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SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Small Pelagic Fisheries Data Collection: Orientation Training Report



May 2015



Hen Mpoano



This publication is available electronically on the Coastal Resources Center's website at http://www.crc.uri.edu/projects_page/ghanasfmp/ and Hen Mpoano's website at <http://www.henmpoano.org>

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Cover photo: Group picture of participants at the end of day two of the training workshop (Credit: Hen Mpoano Photo)

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ACRONYMS

CRC	Coastal Resources Center at the Graduate School of Oceanography, University of Rhode Island
FC	Fisheries Commission
FoN	Friends of Nation
FtF	Feed the Future
FSSD	Fisheries Statistical Survey Division
HM	Hen Mpoano
GoG	Government of Ghana
ICFG	Integrated Coastal and Fisheries Governance
IUU	Illegal Unreported Unregulated
MOFAD	Ministry of Fisheries and Aquaculture Development
M&E	Monitoring and Evaluation
SFMP	Sustainable Fisheries Management Program
URI	University of Rhode Island
USAID	United States Agency for International Development

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INTRODUCTION

The Sustainable Fisheries Management Project (SFMP) is a five years USAID/Ghana-funded project. The goal of the SFMP is to rebuild targeted marine fisheries stocks through the adoption of sustainable fishing practices and exploitation levels. With a focus on small pelagic fisheries management along the entire coastal stretch of Ghana, the SFMP seeks to rebuild a fishery, which is near collapse; more than 100,000 metric tons of high quality low-cost animal protein that was traditionally available to poor and vulnerable coastal and inland households have been lost.

The SFMP will work closely with the Government of Ghana (GoG) through the Ministry of Fisheries and Aquaculture Development (MOFAD) under the World Bank-funded fisheries project as well as with the Fisheries Commission (FC) to achieve the goal of revamping the fisheries sector.

The small pelagics fisheries profile forms part of a process leading to a longer term adaptive fisheries co-management planning process for the small pelagic complex at the national level. This study will characterize the current and historical trends of fishing fleet, gears, species targeted, fishing operations, fishing areas, seasons, harvesting and processing capacity of the sector, support businesses, the people engaged in all aspects of the harvest and post-harvest, infrastructure, communities dependent on fishing, and the significance of the artisanal fishery to local, and regional economies.

The purpose of the profile is to develop a baseline fisheries profile addressing ecological, socio-economic and governance components and it is also intended to be used at the first national dialogue to guide policies and management decisions related to:

- 1) various fishery management strategies
- 2) potential industry's capacity reduction plans
- 3) economic development initiatives
- 4) infrastructure investments
- 5) Community and marine fisheries spatial planning.

This two day small pelagics fisheries profile training is two of such trainings for data collectors. The aim of the two-day training workshop was to orient data collection team to the purpose of assessment and data collection protocol, develop a common language to explain the SFMP to local community leaders and provide response about the project, test and modify as needed data collection methods and processes, and plan for field data collection.

A total of about 25 participants attended the two-day training workshop. These included Regional M&E Officers of the Fisheries Commission, Deputy Director of Fisheries Statistical Survey Division (FSSD). Others in attendance were selected staff of three SFMP implementing partners: Coastal Resources Center/University of Rhode Island, Hen Mpoano and Friends of the Nation.

EXPECTATIONS OF TRAINEES

Expectations of data collectors for the training workshop

The expectations of participants in terms of what to learn, know and acquire during the training workshop are summarized below:

- To be able to establish relationships with the people they will be questioning to trust them enough to open up to share information and data.
- To capture information exactly as was obtained and not add personal views.
- To develop new approaches in collecting data from the people on the ground
- To learn new ways of communicating with fishers to acquire information from them



Figure 1 Participants listening to presentation on the overview of SFMP

SUMMARY OF PRESENTATIONS

The presentations delivered by technical staff of SFMP and FC outlined the overview of the project, how to communicate and respond to questions about SFMP, fishing gear technology, data collection process and fisheries data management. Below is the summary of the presentations with selected slides from the presentations.

Overview of SFMP and Purpose of Training

Kofi Agbogah, National Activity Manager for SFMP

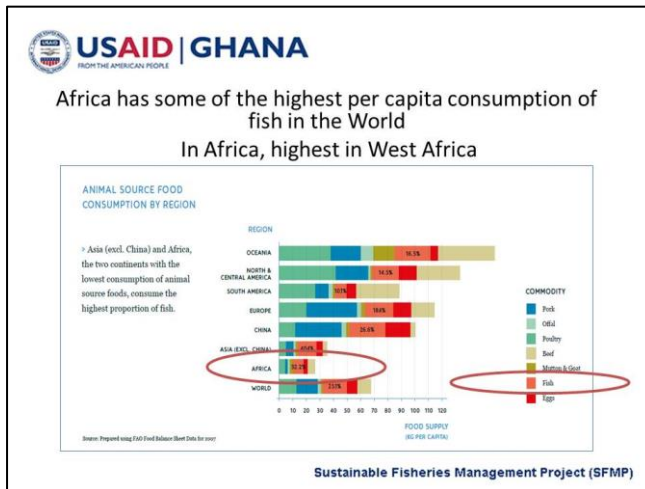
The Integrated Coastal and Fisheries Governance (ICFG) project implemented in the Western Region was a four year (2009-2014) fisheries and coastal project popularly known as Hen Mpoano which has evolved into a local organization because of its popularity.

In the four years of ICFG project, a lot of lessons were learnt; among them, the loss of most of our sardinella fishstock over the years and the need for immediate intervention.

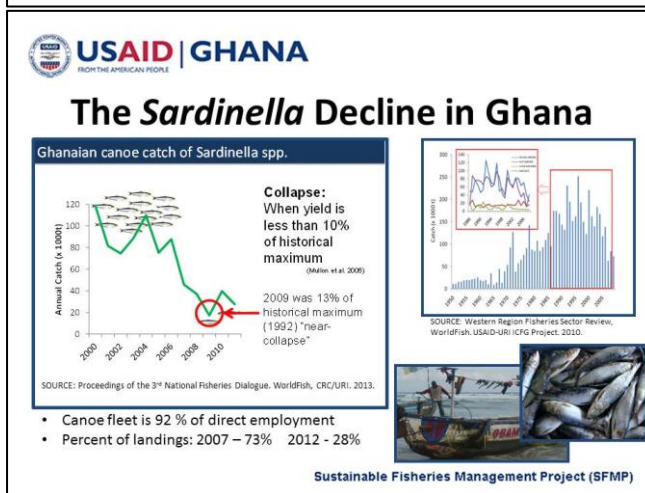
The purpose of the Sustainable Fisheries Management Project (SFMP), therefore, is to support the Fisheries Commission to put in place measures to revamp the declining sardinella. The SFMP in year one will focus on small pelagic fisheries management that spans the entire coast. There is therefore the need to know the history behind what has happened and what is happening within the fisheries sector. It is for this reason that this

profiling exercise is critical. The fisheries profiling exercise will also serve as a way of improving Fisheries Commission data systems and stock assessment capacity.

Selected slides



Per capita fish consumption in Africa. This is highest in West Africa



Sardinella, the mainstay of the artisanal fisheries industry, has over the years witnessed continuous decline leading to near collapse of the fisheries.



SFMP over the next five years would work towards the rebuilding of marine fish stock and increase production through the adoption of a number of responsible fishing practices options.

PROJECT FOCUS:

Geographic



Stocks

- Small Pelagics - National
- Demersals – WR
 - Marine demersal plan
 - CB plans - estuaries

Sustainable Fisheries Management Project (SFMP)

The SFMP focus will cut across the entire coastline of Ghana.

OUTCOMES:

- Recoup tens of thousands of MTs of food protein supply
- Improved profitability throughout value chain
- Significant declines in IUU fishing

Sustainable Fisheries Management Project (SFMP)

At the end of the five years the project would have helped recoup tens of thousands MTs of fish food protein, improved profitability and seen a significant decline in IUU fishing

Questions, comments and Responses

Questions and Comments	Responses
The turbidity of the pra and Ankobra could have environmental implications. Will there be any research under the SFMP to determine the metallic levels.	<i>No, the focus of this project is to bring back the sardinnella into the sea, but there was a research studies under the ICFG project which looked into that phenomenon.</i>
The objectives of the project is very welcoming	
Should we really target only Sardinella	<i>This is the task for the project to see reverses in the decline overr the next five years. There is a big food chain involved</i>
The inclusion of Central, Greater Accra and Volta Regions in the project is highly commendable. Will government buy into the objectives of the project?	<i>We know government has some weaknesses, but the project is here to support.</i>

Communicating and responding to questions about SFMP

Patricia Aba Mensah, Communication Officer for SFMP

To communicate the SFMP to stakeholders and Communities and to become ambassadors of the project, it is important to understand the project goals and the effective language to communicate these goals. Below are some few pointers:

- Anticipate a lot of questions such as ‘where are you coming from?’ ‘Are you bringing us money?’ ‘We’ve seen a lot of your kind and are tired of you people, how different are you?’ etc.
- You need to identify with the target audience (community); speak their language
- Be humble; do not show off; do not judge
- Communicate the ‘participatory’ element.
- Don’t hijack conversations; allow your colleagues and other persons to talk
- Your integrity is at stake – do not litter; do not argue before visitors; carry a united front.
- Seek permission before you start taking notes in order to avoid suspicion and build trust.
- Do not ask closed-ended questions that warrant a ‘yes’ or ‘no’ response such as: *So have you been experiencing the decline in the fisheries for about a decade now?* as opposed to open-ended questions such as: *So how long have you been experiencing the decline in fisheries?* The latter cannot be answered with just a ‘Yes’ or ‘No’ response.
- You should know the cultural dynamics e.g. When you go to chiefs you don’t sit with your leg crossed; others do not want women to talk
- You go to the field to learn and not to teach. It’s not up to us to challenge respondents.
- We should let them know it’s a participatory exercise and we need their help.
- Do not argue among yourselves
- When you’re offered a drink and refusing it looks impolite, just collect and take a sip.
- For community entry it is very good to send drinks to chiefs of community and also the chief fishermen.
- A consortium of eight (8) organisations implementing the **Sustainable Fisheries Management Project – SFMP**.

- Key words in Fanti – ‘*far mpuntu*’; ‘*mbra/far nhyehyee*’; *far mpuntu nna nhyehyee a otsim daa* (Sustainable Fisheries Management)
- Five-year project funded by USAID (from the American People) to support Ghana’s Fisheries and end poverty and hunger in the fisheries and coastal zone
- Goal of project to rebuild small pelagic fishery (herrings - *eban*, *ntar*, *anchovy*, etc., - mackerel, *sardinella*) through the adoption of sustainable fishing practices and exploitation levels
- Working with government (fisheries commission/ MOFAD, community persons, etc)
- SFMP looks forward to solicit participation and contribution of stakeholders/ fisherfolks at all policy development levels.



Figure 2 Participants introducing SFMP to community leaders in a roleplay

FISHING GEAR TECHNOLOGIES

Cephas Asare, Program Officer in Charge of Fisheries, Hen Mpoano


There are two main categories of gears, passive and active gear. The classification of gear is based on the relative behaviour of the target species and the fishing gear. Passive gears are stationary gears left in the water for a period of time. Example includes: gill nets, longlines, traps and pots. Active gears on the other hand go after the fish; they are either towed along the seabed or towed off the seabed. Examples includes: beach seine, bottom trawl, mid-water trawl and purse seines.

Locally the major gears operated by canoes are Ali Poli Watsa (APW), Set Net, Drift Gill Net, Hook and line and Beach Seine Net. These gears are not always canoe specific due to gear switch among artisanal fishermen.

Selected slides

Classification of Fishing Gears


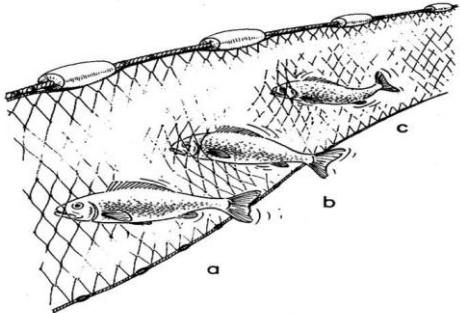
- Two main categories: passive and active
- This classification is based on the relative behaviour of the target species and the fishing gear (Cochrane, 2002)



Fishing gears are categorized into passive and active gears based on the relative behavior of the target species and the fishing gear

Types of Fishing Gear


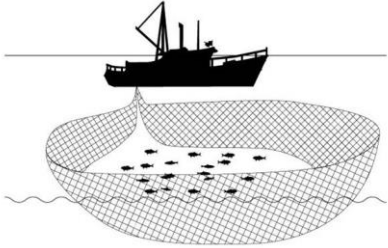
Passive gear: Gill net



Gill net is an example of passive gear

Types of Fishing Gear

Active gear: Purse seine



Purse seine is an active gear

...Bringing it home

- The major gears operated by the canoe fishery for small pelagics are:

- Watsa
- Asoso
- Mpataku
- Twiee
- Ali
- Ashekon
- Tenga
- Keladwee



Local names of the gears used in the canoe fishery in Ghana

Questions, Comments and Responses

Questions and Comments	Responses
<p>Is the project goal of bringing back the sardinella fish into the sea doable?</p>	<p><i>Though the project could be delayed by political will there could also be a strong public will where fishers themselves can stand their grounds and demand change. E.g. can be taken from Ivory Coast, where community members comply willingly with laws and policies governing their fisheries resources although there are some levels of enforcement This will be possible if there is enforcement of the fisheries law (LI 1968) on gear types and fishing equipment</i></p>

What are some of the things that could be done to bring voluntary compliance?

*Power should be restored back to the Chief fishermen to manage the fisheries
There should be awareness creation at the community level by erecting sign posts at landing sites.*

Community watch collapsed due to lack of incentives

Fish processors are not making enough money because of the illegal fishing activities

The chief fishermen are always guilty in one way or the other when it comes to illegal fishing activities.

Public perception of people brings too much pressure on people to make money (social pressure, economic gains, political will, self will)

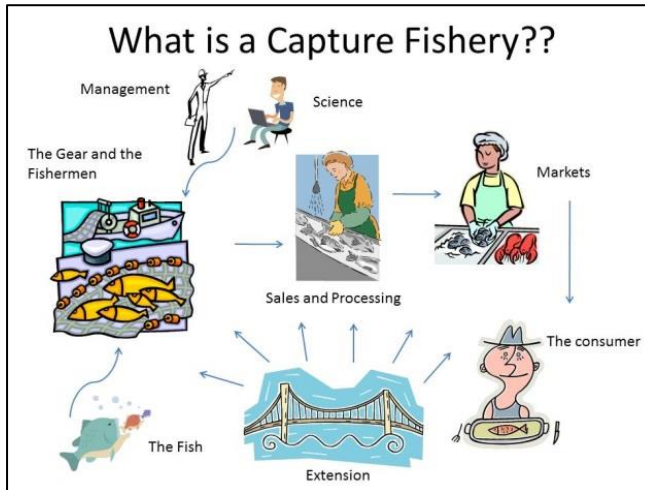
Most fish mongers have the challenge of not being refunded, when they don't purchase the bad fish brought from sea, since they pre-finance most of these fishing activities

DATA COLLECTION PROCESS

Najih Lazar, Senior Fisheries Advisor for SFMP

The highlight of this presentation was on the importance of fisheries data and the application of fisheries data in fisheries management. It presented the definitions of the many terminologies as used in fisheries data collection and the ultimate use of fisheries data.

Selected slides



Capture fishery includes the resource, the gears for harvesting the resource, the science, the management of the fishery, the processing, the market, the consumer and the extension services supporting the fishery.

WHAT ARE FISHERIES DATA?

The phrase “fisheries data” usually include biological information about the exploited fish and associated species, economic information about the fishermen and the markets for the catch, and information about the environmental conditions that affect the productivity of the species.



Information on fish exploitation rate, economic information and environmental conditions affecting fish productivity make up fisheries data

WHO USES FISHERIES DATA?

Fisheries data have many uses and many users:

- Stock assessment
- Fishery management
- Strategic planning
- Business development



Use of fisheries data is not limited to the fisheries managers alone; civil authorities, bankers and fishermen all make use of fisheries data in planning.

ARE DATA IMPORTANT?

- Fisheries data are vital to strategic planning activities in coastal communities that rely on fisheries.
- Fishery management authorities are responsible to use fisheries data for creating policies for sustainable development and management of fisheries.
- Civil authorities use fisheries data to develop infrastructure for the fishing industry.
- Bankers use fisheries data to plan economic development and loan packages to fishermen, fish processors, and ship suppliers.
- Fishermen themselves use fisheries data to plan future fishing activities, such as shifts to new fishing grounds, changes in fishing gear, and changes in species targeted.

Fisheries data is essential for stock assessment, fishery management, strategic planning and business development

ULTIMATE USE OF THE DATA

It is one in which we use the DATA not only to decide how many fish we should take next year or how many fishermen we should allow to fish, but also to set goals about the ways in which we obtain our fisheries data, the type of data we are lacking (including biological, ecological and socio-economic information) to improve the quality of our assessments.

Fisheries stock assessment must be a feed-back system in order to be successful.

Fisheries data helps in setting goals about the ways in which fisheries data is obtained and the type of data that is lacking.

FISHERIES DATA MANAGEMENT

Emmanuel Dovo, Assistant Director of FSSD

This presentation was in two parts: stratification in data collection and standardization of data collection systems. The stratification in data collection aspect highlighted what influences the choice of data collection methods and the two major types of stratification. Standardization of data focused on the objective of standardization, factors to consider in the initial setup of a standardization system and the application of internationally recognised definitions, classifications and codes in standardization.

Selected slides

Fisheries Data Collection Methods

- Choice of a fisheries data collection method is influenced by data collection strategy, type of variable, required accuracy, collection point and skill of the enumerator.
- Links between a variable, its source and practical methods for its collection can help in choosing appropriate methods.
- Main data collection methods: Registration, Questionnaire, Interviews, Direct observation, Observer programme and Reporting.

Data collection strategy, type of variable, required accuracy, collection point and skill of the enumerator all influence the choice of data collection methods.

Standardization of Data Collection Systems

- The primary objective of standardization is to facilitate integration between different data collection systems.
- The initial set-up of system standards and classifications has to take into account not only immediate data collection needs, but also evolution of the data collection system and data needs over time.

Stratification reduces error in sample estimation. This is achieved by dividing the sample population into groups or strata.

ULTIMATE USE OF THE DATA

It is one in which we use the DATA not only to decide how many fish we should take next year or how many fishermen we should allow to fish, but also to set goals about the ways in which we obtain our fisheries data, the type of data we are lacking (including biological, ecological and socio-economic information) to improve the quality of our assessments.

Fisheries stock assessment must be a feed-back system in order to be successful.

The primary objective of standardization is to facilitate integration between different data collection systems.

National and Regional Data Standards

- Where possible and appropriate, it is desirable to apply internationally recognised definitions, classifications and codes.
- Most inter-governmental fisheries organisations with a statistical remit participate in the Co-ordinating Working Party on Fishery Statistics (CWP), which has recommended standard classifications for vessel and gear types and species.

Internationally recognized definitions, classifications and codes should be used where possible in standardization of data collection.



Figure 3 Participants during data stratification exercise



Figure 4 A trainee engaging respondents during pre-test of data collection protocol

TRAINING OUTCOMES

- Data collectors have an understanding of the importance of community entry in data collection and how community process is done.
- Data collectors learned the importance of accurate data collection
- The field pre-testing of protocol taught participants the need to respect the views of interviewee.
- Data collection protocol was updated with feedback from pre-testing.

LESSONS LEARNED

- Use of exercise to explain the different sampling strategy helped the participants to better understand and appreciate the different sampling strategy used in fisheries data collection.
- Involving fisheries commission was very useful; personel provided insightful comments into the data collection protocol.
- Brainstorming session provided relevant suggestion and comment for updating the data collection protocol.
- The use of role play as a tool for teaching participants how to communicate what SFMP is and its goal to communities was very useful. It gave the participants a feel of what the actual fieldwork will look like.

NEXT STEPS

The following points were identified as crucial to the commencement of data collection:

- Development of contracts for data collectors
- Introduction of data collectors to the communities and stakeholders should be done through FC and the Assembly members in the communities should also be involved in the process.
- Data collection should commence soon after the training programme to achieve the set timeline.
- Refresher training should be organized soon after the canoe numeration
- Exercise is completed

ANNEX

Training program

Small Pelagic Fisheries Profile Orientation Training and Planning for Field Data Collection May 3- 5, 2015

Participants

- Fisheries data collectors
- SFMP Accra – Najih, Patricia
- HM staff – Kofi, Daniel, Cephas, Justice, Adiza, Stephen
- Fisheries Commission (Marine Research Division) – Emmanuel Dovlo, regional M&E focal persons

Objectives

- Orient data collection team to purpose of assessment and data collection protocol
- Develop a common language to explain the SFMP to local community leaders and provide response about the project
- Test and modify as needed data collection methods and processes
- Plan for field data collection

Agenda

DAY 1		
4.00 – 7.00 pm	Arrival of participants; check in hotel and have dinner	
DAY 2		
8.00 – 9.00 am	Participant registration	Justice
9.30 – 10.00 am	Welcome, introductions and logistics	Stephen
10.00 – 10.30 am	<p style="text-align: center;">Opening of the training</p> <ul style="list-style-type: none"> • Overview of SFMP – purpose, objectives and strategies • Purpose of training 	Kofi
10.30 – 11.15 am	Communicating and responding to questions about SFMP <i>(Role play and peer feedback on explanation to local community leaders)</i> <ul style="list-style-type: none"> - Purpose and objectives of SFMP - What SFMP will do 	Patricia / Data collectors
11.15 – 11.30 am	Snack Break	All

11.30 – 12.30pm	Overview and purpose of fisheries profile <ul style="list-style-type: none"> - Overview of artisanal fisheries, fishing methods, fisheries statistics/ landings, review fish identification - Key concepts and definitions – open access, overfishing, co-management, use rights, pelagic, demersal etc. - Guide management approaches and policy decisions - Data to be collected- what and why 	Najih and Emmanuel
12:30 – 1.00pm	Types of information to collect <ul style="list-style-type: none"> - Brainstorm list - categorize information to be collected - Table of methods to use to collect information 	Emmanuel and Najih
12.30 – 1.30 pm	Fishing Gear Technologies	Cephas
1.30 – 2.30 pm	Lunch Break	All
2.30 – 4.00 pm	Introduction to participatory approaches <ul style="list-style-type: none"> - facilitation, group dynamics, interviews, triangulation / validation, village mapping (role play and fish bowl interview)	Stephen
4.00 – 4.30 pm	Groupings for field pre-testing	Daniel/Cephas
5.00 pm	Adjourn	
	DAY 3	
7.30 – 8.00 am	Recap	Stephen
8.30 am – 1.00 pm	Field pre-testing of protocols	All
1.30– 2.30	Lunch	
2.30 – 4.00 pm	Peer feedback	Najih and Emmanuel
	Communication protocol / field data collection Challenges on the field Weekly bullets/updates etc. Most interesting issues on the landing site – interesting information to share etc.	Stephen
4.30 pm	Departure	All