



**USAID | GHANA**  
FROM THE AMERICAN PEOPLE

# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

## Training for Fishermen in Hygienic Fish Handling, Business Management and the Fisheries Management Plan



**JANUARY, 2019**

THE  
**UNIVERSITY**  
OF RHODE ISLAND  
GRADUATE SCHOOL  
OF OCEANOGRAPHY



Development  
Action Association

This publication is available electronically in the following locations:

*The Coastal Resources Center*

[http://www.crc.uri.edu/projects\\_page/ghanasfmp/](http://www.crc.uri.edu/projects_page/ghanasfmp/)

*Ghanalinks.org*

<https://ghanalinks.org/elibrary> search term: SFMP

*USAID Development Clearing House*

<https://dec.usaid.gov/dec/content/search.aspx> search term: Ghana SFMP

**For more information** on the Ghana Sustainable Fisheries Management Project, contact:

USAID/Ghana Sustainable Fisheries Management Project

Coastal Resources Center

Graduate School of Oceanography

University of Rhode Island

220 South Ferry Rd.

Narragansett, RI 02882 USA

Tel: 401-874-6224 Fax: 401-874-6920 Email: [info@crc.uri.edu](mailto:info@crc.uri.edu)

**Citation:** Nortey, E. E., Asare A. (2019). Training for Fishermen in Hygienic Fish Handling, Business Management and the Fisheries Management Plan. The USAID/Ghana Sustainable Fisheries Management Project (SFMP). Narragansett, RI: Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island and Development Action Association. GH2014\_ACT241\_DAA. 17 pp.

**Authority/Disclaimer:**

Prepared for USAID/Ghana under Cooperative Agreement (AID-641-A-15-00001), awarded on October 22, 2014 to the University of Rhode Island, and entitled the USAID/Ghana Sustainable Fisheries Management Project (SFMP).

This document is made possible by the support of the American People through the United States Agency for International Development (USAID). The views expressed and opinions contained in this report are those of the SFMP team and are not intended as statements of policy of either USAID or the cooperating organizations. As such, the contents of this report are the sole responsibility of the SFMP team and do not necessarily reflect the views of USAID or the United States Government.

**Cover photo:** Group Photo of Fishermen (Credit; Development Action Association)

## Detailed Partner Contact Information:

**USAID/Ghana Sustainable Fisheries Management Project (SFMP)**  
**10 Obodai St., Mempeasem, East Legon, Accra, Ghana**

**Telephone: +233 0302 542497 Fax: +233 0302 542498**

Raymond Babanawo	Chief of Party	Email: <a href="mailto:raybabs.sfmp@rcuri.org">raybabs.sfmp@rcuri.org</a>
Enoch Appiah	Deputy Chief of Party	Email: <a href="mailto:eappiah.sfmp@rcuri.org">eappiah.sfmp@rcuri.org</a>
Kofi Agbogah	Senior Fisheries Advisor	Email: <a href="mailto:kagbogah@henmpoano.org">kagbogah@henmpoano.org</a>
Perfectual Labik	Communications Officer	Email: <a href="mailto:perfectual.sfmp@rcuri.org">perfectual.sfmp@rcuri.org</a>
Mary Asare	M&E Officer	Email: <a href="mailto:mary.sfmp@rcuri.org">mary.sfmp@rcuri.org</a>
Brian Crawford	Project Manager, CRC	Email: <a href="mailto:bcrawford@uri.edu">bcrawford@uri.edu</a>
Ellis Ekekpi	USAID AOR	Email: <a href="mailto:eekekpi@usaid.gov">eekekpi@usaid.gov</a>

Hen Mpoano  
38 J. Cross Cole St. Windy Ridge  
Takoradi, Ghana  
+233 312 020 701  
Kofi.Agbogah  
[kagbogah@henmpoano.org](mailto:kagbogah@henmpoano.org)  
Stephen Kankam  
[skankam@henmpoano.org](mailto:skankam@henmpoano.org)

Resonance Global  
(Formerly SSG Advisors)  
182 Main Street  
Burlington, VT 05401  
+1 (802) 735-1162  
Thomas Buck  
[tom@ssg-advisors.com](mailto:tom@ssg-advisors.com)

SNV Netherlands Development  
Organisation  
#161, 10 Maseru Road,  
E. Legon, Accra, Ghana  
+233 30 701 2440  
Andre de Jager  
[adejager@snvworld.org](mailto:adejager@snvworld.org)

CEWEFIA  
B342 Bronyibima Estate  
Elmina, Ghana  
+233 024 427 8377  
Victoria C. Koomson  
[cewefia@gmail.com](mailto:cewefia@gmail.com)

Friends of the Nation  
Parks and Gardens  
Adiembra-Sekondi, Ghana  
+233 312 046 180  
Donkris Mevuta  
Kyei Yamoah  
[info@fonghana.org](mailto:info@fonghana.org)

Development Action Association (DAA)  
Darkuman Junction, Kaneshie Odokor  
Highway  
Accra, Ghana  
+233 302 315894  
Lydia Sasu  
[daawomen@daawomen.org](mailto:daawomen@daawomen.org)

### For additional information on partner activities:

CRC/URI: <http://www.crc.uri.edu>  
CEWEFIA: <http://cewefia.weebly.com/>  
DAA: <http://womenthrive.org/development-action-association-daa>  
Friends of the Nation: <http://www.fonghana.org>  
Hen Mpoano: <http://www.henmpoano.org>  
Resonance Global: <https://resonanceglobal.com/>  
SNV: <http://www.snvworld.org/en/countries/ghana>

## **ACRONYMS**

CBT	Competency Based Training
COTVET	Council for Technical and Vocational Education and Training
DAA	Development Action Association
DFTC	DAA Fisheries Training Centre
MSME	Micro, small and medium sized enterprises

## TABLE OF CONTENTS

ACRONYMS .....	iii
TABLE OF CONTENTS .....	iv
LIST OF FIGURES .....	iv
LIST OF TABLES .....	iv
EXECUTIVE SUMMARY .....	1
1. BACKGROUND .....	2
1.1 Objectives .....	2
1.2 Expected Outcome .....	2
2. OPENING .....	3
2.1 Orientation .....	4
3. DAY ONE: WHAT IS BUSINESS? .....	5
3.1 What makes Business Thrive? .....	6
3.2 What makes Businesses to Fail? .....	6
3.3 Pricing, Costing, Profit And Loss Analysis .....	7
4. DAY TWO: HYGIENIC FISH HANDLING AT SEA .....	8
What is fish spoilage? .....	8
4.1 Contamination .....	9
4.2 What Is Fish Quality? .....	9
4.3 Hazard Prevention .....	9
4.4 Fisheries Management Plan Of Ghana. ....	9
4.5 How Do We Address These Key Issues? .....	10
4.6 Closed Season .....	10
5.0 CONCLUSION .....	11

## LIST OF FIGURES

Figure 1. Mrs. Lydia Sasu welcoming participants .....	3
Figure 2. Nii Okaija Adamafo training participants on business management. ....	5
Figure 3. Illustration on Business Ideas .....	6
Figure 4. A fisherman explaining a point .....	7
Figure 5. Mrs. Hannah Boakye, Greater Accra Regional Director of Fisheries facilitating.....	8
Figure 6. Mrs. Hannah Boakye, Greater Accra Regional Director of Fisheries facilitating....	11
Figure 7. A cross section of participants.....	12
Figure 8. Chief fisherman of Winneba contributing.....	12

## LIST OF TABLES

Table 1. Age of participants.....	4
-----------------------------------	---

## EXECUTIVE SUMMARY

The fisheries sector in Ghana is plagued with many challenges that affect the livelihood of fishers. The DAA Fisheries Training Centre organized a two-day capacity building program for fifty fishermen from eleven communities in the Greater Accra and Central regions of Ghana. Communities in Central region are Apam, Winneba, and Mumford. Those from the Greater Accra region are Ahwiam, Old Ningo, Chorkor, Bortianor, Tsokomey, Oshiyie, Kokrobite, and Langma. Participants were all males, the youngest being nineteen years old and oldest being seventy years old. There were thirty four percent youth in attendance thus achieving our aim of attracting ten percent youth to trainings.

The Greater Accra Regional Director of Fisheries Mrs. Hannah Boakye and two Fisheries Zonal Officers working in the GA South Assembly, Ms. Olivia Horvey and Rosina Williams facilitated the workshop.

The training topics were:

- What is a Business?
- Costing, Pricing and Profit and Loss Analysis.
- Hygienic Handling of fish at sea
- Hazard prevention at sea.
- Fisheries Management.

The objectives of the training were:

- To educate fishermen to appreciate the importance of records keeping in their fishing business.
- To train the fishermen on hygienic fish handling on the sea.
- To help fishermen to understand the importance of implementing the Fisheries Management Plan.

The following outcomes were expected from the training:

- That the fishermen would accept their role in the implementing fisheries management plan,
- stakeholders would help to preserve fisheries resources in Ghana,
- Fishermen would be able to cost and analyze their fishing business to make informed decisions and
- Fishermen will be able to consider alternative livelihoods

The methodology used in delivering the training were discussions, brainstorming, group exercises and visual aids as the participants had low literacy levels.

The Regional Director of Fisheries used the words in the Ghanaian national anthem to emphasize the point that the fisheries resources as well as other resources had been preserved by our for fathers it is their turn to also preserve these resources for posterity. She went on to say that protecting and preserving of fisheries resource is not the work of one person but all.

She used video and scientific data collected over the years to explain the causes of the decline in the fisheries sector to the fishermen.

At the end of the workshop the fishermen pledge to be watchdogs over the fisheries resources and would also educate others in the community. The participants pleaded with the Regional Director to ensure that the 2019 closed season is implemented. They promised to obey the fisheries laws in their activities on the sea.

## **1. BACKGROUND**

The Ghanaian fisheries sector is the livelihood for an estimated 10% of the population representing about 2.5 million people (Fisheries Management Plan of Ghana) Fish is an important source of animal protein in Ghana with 75% of the total domestic production of fish consumed locally. Stakeholders including fishermen, fish processors, fish mongers' communities NGOs etc. all recognize the critical role of fish in the life, livelihoods and nutrition of Ghanaians.

Yet, the last decade has seen a massive decline in marine fish catch as the sector is beleaguered with challenges. Though fish folk are aware, they are not properly informed on the causes of this decline and the efforts being made by stakeholders to reverse the situation.

In the light of the above, DAA under the Sustainable Fisheries Management Project (SFMP) organized a training for stakeholders in the fisheries sector in its quest to support the government of Ghana to replenish the declining fish stock.

The DAA Fisheries Training Centre organized a two-day workshop for fishermen in communities in the Greater Accra and Central regions. This workshop helped the fishermen to consider fishing as a business and keep records that will enable them determine profits or losses. They also have deliberated on the new trends in the fisheries sector and the Fisheries Management Plan.

### **1.1 Objectives**

- To educate fishermen to appreciate the importance of keeping records in their fishing business.
- To train fishermen on hygienic fish handling at the sea.
- To help fishermen to understand the contents of the Fisheries Management Plan.

### **1.2 Expected Outcome**

It is expected that at the end of the training;

- Fishermen will understand their roles in implementing the fisheries management plans.
- Fishermen will support government's efforts to preserve fisheries resources in Ghana.
- Fishermen would be able to cost and analyze their fishing business to make informed decision.
- Fishermen be able to consider alternate livelihood efforts.

## 2. OPENING



**Figure 1. Mrs. Lydia Sasu welcoming participants**

The workshop began with a prayer by the Chief fisherman of Winneba, after which the Executive Director welcomed all to the workshop. She expressed her gratitude to all fishermen present and wished them a fruitful deliberation during the workshop. She stated that it is her desire that at the end of the training the fishermen would understand the importance of co-management of fisheries resources. Because the declining fish stocks cannot be revamped by one person, but by all stakeholders.

The fifty participants selected were fishermen who actually go to sea to fish and not those who just own a canoe or fishing gear, so they can share their challenges. They were between the ages of nineteen and seventy.

Topics to be discussed include:

- What is a business?
- Costing, pricing, profit and loss analysis
- Hygienic fish handling at sea
- Hazards at sea
- The Fisheries Management Plan of Ghana.

Methods used in the training included:

- Brainstorming.



- Group assignment and presentations
- Video shows
- Experience sharing
- Energizers.

## 2.1 Orientation

The workshop was scheduled for two days. Participants were all fishermen from eleven communities in Greater Accra and Central regions of Ghana. Communities in the Central region included Apam, Winneba and Mumford. Communities in the Greater Accra region were Chorkor, Old Ningo, Ahwiam, and Tsokomey. Others were Bortianor, Oshiyie, Kokrobite and Langma. The youngest fisherman was nineteen years whilst the oldest was seventy years old. Age range and numbers are as follows.

**Table 1. Age of participants**

<b>AGE RANGE</b>	<b>NUMBER</b>
19---29 Years	17
30----39 Years	7
40----49 Years	9
50----59 Years	13
60---Above Years	4

The above table shows that there were seventeen young fishermen which represented 34% of total attendance.

Facilitators were introduced to participants after which participants also introduced themselves.

Ground rules were then set for the smooth delivery of the workshop. These were

- All mobile phones to be put on silent /vibration to avoid distractions.
- Anybody who wants to answer a question or contribute to a discussion should wait to be called.
- All litter should be dropped in bins provided.
- Everybody should feel free to express their opinion without fear

The Fishermen were asked to state their expectations of the workshop. The following are some of the opinions that were shared;

- To acquire more knowledge in the fishing business.
- To know why we are not getting a good harvest these days
- To learn about new techniques in fishing.
- To understand the new modalities being introduced in fishing.

### 3. DAY ONE: WHAT IS BUSINESS?



**Figure 2. Nii Okaija Adamafio training participants on business management.**

The facilitator, Nii Okaija began the session by soliciting the fishermen’s understanding of what a business is. They brainstormed and gave various opinions such as;

- Something that you do to put food on your table
- Anything that you do to give you income to take care of your wife and children.
- Business is anything that you do with your mind or ability to give you income.
- Anything that gives profit after investing is a business.

The facilitator summed the discussions and defined a business as any venture that requires the use of abilities, skills, knowledge, money or energy in return for income.

Participants were tasked to look back at their communities or the environment where they lived and come out with businesses that would thrive there. In the opinion of the fishermen, fishing is the predominant business in their communities since they lived by the sea.

Following further promptings from the facilitator, the participants mentioned other businesses such as selling fruits and vegetables, food joints, masonry, carpentry, sand and tailoring.

The facilitator cautioned that in deciding which business to invest, the choice of location should be taken into consideration.

Fishermen commented that, they are all fishermen because their fathers, uncles or people who nurtured them were fishermen and were drafted into fishing. According to them, every fishing community has its own peculiar fishing culture preserved for the next generation., however as they attend workshops, meetings or travel to other communities, they learn new techniques to improve their fishing business making them better fishermen than their parents.

### 3.1 What makes Business Thrive?

The participants were asked to mention some attributes that make businesses thrive. They mentioned:

- Faithfulness.
- Truthfulness.
- Hard work.
- Customers to patronize your work.
- Capital (money to work with).
- Accountability.
- Good customer relationship.

### 3.2 What makes Businesses to Fail?

The facilitator asked the Fishermen to discuss what in their opinion caused businesses to fail. Following are some of the thoughts shared:

- Laziness
- Misuse of funds.
- Abuse of workers by owners
- Lack of transparency
- Lack of unity among workers
- Lack of customers to patronize the business
- Siting business in wrong places
- Bad customer relationship
- Lack of funds to grow business
- Lack of savings



**Figure 3. Illustration on Business Ideas**

The facilitator then explained that business is like a seed that is planted. If the seed is watered and cared for, it will grow and bear fruits otherwise it will die. He encouraged the participants to avoid these pitfalls that make businesses to fail.



**Figure 4. A fisherman explaining a point**

### 3.3 Pricing, Costing, Profit And Loss Analysis

Participants were put into groups of ten to write down all the resources required to start a fishing business and cost each item. They were then asked to cost a fishing expedition, price the catch and determine their profit or loss.

Fishermen presented their work in a plenary session. The participants listed equipment such as outboard motor, canoe, fishing net, paddle, lead, fuel, thread for mending net, 'lampado' rings, 'agada' and kako. Participants also mentioned that they carried food and drinks on each fishing expedition, and also maintained their boats by painting regularly. Discussion during the plenary sessions revealed that fishing business is capital intensive, so fishermen need to keep good records of their expenses and income.

The facilitator then asked the fishermen how they determined the prices for their catch. They all opined that it is the Konko Hema (Fish Queen) who is usually the wife of the Chief fisherman, who determined the price of the fish, meaning the fisherman has no say in the pricing of his catch.

According to the group, the proceeds from the sale of fish catch is divided into three parts; the first part is given to the boat owner to defray the cost of net, outboard motor etc. the second part is used to purchase logistics for the next fishing venture and the third is saved in a bank for one year shared amongst the crew at the end of each year. Knowing that their equipment is expensive, the crew make regular savings towards repairs and maintenance.

Concluding the discussion on profit and loss analysis, the fishermen were taught to keep records on their expenses and income. Those who cannot read or write were shown how they can use symbols. For those who are somewhat literate, they should purchase a note book to keep all records.

## 4. DAY TWO: HYGIENIC FISH HANDLING AT SEA

Ms. Hannah Boakye, the Greater Accra Regional Director of Fisheries facilitated the session on hygienic fish handling at sea.



**Figure 5. Mrs. Hannah Boakye, Greater Accra Regional Director of Fisheries facilitating.**

She began the session by asking the fishermen to sing the Ghana National Anthem. After which she took her time to explain the words to them. According to her, our forefathers fought with their blood to preserve and protect the resources that we are using today. Now it is our turn to also protect and preserve these resources. One of such resources is the sea from which our fishermen are deriving their livelihood.

She then asked the fishermen whether their activities are protecting or ruining the resources of the sea to which the fishermen responded that they know their activities of late is rather destroying the fisheries resources.

A video documentary titled Regatta i.e.” Canoe Racing” was screened to buttress the point that illegal fishing practices and poor refuse disposal are the cause of the depleting of marine stocks.

### 4.1 What is fish spoilage?

The facilitator asked the participants if they knew what fish spoilage was, to which they answered that ‘fish is spoiled when it is not wholesome for consumption’.

According to the facilitator fish spoilage as the change in the quality and value of fish as a result of decomposition after fish is harvested, usually caused by bacteria or germs. She went on to explain that physical damage can also cause spoilage. The participants mentioned the various items used in fishing that may cause spoilage. These are;

- Dynamite
- Detergents
- Carbide

The fishermen explained that dynamite kills the fish and causes them to float on the sea so it is easy to harvest. The carbide also blinds the fish so after harvesting, washing powder is added to gari (cassava grits) to polish the fish to make it look attractive. The facilitator added that the use of chemical in fishing affects the safety and quality of fish and poses a threat to the health of consumers. The fishers also mentioned that when fish is kept on the sea after harvesting for a long period and not processed or iced, its quality deteriorates.

#### **4.2 Contamination.**

According to the facilitator, fish can spoil or contaminated through contact with dirty equipment such as,

- Fishing gear/boats.
- Dirty fish boxes
- Knives /dirty hands
- Fish handling equipment

#### **4.3 What Is Fish Quality?**

The facilitator explained to participants that the quality of fish harvest determines its value in terms of price. She asked the Fishermen why they do not take ice to sea? . Some of the reasons were that the fishes were fresh enough to survive the journey back to land, but they also know that icing will keep it fresher for longer. The facilitator then explained that icing helps to keep fish fresh for a long period of time, so it is important that fishermen carry ice on their fishing expedition.

#### **4.4 Hazard Prevention**

The fishermen were asked “what they would do to prevent accidents at sea?” Some of their responses were that they would:

- Use life jackets
- They would also ensure that they carry a first aid kit
- They would ensure that they properly maintained their boats

They were then advised to also carry a compass so they could find their way back if they got lost at sea. They were lastly advised to install tram ponds on their boats for safety and security at sea.

#### **4.5 Fisheries Management Plan Of Ghana.**

The facilitator gave an overview of the fishing industry between 1950- 2010, and explained that the highest catch was from 1997 – 2000 after which stocks started declining. She attributed the cause of the decline to;

- Illegal fishing especially the use of chemicals.
- The harvest juvenile fish by Chinese trawlers,
- Too many fishing boats and canoes on the sea.
- Use of rubber nets, lights and dynamites.

According to her it the responsibility of the Fisheries Commission to ensure that the fisheries laws are enforced, especially on key concerns such as;

- Open assess regime for artisanal fleets.
- Use of illegal meshes, unorthodox fishing methods.
- Low enforcement of rules and regulations by all.

- Excessive fishing efforts exerted in all fisheries except the Skip Jack Tuna.
- Low levels of protection of marine bio-diversity.

#### **4.6 How Do We Address These Key Issues?**

She then asked how these challenges should be addressed. The fishermen responded that

- The number of canoes should be regulated.
- Laws should be enforced to protect marine resources.
- Law on closed season should be enforced to allow fish to breed.
- Co-management should be practiced by all stakeholders.

#### **4.7 Closed Season**

After the day's deliberations, the fishermen were now convinced that a closed season should be implemented to help revamp the declining marine fisheries stock. They were of the view that, their illegal fishing activities have led to the decline of fish stocks and are therefore pleading with the government to enforce the 2019 Closed Season. The Regional Fisheries Director was very happy with outcome and assured that their message will be carried to the Fisheries Commission. Fishermen were also advised to engage their colleague fishers to accept the closed season intervention.

The Chief Fisherman of Winneba, in his submission assured the gathering that fishermen are now enlightened and will not allow themselves to be manipulated by politicians.

## 5. CONCLUSION

Fishermen were asked how they would utilize the knowledge gained from the workshop. They responded that they will:

- Follow the laws in the fisheries management plan.
- Share knowledge gained with other fishermen.
- They would be advocates of closed season.
- They would now take ice to sea to preserve fish.
- Knowledge acquired on business skills would be used to help their business thrive.
- Pitfalls in business would be avoided.
- Asked for regular visits from FC to update them on new issues.



**Figure 6. Mrs. Hannah Boakye, Greater Accra Regional Director of Fisheries facilitating**





**Figure 7. A cross section of participants**



**Figure 8. Chief fisherman of Winneba contributing**