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# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

## Training On Hygienic Handling Of Fish; Class 1 Certification Guidelines



FEBRUARY, 2018

THE  
UNIVERSITY  
OF RHODE ISLAND  
GRADUATE SCHOOL  
OF OCEANOGRAPHY



**SNV** SMART  
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**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:** Etsra, H. (2018). Training on hygienic handling of fish; class 1 certification guidelines. The USAID/Ghana Sustainable Fisheries Management Project (SFMP). Narragansett, RI: Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island GH2014\_ACT210\_SNV 16 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 team and do not necessarily reflect the views of USAID or the United States Government.

**Cover photo:** Picture of participant demonstrating handwashing as part of hygienic fish handling (Credit: SNV)

## 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

Maurice Knight	Chief of Party	<a href="mailto:maurice@crc.uri.edu">maurice@crc.uri.edu</a>
Kofi Agbogah	Senior Fisheries Advisor	<a href="mailto:kagbogah@henmpoano.org">kagbogah@henmpoano.org</a>
Nii Odenkey Abbey	Communications Officer	<a href="mailto:nii.sfmp@crcuri.org">nii.sfmp@crcuri.org</a>
Bakari Nyari	Monitoring and Evaluation Specialist	<a href="mailto:hardinyari.sfmp@crcuri.org">hardinyari.sfmp@crcuri.org</a>
Brian Crawford	Project Manager, CRC	<a href="mailto:brian@crc.uri.edu">brian@crc.uri.edu</a>
Ellis Ekekpi	USAID AOR (acting)	<a href="mailto:eekekpi@usaid.gov">eekekpi@usaid.gov</a>

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

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)

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

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

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

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

### For additional information on partner activities:

CRC/URI: <http://www.crc.uri.edu>  
CEWEFIA: <http://cewefia.weebly.com/>  
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## **ACRONYMS**

SFMP	Sustainable Fisheries Management Project
SNV	Netherlands Development Organization
USAID	United States Agency for International Development
FC	Fisheries Commission
EU	European Union
WHO	World Health Organization

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## **1.0 BACKGROUND**

Studies have indicated that the fish smoking methods and techniques used in Ghana expose the product to some level of chemicals and microbial contamination. There is therefore the urgent need to address these problems so that fish sold at the local markets as well as for export are wholesome.

A Certification Scheme (Class 1) has been developed by SNV under the SFMP to promote the production of safe fish for Ghanaian markets. The scheme is to ensure that fish is produced under hygienic conditions using safer smoking techniques for both the local or export markets. The class 1 certification scheme will serve as a guideline.

In order for producers to produce healthy fish to meet the requirements of the certification, there is the need to take them through training on how best to manage their production processes to ensure and maintain hygienic conditions in the production line.

This training was to train fish processors on the Class 1 certification guidelines to prepare them towards production of safe smoked fish for consumers. The training employed various practical and demonstration approaches to educate fish processors on personal hygiene and other best practices for healthy fish production.

The training was organized for fish processors in the Volta Region, and took place in three districts in the region namely Keta, Ketu and South Dayi Districts. The communities in which the trainings were organized are Aflao, Hedzranawo, Adina, Atorkor, Keta and Dzemeni. In total, the training was attended by 165 trainees made up of 4 males and 161 females. At the end of the training, 47 fish processors gave their names as being willing to change their processing kitchen and methods in order to produce healthier fish to meet the Class 1 Certification standards.

### **1.1 Training Objectives**

The objectives of the training program were;

- To educate fish processors on the Class 1 certification Checklist/guidelines
- To prepare participants for the Class 1 certification
- To identify interested participants and support them to meet the Class 1 criteria.
- To train fish processors on healthy fish handling

### **1.2 Expected outcomes**

The training aimed to educate fish processors on the importance of producing healthy fish, not only to sell to higher markets but to also ensure that they are not causing harm to other humans by selling unwholesome food (fish) to them. It was also to help identify and support fish processors who are willing to produce fish under hygienic conditions, and help them access higher markets for their efforts for producing healthier fish. The trained processors would also train their helpers to ensure that the processing team adhere to the hygienic practices laid out in the certification checklist.

### **1.3 Training method**

The training method was in three parts; the first part was a theory session where participants were taken through the basic steps in hygienic handling of fish. This session was divided into four topics, which were Personal Hygiene, Environmental Hygiene, Hygienic Handling of fish and Post-Harvest Losses, and Storage of smoked fish. Participants were also taken through the checklist for the Class 1 Certification scheme.

After taking participants through the various topics, the second part of the training involved showing participants some videos on how to wash their hands. Two videos on efficient hand washing was shown to the participants and they all practiced hand washing as per the video instructions.

The third session was a practical session where participants demonstrated the hand washing techniques learned from the videos. Water and soap was provided and all participants washed their hands, and were assessed by other participants based on the videos watched earlier. The training was facilitated by Emmanuel Kwarteng and Hopeson Eli Etsra (SNV), with support from Promise Gavor (Zonal Fisheries Officer at Keta), Samuel Pinto (Corporate Officer at Ketu), Jennifer Glova (Corporate Officer at Keta) and Elizabeth Gagba (Zonal Fisheries Officer at Dzemeni).

#### **1.4 Venue**

The training program took place in three (3) districts in the Volta Region; Keta, Ketu and South Dayi Districts. In the Keta district, the training took place at two locations, namely Keta and Atorkor. In the Ketu Municipality the training took place in three locations namely Aflao, Adina and Hedzranawo. At South Dayi district the training took place at Dzemeni.

#### **1.5 Attendance**

In total there were 165 participants who attended the training, made up of 4 males and 161 females. All participants attended the sessions in full.



## 2.0 TRAINING CONTENT

### 2.1 Personal Hygiene

The training program started with the theory session where participants were given an overview as to what the whole training was about, and the need to take active part in all activities and discussions undertaken during the session. Participants were first taken through some personal hygiene that needed to be observed in their daily activities as fish processors. Participants were also educated on the need to practice and maintain personal hygiene in the processing of fish for consumers. Participants agreed to the fact that there is the need to maintain personal hygiene. They gave some examples as to why personal hygiene should be observed. Some said the covering of hair would prevent the processors from scratching the head and using the dirty hand from the hair to touch the fish during processing.



**Figure 1. Facilitator explaining the need to cover hair during processing of fish**

During the discussions, participants were asked why they knew all the implications of not practicing personal hygiene but yet do not practice it. Some said they are mostly in a hurry to process the fish and thought it would delay the processing time. Others said though they knew the implications they did not think it was that serious. However, participants agreed that there was the need to change the way they processed the fish for consumers.



**Figure 2 Participant demonstrating hygienic handwashing**

## **2.2 Environmental Hygiene**

Participants were taken through environmental hygiene practices that would ensure that they were processing the fish under hygienic conditions. Participants were educated about the implications of not adhering to the environmental conditions of their processing sites. Participants gave examples of how unhealthy environments can affect the product they produce. Participants agreed that hygienic environment of the processing area alone adds some value and respect to the processor and his/her product. They were made to understand that one does not necessarily need a big kitchen, but one can manage a small kitchen to achieve efficient hygienic conditions.



**Figure 3. A participant asking about the environmental requirements for a healthy processing area**

Participants said processors in the Volta region normally wash their fish in basins and pour the water away. They also do not have much problem with separating the raw material from the packaging of the fish.

### **2.3 Hygienic Handling of fish and post-harvest losses**

During these session participants were taken through some of the ways by which they lose fish and subsequently lose some income. It was realized through the session that though the processors acknowledged these losses they did not pay attention to it because they never quantified the loss in monetary terms. When participants were taken through how these losses affected their income, they appreciated the fact that they could have saved some money by reducing these losses.



**Figure 4. Facilitator explaining the types of losses to participants**

On the aspect of hygienic handling of fish, participants were taken through the need to wash the fish thoroughly with clean water before they start processing the fish. Participants were made to understand that the quality of fish produced at the end of processing depends on the quality of the raw material and the processing method or approach.



**Figure 5. Participant explaining how washing of fish is done in basins and waste water carried away from processing site**

## 2.4 Storage of Smoked fish

Participants were taken through the storage of fish to ensure that the quality of the fish does not deteriorate with time. They were also advised on using the right materials for storing the fish to avoid contamination of the finished product. Participants were also advised on ensuring that the storage area is separated from the raw material processing area to avoid cross contamination from these two areas. They were also taken through the need to ensure that the storage area is free from rodents, pests and insects that could cause spoilage or contamination of the stored products.



**Figure 6. Facilitator explaining the need to ensure that processed fish are stored in efficient manner to maintain quality during storage**

## 2.5 Checklist for Class 1 Certification Scheme

Participants were taken through the need to enroll onto the Class 1 certification scheme being introduced by the SFMP project. They were told about the need for the scheme, as well as some of the benefits associated with joining the scheme. Participants were taken through the basic requirements that needed to be satisfied for one to qualify to be enrolled onto the scheme. They were also informed about the plans of the project in getting higher markets for processors who get enrolled in the certification scheme.



**Figure 7. Facilitator using plastic chairs to demonstrate separation of kitchen into raw material, processing and storage areas**

By the end of this session participants acknowledged the fact that there is the need to change their ways of processing fish, not only to qualify for the certification scheme, but to also ensure that they sell wholesome fish to consumers, and also ensure they have good health in their business.

Participants were grateful that the project sought to support them to have and maintain a healthy kitchen.

## **2.6 Practical washing of hands by all participants**

After the training sessions, all participants including facilitators, demonstrated the practical washing of hands; and were assessed by the other participants and facilitators. During this session, soap and water was provided for participants to wash their hands according to the steps in WHO hygienic hand washing protocol, as watched from the video.



**Figure 8. Participant demonstrating handwashing techniques during the practical session**



**Figure 9. Facilitator demonstrating the need to wash hands with running water but not stagnant water**

### **3.0 CONCLUSIONS**

During the discussions sessions it was realized that participants were grateful for the knowledge acquired to improve their business and working environment.

Interactions also revealed that most of the processors were aware of the health implications of processing fish under unhygienic conditions and unhygienic handling of fish, but they did not attach much importance to it to warrant their changing from those bad ways.

However, at the end of the training, 47 fish processors gave their names that they want to change how they process their fish to processing under hygienic conditions to qualify for the Class 1 Certification Scheme.