USAID | GHANA
FROM THE AMERICAN PEOPLE

SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Class 1 Recognition Scheme

(Operational Guidance)

APRIL 2019

THE UNIVERSITY OF RHODE ISLAND GRADUATE SCHOOL OF OCEANOGRAPHY | CRC COASTAL RESOURCES CENTER

SNV SMART DEVELOPMENT WORKS

This publication is available electronically in the following locations:

The Coastal Resources Center

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

Citation: SNV Netherlands Development Organisation. (2019). Class 1 Recognition Scheme (Operational Guidance). 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 Organisation. GH2014_ACT262_SNV. 32 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: Fish processing to attain Class 1 Certification (Credit: SNV Netherlands Development Organisation)

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

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

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

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

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

CEWEFIA
B342 Bronyibima Estate
Elmina, Ghana
+233 024 427 8377
Victoria C. Koomson
cewefia@gmail.com

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

For additional information on partner activities:

CEWEFIA:	http://cewefia.weebly.com/
CRC/URI:	http://www.crc.uri.edu
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

CEWEFIA	Central and Western Region Fishmongers Improvement Association
CRC	Coastal Resource Center
DAA	Development Action Association
EU	European Union
PAH	Polycyclic Aromatic Hydrocarbons
SFMP	Sustainable Fisheries Management Project
SNV	Netherlands Development Organisation
URI	University of Rhode Island
USAID	United States Agency for International Development

CONTENTS

LIST OF FIGURES

ABOUT THIS MANUAL

This manual is designed to create awareness on the requirements to qualify for the Class 1 Certification Scheme. It contains the checklist for the audit of fish processing facilities on to the recognition scheme. This manual is guide for processors who want to enroll on the scheme and a training manual for auditors of the scheme.

Sustainable Fisheries Management Project

The United States Agency for International Development (USAID) committed funds to the implementation of a Sustainable Fisheries Management Project (SFMP) in Ghana for five years. The objective is to rebuild marine fisheries stocks and catches through adoption of responsible fishing practices. The project contributes to the Government of Ghana's fisheries development objectives and USAID's Feed the Future Initiative. USAID selected the Coastal Resources Center (CRC) at the University of Rhode Island's Graduate School of Oceanography as lead implementer of the SFMP. In leading the project, CRC is working with the Ministry of Fisheries and Aquaculture Development and the Fisheries Commission along with a consortium of international and local partners, including SNV Netherlands Development Organisation.

Class 1 Recognition Scheme

Fish processing is the main economic activity for women living in and around the coastal and lake areas of Ghana. Preservation methods include salting, frying and freezing, but smoking is the most prevalent form: practically all species of fish available in the country can be smoked and it is estimated that 75% of the domestic marine and freshwater catch is smoked. Most processed fish is sold in major markets across the country and within the West African Region, with some products making their way through to the global diaspora including the EU market.

Poor product quality and unhygienic handling practices are a major concern in the local fish processing industry. Chemical and microbiological contamination can occur at multiple points through the value-chain: the processing, storage, transport and sales of fish in unhygienic surroundings. The current smoking and drying techniques have limitations that needs to be addressed to significantly improve the livelihoods of small-scale fishers' while responding effectively to product safety challenges – especially linked to controlling contamination by Polycyclic Aromatic Hydrocarbons (PAH), which is a public health hazard.

Recent SFMP analyses have shown that smoked fish contains chemical and microbiological contaminant levels that are well above those recommended for human health. The SFMP project in response to these issues, has collaborated with a team of government agencies (Fisheries Commission, Ghana Standards Authority, Food and Drugs Authority, Food Research Institute, University of Ghana, University of Cape Coast) relevant to food safety, towards the development of a recognition scheme which will enhance the production and trade of healthy fish on the Ghanaian market.

This document therefore serves as the operational guide for the implementation of Class 1 recognition scheme.

I. ENVIRONMENTAL HYGIENE

The location of the processing site and its surrounding environment should be clean and free from obvious contamination.

clean processing area **untidy processing area**

Figure 1. Examples of clean and untidy processing areas

Figure 2. Dump site too close to processing site

Dumps should be isolated from site and placed in a well-protected area, at least 30m away from the processing site.

Premises should be fenced to prevent entry by pests and household animals into the processing area.

Figure 3. Enclosed processing area

Figure 4. Another example of enclosed processing area

II. LAYOUT OF PREMISES

The layout of the processing site should be designed to avoid contamination of the product before, during and after the smoking session. The design of the layout can be as follows;

There should be a well-defined reception area for receiving the raw material (fresh fish). The area should be cemented or have a hard water proof surface that can withstand repeated washing and disinfection.

Cemented processing areas **Inappropriate processing areas**

Figure 5. Enclosed processing areas

Figure 6. Wet (dirty) Area (cleaning outside) Clean Area (smoking inside)

There should be a clear separation between dirty area (where the fish is received, washed and prepared for smoking) and clean area (where the fish is smoked).

Wet (dirty) Area (cleaning outside)

Clean area (smoking inside)

Figure 7. Wet (dirty) Area (cleaning outside) Clean area (smoking inside)

If the receiving platform does not have a receptacle, waste water should be disposed of hygienically through well-kept canals a good distance away from the processing area

Unhygienic disposal method

Waste canal away from processing site

Well dug pit for water waste

Figure 8. Bad and Good waste handling practices

Figure 9. Well-kept storage area

There should be a clearly allocated storage area, with a clear demarcation of space for storing finished products, packaging materials, processing equipment, cleaning agents and disinfectants. The storage areas should be free from pest and rodent infestation.

Figure 10. Bathroom is too close to processing site

The toilet facility and cloakroom should be separated from the handling and processing area.

III. PERSONAL HYGIENE

To avoid the fish processor unintentionally contaminating the fish before, during and after processing, there is the need for the processors to observe some personal hygiene. These personal hygiene requirements include the following:

All staff working in the processing facility must be examined and certified to process and sell food by the District Health Directorate.

Figure 11. Processor with valid certificate

All staff must keep short fingernails, cover hair during processing, no jewelry, no eating, chewing or drinking inside the facility during processing.

Processor with well-kept fingernails

Processor with long nails and jewelry (Not Acceptable)

Figure 12. Processor's hand conditions

Figure 13. Processor in Personal Protective Equipment (PPE)

All visitors entering the processing area during processing must also observe the above personal hygiene protocols.

Figure 14. Visitors also need to observe personal hygiene rules

All staff working at the processing facility should know how to wash their hands efficiently.

Figure 15. Hand washing practice

Figure 16. Hand washing under running water

IV. HYGIENIC FISH HANDLING

The fish processor must check the fresh fish to ensure it was properly harvest. Fish should be hygienically handled immediately after harvest and iced when waiting to be processed.

Figure 17. The fish processor checking fish

Figure 18. Processors washing fish

The fish processor must also ensure that all fish are washed thoroughly before smoking. The processor must ensure that the process of inspecting, cleaning and washing of the fish is carried out under a shed to avoid exposing the fish to extreme weather conditions.

Figure 19. Fish processing under a shed

Any excess fish must be packed and stored in a freezer or in an insulated container with enough ice for preservation till next smoking session, to avoid contamination and/or deterioration

Figure 20. Preservation with ice

The source of the ice should be hygienic and should be stored in a clean container during transportation and before use.

Figure 21. Clean ice

All equipment and containers coming into contact with the fish should be thoroughly cleaned, and disinfected to avoid contamination.

*** Do not recycle chemical containers for use at the production site.**

All equipment must be cleaned and stowed away.

Figure 22. Cleaned and stowed equipment

V. WATER QUALITY

The water used for washing the fish and equipment, must be clean to avoid contamination.

Water for the processing facility should be potable (it could be municipal water, bore hole, clean well, tanker or stream)

Municipal tap water **Dirty well**

Figure 23. Municipal tap water versus dirty well

Containers for holding water before use should be convenient for easy cleaning and disinfecting.

Figure 24. Water containers

VI. STORAGE

The storage facility should take into consideration the following good practices.

The storage area should be properly ventilated and should be fenced to prevent pests from entering.

Figure 25. Well-ventilated storage areas

Cleaning chemicals should be stored in well labelled containers and kept away from food all edibles.

Figure 26. Chemicals in their containers

VII. PEST CONTROL

Pest infestation must be prevented to avoid contamination. Pest control should take into consideration the following.

The premise should be kept tidy to prevent pest infestation.

Figure 27. A tidy premise

The right pest control practices should be employed.

- Mosquito nets should be used where possible for fencing the processing and storage area to prevent pests.
- Processing and storage sites should be cleaned thoroughly at least once a week.
- to avoid pest and insect infestation.
- Avoid the use of chemicals in pest control.
- Pesticides, if used should be stored properly and away from fish product to avoid contamination.

VIII. CLEANING PROGRAMS

Cleaning of the facility.

All parts of the processing site should be cleaned effectively.

Figure 28. Proper cleaning method with detergents

There should be adequate equipment and chemicals for cleaning the processing site thoroughly. Cleaning of the facility should be done frequently, at least once a week.

Cleaning materials such as brooms must be dedicated to the processing site. There should be dedicated cleaning materials for cleaning food contact surfaces and non food contact surfaces.

IX. WASTE MANAGEMENT

Waste generated during processing of the fish should be properly disposed of.

There should be a clear system for disposing both liquid and solid waste

Figure 29. Well dug pit for waste water

Figure 30. Bad disposal method

Waste must be removed from processing site frequently (after each processing session).

Figure 31. Waste water being carried away

Figure 32. Covered containers for solid waste

Solid waste must be kept in well covered containers.

X. PACKAGING

Packing of the final product for sale and storage should be done appropriate materials.

The packaging material should be appropriate to protect the fish product from the environment.

Figure 33. Appropriate packaging materials

The packaging material should not introduce hazardous chemicals to the product.

- Do not use cement papers or news papers for packaging on the open market. Use brown paper or milk papers.
- All baskets and containers for packaging the product should be well cleaned and used solely for fish.

Figure 34. Inappropriate packaging material

XI. TRANSPORTATION

Transportation of products must be done by means that would not cause damage to the finished product.

Figure 35. Improper handling of product

Figure 36. Better ways to transport fish

XII. RECALL AND TRACEABILITY

Finished products must be clearly labelled to allow for traceability. Batch numbers should be clear on the label to allow for easy traceability.

Figure 37. Labeling for traceability

XIII. SMOKING TECHNOLOGY

Improved fish smoking technology should be used in processing the fish to reduce the smoke deposit (chemical contamination) on the finished product. Preferably, processing of the fish should be done using the Ahotor or FTT oven.

Ahotor Oven **Chorkor Oven**

FTT Oven

Figure 38. Types of smoking ovens

XIV. RECORD KEEPING

Records should be kept on all activities at the processing facility.

Figure 39. Record Keeping

How to apply for the Class 1 recognition.

1. Acquire and complete an application form from the Zonal Fisheries Officer
2. The Zonal Fisheries Officer will visit and audit the facility
3. The Zonal Fisheries Officer will pick samples of fish processed for biological and PAH testing. The officer will share the findings of the audit with you.
4. If you passed the audit, you will pay a fee and certificate will then be issued to you with 500 product labels.
5. The certificate should be renewed annually after an audit.

SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Figure 40. The Sustainable Fisheries Management Project