to paste posters. Also, some landing sites did not have PA systems. The campaign song by one of Ghana's leading

pop stars, Kofi Kinaata, was an instant hit song. It was a form of “edu-tainment” (education-entertainment), where people enjoyed and danced to the song but also took away important messages in the song.

WhatsApp Fisher-to-Fisher Platforms

For the mass provision of airtime/data bundles, there was an initial attempt at using a payment platform of the project’s local bank. However, the bank’s platform faced intermittent platform instability which delayed the transfers and ultimately proved incapable of handling bulk transfers. SFMP then switched to a bulk digital payment service provider, Npontu Technologies, that was able to execute this task successfully for the four months. However, a small group (usually 15-20) reported that they did not receive their data or airtime after each transfer. The composition of this group varied after each transfer and the conclusion the service provider reached was that it was a network issue where the value of the individual’s account did not update after the transfer. Npontu Technologies was requested to follow up with the telecommunication providers, which showed that the funds were transferred, and the affected people could still access data service and this was subsequently communicated to the affected group.

For privacy and group cohesion purposes, proposed group members should be thoroughly informed about the nature and purpose of the group and the members themselves should volunteer to be part of the group. Proposed group members should also go through a simple vetting process to ensure they are fisherfolk themselves and would be able to engage actively in group activities. Some of the contacts provided belonged to the children or other relatives of the targeted fisherfolk. In most cases the fisherfolk did not inform their representatives about the group. They were subsequently given orientation about the purpose of the group but most did not appear pleased with how they were added and a few declined to join.

At the conception of the COVID-19 response program, it was thought that the groups would include all segments of the fisheries sector including the industrial sub-sector. However, the three associations constituting the industrial and semi-industrial sub- sectors of Ghana’s fisheries; GTA, GITA, GIFA did not express interest to be part of this activity. Consequently, the total number of WhatsApp groups created was limited to 21, instead of 24 groups as was originally planned. In future projects, the commitment of stakeholders should be secured in the conception stage to ensure group targets are feasible.

Even though WhatsApp Messenger is the most popular messaging platform in the country, it features inadequate group management mechanisms such as anti-spam, administrator deleting posts and analytics and reporting. This made the monitoring of the platform for growth, post engagement, and the curbing of fake news and videos difficult.

Provision of data bundles for four months played a role in keeping group members on the platform. Even though the majority of the group members stayed when the transfers ended, a total of 73 members from the 21 groups left after the stipend ended. This was a significant increase in dropouts over the previous four months when data was being provided.

The deployment of the handwashing stations to active fish landing and processing sites was based on a baseline survey of all fish landing and processing sites along the four coastal regions of Ghana by UCC. This baseline provided useful information as many of the landing sites in the FC Frame survey were inactive, were very small – one or only a few canoes, or very isolated. The baseline also provided information about exiting conditions (number of Veronica buckets on site – problems of no soap and water availability). This helped SFMP tailor implementation more appropriately to site-based needs.

Landing Sites Competition

The landing sites competition was conducted based on data gathered from monthly surveys of site advocates on behavior and practices of fisherfolk at all 242 landing sites. The surveys were administered in two forms; through the Engage Spark automated phone polling platform and through enumerators calling site advocates. The following issues were discovered:

- As many as approximately 20 percent of site advocates were unable to respond to both forms of the survey. In practice, this meant that certain districts with fewer sites had no data from any of their sites and thus could not compete while other districts did not get responses from the full list of sites competing.
- Responses of site advocates showed a tendency to be positively biased and scored compliance with COVID-19-safe practices at higher levels than SFMP and UCC staff who were able to document via field site spot checks.

Cooperation with the Fisheries Commission, MMDAs, SFMP's implementing partners, and GNCFC in organizing the landing sites competition ensured its success. The Fisheries Commission, implementing partners and GNCFC were involved in the conceptualization of the competition. The regional offices of the Fisheries Commission were also involved in the presentation of awards to the winning landing sites. This gave a greater sense of authority to the awards and a higher sense of achievement for the winning sites. In validating the scores of the highest ranked sites, the awards committee did not only consider adherence to COVID-19 safety protocols, but also considered fisher folk's adherence to general sanitation and hygiene practices at the landing sites.

Apart from the presentation of plaques which changed hands each month, the landing beach committees of the winning landing sites were presented with plastic chairs to aid in conducting meetings at the landing sites. Public address systems, meeting sheds, rakes, brooms dustbins, water storage containers like polytanks, etc. could be considered as awards for future projects. It would also be useful to elicit the views of stakeholders in choosing awards.

Deployment of handwashing stations to fish landing sites

The deployment of the handwashing stations has been critical in the success of SFMP's implementation of the SBCC strategy, as community members had an opportunity to practice the information received from the IEC materials. At the onset of the COVID-19 pandemic, some government agencies and institutions also deployed handwashing stations for use by the public. However, most are now abandoned as they are not manned. SFMP's strategy of training community members as advocates, the supply of consumables and the provision of stipends, ensured that all 242 were well maintained and ready for use by every community member. (Figures 6 and 7). When problems did arise and stations became broken, the WhatsApp platforms were instrumental at getting that information to partners quickly so that they could be fixed by local artisans and put back into use as quickly as possible.



Figure 6 Pictures of site advocates cleaning handwashing stations.

**Left: Site Advocate at Vodza landing site scrubbing a 100 L handwashing station.
Right: Site advocate at Demi landing site washing a 100 L handwashing station.**



Figure 7 Pictures of site advocate who dug a well to ensure clean water supply for the handwashing station

**Left: Dzelukope site advocate fetching water from his hand dug well.
Right: Site advocate washing his hands at the handwashing station with the well in the lower right background.**

APPLICATIONS

Social and Behavior Change Communication (SBCC) Strategy

For fisheries interventions that seek fisherfolk to either desist from old practices or adopt new practices, social and behavior change modules should be integrated in these interventions. For example, hygienic fish handling and processing, the use of the Ahotor oven, diversified/ alternative/ complementary livelihoods interventions, or interventions on Illegal Unreported Unregulated fishing. These are some examples of fisheries interventions that require fisherfolk to change their current practices to more desired behaviors.

The strategies developed must take into consideration the unique situations of the fisheries sector and fisherfolk. Field visits and monitoring must include the behavior change communication unit/personnel.

Information, Education and Communication (IEC) Materials

Messaging targeting fisherfolk must be developed in collaboration with fisherfolk and other stakeholders to ensure that messages developed are appropriate and relatable by fisherfolk. The materials developed by the SFMP could serve as a guide for future engagements.

WhatsApp Fisher-to-Fisher Platforms

Future projects should consider adopting the “Telegram” messaging app. Some features of Telegram which make it user friendly as compared to WhatsApp are:

- Telegram users in a group have access to voice chat rooms which functions similarly to conference calls. This allows for real time group meetings especially with members who may not have high levels of literacy to participate in a text meeting.
- Telegram also has a feature where newly added members can have access to previous chats and files.
- Telegram stores the app contents on their servers so this help manage the phone’s storage space.

Telegram also offers some group management features such as:

- Telegram groups can have up to 200,000 members and supports features such as hashtags to help track conversations about a topic in the group. For monitoring and evaluation purposes, the feature “Group Stats” enables administrators to view statistics on group growth and engagement. Telegram also offers polls which can be used to run informal surveys in the group.
- Telegram allows automated tools called “bots” which can be set up to automatically post messages and carry out other administrative duties. Telegram also enables group administrators to partially ban specific disruptive members by disabling them from sending messages or files.
- Telegram enables group administrators to share messages to multiple groups at the same time and pin messages like group rules or an upcoming meeting to the top of the group.

To make the transition easier, prospective group members can join the WhatsApp groups and after being coached on how to install the Telegram app (a process similar to the installation of WhatsApp) by trained volunteers, they can be migrated to the Telegram groups via links.

Landing Sites Competition and Awards

The landing sites competition can be adopted by the Fisheries Commission and scaled up to foster community participation. For example, a competition on beach cleanliness or good/sustainable fishing practices can be instituted.

Deployment of handwashing stations to fish landing sites

Frequent handwashing remains critical in the prevention of most diseases that are endemic in fishing communities even before the onset of COVID-19. Time and financial resources are required to keep these handwashing stations functioning. Therefore, the fisheries associations whose members are the ultimate beneficiaries of these interventions should ensure that the gains made are continued.

NEXT STEPS FOR GHANA

COVID-19 remains a public health threat. Education on the disease should continue. As the SFMP comes to an end, agencies such as MOFAD, FC, MOH, MOI, and National Commission for Civic Education (NCCE) should continue implementation of the SBCC strategy, hopefully scaling it up. Dissemination of the IEC materials (Posters, animations, video, campaign song) developed by the SFMP should continue. The IEC materials have already been made available to these agencies. In the event of availability of new information on the pandemic, the IEC materials could be modified and disseminated to fisherfolk. As vaccines are becoming available in Ghana, new materials could be developed and disseminated on the benefits of getting vaccinated and to counter possible vaccine hesitancy among fisherfolk. The Fisheries Commission should consider running the COVID-19 Safety Landing Sites Competition after the SFMP ends and possibly explore other measures of assessing the landing sites. Also, the FC could run a competition to award landing sites and fisherfolk on best fishing practices, etc.

The Fisheries Commission and fisheries associations should assume the administration of the social media platforms to continue disseminating IEC materials. Volunteers at the district or community level of the associations and the zonal officers of the FC could be trained to assist in managing the groups they belong to. The platforms can also serve as public channels where resource users and policymakers nation-wide such as the Fisheries Commission, chief fishermen, landing beach committees, or co-management groups can share and document best practices and success stories relating to the fight against IUU fishing and similar sustainable fisheries management practices.

The COVID-19 pandemic may not be over anytime in the near future. This means that fisherfolk, like all other citizens, need to adhere to the safety protocols to prevent infection and spread of the coronavirus in their communities. Local leaders of the fisheries associations – Chief fishermen and the ‘konkohemaas’ should assume the responsibility for management of the handwashing station, ensure the constant supply of consumables, and remunerate the site advocate to ensure that the stations are not desecrated and community members always have a safe place to wash their hands.

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CASH TRANSFERS TO FISHERIES DEPENDENT VULNERABLE HOUSEHOLDS

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BACKGROUND

In January 2020, the World Health Organization (WHO) declared the outbreak of a new coronavirus disease (COVID-19) a Public Health Emergency of International Concern. This virus has since spread to most countries in the world including Ghana. When the Government of Ghana in March 2020 instituted a lockdown of two key economic centers of the country; Greater Accra Metropolitan Area and the Greater Kumasi Metropolitan Area, as part of measures to prevent infection and spread of the disease, the fisheries sector was excepted as essential for food security. However, considering the mode of infection and spread of the virus and given the communal nature of harvesting, landing and other post-harvest activities before fish reaches consumers, it was anticipated that any infection and community transmission could adversely impact the livelihoods of 300,000 households most of whom are already vulnerable to economic shocks and faced with collapsing fisheries stocks.

As a result, in May 2020, USAID/Ghana extended its cooperate agreement with URI on the Ghana Sustainable Fisheries Management Project (SFMP), originally scheduled to expire in September 2020, for seven months through April 2021, with the supplemental project goal to *“Prevent the spread and mitigate the economic effects of COVID-19 among vulnerable households in fishing communities in Ghana.”* One of the key result areas identified within the scope of the SFMP COVID-19 response initiative which should contribute to the SFMP supplemental goal was *“Two thousand extremely vulnerable fisheries-dependent households avoid extreme poverty.”*

Towards achievement of this result, SFMP designed and piloted a cash transfer program targeting 2000 economically vulnerable fisheries dependent households at risk of not meeting their basic food needs. The methodologies piloted built on existing SFMP partner relationships with fishing communities and the Fisheries Commission with the aim of using this opportunity to put in place structures and processes that can be leveraged in the future to reinforce long-term systems for responsible fisheries management and fishing community coping strategies. For example, similar schemes might be used to mitigate economic hardship and food insecurity during closed fishing seasons. An SFMP closed season socio-economic study conducted in 2019 found that household hunger went up and dietary diversity went down during the 2019 fisheries closure, likely due to declines in household income as fishing ceased. Provision of safety nets was one of the recommendations of the study.

PROJECT IMPLEMENTATION STRATEGY

The design, implementation, monitoring and evaluation elements of the SFMP economic safety net intervention were informed by analysis of Ghana’s vulnerability and poverty profile (World Bank, 2016b), and guiding principles espoused by the FAO (Social Protection Framework, FAO, 2017). The key FAO guiding principles for social protection applicable to fishing communities are:

- Social inclusion.
- Gender equality.
- Sustainability.

Consultation with Fisheries Associations

The fishing sector in Ghana is dominated by the artisanal fishery involving about 100,000 fishermen and an estimated 33,000 women who process the harvest. These two groups of fisherfolk have over the years formed national associations with membership across the four coastal regions of Ghana. These associations are the male led Ghana National Canoe Fishermen's Council (GNCFC) and the three female led processor associations Development Action Association (DAA), Central and Western Fishmongers Improvement Association (CEWEFIA), and the National Fish Processors and Traders Association (NAFPTA). Since its inception, the SFMP has built the capacity of these associations to enable them to contribute effectively to sustainable fisheries management in Ghana. These associations were engaged on SFMP's COVID-19 interventions and the strategy for implementation to harness their local knowledge and ensure their buy-in and cooperation.

Set up of fisheries association representatives on virtual WhatsApp platform

Due to the restrictions on travel as a result of the COVID-19 outbreak, the project set up WhatsApp groups similar to the organizational structures of the fisheries associations involving two or three layers of authority; national, district and community level groups with overlap of representatives in the national level groups with the district and community levels to facilitate flow and dissemination of information from the national to community levels across all four coastal regions of Ghana. This was referred to as the Virtual Platform for Fishers (VPF). The essay on COVID-19, Social and Behavioral Change Communication (SBCC) provides more detail on the structure of the VPF. The fisheries associations were tasked to nominate members to represent the various regions, districts and communities on the virtual platform. The representatives at these levels of decision making worked to ensure the free flow of information on the selection of potential beneficiary households for the cash transfer economic safety-net pilot across all the fishing villages.

Consultation with MMDAs

There are 27 Metropolitan, Municipal and District Assemblies (MMDAs) along the four coastal regions of Ghana. The SFMP team sent letters to the Coordinating Directors of each MMDA to inform them of the COVID-19 interventions within their jurisdictions. This was followed up with further engagements by SFMP's implementing partners with the political heads in the districts on the mandate of the project and the reason for implementing the economic safety net intervention. This engagement was necessary to avoid any misconceptions and misinformation in the communities, especially with 2020 being an election year in Ghana.

Establishment of an Ad hoc Technical Committee

To leverage on the expertise of key stakeholders and in consonance with policy implementation and coordination arrangements for social protection programs in Ghana, an ad hoc technical committee was established, made up of one nomination each from the following institutions:

1. The Ministry of Gender, Children and Social Protection – Chairperson.
2. The Ministry of Gender, Children and Social Protection (MOGCSP), Department of Social Welfare.
3. The Ministry of Gender, Children and Social Protection (MOGCSP) – Livelihood Empowerment Against Poverty (LEAP), Program Secretariat.
4. The Ministry of Fisheries and Aquaculture Development (MOFAD).

5. The Fisheries Commission.
6. The National Development Planning Commission (NDPC).
7. The Ministry of Health and the Ghana Health Service.
8. The Ministry of Finance.
9. The Ministry of Local Government and Rural Development.
10. The Coastal Development Authority. (CDA)
11. The Ghana Statistical Service.
12. Fisheries Associations – Ghana National Canoe Fishermen’s Council, National Fish Processors and Traders Association.
13. USAID/Ghana Sustainable Fisheries Management Project –the Coordinating Unit.

The objective of the Committee was to provide strategic oversight for the development of appropriate methodologies for the activity, which could be adopted by Government and Development Partners in the future to provide assistance to poor and vulnerable fisheries dependent households to mitigate economic shocks, including the implementation of future fisheries closed seasons.

Development of criteria for selecting beneficiary households

In defining the criteria for the selection of potential beneficiary households, the representatives of the fisheries associations defined a household “as a social unit headed by an adult male or female or a couple with dependents living in a house, under a shed or fish processing center, and who share common meals”. Each potential household should be fisheries dependent at any level of the value chain and not beneficiaries of LEAP or any other major government social protection scheme. The selection criteria was defined around three main themes;

- Health.
- Education.
- Standard of living.

Sensitization of fishing communities on the selection criteria

Following the development of the criteria for selecting the beneficiaries, the representatives of the fisheries associations were tasked to sensitize the fisherfolk in their various communities on the definition of poor and vulnerable persons as outlined in the criteria.

Selection of potential beneficiaries

The project adopted two methodological approaches in the selection of potential beneficiaries as indicated below:

- Multiple stakeholder organizations -CEWEFIA, DAA and NAFPTA – which have predominately female members.
- Single stakeholder organization - GNCFCA – which has predominately male members.

A graphical presentation of the selection process is depicted in Figure 8 below.

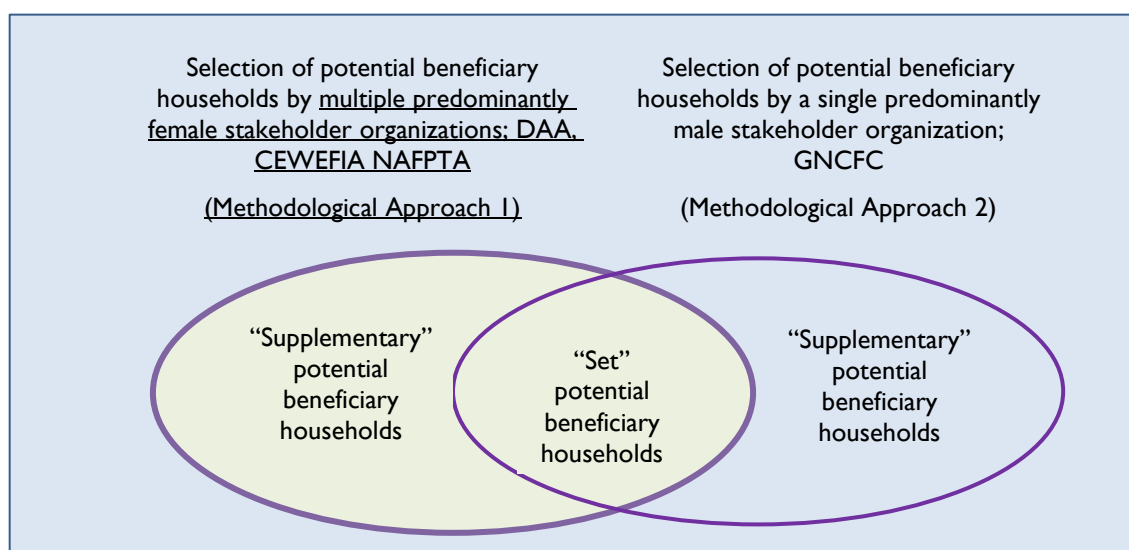


Figure 8 Graphical representation of the selection process

Methodological approach 1: Selection of potential beneficiaries by multiple stakeholder organizations of fish processors.

SFMP assigned to the three fish processor associations, CEWEFIA, DAA, and NAFPTA, the responsibility of identifying a total of 2000 potential beneficiary households across all coastal regions of Ghana, using the number of landing beaches as an index of the population of fishers to be selected per region, as indicated in Table 2 below. The assignment of identification and selection responsibilities among stakeholder organization per region, was based on the level of the organization’s influence and strength in a given geographic area.

Table 2 Allocation to DAA, CEWEFIA and NAFPTA

Region	No. of Districts (MMDAs)	No. of Landing Beaches	No. of Villages	No. of Beneficiary Households per Region	Responsible Stakeholder Organization
Volta	3	47	28	322	DAA
Greater Accra	9	59	44	404	DAA/NAFPTA
Central	9	97	42	664	DAA/CEWEFIA
Western	6	89	72	610	NAFPTA
Total	27	292	186	2000	

Methodological approach 2: Selection of potential beneficiary households by a single stakeholder organization, the GNCFC.

The SFMP has worked with the male led GNCFC to bring about reforms within the marine artisanal fisheries sector. The GNCFC is the largest fisheries stakeholder organization, with a nationwide membership of over 100,000 including influential Chief Fishermen and canoe owners. The Council has a very strong presence in all landing beaches across all four coastal regions of Ghana and local representatives have good knowledge of the socioeconomic conditions of fishers at the village level. The SFMP, therefore, leveraged the local knowledge

and institutional structures of the GNCFC in the identification, selection, and monitoring of the delivery and use of economic safety net assistance to eligible vulnerable households. The GNCFC was also assigned the responsibility of identifying 2000 potential beneficiary households, using the number of landing beaches as an index of the population of fishers to be selected per region as indicated in Table 3 below.

Table 3 Allocation to GNCFC

Region	No. of Districts (MMDAs)	No. of Landing Beaches	No. of Villages	No. of Beneficiary Households per Region	Responsible Stakeholder Organization
Volta	3	47	28	322	GNCFC
Greater Accra	9	59	44	404	GNCFC
Central	9	97	42	664	GNCFC
Western	6	89	72	610	GNCFC
Total	27	292	186	2000	

The local representatives of the fisheries associations were, thus, expected to select a total of 4000 potential beneficiaries across the various fishing villages and towns. Considering that the selection of beneficiaries was done by two approaches (male-led and female-led) independent of each other from the same communities using the same selection criteria, it was expected that the two independent approaches would identify the same potential beneficiaries in some instances. The overlap between the two methodological processes, referred to as “set potential beneficiary households” in Figure 8 above were considered to be the true poor and vulnerable to have been identified and selected by two independent process using the same selection criteria. The “set potential beneficiary households” were not subjected to further validation by Proxy Means Test. Potential beneficiaries not falling within the intersection (overlap) between the two independent selection processes were referred to as “supplementary potential beneficiaries” as shown in Figure 8 and were subjected to further validation using a Proxy Means Test, the Poverty Probability Index (PPI).

Design of beneficiary data collection form

A data collection form was designed to capture specific parameters/variables and socioeconomic characteristics of potential beneficiaries (Heads of Households) who fall into the categories of poor and vulnerable as defined by the selection criteria. The variables also included some unique identifiers that allowed SFMP to cross check the beneficiaries selected with the Livelihood Empowerment Against Poverty (LEAP) Registry.

Data Collection

Due to COVID-19 the project strategy was to reduce travel and face to face interactions. SFMP therefore, relied on the representatives of the fisheries associations in the various communities to collect beneficiary household information and send that information to SFMP. The data collection forms were sent electronically mainly through WhatsApp platforms to community representatives who filled them with defined or specified data elements on each identified potential beneficiary household and sent the form through the same means to the project team. Some forms were sent by taking pictures of hand filled data collection sheets sent to SFMP via mobile phones and some hand filled forms were forwarded to SFMP Implementing Partners for collation and subsequent submission to SFMP. The database list of household heads included information on the gender of

household head and whether they were female headed household with no adult males, and the household size.

Determination of transfer amount, duration and frequency

The objective of the cash transfer program was to support declining household consumption due to the COVID-19 restrictions. The value of the cash transfer to each beneficiary was the Cedi equivalent of US \$51.30 per month for four months at design stage. This amount was rounded up to Cedi equivalent of US \$52 during the implementation phase. This amount covers an estimated 20% of household consumption for households at the [international poverty rate](#) of \$1.90 per day per capita which [is similar to the Ghana national poverty rate](#).

Using mobile money platform to transfer cash to beneficiaries

Ghana is one the fastest growing mobile money markets in Africa, and the Government of Ghana is seeking to strengthen its payment systems by leveraging the widespread usage of mobile phones as alternative channels for accessing finance, deepening financial inclusion and promoting a cash lite economy. The mobile money platform is the most effective means of cash delivery to the fisherfolk who are largely unbanked and underserved. Considering the number of beneficiaries and the volume of cash to be transferred, the SFMP contracted the services of a digital financial service provider, to first validate that all mobile numbers matched with the names of the selected beneficiaries before payments were made. Final beneficiaries who did not have their own phone numbers were supported by the leadership of the fisheries associations in the various communities to acquire and register SIM cards – (required for signing on, and not necessarily owning a phone) on the mobile money network of their choice before they received their cash transfer.

Monitoring selected beneficiaries

It was essential to know if recipients were safely able to receive and spend their transfer, if they were able to secure their basic needs and if not, what needed to change, as well as other impacts the cash had. The SFMP M&E team monitored the receipt, use, and impact of assistance provided, including measures to track the risk of leakage or elite capture. A phone-based polling tool, [Engage Spark](#), was contracted to enable SFMP to collect data on each beneficiary for monitoring, evaluation and follow up of interventions. The monitoring team used cash transfer evidence from the payment services provider, Npontu Technologies, to ensure the funds were received by the registered phone number of the household head. The M&E team employed the services of six enumerators to conduct post-disbursement monitoring via phone surveys to verify the receipt and use of cash transferred. Phone poll data was collected on what the cash transfer funds were used for, a Household Food Insecurity and Access Score (HFIAS), and Minimum Dietary Diversity for Women Score (MDDS-W). These polls were based on a sample of all the persons receiving cash benefits and of women for the MDDS-W poll.

PROGRESS AND RESULTS

Over a period of 10 days, the local representatives of the fisheries associations through the two selection processes selected a total of 3,244 out of the expected 4,000 potential beneficiary households they considered to be poor and vulnerable using the criteria developed themselves, across 157 landing sites instead of the planned 186. This represented 81% of the expected target of 4000 potential beneficiary households.

Reasons for the inability to achieve the desired target of 4,000 potential beneficiary households include:

- Some fish landing sites were considered inactive during a baseline survey. As a result,
-

those communities were no longer considered to be dependent on fisheries resources.

- Some community members refused to participate because they thought it was a scam.
- Some community members also thought it was a ploy to delete their names from Ghana’s electoral roll as the Voter card was one of the national identification cards required to be used for identification of potential beneficiaries.

The results of potential beneficiary households selected by stakeholder organizations is shown in Table 4 below.

Table 4 Results of Stakeholder led Beneficiary Household Selection

Planned and Actual Beneficiary Household Selection by Stakeholder Organizations							
Region	Planned No. of Head of Household	No. of Head of Household Selected by GNCFC	No. of Head of Household Selected by NAFPTA/DAA/CEWEFIA	Total No. of Head of Households Selected	No. of Overlap between the two Selection Processes	No. of Overlap with LEAP Data Set	% overlap with LEAP Data Set
Volta	644	300	316	616	12	24	3.90%
Greater Accra	808	259	275	534	0	71	13.30%
Central	1328	512	528	1040	5	153	14.71%
Western	1220	475	579	1054	7	322	30.55%
Total	4000	1546	1698	3244	24	570	17.57%

Validation of selected beneficiaries

Following selection of the 3,244 potential beneficiary households by the fisheries associations, SFMP’s next step was to vet and validate their poverty status using a proxy means test survey instrument, the [Poverty Probability Index](#) (PPI). At design stage, it was considered to use the same National Targeting System (NTS), used by the LEAP program under the Ministry of Gender, Children and Social Protection (MOGCSP) to assess poverty status of potential beneficiaries falling outside the intersection of the two selection processes. During implementation it was realized that the COVID-19 restrictions were not going to make it possible for SFMP to adapt the Proxy Means Test used by the LEAP program, which would have required in person administration of the survey instrument. As a result, the SFMP chose to use the PPI as it was simpler and could be administered by a phone poll rather than in-person interviews. The PPI consists of a series of ten questions administered to the heads of each selected household. Each question is assigned a predetermined score and the total score for the 10 questions provides an index of the probability of the household being poor and vulnerable. The higher the score, the lower the probability the household is poor and vulnerable and vice versa. The potential beneficiaries falling within the intersection between the two selection processes, the “set potential beneficiaries” were assigned PPI score of zero – The PPI scores obtained following the exercise therefore range from 0-100.

In the process of validating the poverty and vulnerability status of the potential beneficiary households, the following three groups emerged:

- Households, falling within the intersection between the two selection processes, the “set potential beneficiaries”: These households were only 24. They were considered to be truly poor and vulnerable to have been independently identified and selected by both the female and male led associations and were not subjected to the validation process using the PPI instrument. They were verified to ascertain the correctness of mobile money accounts or assisted to set up mobile money accounts.
- Heads of households who indicated on the data collection forms submitted to the project team that they had their own phones. These were assigned to an automatic phone polling platform, Engage Spark. In the end, many potential beneficiary households who indicated they had their own mobile phones and were assigned to the automatic phone polling platform could not take part in the automatic polling or could not complete the PPI because they were not familiar with the process or they could not answer their calls at the time scheduled for the automatic polling. These beneficiaries had to be reassigned to manual administration of the PPI survey through enumerators. As a result, out of the 3220 scheduled to take the PPI survey, only 142 heads of households were able to complete the questions through the Engage Spark platform.
- The remaining 3,078 heads of households were assigned to one of six enumerators for manual administration of the PPI. The enumerators were trained in administration of the questionnaire via telephone calls using one of the five widely spoken languages along the coast (Ewe, Ga, Fante, Dangbe, Nzema). Of the 3,078 potential beneficiary households assigned to the enumerators, they were able to administer a combined total of 2,037 PPI surveys, despite repeated attempts to reach all potential beneficiaries. The enumerators encountered problems with poor connectivity, phones switched off and calls dropped. As a result of the need to reach many of the potential beneficiary households through intermediaries, some heads of household ended up taking the PPI questionnaire twice instead of once. The 2,037 validated potential beneficiaries therefore included some duplicate names that had to be removed during a data cleaning exercise.

Challenges with data collection and processing

In the identification and processing of potential beneficiaries, challenges were encountered. Some of these include:

- The differential presence and strength of both the GNCFC and NAFPTA across the four coastal regions meant that some communities allocated to them could not be reached as they did not have representatives there. This resulted in the shortfall in achieving the target of selecting an initial list of 4,000 potential beneficiary households.
- To facilitate the work of fishery association representatives on the virtual platform, SFMP was to support them with voice and data credit. The initial decision to use SFMP’s bank for this did not work as anticipated requiring the need to contract a digital payment service provider. This caused a delay in the transfer of voice and data credit to the representatives, and subsequently the delivery of the data collation process.
- Response rates of the automatic phone polling when the PPI was administered to selected potential beneficiaries was low. Out of the 3,220 beneficiaries, 881 had their own phones and yet only 142 of them could be reached by automated phone polling. This meant that most potential beneficiaries had to be reached by in person calling to

conduct the PPI survey. Even with that method, enumerators could only reach 2,037 beneficiaries, meaning that only 2,179 out of the 3,220 were vetted or validated. The final 2000 beneficiaries were therefore selected from the 2,203 potential beneficiaries. Out of the initial 2,000 beneficiaries selected, approximately 1,500, representing 75% did not own phones and did not have mobile money accounts probably due to their low income and low literacy status and so they could not receive their cash transfer on the mobile money platform. SFMP staff had to call each of these beneficiaries and ask them to obtain a SIM and register on the mobile money platform. Despite the many follow up calls, 15 of them could still not be reached.

Disbursement of cash to selected beneficiaries

A total of 1987 beneficiary households were finally verified, however only 1905 received the cash transfer (see Table 5) due to repeated failed mobile money transfers. The percentage of female headed households was approximately 70%. SFMP transferred the cash to Npontu Technologies a local digital financial payments service provider to send the transfers to each beneficiary over the four-month period. Npontu Technologies submitted a financial report showing cash transfers to each mobile number at the end of every month. A total of \$208 in local currency was transferred to each of the 1905 households between December 20, 2020 to March 2021 for a total cash disbursement to all beneficiaries of \$396,240. Due to delays caused by SIM and mobile money registration, some beneficiaries received more than one monthly payment at the same time to catch up. This was necessary due to SFMP's hard end date, leaving no room to spread payments out over additional months for those with a delayed first payment.

Table 5 Planned and Final Beneficiary Households by Region

Implementation of SFMP Economic Safety Net Scheme - Summary Result of Selection and Verification Processes							
Location & Initial Allocation		Overlap & Variation with LEAP		Variation of Final Beneficiaries from Initial Allocation		Final Beneficiaries	
Region	Initial Allocation	Overlap with LEAP Data	% Overlap	Variation from Initial Allocation	% Variation	No. of Final Beneficiaries	% of Total Beneficiaries
Volta	322	14	7.91%	41	12.73%	363	18.27%
Greater Accra	404	35	19.77%	-20	-4.95%	384	19.33%
Central	664	52	29.38%	42	6.33%	706	35.53%
Western	610	76	42.94%	-76	-12.46%	534	26.87%
Total	2,000	177	100.00%	-13	-0.65%	1987	100.00%

Impact of cash transfer

Compilation and analysis of post-disbursement monitoring by enumerators and via phone surveys to verify the receipt and use of cash transferred and its' impact, including HFIAS and MDDS-W results, was not complete at the time of publication of this essay. Refer to the final SFMP report for more information on the impact of this activity on vulnerable fisheries dependent households.

LESSONS LEARNED

The role of fisheries associations in the roll out of interventions in the sector

Targeting of beneficiaries for any economic safety net program often raises the question of:

- Eligibility-those whom the intervention is designed to reach.
- Inclusion and exclusion – those whom a program does or does not reach.

Targeting in the implementation of Economic Safety Net Schemes is primarily concerned with questions of how the eligible are identified and reached in practice, and mechanisms for self-targeting, community-based selection, and means-testing. Based on the design principle of social inclusion leading to the involvement of representatives of beneficiaries from the beginning in all stages of the program including execution, the fisheries associations were engaged to design their own selection criteria for vulnerable households (based on assessment of health, education and standard of living). They were also engaged to use the criteria to nominate households defined as poor and vulnerable to receive the cash benefit. While involvement of the national fisherfolk associations has value in developing program support and understanding, the fact that the 4000 household target of nominees was not reached shows its limitations. Either the process and association representatives on the ground were not fully capable of identifying such individuals, or the number of poor and vulnerable households in fishing communities is a smaller pool of households than initially thought. The lack of a full national household register of poor and vulnerable households disaggregated into occupational categories, makes targeting of beneficiary households more difficult and time consuming.

Proxy means testing

The PPI surveys showed that many of the nominated beneficiaries had low probabilities of being poor using this tool. This suggests that phone polling may not be a good approach for conducting a proxy means test. This was the pilot design and took into consideration the need to limit face to face meetings and travel in a COVID-19 environment, as well as conduct the beneficiary selection process in a very short time period of only a few months. Ideally, this process needs more time and a face to face meeting with the nominated households, similar to what the LEAP program does. Using a more detailed means test, would provide better assurance that the program indeed was reaching the intended fisheries dependent vulnerable households living at or below the international poverty line or in extreme poverty.

Use of Mobile money to create financial inclusion for fisherfolk

Despite the widespread use of mobile money in Ghana (about 40-45 % of adults), vulnerable fisherfolk are excluded as the cost of a mobile phone handset with basic features costs about \$10. They also lack the literacy and numeracy skills to operate the functions of the platform. These were some of the reasons why 75% of selected beneficiaries did not own phones.

APPLICATION AND NEXT STEPS FOR GHANA

Strengthening the capacity of fisheries associations

More time and resources are needed to strengthen the fisheries associations especially the GNCFC and NAFPTA to enable them develop systems that identify and include every member irrespective of their location. This may require expanding leadership opportunities at all levels, nurturing better relationships and trust among fisherfolk and their leadership, while advocating for the implementation of the Standard Operating Procedures developed with them by SFMP especially on the tenure of leadership, dues, and member welfare.

Strengthened associations will facilitate design and implementation of interventions such as economic safety net programs targeted at fisherfolk.

Using Mobile money platforms for cash disbursement to poor and vulnerable fishing households

Most fisherfolk are unbanked and underserved due to the nature of their businesses, location and literacy status. The mobile money platform is well suited for them as it enables them to access a suite of services relevant to their lives, encouraging them to keep their money in digital form and building resilience to financial shocks. This requires the involvement of digital financial service providers in the project design to educate the target beneficiaries on digital financial literacy as well as facilitate the design of user-friendly products to suit the needs of fishers.

Through this pilot experience, the project also aimed to demonstrate and validate methodologies and procedures to ensure effective targeting, delivery, and monitoring of economic safety net assistance in Ghana's artisanal fisheries that can be considered by the GOG to:

- Respond to future economic shocks.
- Accompany sustainable fisheries management measures such as closed seasons.
- Develop conditional safety nets and economic support programs for diversified and alternative livelihoods that reduce dependence on fishing, especially for youth as, Ghana prepares to cap canoe numbers and take additional measures to manage fishing effort.

Collaboration between MOFAD/FC, LEAP, and other national social protection programs in Ghana on the design and implementation of the USAID/SFMP COVID-19 response social safety net initiative has increased awareness of poverty and household vulnerability in Ghana's fisheries sector among these institutions with a social protection mandate. As LEAP and others extend their data collection programs to Ghana's coastal districts and include the identification of fisheries livelihoods in these areas in their databases, there will be an opportunity to document and strengthen linkages between vulnerable fisheries dependent households and these programs.

Completion of the National Household Poverty Registry

In October 2015, the Government of Ghana launched the Ghana National Household Register to streamline and make more efficient the targeting system in Ghana by using the same Proxy Mean Test indicators (Common Targeting Mechanism) in the identification of potential beneficiaries for social protection interventions. This is part of GOG's efforts to sustain and deepen the progress made in poverty reduction by ensuring that a larger share of benefits of social protection interventions goes to the extremely poor and vulnerable. The register is however yet to cover the four coastal regions. When completed the register should have a detailed breakdown of all poor households by occupation to make targeting and identification of beneficiaries less difficult and time consuming.

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PILOTING DIVERSIFIED LIVELIHOODS

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BACKGROUND

Over the last two decades, there continues to be drastic decline in the volumes of fish landings from the marine artisanal canoe sector in Ghana. The canoe sector registered its highest landings of about 140,000 tons in 1996. Thereafter, the landings of the canoe sector have continued to decline, registering the lowest volume of about 20,000 tons in 2016. Several reasons can be ascribed to this unfortunate development, including excessive exploitation of the marine fisheries resources, weak enforcement of fisheries laws, poor governance, and an open access regime.

With the onset of COVID-19 in Ghana, given the mode of transmission of the virus juxtaposed with the communal nature of all activities in the artisanal fisheries sub-sector, harvesting, landing, processing and sales of fish, it was anticipated that the COVID-19 pandemic would have dire consequences for fisherfolk and worsen the plight of those already poor and vulnerable in the sub-sector due to the near-collapse of Ghana's marine stocks, as dwindling fish catch means a reduction in income of fisheries dependent households.

Over the years, the low level of education among fisherfolk, both men and women, and their limited access to financial resources has constrained their ability to access livelihood opportunities outside the fisheries sub-sector, particularly for older generations who have worked in the sub-sector their whole lives. With limited options to pursue other diversified livelihood opportunities, coastal communities continue to rely on the already overstretched fishery as their primary source income.

For a growing youthful population out of school with little or no numeracy and literacy skills, the future in coastal communities looks bleak. The dual threats of dwindling fish stocks and the COVID-19 pandemic have heightened the need for fisherfolk to be encouraged to pursue livelihoods outside the sub-sector.

The goal of the Sustainable Fisheries Management Project (SFMP) COVID-19 response was, "To prevent the spread and mitigate the economic effects of COVID-19 among vulnerable households in fishing communities in Ghana." One of the three main objectives towards achieving that goal was "to provide the Government of Ghana with evidence on approaches for effective diversified livelihood options in fishing communities affected by COVID-19."

PROJECT IMPLEMENTATION STRATEGY

The COVID-19 pandemic presented an opportunity to pilot livelihood options that could reduce the dual threats of fishing pressure and the COVID-19 pandemic while providing stable incomes and new economic opportunities in the long-term, especially for the youth.

The SFMP livelihoods strategy focused on non-fishing related livelihood options targeted at the youth (18 - 35 years of age), both men and women, in fisheries dependent households. SFMP encouraged these youth to explore income earning opportunities not related to fishing given the difficulties of earning a decent living in the fisheries sub-sector due to the collapsing fishery. The youth were targeted, as the strategic approach was to focus on reducing the number of new entrants into the canoe fishery, given its current overcapacity and the problem of too many fishing vessels chasing nonexistent fish stocks and the need to optimize fishing activities to align with the ecological carrying capacity of the marine

artisanal fisheries while enhancing the socio-economic well-being and resilience of artisanal fisherfolk.

The Fisheries Commission's draft National Marine Fisheries Management Plan (2021-2025) proposes to impose a moratorium on new canoe registrations and cap the number at the current fleet size of approximately 14,000 canoes. Some studies suggest that only 9,000 canoes are needed to produce maximum sustained yields, indicating the possibility of fleet reduction in the future. These measures will result in fewer job opportunities in canoe fishing in the near future. With high youth unemployment and expanding populations, the need for non-fishing livelihoods in coastal communities becomes a priority to complement fisheries management measures including effort and capacity reduction.

Past research in Ghana and globally has shown the difficulty of trying to provide successful alternative livelihoods to fisherfolk involved in capture fisheries who embrace fishing both as a livelihood and as a lifestyle and enjoy the occupation of fishing. Culturally, fishing is viewed in Ghana as a way of life for those living in coastal communities. Many are unwilling or unable to leave fishing due to low skills, low formal education and lack of access to capital that constrain potential opportunities without some form of assistance. In this regard, the project approach was to pilot diversified livelihoods for individuals in fishing households rather than trying to convince fisherfolk to leave occupations in fishing. Diversifying the livelihoods of fisheries dependent households to enable them to adjust and cope more easily with management measures needed to rebuild fish stocks, such as a closed season when they experience significant reduction in income due to a temporary cessation of fishing, is one of the strategic policy options available to Government. Diversified sources of income outside of fishing can make it possible for fisheries dependent households to maintain reasonable dietary needs and meet basic expenses such as health and education of their children during fisheries closures, and to be more receptive to such management measures.

The project strategy focused on identifying desirable and marketable non-fisheries livelihoods that require resources that can be accessed locally. Building on past lessons of success and failure, the approach adopted was a bottom-up process that allowed beneficiaries to opt in to SFMP support interventions that would help launch them into new livelihoods of their choice rather than predetermining a fixed set of livelihoods that individuals would be trained in.

The short timeframe of only 11 months for piloting the selected diversified livelihood options constrained the deployment of all components of the strategic approach, such as establishing a savings culture among beneficiaries getting them to a point where they could be linked to local financial institutions that could provide on-going financial services and loans for business development or expansion.

PROGRESS AND RESULTS

Focus group discussions were held with youth from fisheries dependent households randomly selected by SFMP's partners from their operational communities, as well as interviews with other key informants to gauge youth interest in pursuing livelihoods outside of the fisheries sub-sector, livelihood options of interest to them, and to assess their skills and aptitudes for other potential livelihoods.

Based on synthesis of the responses, three livelihood options were identified as suitable to respondents' socio-economic profiles that offered the potential to generate immediate income for the people involved. These were:

- Production of handwashing soap.

- Baking of confection.
- Installation and repair of digital television and air conditioning systems.

In addition to these three diversified livelihood options, the project piloted the production of snacks from other types of food, targeted at the early adopters of the Ahotor fish smoking oven.

Coordinating with SFMP's local partners (DAA, CEWEFIA, Friends of the Nation and Hen Mpoano), a call for applications was made to the youth to apply to be trained on any of the three livelihoods. Over 200 applications were received. The final beneficiaries were those who met set criteria:

- Applicant should be from a fishing household.
- Not more than 35 years of age.
- Open to new innovations.
- Commitment to participate in the training for the full duration.
- A target of 40% women participants but ensuring opportunities for both men and women.

The training design took into consideration the educational status of the beneficiaries, their existing skill sets, and the commercial viability of livelihoods chosen. The duration for the trainings were:

- Production of handwashing soap – 1 day.
- Baking of confection – 5-6 days.
- Installation and repair of digital television and air conditioning units – 5 days.
- Production of alternative products on the Ahotor oven – 1 day.

Beneficiaries also received training on basic business and financial management skills to improve their aptitudes in these areas and to augment the technical skills they received. Each beneficiary received an in-kind grant consisting of startup tools and equipment under a cost-share arrangement, with beneficiaries contributing sweat equity.

Another component of the pilot livelihood initiative provided equipment grants for 27 beneficiaries who had already completed apprenticeships but could not work because they lacked the finances to acquire the required start up tools.

The SFMP and its implementing partners in the communities frequently monitored the performance of each beneficiary to ascertain uptake of the skills acquired and performance of their businesses. A brief assessment was carried out on the businesses of 24 beneficiaries selected randomly from all beneficiaries trained.

The three livelihoods piloted across Ghana's four coastal regions benefited 138 youth, 83% of them female. A breakdown of the livelihood options piloted is shown in Table 6 below.

Table 6 Breakdown of pilot livelihood options by gender

Livelihood Option	Male (%)	Female (%)	Total Persons who Benefitted	In Kind Grants per Beneficiary (GHS)	Total in Kind Grants per Livelihood Option (GHS)
Production of handwashing soap	2 (2%)	94 (98%)	96	250	24,000
Baking of confection	0	20 (100%)	20	1,275	25,500
Satellite TV & Air Conditioning	21 (96%)	1 (4%)	22	700	15,400
Total	23 (17%)	115 (83%)	138	2,225	65,900

Training of beneficiaries on the production of handwashing soap

One of the key safety protocols to prevent the spread of COVID-19 is regular washing of hands with soap under running water. Under the COVID-19 response, SFMP deployed 248 handwashing stations to fish landing and processing sites in all four coastal regions. As people in fishing communities and everywhere in Ghana adhered to the handwashing protocol, the demand for handwashing soap increased, creating an opportunity for more soap producers. A total of 96 youth, mainly fish processors and traders, were trained on the production of handwashing soap to supplement their income (Figures 9 and 10). They were provided free startup kits (chemicals and fragrances) to enable them to produce their first line of handwashing soap.

SFMP partners CEWEFIA and DAA procured handwashing soap from the trainees to supply the 103 handwashing stations at fish landing sites in their intervention zones. To date, these two partners have procured 1,845 liters of handwashing soap from 46 women valued at GHS 10,900 (approximately US\$ 1,896).



Figure 9 Training on the production of handwashing soap



Figure 10 Packaging of handwashing soap for sale



Figure 11 Training on bakery and confectionery

Training on baking and confection

Twenty females were trained on baking and confectionary of popular local foods such as meat pasties, *chin chin*, bread and spring rolls. They were also trained on customer care and marketing skills (Figure 11 above). On completion of the trainings, participants each received in-kind support of tools and equipment worth GHS 1,275 (US\$ 222) to enable them start operating immediately. The products from the trainings and leftover ingredients were handed over to them to start their businesses.

Training on digital TV and air conditioning installation and repairs

There were 22 youth (21 males, 1 female) trained on the installation and repair of digital TV and air conditioning units (Figures 12 and 13). The training covered both the theory and practical aspects of running a digital TV installation business, terms and rationale for satellite reception, dealing with clients, anatomy, systems, polarization and the positioning of a satellite dish. On completion of the training, each beneficiary received an in-kind grant of a tool kit worth GHS 700 (US\$ 122).



Figure 12 Beneficiaries learning to install a TV signal receiver



Figure 13 Trainee on installation of an air conditioner

As a young fisherman, it is sometimes difficult to go fishing and return with no catch to earn an income. With the new skills acquired in digital TV and air conditioning installation & repair, I can earn income from the services I provide. I will stop fishing and focus on the new skill and leave the sea completely.”

Robert Tetteh Nortey, Axim, Western Region

Production of alternative products on the Ahotor fish smoking oven

In 2017, SFMP developed and deployed a clean fish smoking technology called the *Ahotor* smoker for use by fish processors. There are currently an estimated 723 of these ovens in use by fish processors across Ghana. In the face of dwindling fish stocks, SFMP through its implementing partners DAA and CEWEFIA explored the possibility of using the Ahotor oven to produce other edible and marketable products (snacks) using local ingredients.

A brief market survey revealed an interest in the consumption of snacks such as fish nuggets (made with local potatoes and fish), fish/beef pasties, coconut cookies, bread rolls and maize dumplings (locally known as ‘*abolo*’). Fifty- eight women were therefore trained in the production, packaging, labeling and pricing of these products (Figure 14).

In order for the beneficiaries to begin production of these products immediately after the training so they would not lose the knowledge acquired, the trainees were given a free starter pack made up of:

- Basic ingredients (flour, butter and spices).
- Packaging materials.
- Labels.



Figure 14 Final products (cookies and bread rolls) made on the Ahotor oven and ready for sale

Equipment grants to beneficiaries who had already completed apprenticeships

The 16 beneficiaries who had completed trade apprenticeships but could not access the finance to procure the tools and equipment required to operate their businesses were supported with in kind grants of up to GHS 1000 per person. A breakdown of the livelihoods supported are shown in Table 7 below.

Business and financial management training

To enable livelihood beneficiaries to improve on their aptitudes and understanding of the dynamics of managing a small business, 33 were trained on business skills and financial management. Eighteen beneficiaries who did not have bank accounts were also supported to open accounts with financial institutions in their communities to enable them to start developing a savings culture and nurture a relationship with a financial institution that could potentially provide business financing in the future.

Table 7 Grant support to beneficiaries who had already completed apprenticeships

Livelihood	Male	Female
Catering	0	1
Hairdressing	0	7
Dressmaking	0	6
Painting	1	0
Make Up	0	1
TOTAL	1	15

Monitoring the impact of project interventions on livelihood beneficiaries

A survey was conducted on 24 (17%) individuals out of the total 138 livelihood beneficiaries that were trained and set-up to start their own businesses (Table 8). The survey was conducted three months after business start-up to gauge the viability of each livelihood option in 11 communities in the Central and Greater Accra regions.

Table 8 Sample size from population of livelihood beneficiaries

Livelihood Option	Trained & Set Up	Number Sampled
Production of handwashing soap	96	12 (70%)
Baking of confection	20	7(14 %)
Installation and repairs on digital tv and air-conditioning	22	5 (16%)
Total	138	24 (17%)

Specific questions were asked on technical skills, sales and marketing and financial support. Other areas included viability of the three livelihood options, adequacy of trainings and income earned per livelihood. A summary of findings are provided below.

Interest in livelihood option selected

Twenty-one (21) beneficiaries indicated they were selected for the livelihood they applied for while three (3) said they had indicated their preferences for livelihood options other than the ones they were trained on. They were, however making use of the livelihood skills acquired. Twenty-one (21) indicated the training content was adequate and useful. The rest stated otherwise. Three (3) beneficiaries responded that the starter- pack given to them was inadequate.

Technical Skills

Of the 24 beneficiaries, 16 expressed a need to improve on their technical skills specifically to improve the quality of their work. Trainees on the baking option asked for more training on measuring and timing for the mixing of the various ingredients as the one week allocated

for the training was inadequate. While the beneficiaries trained on the installation and repairs of digital TV and air conditioning also requested more training to improve their skills.

Sales & Marketing

Only one beneficiary expressed the need to improve on the marketing and sales of their products to enable them increase income. However, all beneficiaries expressed concern about meeting any increase in demand, as they lack the financial resources to expand production.

Financial Support

Two (2) of the trainees on the production of handwashing soap were yet to start any production due to lack of finance and complained that the start-up pack given by the project was inadequate. Twenty-two (22) respondents were practicing their livelihoods, at the time of the survey, and stated they would make it their main source of livelihood. These beneficiaries used their own savings or borrowed from family and friends to top up the ingredients SFMP provided as start-up kit. All 24 beneficiaries expressed the need for financial support to be able to scale up production as their initial levels of production were only yielding marginal profit after sales.

Satisfaction with trainings

The handwashing soap trainees indicated they were satisfied with the training but would have liked to be trained on the production of other detergents. The five respondents trained on the installation and repairs of digital TV and air conditioning indicated that, more practice would be useful to help them improve on their skills especially on the installation of air conditioning. The 18 out of 24 trainees sampled who participated in the training on business skills and financial management said they were satisfied with the content of the training. Overall, beneficiaries were satisfied with the various trainings received for the livelihoods piloted.

Adequacy of Training and Set – Up Support

Of the 22 beneficiaries who expressed satisfaction with the training, eleven of them were those trained on handwashing soap and nine of them also expressed satisfaction with the set – up package. (Table 9 and Figure 15). Six (6) beneficiaries expressed satisfaction with the training on baking while all seven (7) responded that the in-kind grant was adequate. The same opinion was expressed by five (5) of the trainees on the installation and repairs of digital TV and air conditioning.

Table 9 Perception of Adequacy of Trainings/In- kind Grants

Livelihood Option	Training		In –Kind Grants		Total
	Yes	No	Yes	No	
Production of handwashing Soap	11	1	9	3	12
Baking of confection	6	1	7	0	7
Digital TV and Air conditioning	5	0	5	0	5
Total	22	2	21	3	24

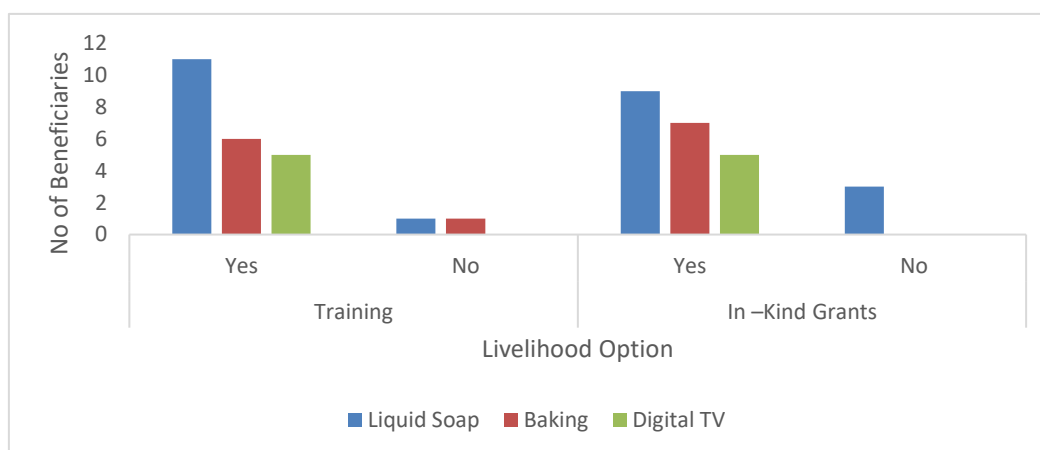


Figure 15 Perceptions of Training & Adequacy of In-Kind Grant

Income

The minimum amount of income earned per week by the beneficiaries so far is GHS 7.5 and the highest was GHS 350 with a mean of GHS 68.5 per set of production or services rendered. The beneficiaries trained on the installation and repair of digital TV and air conditioning earned GHS 30 – GHS 50 per installation per week. The amount earned per month is dependent on the frequency of job requests, and most serviced at least one customer each week. The beneficiaries trained to produce handwashing soap earned GHS 8 – GHS 350 per production depending on scale of production. Those trained on baking also earned between GHS 15 – GHS 175 per week (Table 10).

Table 10 Income earned per week

Livelihood Option	Mean amount earned (GHS)	Minimum amount per week (GHS)	Maximum amount per week (GHS)	Sample Size (N)
Production of handwashing soap	179	8	350	12
Baking	95	15	175	7
Installation and repairs of digital TV and air-conditioning	40	30	50	5

The income earned is dependent on the scale of production and some respondents indicated they are producing at the barest minimum. Thirteen of the beneficiaries responded that the income earned was not adequate to take care of their needs. Another 13 also responded that they had been able to buy additional equipment to supplement the starter packs given to them by SFMP. In terms of support, only five beneficiaries stated they needed financial capital to expand their business. The rest indicated that because they were just starting up, they did not have any immediate needs. On whether they had other livelihood options prior to the piloted intervention, 13 respondents stated they would have continued their existing livelihoods, while seven (7) stated they would have searched for other means as a source of livelihood.

Three of the beneficiaries indicated that they had been approached by some youth in their communities to train them but would rather focus on honing their skills before taking on any apprentices.

Challenges

Some challenges encountered include:

- The trainees lacked the interest and skills to pursue livelihoods outside of fishing and fish trading, due to their low literacy and limited access to financial resources.
- As a pilot, it was a challenge to identify and deploy innovative and commercially viable livelihood options that the beneficiaries could easily adopt and be able to generate the same level of income or even more than they normally earn from fishing. This was important to ensure that the intervention will be sustained even after SFMP exits.
- The short duration for the pilot meant that the period allotted for the trainings on the various livelihood options and set-up, and follow up monitoring, was very limited and constrained the content and scope of the technical skills training.
- There were gendered differences in the interest and choice of livelihood options by beneficiaries and fewer male-oriented options. The differences also stemmed from the idea that some livelihood options are typically male oriented and vice versa, influencing more women to sign up for options like the handwashing soap making and baker's confectionery.
- None of the fish processors who received training to produce alternative product on the Ahotor have produced anything for sale. They complain of the small profit margins on the sale of pilot products compared to the fish smoking.

LESSONS LEARNED

Beneficiaries were most interested in livelihood activities generating income in the shortest possible time

Choosing livelihood options that are innovative and marketable and suited to beneficiaries with low literacy in the very short time given, was challenging. Fisherfolk earn incomes after each fishing trip or market day, and so it is imperative to have a livelihood that has potential to generate income comparable to what they would have otherwise been earning. Some success was achieved on this pilot as about 60% of the beneficiaries trained were able to make sales immediately after training.

Creating livelihood opportunities for both men and women is challenging

It was difficult to recruit or attract many men to consider viable livelihood options identified such as baking and soap making. Conversely, very few women were interested in the satellite and air conditioning repair business. Interventions overwhelmingly benefited women more than men. For those livelihoods taken up mainly by women, there seemed to be some level of commercial viability associated with them.

Building Partnerships with the private sub-sector takes time

Adequate resources and time were required to develop and nurture partnerships with master tradesmen of business development service providers to coach or mentor trainees. There was also limited time for partnership formation and development with companies such as Zaaccoal and Sky Fox Services which could offer innovative and profitable livelihood options.

The number of beneficiaries targeted was small but could be scaled up in the future with additional resources and time

The number of beneficiaries targeted for this pilot was limited. Two hundred applications were received for the initial training on baking of confections and the installation and repairs

of digital TV and air-conditioning. Yet only 22 were selected during the first batch of trainings due to time and resource constraints.

There was a limited variety of products that beneficiaries could produce

The very short duration of the training limited the number of products that could have been taught under the selected livelihood options such as the production of sanitizers, dishwashing soap and bleach and the baking of assorted local confectionery.

Lack of microfinance for beneficiaries constrains potential for business growth

Even before the outbreak of the COVID-19 pandemic, fisherfolk were financially constrained as fish catch was low. This is exacerbated by the fact that fisherfolk have a poor savings culture and have little or no relationship with financial institutions. As business startups with low business and financial management skills, accessing credit would be difficult, and so the beneficiaries were rather encouraged to open savings accounts with financial institutions in their communities. This is helpful as businesses with a good savings culture can invest these savings or access credit to expand when they need to.

APPLICATIONS

The key lessons could inform design and deployment of future livelihood projects and initiatives in the following ways:

Choice of livelihood options

Priority should be given to livelihood options that generate income in the shortest possible time. These should be selected after continuous engagement with the target beneficiaries to guarantee their buy-in and uptake of the livelihood options.

Development of private partnerships

Partnerships with private enterprises and master tradesmen should be developed and nurtured over time to increase the number of individuals benefiting even after the tenure of the project's interventions.

Improved access to finance through savings

A good savings and investment culture is needed for business start-ups especially in the face of the high interest rate regime prevailing in Ghana. Future livelihood interventions should focus on nurturing the business and financial management skills of startups and linking them with financial institutions for further support.

Gendered livelihood interventions

Developing alternative and /or diversified livelihood strategies for fishing households needs to carefully consider gender biases and constraints. While many donors and Ministries focus on youth and women in developing employment opportunities and access to credit interventions due to the fact that in most social settings, these categories of people tend to be disadvantaged and underserved, the fisheries context provides a unique case where men who may no longer be able to earn an adequate living from fishing, need to be given equitable opportunities, and in some instances, perhaps prioritized. This is very important if interventions are designed to complement fishing effort or capacity reduction strategies. 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.

NEXT STEPS FOR GHANA

The near collapse of Ghana's fishery presents dire consequences for fisherfolk. As the Government of Ghana initiates management measures to rebuild fish stocks, there should also be carefully conceptualized and well-resourced interventions to implement diversified and alternative livelihood options that appeal to the youth, have the potential to generate better incomes and are commercially sustainable.

The processes established through this pilot intervention can be scaled up with adequate resources to be able to achieve results on a larger scale. An ecosystem of both private and public stakeholders with adequate funding and technical expertise is required to fully engage the youth and offer them opportunities that will systematically transition their future away from fishing.

The examples and lessons from these piloted livelihood interventions for fisherfolk provides the Government of Ghana with evidence on approaches for effective livelihood assistance to fishing communities affected by COVID-19. The mandate of the Fisheries Commission and the Ministry of Fisheries and Aquaculture Development is the management of Ghana's fish resources. In order for MOFAD and the Fisheries Commission to be successful in the execution of this mandate and make progress towards rebuilding the fisheries sub-sector, interagency coordination is needed with Ministries that have mandates to promote and support job creation, vocational training and youth employment, in order to foster a comprehensive strategy with multipronged actions targeted at the unique and special needs of fisheries dependent households.