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SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

Construction & Material Support For Processors



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THE
UNIVERSITY
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GRADUATE SCHOOL
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Development
Action Association

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Cover photo: A beneficiary of raised drying rack in Apam drying her fish on the constructed rack and a sample design of the raised drying racks. (**Credit:** Development Action Association)

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Resonance Global: <https://resonanceglobal.com/>
SNV: <http://www.snvworld.org/en/countries/ghana>

ACRONYMS

CCM	Centre for Coastal Management
CEWEFIA	Central and Western Region Fishmongers Improvement Association
CRC	Coastal Resource Center
CSLP	Coastal Sustainable Landscape Project
DAA	Development Action Association
DFAS	Department of Fisheries and Aquatic Science
DMFS	Department of Marine Fisheries Sciences
DQF	Daasgift Quality Foundation
FtF	Feed the Future
GIFA	Ghana Inshore Fishermen's Association
GIS	Geographic Information System
GNCFC	Ghana National Canoe Fishermen's Council
HM	Hen Mpoano
ICFG	Integrated Coastal and Fisheries Governance
MESTI	Ministry of Environment Science and Technology
MOFAD	Ministry of Fisheries and Aquaculture Development
NDPC	National Development Planning Commission
NGOs	Non-Governmental Organizations
SFMP	Sustainable Fisheries Management Project
SMEs	Small and Medium Enterprises
SNV	Netherlands Development Organization
SSG	SSG Advisors
STWG	Scientific and Technical Working Group
UCC	University of Cape Coast
URI	University of Rhode Island
USAID	United States Agency for International Development
WARFP	West Africa Regional Fisheries Development Program

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1. INTRODUCTION

1.1 Background

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. The illegal use of chemicals and explosives in fishing are a major contributor to poor quality fish catch and microbiological contamination can occur at multiple points through the value-chain, through the processing, storage and sales of fish in poorly kept and unhygienic surroundings.

1.2 Introduction

Women are the back bone of the fishing industry as they are hugely involved in the various stages of the post-harvest processes and also, as they generate an important share of the country's revenue through fish processing. The fisheries sector plays an important part of the socio-cultural and economy of the people of Apam, in the Gomoa West District in the Central Region of Ghana. Being a typical fishing community in Ghana, the women fish processors in Apam engage in various forms of processing including smoking, frying and salting.

2. THE PROBLEM

2.1 Problem Statement

Salted fermented Fish is dried in different forms including, hanging, hooking or drying or drying on a rack. Unfortunately for the people of Apam, they lack simple technology and has resorted to unhygienic ways such as use of refuse, straw and fishing net as a stage for drying. Some are also dried on the bare ground. These practices are associated with many problems such as “sandy-end” product leading to low pricing, ground contamination, worm infestations and sometimes dried products are swept away during heavy down pour.



Figure 1: Ground contamination and other infestation in the drying fish is Drying fish on the ground can increase the drying time. Animals such as dogs, goats, chicken and many others may eat or trampling on their products.

Again, the long hours spent in bending over to spread the fish on the ground can have some health implications on some of the women.

Drying fish on the ground can increase the drying time especially in days where the sun is not hot. Since the fish on the ground do not take advantage of the air flow from below and above the fish. Some of the women have to contend with waiting and loitering around the area to prevent some animals such as dogs, goats, chicken and many others from eating or trampling on their products. Many Ghanaians love their fermented fish (locally called momoi / kako) which are sold in almost every Ghanaian markets.

However, most of these consumers will definitely think again if they realized that their favorite “delicacy was prepared under such an unhygienic environmental conditions. Not only do such conditions pose a threat to the quality of the final “momo” product but also the health implication of the fish processors themselves (example the outbreak of cholera in the area).

3. IMPROVED FISH DRYING TECHNIQUE

3.1 The Solution

In 2014, the United State Agency for International Development (USAID-GHANA) through the Department of Coastal Resource Centre (CRC) of the University of Rhode Island, sponsored a 5 – year fisheries development project called the Sustainable Fisheries Management Project (S.F.M.P) which aims at rebuilding targeted marine fisheries stock through, adoption of sustainable fishing practices and reduction in over exploitation, working closely with Fisheries Commission of Ghana and other 8 local partners, (DAA, CEWEFIA, Hen Mpoano, DAASGIFT, FON, SNV, SSG ADVISORS and Spatial Solutions), men and women in the fisheries sector and civil society organizations to assist in project implementation.

To achieve the overall project goal, the SFMP seeks to adopt various Intermediate Results, of which improving management of marine resources to reduce over exploitation, to conserve bio diversity and provide other benefits play a key role. One major expected outcome is to help approximately 12,000 people, majority of whom are women to benefit from diversified livelihoods, access to micro – credit, adoption of more profitable and healthy fish processing and product addition.

In line with this, Development Action Association - DAA, a local implementing partner of the project in Apam and Winneba constructed for the adoption by fish processors who are into fish salting and fermentation, raised platforms or raised drying racks. This direct project intervention presents an improved technology for fermented fish processing, thus a sharp contrast to the drying of fish on the bare ground.

3.2 The Benefits

So what do these fish processor benefit from this project intervention?

- Reduced drying time
- High market value
- Improved product quality products
- Hygienic fish drying process
- Better safety and quality products with increased consumer confidence
- Improved returns to fish processors

The women have also avoided the long wait and loitering around to scare away animals that trample on or eat some of the drying fish. Not only did the women processors receive an improved drying platform, but also received training in hygienic fish handling and processing to produce high quality products for the market. They were taken through modules such as

- Fish spoilage prevention
- Personal Hygiene
- Preserving fish freshness
- Packaging and Marketing

- Customer service relation

The intervention also took into consideration the environmental condition of the processing and drying area, therefore DAA in collaboration with Gomoa West District Assembly, Onyame Ntesee Odasani fish processors, fishermen and the traditional authorities in Apam embarked on a clean – up exercise to begin the institutionalization of a bi-weekly cleaning and de-silting exercise in the processing area.

3.3 The Consultation and Construction



Figure 2: Needs, design, material choice and price assessment were done in close consultation with the fish processes during several meetings.

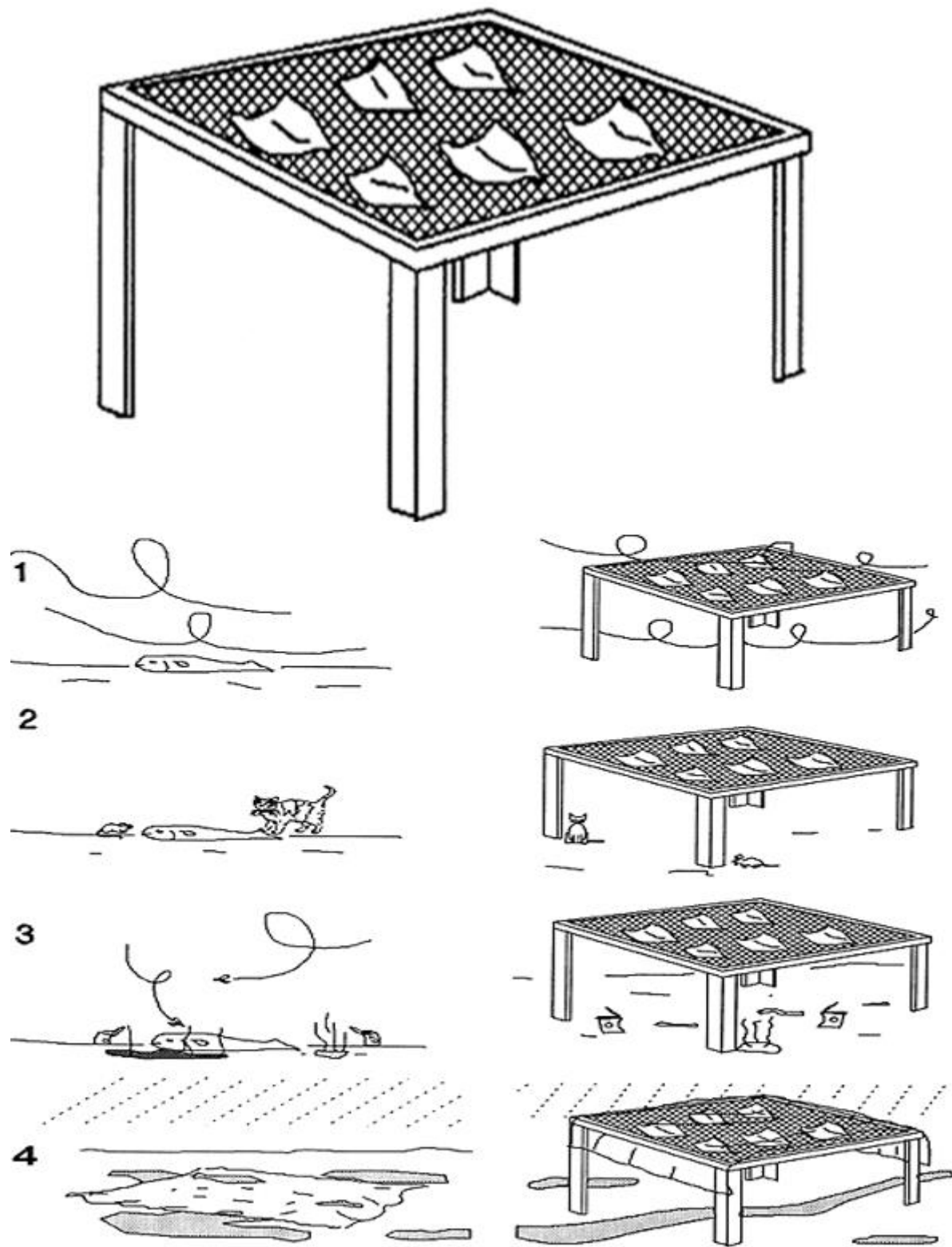


Figure 3: Sketches of the proposed designs of the raised racks for fish drying



Figure 4: Some materials used in securing the footing of the racks during the construction process



Figure 5: Some members of the association volunteered their time and effort during the construction of the raised racks in Apam in the Central Region of Ghana.



Figure 6: Finished raised drying racks in Apam with a tapoline cover



Figure 7: Mr. Abraham Asare and Mrs. Lydia Sasu of DAA inspecting the finished raised racks before handing over to the beneficiaries



Figure 8: . Mrs. Lydia Sasu of DAA (right) with a beneficiary (left, Grace Dadzie) of the raised drying racks in Apam in the Gomoa West District of the Central Region of Ghana



Figure 9: Members of the beneficiary group embarking on a clean-up exercise as part of the healthy and hygienic fish campaign in Apam

3.4 Improved Fish Drying Racks in Use

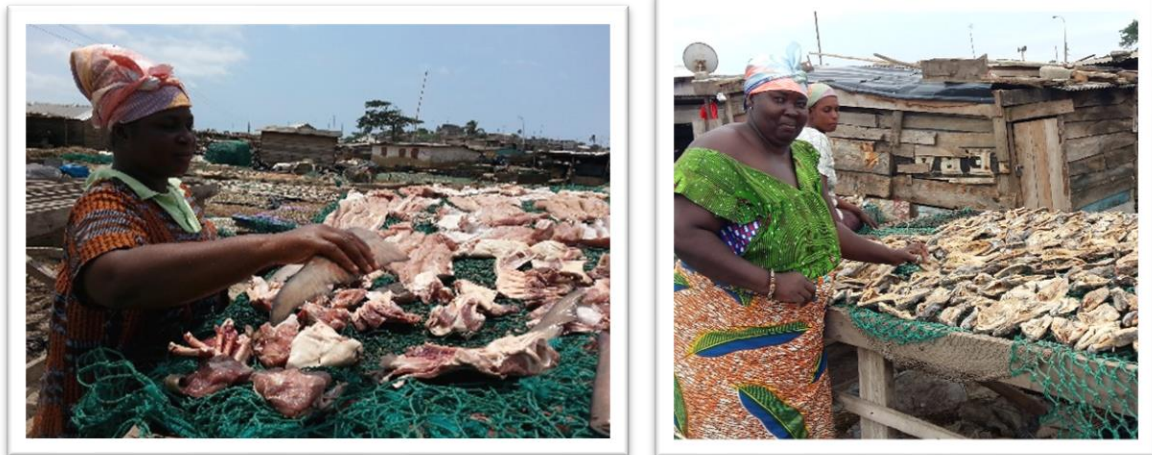


Figure 10: . Beneficiaries of the raised drying racks happily use the improved technology and are grateful for the support received.



Figure 11: A beneficiary packages the end products from using the raised racks to dry her fish.



Figure 12: Beneficiaries of the raised drying racks happily use the improved technology and are grateful for the support received



Figure 13. Before (left) and after (right) photo of Madam Grace Dadzie, a beneficiary of the raised drying racks in Apam

Madam Grace Dadzie
“I am very grateful for this intervention. Now I can process and dry my fish in a healthier manner. Thanks also to DAA for their support”

4. CONCLUSION

It is our hope that these women processors will put into good use the raised platforms and even expand the adoption of the platforms beyond Apam and its environs. Development Action Association (DAA) under SFMP will continue to work closely together with the fish processors to improve not only their processing but also direct technological improvement.