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# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

## Validation Workshop On Business Model Options & Segmentation Study Reports



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THE  
UNIVERSITY  
OF RHODE ISLAND  
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OF OCEANOGRAPHY



This publication is available electronically on the Coastal Resources Center's website at [http://www.crc.uri.edu/projects\\_page/ghanasfmp/](http://www.crc.uri.edu/projects_page/ghanasfmp/)

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**Cover photo:** Photo Grid of Workshop group discussions (Credit: Richard Amaning)

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## **ACRONYMS**

CEWEFIA	Central & Western Fish Mongers Improvement Association
CRC	Coastal Resources Center
DAA	Development Action Association
NAPFTA	National Fish Processors and Traders Association
SFMP	Sustainable Fisheries Management Project
SNV	Netherlands Development Organisation
USAID	United States Agency for International Development

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## INTRODUCTION

SNV Netherlands Development Organization organized a 2-day validation workshop on the business model options and market segmentation study reports from 27<sup>th</sup> -28<sup>th</sup> April, 2016 at Erata Hotel, East Legon-Accra. The purpose of the validation workshop was to discuss the results of the business model options, segmentation study and validate the findings through brainstorming sessions as well as solicit the views of implementing partners and stakeholders in finalizing the report.

The validation workshop was well attended by the SFMP implementing partner organizations and stakeholders from stove enterprises, government and smoked fish processors. The following organizations attended the validation workshop; Microfin Rural Bank, GRATIS Foundation, Best Performance Company, Food Research Institute, Morrison Energy, DAA, CEWEFIA, Fisheries Commission and the Smoked Fish Processors.

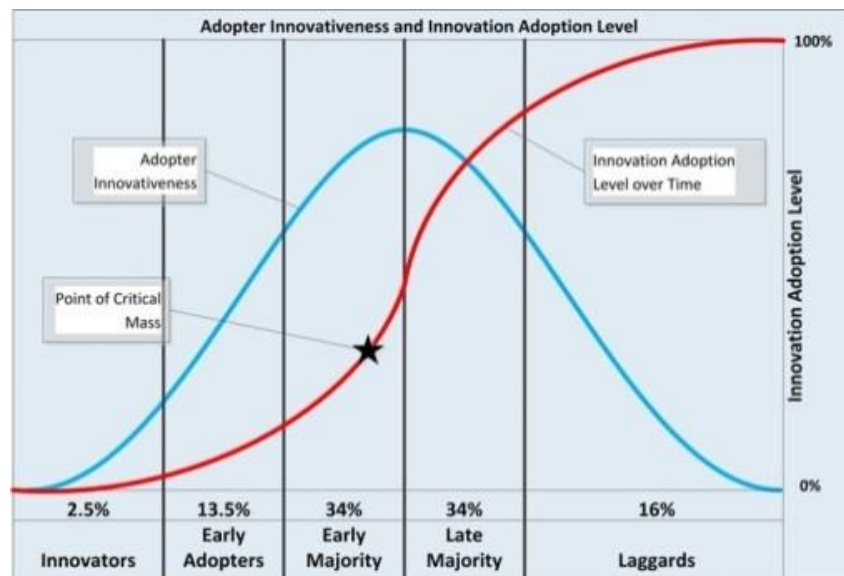
## WORKSHOP PROCEEDINGS

### DAY 1: ACTIVITIES UNDERTAKEN

The following activities were outline of activities for Day 1 of the validation workshop;

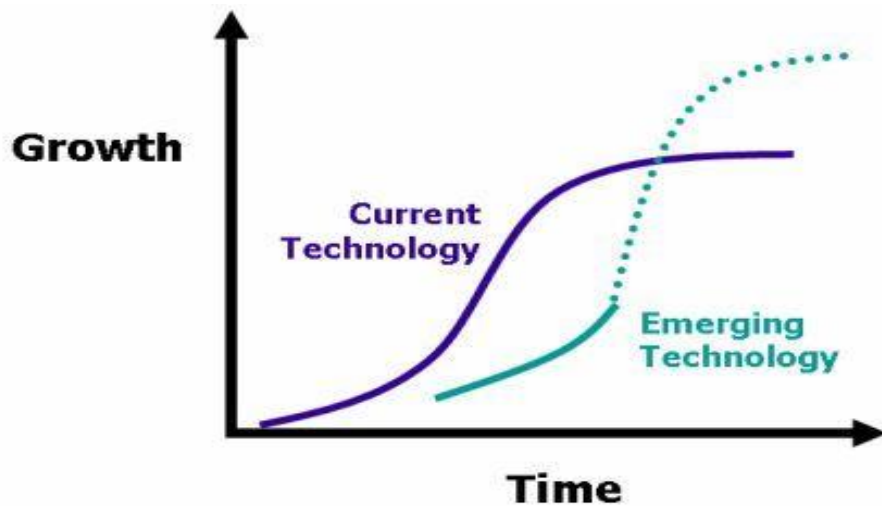
- Welcome Address by SFMP Chief of Party
- Purpose of Gathering by SNV Energy Sector Leader
- Presentation on the findings of the Market Segmentation Study
- Preliminary session on the segmentation study
- Investment Impact tool

#### *Welcome Address*



**Figure 1: Adopter innovativeness and innovation adoption level**

The first day started with an opening prayer from one of the participants with an opening remarks from Dr. Brian Crawford (SFMP Chief of Party). In his welcome remarks, he stressed on the need to be innovative in our approach to upscaling improved fish smoking stoves by the SFMP partners. He indicated that one of the models which is mostly ideal to adopt for upscale is the diffusion of innovative theory.



**Figure 2: Adoption of new technology over time**

He indicated that innovation such as an improved fish smoking stove would take time to diffuse within a community before a full scale adoption can be achieved. He mentioned that for every community, there are innovators who would easily admit to change whereas the early majority would embrace the technology based on information regarding its benefits. He mentioned that the early majority class adoption of the desired technology is critical in a successful diffusion process. He wished participants the best and encouraged the participants to make contributions toward enriching the two reports. He commended the consultant for a great job.

### ***Opening Remarks***

James Robinson (SNV Country Energy Sector Leader) gave the opening remarks. In his remarks, he made a PowerPoint presentation on technology cost and financing. He mentioned that, the era of subsidy is over as a commercially viable on-lending with a socially inclined objective. This would ensure sustainability and upscale of improved cook stoves in Ghana.

He used an analysis of total number of stoves to be constructed over the remaining 3 years of the project and made an indication that initiating an end-user financing model that recognizes the key role of financial institution in the provision of micro-credit will be instrumental in reaching scale.

### ***Presentation on the Segmentation Study findings***

The consultant, Richard Amaning presented the findings of the market segmentation study to the participants present at the workshop. He walked the participants through the purpose of the study and the methodology employed in undertaking the study. He outlined the study limitations and indicated that amidst the limitations, the study was successfully conducted in the Central and Western Regions of Ghana.

On the study findings he took the participants through the thematic areas outlining the socio-economic conditions under which the smoked fish processors operate their business as well as their challenges.

### ***Preliminary Session***

After the presentation on the segmentation study findings, the participants were group into four different groups with representation from the Government, Civil Society Organisations,

Fish Processors and Stove Enterprises. In each of the group, the various stakeholders were well represented. Each group was assigned a task of discussing and validating the study findings and then present their feedback.

Each group made a presentation on the outcome of their brainstorming session and shared their observations of the findings of the study. Key issues identified were; the need to have a standard conversion for cartons and pans, further analysis on the production volume based on the business working capital and the need to have more graphics in the report so the report could easily be assimilated by readers.



**Figure 3: The four groups brainstorming over the Study Results**

The second task assigned to the groups was on the required needs of the various segments of the smoked fish processors. Figure 4 below provides a summary of the group's feedback.



Table 29: The Required Needs of the various segments of Smoked Fish Processors				
Required Needs	Micro	Small	Medium	Large
Technology cost	GHC 200 -500	GHC 450 -800	GHC 800 -2,500	GHC2,500 -8000
Technology option	clay-based stove	Clay-based stove	Brick-based stove Other modern technologies	Brick-based stove Other modern technologies
Average Loan Size	GHC200 - 500	GHC 600 - 1,500	GHC2,000 - 5,000	GHC6,000 - 15,000
Business capacity enhancement	Records keeping Small business management	Records keeping Small business management Financial management Sales and marketing	Records Keeping Succession plan Business Plan Marketing and Sales Improved processing techniques	Business succession plans Marketing and Sales Business Plan Improved processing for the foreign market
Business Model	BOT (Stove Enterprise builds the stove at a site approved by the End-user. The end-user uses the stove and pay daily user fee for an agreed period). The need for a pro-poor interventions (subsidy).  Savings-Led Approaches to build savings culture	End-user financing through a financial institution (No Subsidy). Savings-Led Approaches to build savings culture	End-user financing through a financial institution (No subsidy).  Savings-Led Approaches to build savings culture	Savings-Led (No need for credit to finance stoves & Subsidy)
Barriers	Subsistence production level because doesn't have the capital to grow.	The prioritised need is capital to purchase the fish stock	Focus is mainly on capital to increase production capacity irrespective of type of stove used	Focus is mainly on meeting the market demand irrespective of the type of stove used Does not see the need for an improved stove

**Figure 4: Table of the Needs of the Various Segments of the Smoked Fish Processors**

### ***Presentation on the Investment Impact Tool***

The consultant gave a presentation on the investment impact tool which was a Microsoft excel template designed to assist SFMP implementing partners to undertake impact assessment of project interventions targeted at smoked fish processors. It was mentioned that the tool is expected to be used by Project implementing partners to assess the level of investment made into the operations and activities of Fish Processors within the fishing industry in Ghana. Emphasis was placed on the fact that, the primary objective of the tool is for the measurement and tracking of a stove user's finances/business before and after the introduction of an intervention (e.g. Stove, training etc).

It was noted that the Investment Impact Tool (IIT) is in seven major components namely;

- the business profile,
- production capacity investment,
- business management enhancement,
- technological enhancement,
- financial management
- Human capital investment and
- Alternative livelihoods



**SUSTAINABLE FISHERIES  
MANAGEMENT PROJECT (SFMP)**

Name of Fish Processor	0			
Income (Profit and Loss) statement of the period	Before Intervention		After Intervention	
	Month	Annual	Month	Annual
<b>INCOME/REVENUE</b>	<b>2,250.00</b>	<b>20,250.00</b>	<b>4,980.00</b>	<b>59,760.00</b>
Sales from smoked fish processed	1,600.00	14,400.00	2,800.00	33,600.00
Sales from other processed fish	600.00	5,400.00	2,000.00	24,000.00
Other Income received	50.00	450.00	180.00	2,160.00
<b>FINANCIAL EXPENSES</b>	<b>95.00</b>	<b>5,598.50</b>	<b>23.00</b>	<b>- 5,108.25</b>
Bank charges on current account	5.00	60.00	5.00	60.00
Interest on loans taken from Financial Institution	60.00	180.00	18.00	18.00
Interest on loans taken from a friend/relative	-	-	-	-
Depreciation		5,088.50	-	5,186.25
Interest margin on fish purchased on credit	30.00	270.00	-	-
<b>DIRECT OPERATING EXPENSES</b>	<b>1,134.00</b>	<b>10,206.00</b>	<b>2,148.00</b>	<b>25,776.00</b>
<b>Personnel expenses</b>	<b>628.00</b>	<b>5,652.00</b>	<b>1,482.00</b>	<b>17,784.00</b>
Paid hired labourers	480.00	4,320.00	1,296.00	15,552.00
Payment to family members (helping hands)	48.00	432.00	36.00	432.00
Self wage payment	100.00	900.00	150.00	1,800.00
<b>Operating Expenses</b>	<b>506.00</b>	<b>4,554.00</b>	<b>666.00</b>	<b>7,992.00</b>
Fuel wood	160.00	1,440.00	100.00	1,200.00
Packaging materials	40.00	360.00	140.00	1,680.00
Utility & Transport	290.00	2,610.00	390.00	4,680.00
Other expenses	16.00	144.00	36.00	432.00
Business operating permit (fees)	-	-	-	-
<b>TOTAL OPERATIONAL EXPENSES</b>	<b>1,229.00</b>	<b>15,804.50</b>	<b>2,171.00</b>	<b>20,667.75</b>
<b>NET INCOME (Before Tax)</b>	<b>1,021.00</b>	<b>4,445.50</b>	<b>2,809.00</b>	<b>39,092.25</b>
<b>Taxation on income and profits</b>	<b>275.25</b>	<b>1,291.38</b>	<b>722.25</b>	<b>10,013.06</b>
Market fees (Local Authority Tax)	20.00	180.00	20.00	240.00
Business Tax (GRA)	255.25	1,111.38	702.25	9,773.06

Figure 5: Investment Impact Tool, Financial Component



**SUSTAINABLE FISHERIES  
MANAGEMENT PROJECT (SFMP)**

		<b>Processor Name:</b>		0
Variations to previous visit	Standard Benchmark	Before Investment	After Investment	
in Total Assets	>=5%		6%	
in Liquid Investments	>=10%		239%	
in Equity	>=5%		5%	
in Operational Income	>=10%		121%	
in Total Borrowed Funds	<=5%		-17%	
in Operating Expenses	>=20%		89%	
in Nbr. of Helping Hands	>=10%		50%	
in Net Plant, Property and Equipment	<=5%		2%	
<b>Financial Structure of the Processor's Business</b>				
<b>Solvency</b>				
Solvency ratio	>=10%	20%	46%	
Leverage	>=5%	4%	4%	
<b>Liability Composition</b>				
Total Customer cash with business / Total Liabilities	<=30%	66%	79%	
Borrowed funds / Total Liabilities	<=20%	27%	19%	
Outstanding Wages / Total Liabilities	<=5%	7%	13%	
<b>Donated equity / Total equity</b>				
Debt-to-Equity Ratio		4%	4%	
Debt-to-Asset ratio		4%	4%	
<b>Efficiency &amp; Productivity of the Processor's Business</b>				
Receivable Turnover	Decrease	500%	332%	
Fixed Asset Turnover	>=5%	2%	5%	
Operating expense ratio	Decrease	50%	43%	
Production output per worker (in pans)	Increase	8	30	
<b>Sustainability of the Processor's Business</b>				
Return on Equity (ROE)	>=5%		2%	
Return on Assets	>=5%		2%	
Operational self-sufficiency (OSS)	100%	183%	229%	
<b>Profitability Analysis of Processor's Business</b>				
Net Margin	>=5%	33%	42%	
Operating Margin	>=5%	45%	56%	
Net Financial Margin	>=5%	96%	100%	
Cost ratio	<=40%	53%	43%	
<b>Liquidity Ratios of the Processor's Business</b>				
Current Ratio (Working Capital Ratio)	increase	199%	255%	
Acid Test Ratio (Quick Ratio)	increase	134%	139%	
<b>Other Relevant Ratios of the Processor's Business</b>				
Asset Turnover Ratio			56%	
Sales Growth			121%	
Net worth of the Business		100,427.25	105,625.50	

**Figure 6: Financial Ratios Generated by the Tool**

## ***Closing***

SFMP implementing partner institutions were given up to 5<sup>th</sup> May 2016 to provide their official feedback on the segmentation study report and the business model options. The consultant mentioned that beyond the 5<sup>th</sup> May deadline, feedback on the study results and the business model options would not be accepted.

The day ended with a closing prayer from one of the participants and the session was co-moderated by Emmanuel Aziebor and Richard Amaning (consultant). Benedicta Avega provided participants with information on administrative arrangements and logistics.

## **DAY 2: ACTIVITIES UNDERTAKEN**

### ***Opening***

The second day started with an opening prayer which was said by one of the participants. The consultant immediately after the prayer took the participants through the recap of day one activities and outlined day two's activities.

### ***Presentation on the Business Model Options***

The consultant made a 4-hour presentation on the business model options. His presentation touched on the market dynamics, the diamond business model and explained the roles of the actors' identified in the diamond model.

He outlined the various business strategies that would complement the diamond business model in ensuring upscale of improved fish smoking stoves in Ghana. He explained the strategies and presented the various models within each of the strategies. On promotional strategy, he mentioned the SETH model as an effective model for promotion of improved fish smoking stoves. He also explained the various behaviour change communication models to complement the SETH in ensuring effective promotion of the improved fish smoking stoves. The following BCC models were discussed; Diffusion of innovation theory, ADKAR model, Health belief model, Theory of planned behaviour and positive deviance.

On marketing strategy, he explained that the social marketing approach as one of the key model to ensure upscale of the improved fish smoking stoves. He also took the participants through the financing strategy and explained the following end-user financing models; dealer financing, umbrella financing and inclusive financing.

On the pricing strategy, he mentioned that the document made recommendation on two pricing strategies namely; penetrative and bundle pricing.

He concluded with the recommendations in the documents.

### ***Preliminary Session***

The presentation on the business model options triggered and generated discussions among the participants. The participants went back to their groups and brainstormed on the business models and strategies outlined by the consultant.

The following were the key issues that were discussed;

- The need to follow-up on training at the processor level
- The need to strengthen the supply chains for the technology supply
- Availability of the technology at the local level is essential in ensuring adoption
- Capacity of the stove should be considered by the stove builders after realizing the demand
- Innovation takes time to diffuse within a community
- The need to contextualize solutions and technologies of improved fish smoking stoves

- The need to modify the technology based on feedback from the clients/end-users
- The project must ensure the establishment of demonstration sites to show case the stove technologies available at the local level
- Rate of failure of technology is more when ownership is ignored especially with community owned facilities/stoves.
- Risk of investing in a new technology by the stove users/end users as perceived by the stove builders
- Response time in responding to stove defects and technological upgrades is essential in sustaining adoption rate
- End-user training must be ensured and should be undertaken on a continuous basis by the stove builders.
- The beneficiaries of the demo stove must be selected based on their ability to influence other people. Change agents must be natural leaders.
- Stove builders must use well-seasoned woods for the processing trays to avoid bends and other defects
- The need to explain PAH in its simplest form for the average smoked fish processor to understand. It will be ideal to have a local name for PAH.
- To need for NAFPTA to consider the establishment of a credit union to facilitate savings and micro-credit.
- The need to consider the village savings and loans concept for rural communities where there are no financial institutions operating within that area.
- NAFPTA technical advisor suggested that the FRISMO should also be promoted and informed of another stove designed in Nigeria which is similar to a bread baking oven.
- Brian stressed that SFMP is not concerned with stove that produces fish for export but rather simple technologies that would be affordable to the processors.

### ***Workshop Closing Remarks***

Dr. Brian Crawford (SFMP Chief of Party) gave the closing remarks. In his address, he thanked the participants for the excellent feedback on the segmentation study and the business model options report. He tasked the SFMP implementing partners to critically think through the business model options and strategies and decide on the strategy to adopt. He indicated that the diffusion of innovation theory is a very good model which would ensure that any choice of technology promoted by the stove builders and implementing partners would diffuse within a community.

He mentioned that the SFMP implementing partners would have to take decision on the models to adopt at the next implementing partners meeting scheduled for 4<sup>th</sup> -6<sup>th</sup> May, 2016. He tasked the partners working on post-harvest interventions to critically decide on the other models to complement the diffusion of innovation theory in ensuring upscale of improved fish smoking stoves in Ghana.

### ***Closing***

The consultant thanked the participants for their inputs in enriching the study report and the business model options. Benedicta Avega gave the announcement on the administrative arrangements and closing prayer was said by Dr. Queronica Quartey.