

# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

## Fisheries Training Center Needs Assessment



September 2015



















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**Citation**: Otoo, A., Ajongbah., L., Samey. B. (2015). Fisheries Training Center Needs Assessment. The USAID/Ghana Sustainable Fisheries Management Project (SFMP). Narragansett, RI: Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island and SNV Netherlands Development Organization. GH2014\_ACT017\_SNV. 15 pp.

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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 Project team and do not necessarily reflect the views of USAID or the United States Government.

Cover photo: Proposed DFTC Structure (Credit: Yaw Barima)

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#### **ACRONYMS**

CEWEFIA Central and Western Region Fishmongers Improvement Association

COTVET Council for Technical and Vocational Education Training

CRC Coastal Resources Center at the Graduate School of Oceanography, University

of Rhode Island

CFSA Choker Fish Smokers Association
DAA Development Action Association
DAASGIFT Daasgift Quality Foundation
DFTC DAA Fishers Training Center

EDC EDC Consulting Ltd.
FC Fisheries Commission
FRI Food Research Institute
FGD Focus Group Discussions
GSA Ghana Standards Authority

GSO Graduate School of Oceanography, University of Rhode Island

IR Intermediate Results

NAFTA National Association of Fish Processors and Traders.

SFMP Sustainable Fisheries Management Project SNV Netherlands Development Organisation.

URI University of Rhode Island

USAID United States Agency for International Development WARFP West Africa Regional Fisheries Development Program

VP Vice President

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#### 1 INTRODUCTION

#### 1.1 Purpose and Scope of the Report

EDC Consulting Ltd. (EDC) was contracted by SNV to conduct a needs assessment and develop a Business Plan for a Fisheries Training Center for Development Action Association (DAA).

This document is a report on the Needs Assessment; it covers this introduction, background to the assignment, approach and methodology, analysis, conclusions and recommendations.

#### 1.2 Background

The United States Agency for International Development (USAID) has committed funds to the implementation of a Sustainable Fisheries Management Project (SFMP) in Ghana. The project is to improve fisheries management and strengthen governance to have positive impacts on fisheries resources and the people that depend on marine ecosystem goods and services.

SNV plays a supporting role in the project and is currently supporting Development Action Association (DAA) with the establishment and operation of a Fisheries Training Center. In the preparation for the establishment of the center, EDC was contracted to first carry out a Training Needs Assessment and then develop a Business Plan for the Fisheries Training Center.

#### 1.3 Scope of Work for the Needs Assessment

EDC was tasked to conduct a Needs Assessment for establishing a Fishery Center in collaboration with the Development Action Association and prepare a comprehensive report on the assessment, which evaluates the following needs:

- The needs of those who will use the services provided at the facility (Fishermen, Fish processors, fish traders, fishery institutions etc.)
- Those that want target groups to be trained / the needs of prospective customers/clients of the center (DAA, SNV, Fisheries Commission, Ministry of Food and Agriculture and other related institutions)
- The needs of the West African Regional Fishery Project (WARFP) in this direction.
- The capacity of DAA to manage the Center.
- Other needs depending on the consultant's discretion.

#### 2 APPROACH AND METHODOLOGY

This section presents the approach and methodology used to collect the relevant information for the needs assessment. In collecting information, a consultative and participatory approach was adopted to engender ownership, involvement and commitment of DAA members and other stakeholders.

#### 2.1 Start Up Meeting with DAA

EDC Consulting Ltd (EDC) held a maiden meeting with some executive members and management of DAA (EMD) at their office. The meeting was held to introduce the EDC team, outline the purpose and scope of work and level expectations. The meeting also discussed DAA's proposed Fisheries Training Centre and their needs and expectations.

### 2.2 Interviews with Potential Users - Fish Processors, Traders and Fishermen

Focus group discussions were conducted with DAA and CEWEFIA members and Fishermen who trade with CEWEIFIA. Two (2) focus group discussions were held with DAA members at Tsokomey and Kokrobitey. At Tsokomey members from Bortianor, Tsokomey and Farna attended the meeting while at Kokrobitey only members from Kokrobitey took part.

Two other meetings were held in Elmina in the Central Region with CEWEIFIA members and Fishermen who trade with CEWEFIA. The discussions were to determine training needs of the target groups and whether they would want to use the services of the Fisheries centre.

The Focus Group Discussion (FGD) method was used essentially because of its effectiveness in qualitative data collection. It provided a better opportunity to interview several respondents systematically and simultaneously, quickly validate information and obtain speedy results.

#### 2.3 Interviews with Prospective Clients of the Centre and stakeholders

Semi structured interview were conducted with some potential clients of the center. These were executive members of the potential user associations namely DAA, CEWEFIA, NAFTA and Choker Fish Smokers Association (CFSA). Officials from Fisheries Commission (FC) and WAFRP. The semi –structured interview format provided some guidance on what to talk about, which was very helpful.

#### 2.4 Data Analysis

All the data gathered was synthesized and reviewed by the team to get the relevant information on the needs of the potential users and clients of the proposed training center.

#### 3 FINDINGS

#### 3.1 Needs of Potential Users of the Training Centre

The needs of the potential users have been categorized into learning, learner and other needs and are discussed below.

#### 3.1.1 Learning Needs

The learning needs of the potential users were identified as fish processing, fishing, alternative livelihood, numeracy and literacy, management and entrepreneurship.

#### **Fish Processing**

• **DAA** members stated they all had been trained and were proficient in all aspects of fish processing particularly in the use of the Choker smoker and did not need any training unless it was for new and improved ways of smoking. They said however that new members to DAA will need to be trained in how to process fish especially in DAA's "secret fish" processing techniques, which ensures a long storage life of smoked fish.

Our observation of two of the lead trainer's premises and environment showed that they could have issues with health and sanitation judging from the setup of their processing units and the environment. Also since members say they have basic knowledge and skills in fish

processing, there is a need for improved fish processing technology building on what they already know.

- **CEWEFIA** members said they have a number of challenges with fish processing which they said needed to be addressed through training and were prepared to pay for the services. They gave the following as the challenges they face:
  - o Inability to identify type of wood for smoking resulting in smoked fish sometimes being covered with a black tar like substance
  - o Buying poor quality fish from fishermen /traders because cannot easily tell the difference between poor quality fresh fish from good. After smoking they are forced to sell the smoked fish cheaply because of its poor quality
  - o Stored smoked fish deteriorates very quickly

CEWEFIA members lack basic knowledge and skills in fish processing and therefore they will benefit from training in basic fish processing.

**National Association of Fish Processors and Traders (NAFPTA).** The Vice President (VP) indicated that the main challenge facing most members is the high cost of firewood and other sources of energy, which greatly increases the cost of processing. Members would be very interested in being trained in how to conserve energy or improved smoking technology that does not require a lot of firewood.

Since firewood constitutes a major cost of fish smoking, being able to provide members of NAFPTA with knowledge and skills in improved fish smoking technology will increase productivity and revenue.

#### **Fishing**

The fishermen interviewed stated that they experience challenges in the following:

- Determining the right type of net to use to ensure that the right type of fish is caught
- Distinguishing between good and poor quality nets.
- Determining indicators or signs that will let them know the best time to go fishing

The fishermen stated their readiness to use the services of the center as long as it addresses their needs.

Since fish is the main raw material in fish processing it is important to address the issues identified in order to contribute to the improvement of the quantity and quality of fish available to the fish processors and traders.

#### Alternative livelihood

DAA members interviewed said their fish processing activities were seasonal, so they need to learn alternative income generating skills such as soap making and hairdressing to tie them over during the lean season. They also said that the skills training should be targeted at their children, dependents and the youth in the community

Even though most of the users will be trained in improved fish smoking technology that is expected to increase productivity, the revenue generated as a result may not be substantial to sustain them throughout the year especially during the lean season. Alternative livelihood training being asked for by members would be helpful to them.

#### Numeracy and literacy skill

The executive of NAFPTA, CEWEFIA members and fishermen stated the need for literacy and numeracy skills because most of their members cannot read and write and are unable to keep basic records.

Training in literacy and numeracy skills will help members to keep proper record and thereby contribute to the performance of their business

#### **Management and Entrepreneurship**

Through interactions with potential users, it was determined that they need training in management to address the challenges they face in their businesses. Some of the challenges they listed are higher costs cutting into their profit margin, cash flow problems and costs rising faster than income, business finances not well controlled and keeping track of what is earned or spent. They also expressed the need to be trained in packaging and marketing so that they can expand their customer base from selling only to traders in markets to restaurants, hotels and supermarkets.

In addition to technical skills in fish processing, addressing the deficiencies in management and entrepreneurship will greatly enhance the potential users' business performance.

#### 3.1.2 Learner needs

#### Onsite training

The main learner need identified by most of the potential users is the need for onsite site training.

Most of the potential users (members of DAA, NAFPTA, CEWEFIA and Fishermen,) said they will not be able to travel to Kokrobitey for the training but rather needed on-site training in their communities for the following reasons:

- To enable them take part in the training and continue with their businesses.
- To enable them learn new skills to improve productivity without leaving their premises
- Cost saving eliminate travelling and lodging expenses
- For convenience
- For flexibility –time frames and days of week and class size

The reasons given for on-site training are well founded and addressing this need will encourage user participation.

#### **Duration and Timing**

All members said the duration of training programmes should be short and the timing should take into consideration their business activities. DAA members said they prefer training programmes organized between 9.00 am and 12.00 noon while the fishermen said they preferred their training in the evenings.

#### 3.1.3 Needs Other than Training

#### Space to supply fish processing equipment and materials

DAA members in Kokrobitey said they need a shop at the center to supply materials such as wood and nets at prices lower than the open market. This is to enable members get easy access to materials and reduce their business cost.

DAA could help members to secure the needed materials without making it part of the training center.

#### Meeting /conference area-

DAA members stated they need a conference room to hold association meetings such as ordinary and annual general assembly meetings.

Using the conference facility that will be provided at the training center can accommodate this need.

#### Loan facility for members

The DAA members said they want to be given loans to develop their businesses. This is a genuine need but cannot be addressed with the establishment of the training center

#### 3.2 Needs of Prospective Clients

#### 3.2.1 Learning Needs

**DAA:** The EMD also identified basic, new and improved fish processing techniques, alternative livelihood, numeracy and literacy, marketing, management and entrepreneurship. In addition to these the EMD identified basic health and sanitation, basic savings, advocacy and mentoring as courses that need to be delivered.

**CEWEFIA:** The Executive members of CEWEFIA identified improved fish processing techniques, alternative livelihood, numeracy and literacy, marketing, management and entrepreneurship as the needs of their members:

*NAFTA*: The needs identified by the executive are fish handling and processing, marketing and packaging for restaurants and supermarkets, business management, records keeping, improved smoker with a chimney to reduce smoke and cost of firewood, literacy and numeracy skills. Investment opportunities and social security were also identified, as important training needs which if addressed will ensure that members retire comfortably.

The executive explained that the association has a large membership of about 2000 and cannot afford to train all members at the training center. Therefore, they will need a training

of trainer programme for a few members especially in fish processing. These trainers will in turn train members.

**CFSA**: The executive expressed the need for training in new ways of smoking to reduce firewood consumption and costs

#### 3.2.2 Funding of Programs:

All the clients said they would need financial support. The EMD expects SFMP to pay for the training and NAFTA said it would also need financial support. CEWEFIA and CFSA said they were prepared to contribute towards the training

#### 3.2.3 Training model:

The EMD said that they need a training center that offers both off site (center) and onsite (user premises) training. The on -site training could be for fish processing courses (the technical training) while the off- site could be for the other non-fisheries courses. CEWEFIA and NAFTA said they preferred on- site training and gave the same reasons as the users namely convenience, flexibility and cost saving.

#### 3.2.4 Duration and period of training

The EMD expressed the need for the fish processing (technical) training to be offered during the fishing season when fish is available for demonstration purposes and non-technical training offered during the lean season. They also said they need training schedules should be developed taking into account the business activities of members and their time preference.

CEWEFIA, NAFTA and CFSA all said they needed short programmes organised during periods of low economic activities of their members.

#### 3.2.5 Facilitators:

EMD stated they want their members to deliver the technical training while specialists deliver the non-technical training.

NAFTA: The executive expressed the need for facilitators who are their members or fish processors, have good command of the local language, understand the context in which they operate, and are able to break down theory into simple terms.

CEWEFIA executive expressed the need for facilitators who can use local the language to deliver and are familiar with the way they do things.

#### 3.2.6 Facilities

All the associations expressed the need for boarding and lodging if they attend off site training at the center.

#### 3.3 Expectations and Needs of Institutions or Regulatory Bodies

#### 3.3.1 Fisheries Commission (FC)

The expectations of the Fisheries Commission of the DFTC are line with government policy on post-harvest, i.e., to reduce losses and improve the value of processed fish. Moreover, it

should serve as a resource center as well as provide training space for the training programmes in the fisheries sector.

The Fisheries Commission identified numerous problems with the fish processors and traders on the one hand, and fishermen on the other that the training center should address. These problems which constitute the training needs of the target beneficiaries are:

- a. The women do not consider hygiene issues as a matter of priority. Proper handling of the fresh fish and the processed products.
- b. The products have a lot of smoke deposits and this go to affect products exported to the outside world. So it means if products were to be assessed on the market, it would definitely not meet the standards.
- c. The fishermen have problems with gear technology, safety at sea, use of GPS, coxswains, captainship, etc.
- d. Also, the Fisheries Commission conducted training needs assessment of fish processors and traders in 2014 and some of the needs are:
  - 1. Smoking trays
  - 2. Wire mesh
  - 3. Credit
  - 4. Market information

Therefore, the training courses at the DFTC should focus on:

- a. How to handle technology- models of such technology should be at the training center. (Drying racks, smoking ovens,)
- b. Courses from fishing- gear technology, safety at sea, etc.
- c. Fish processors-Hygiene, fish handling, processing, group development strategies, marketing, business management etc.

The fisheries Commission is ready to partner with the DFTC by providing expert facilitators because all FC staff in the post-harvest sector are expert Fish Technologist, have taken up consultancies with FAO and other international organizations as part of their experience. The FC will send people to be trained at the center.

#### 3.3.2 Ghana Standards Authority (GSA)

The needs and expectations of the GSA with regards to the DFTC are outlined below.

#### **Direct Needs for a Fisheries Training Centre**

Ghana Standards Authority has the mandate to verify compliance of fish and fishery products for export and to issue certificates to conforming products.

Exports, which do not meet the requirements of the importing country, are often destroyed and a notification, known as an alert is issued to the country and often to all countries as well on the type of problem.

In recent times the number of alerts has increased and this has caused an increased scrutiny of exports from Ghana.

To prevent these occurrences a fisheries training school is needed to educate and inform all stakeholders along the fishery product chain (export and local consumption) about the requirements in producing fish and fishery products which are safe for human consumption.

Once knowledge is disseminated, consumers would be able to have access to fishery products, which are safe, and of good quality.

#### **Ideal Training Centre for post-harvest Processors and Fishermen**

The ideal training center for post-harvest processors can be categorized into the following areas

- Facility: The structure of the facility built must meet the requirements for processors exporting and those processing for local consumption. It must be built such that pollution from the environment would be excluded or minimized
- Hygiene: The basic hygiene requirements which would prevent cross contamination of products must be met
- All the different categories of processed fish must be considered in the training centre.
- Landing site requirements for fishermen and the basic hygiene requirements must be considered.
- Facilities to maintain the cold chain in and during processing must be considered.
- Sustainability of the fish stocks must be included.

#### 3.3.3 Council for Technical and Vocational Education Training (COTVET)

**COTVET** expects

The training institution and trainers to be certified by COTVET

The programmes, manuals and materials for the training must be approved before use.

The delivery manuals to be based on CBT approach

#### 3.3.4 West African Regional Fishery Programme (WARFP)

The deputy programme officer explained that one of the components of WARP is to provide funds to build the capacity of Government and stakeholders to develop and implement policies, and that the best organization to express its needs for the Fisheries Training Centre is the Fisheries Commission.

#### 3.3.5 Food Research Institute (FRI)

Did not provide the requested information

#### 3.4 Capacity of DAA to manage the center

The current management of DAA does not have the capacity to manage the centre. The management's functions and roles are not related to training center management; therefore, there is a need to employ qualified persons who have experience in managing a training center.

#### 4 CONCLUSION AND RECOMMENDATION

#### 4.1 Potential Target Group

The potential target group for the training centre is members of associations of fish processors, traders and fishermen along the coast of Ghana.

#### 4.2 Needs That Must Be met by the Centre.

#### Learner needs

The following should be done to address the learning needs of the potential clients

- Training should be delivered
  - Mostly on site to address the potential target group's need to take part in the training and continue with their businesses and for convenience and cost effectiveness.
  - o In the local language
  - o By facilitators who themselves have experience in fishing and fish processing.
- Financial support should be explored since most of the potential users say that they will not be able to pay for the services of the centre.

#### **Courses and Modules:**

The following courses and modules should be offered at the center to address the learning needs of the potential target group. To address the need for onsite training, the courses should be delivered by trainers of the target beneficiaries who have been trained and certified by the center.

Courses	Possible Modules	
Fish Processing	Hygiene and Sanitation	
	Smoking and smoke deposits	
	Handling of fresh and processed fish	
	Fish smoking equipment	
	Smoking process control	
	Smoke production and components	
Fishing	Gear technology,	
	Safety at sea,	
	use of GPS, compass ,coxswains, captainship,	
	Fishing nets	
	Indicators to fish	
	Hygiene and Sanitation	
Entrepreneurship and Management	Record Keeping	
	Marketing	
	Packaging	
	Marketing information	
Literacy and Numeracy	Literacy	
	Numeracy	

#### 4.3 The Structure and Logistics

The training center should have a conference/training room to train the trainers of the target beneficiaries, a demonstration-processing unit and accommodation for participants. The logistics for the demonstration processing unit and conference /training room are shown in the table below.

Tools and technical	Amount	Specifications	Purpose
equipment			
Processing Unit			
Choker smoker	4	6 tray, 1 board, Smoker with chimney (3m long x 1.5 m wide x 1m hight)	Teaching Equipment
Fish trays	10	Big trays with no holes	Fish transport
Basket	1	Big cane basket	Fish storage
Basket	4	Small cane baskets	Fish storage
Bowl	15	Rubber bowls	Hand wash
Pan	3	Metal pans	Cleaning
Deep freezer	1	5.0 cubic foot chest freezer	Fish and ice storage
Chopping board and knifes	3	Long	Teaching Equipment
Chairs and stools	10	800 pounds capacity	Teaching Equipment
Conference / Training facilities			
Public address system,	1	Set public address system	Social Events
Conference room	1	50 feet x 15 feet	Training
Flip chart stand	2	70cm x 120 cm	Training
LCD projector	1	Sony VPL CH350, 4000 Lumen WUXGA 1920 x 1200	Training
White Boards	2	4 feet x 5 feet	Training
Metaplan Boards	3	150cm x180 cm	Training
Chairs	100	Fabric chairs	Training
Conference table	1	60 inches wide and 58 inches diameter	Teaching Equipment and social events
Tables	7	60 x 30 x 30 inches (W x D x H)	
Laptop	1	HP Pavilion 17 inches with 1TB Hard drive	Teaching Equipment