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Report On Sanitation Assessment To Explore Opportunities And Viability Of Trashy Bag Business At Ankobra Estuaries

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

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ACRONYMS

CEDECOM	Central Region Development Commission
CEWEFIA	Central and Western Region Fishmongers Improvement Association
CLaT	Child Labour and Trafficking
DAA	Development Action Association
DSW	Department of Social Welfare
FoN	Friends of Nation
SFMP	Sustainable Fisheries Management Program
SNV	Netherlands Development Organization
USAID	United States Agency for International Development
WFCL	Worst Forms of Child Labour

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CHAPTER ONE

1.1 Introduction

Economic growth and changing consumption and production patterns are resulting into increase in generation of plastic waste in the world, (Fobi, 2000). The world's annual consumption of plastic materials has increased from around 5 million tons in the 1950s to nearly 100 million tons: thus, 20 times more plastic is produced today than 50 years ago, (UNEP 2009).

The rapid growth of plastic waste is not different in Ghana and for that matter all the coastal communities in the Western Region. The plastic waste in the coastal communities, including Axim and Ankobra (Ankobra estuary) present a dilemma.

Presently, drinking water comes in plastic bags and bottles. With strong taste for sachet water considering its portability, easy to carry from one place to another and the perception of its cleanliness has made sachet water more acceptable at public function and for domestic use. Ironically, after drinking the liquid content, those bags are disposed of indiscriminately thereby littering the surroundings across cities, big towns and especially, the coastal communities.

According to a study by Oteng-Ababio, 2011, used water sachet bags, in other words plastic waste constitute a major proportion of the plastic waste generated throughout the country.

Managing plastic waste is a serious challenge to the local authorities as well as community leaders. In spite of its effects on the environment and associated health implications, water sachet bags can provide a very good economic and social development. Quoting from a study by (GTZ 2000), "despite the health and environmental effects associated with plastic waste, it is a great resource that can have very positive economic and social implications for the general citizenry, but this has not been adequately exploited". The study recognized the potential of plastic waste, when fully exploited could be a source of alternative livelihood.

Daasgift under a contract signed with Sustainable Fisheries Management Project (SFMP) being sponsored by University of Rhode Island (URI) and United State Agency for International Development (USAID) Ghana, and in line with Daasgift deliverables under intermediate result (IR 4.5), conducted Sanitation Assessment to explore opportunities for Trashy Bag business development and coordinating community contacts.

The methodology adopted pooled opinion from the community, key informants, sales outlets and entrepreneurs in the Trashy Bag business. Key issues captured with the tool include the effect of plastic waste on fishing activities at the landing site. The other issue was on how plastic waste can provide alternative livelihood for the local people and the viability of Trashy Bag business.

The Sanitation Assessment revealed willingness of the people to collect plastic waste for a fee and described their desire to help sanitize the various landing sites.
Fish processors showed their preparedness to use recycled plastic materials "fish mat" at the landing site and at the various processing points to provide healthy fish.
The study provided insightful knowledge about the huge potential of Trashy Bag business. One underlining issue that featured was education, thus, entrepreneurs recommended that people should be educated to segregate organic waste from plastic waste.
In summary almost all the contacts made at Axim and Sanwoma expressed their willingness to collect plastic waste for recycling. In another development, all the fish processors engaged in the discourse were also willing to use recycled material in the course of fish processing to provide healthy fish.

1.2 Purpose of Assessment Report

The aim of this report is therefore for DAASGIFT, under the SFMP project, carry out sanitation assessment as part of Intermediate Result 4 (IR4) Integrated Community Fisheries Management and Resilience Plans for the Ankobra River Estuarine and Mangrove Ecosystem to explore opportunities and viability of Trashy Bag business, bring to bear some of the hiding economic capability associated with plastic waste collection and recycling, create linkages, drawing on experiences of Trashy Bag producers in Accra and Western Region.
The assessment report is also to establish facts, figures, observation and technical issues that informed decision and way forward based on the methodology adopted. The report addresses concerns and provides alternative ideas with regard to the exercise.
The report again is to provide information on the extent to which insanitary condition at landing sites affect fishing activities in Ankobra estuary.

1.3 Goal

The objective of the sanitation assessment is to find appropriate strategy to develop livelihood empowerment programme and improve the livelihood of the target group especially women in the Ankobra estuary. It is also to ensure clean environment through sustainable collection and recycling of plastic waste by reducing pollution through indiscriminate disposal of plastic waste at the landing sites.
Secondly, to assess the viability of Trash bag business and opportunities it offers should one invest in the business.
Specifically, the sanitation assessment looks at:

1) The effect of plastic waste on fishing at the various landing site of Ankobra estuary and the collective responsibility to safeguard the environment.

2) Build consciousness and recognition of the local people to improve or reduce indiscriminate disposal of plastic waste at the landing sites.

3) Solicit the willingness of the people, thus, the youth, women and men to collect plastic waste as an alternative livelihood.

4) Assess the viability of Trashy Bag business and using it as a tool for alternative livelihood improvement.

CHAPTER TWO

2.1 Methodology 1 - Focus Group Discuss - Ankobra

Considering the prevailing status of the plastic waste in Axim and Ankobra, the two densely inhabited fishing communities in Nzema East Municipality, and Ellembelle Districts, focus group discussion and key informant interviews were adopted. Focus group discussion was concentrated at Ankobra. Documented sources were slightly used to establish and corroborate where possible, the primary data collected. The assessment focused mainly on qualitative and quantitative approach to gather in-depth information. Proceedings at the Focus group were mainly in the local language "Twi" and "Nzema", which were translated, analysed and organised around the key themes that emerged from the FGDs.

Figure 1 Focus group session with women

Figure 2 Focus group session with the youth

2.2. Results

Description of the Results

Focus Group Discussion at Ankobra

Table 1 Age distribution of respondents

Age	Number Interviewed	Percentage	Cumulative Percentage
18 -35	25	33.33	33.33
36 – 59	50	67.67	100
Total	75	100	

Source: Sanitation Assessment Data 2015

From table 1, out 75 respondents, 25 representing 33.33 percent were in the age range of 18 – 35, and 50 representing 66.67 percent were in the age range of 36 – 59.

Table 2 Gender disaggregation of respondents

Gender	Number Interviewed	Percentage	Cumulative Percentage
Male	25	33.33	56
Female	50	66.67	100
Total	75	100	

Source; Sanitation Assessment Data 2015

From table 2, out of 45 respondents, 25 representing 56 percent were male, 20 representing 44 percent were female.

Table 3 Demographic of respondents

Occupation	Number Interviewed	Percentage	Cumulative Percentage
Fishmongers	50	66.67	66.67
Fishermen	25	33.33	100
	75	100	

Source; assessment data 2015

From table 3, out of 75 respondents, 25 representing 33.33 percent were fishermen, 50 representing 66.77 percent were fishmongers.

2.3 Methodology 2 - Interviews with Entrepreneurs and Market outlets

For a better understanding of the processes involved in trash bag production, entrepreneurs in the industry were interviewed in Accra, Busua, Apowa and those trained at Dixcove by Daasgift Quality Foundation. Using purposive approach, key informant interviews were also conducted. The interviews focused on business opportunities to derive from plastic waste. It also touched

on kind of products produced and marketing outlets of trashy bags including business prospects. In all, ten entrepreneurs of trashy bags were interviewed and they have been in business for more than five years.

2.4 Trashy Bag Business Production Process

Figure 3 Trashy Bag Production Process

The designer at Trashy Bag - Accra explained the process and mentioned research as a tool to gather information about customer needs and kinds of materials to use in order to satisfy customers.

2.5 Profitability

As businesses thrive on profit maximization, the study looked at five sales outlets to ascertain facts on market and trend of sales of the various products. These interactions revealed the fast moving items as; Azonto ladies bags, school bags, smart bags, laptop sleeves, hat and pencil case. Though the sales persons were not ready to provide profit margin per every item, the search showed, that profit margin per Azonto Ladies bag is 30 Ghana cedis and that of Smart bag is 25 Ghana Cedis, depending on the brand.

2.6 Trashy Bag Business Success Cycle

Figure 4 Trashy Bag Business Success Cycle

2.7 Customers

According to the producers interacted with, the customer is placed at the top of the business cycle. Thus, to continue to remain in business, the customer is always the focus and that trashy items are designed to satisfy the needs of the customer.

A customer who was met at the Osu outlet expressed her joy seeing plastic waste turned into beautiful items and stated "there is market for waste plastics in China which can be explored for export."

Customers who supply inputs (used Sachets materials) to produce the final products are motivated to supply hygienic and useful materials.

2.8 Inputs Costs

Information gathered indicated that, inputs cost for Smart Bag and Azonto bag is 10 and 15 Ghana Cedis respectively. On the average, the total cost of production for Smart and Azonto bag is between 20 and 30 Ghana Cedis respectively.

Sales Price

At the market outlets, Smart and Azonto bags are sold between 50 and 60 Ghana Cedis respectively**.**

Profit Margin

Comparing cost of production per Smart and Azonto bag to its sales price, the profit margin is between 25 and 30 Ghana Cedis per sale of one Smart or Azonto bag.

Production level

On the average, 10 to 15 smart bags are produced a day by an employee when all the needed materials are readily available.

2.9 Demographics of Producers

Table 4 Respondents and Age distribution of respondents

Age	Respondents	Percentage	Cumulative Percentage
18 -35	7	70	70
36 – 59	3	30	100
Total	10	100	

Source; assessment data 2015

From table 4, out of 10 respondents, 7 representing 70 percent were within age range 18 – 35, 3 representing 30 percent were within age range 36 – 59.

Table 5 Respondents and Proportion of sex of respondents

Gender	Respondents	Percentage	Cumulative Percentage
Male	7	70	70
Female	3	30	100
Total	10	100	

Source; assessment data 2015

From table 5, out 10 respondents, 7 representing 70 percent were male and 3 representing 30 percent were females.

Figure 5 Interview with Frank – manufacturer at Busua

Figure 6 A customer at an outlet at Osu- Accra during the study

Figure 7 A designer at Trashy Bag Accra showing a pencil case and laptop sleeve

Figure 8 One of the workers at Trashy Bag Accra busily working

Figure 9 Trashy bag Items on display at the market or sales outlet in Accra – Osu.

2.1.0 Challenges

Entrepreneurs mention some challenges they face and that includes washing of sachet bags which sometimes leads to fading of the sachet rubber due to its poor quality. Again, because organic waste are mixed with plastic waste, most of the sachet rubbers become so dirty and that creates a lot of work.

2.1.1 Interviews with community members - Individuals

A total of four hundred people were involved in the sanitation assessment. They included 45 community members at Sanwoma who were engaged in focus group discussion, comprising 15 youths, 15 females between the age of 36 and 59 and also 15 males between the age of 36 and 59, and thirty (30) individuals who were interviewed one on one. Three hundred and ten 310 people of Axim were also interviewed, while 10 producers of trashy bags and 5 outlets were interacted with.

2.1.2 Analysis of Respondents - Axim

The figures below analyses the responses from the three hundred ten (310) people interviewed in Axim using the Sanitation assessment tool.

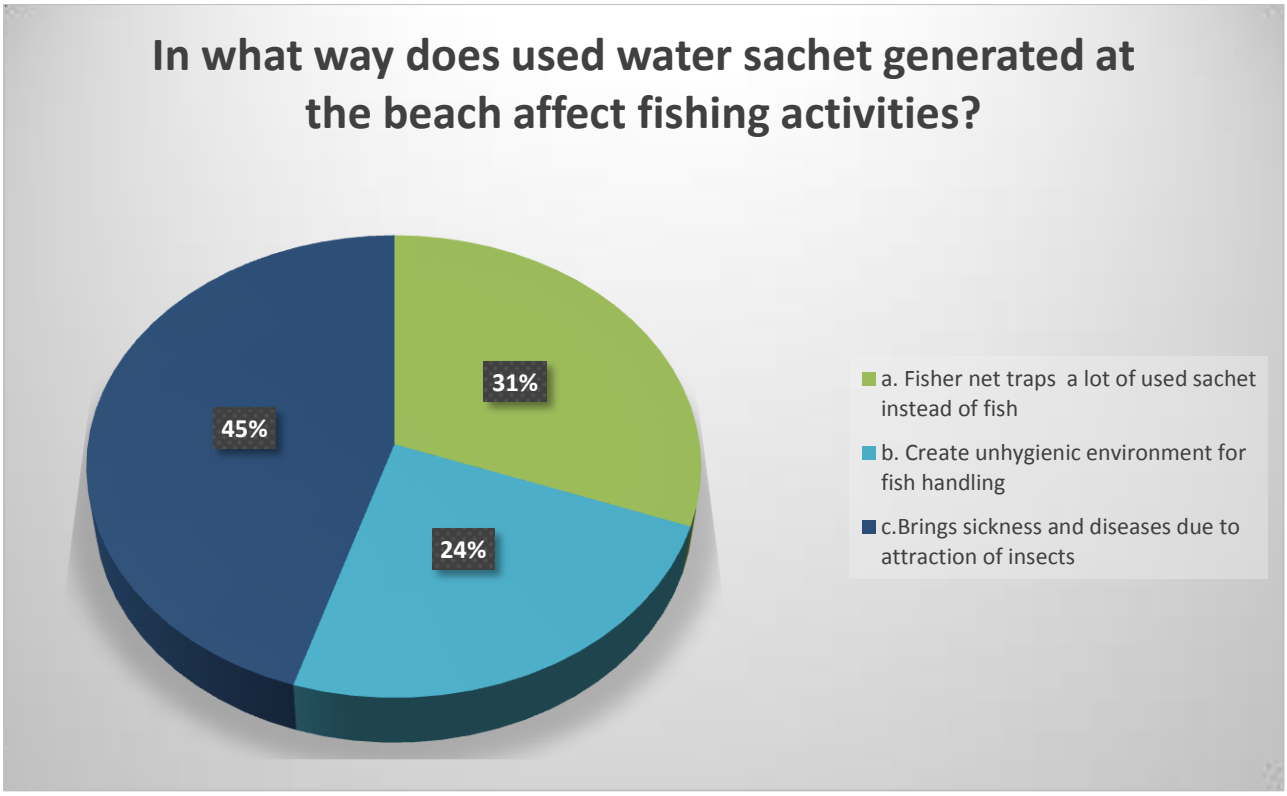

Figure 10 Questionnaire Response 1

Source; assessment data 2015

From figure 10, out of 310 respondents, 95 representing 31% were of the view that a lot of used water sachet or plastic materials are trapped in the fisher nets whenever fishermen drag their nets at sea to catch fish and they waste much time to remove them, 75 representing 24% stated, used water sachet generated at the beach create unhygienic environment and 140 representing 45% said most of the sicknesses or diseases affecting the community were as a result of breeding of insect and Mosquitoes in the used sachet water bags at the landing sites.

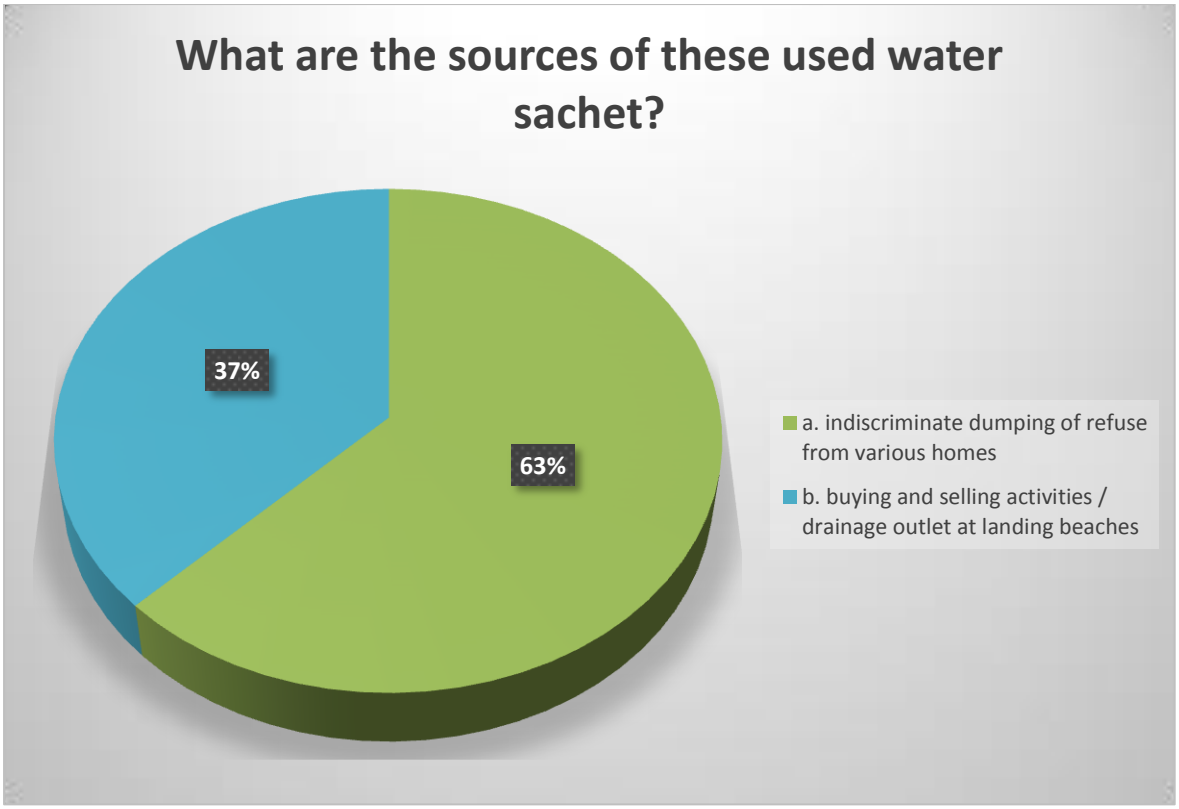

Figure 11 Questionnaire Response 2

Source; assessment data 2015

From figure 11 out of 310 respondents, 194 representing 63% said the fishermen and their associates including members of the community litter after drinking and in most cases members of the community use the landing beaches as their dumping site or waste disposal site.116 representing 37% were of the view that sales outlets of sachet water at the beach and drainage system in the community which have their outlet at the beach contribute to the menace. Littering anyhow, culminating with numerous sachet water producers supplying along the landing site with their vehicles were also mentioned.

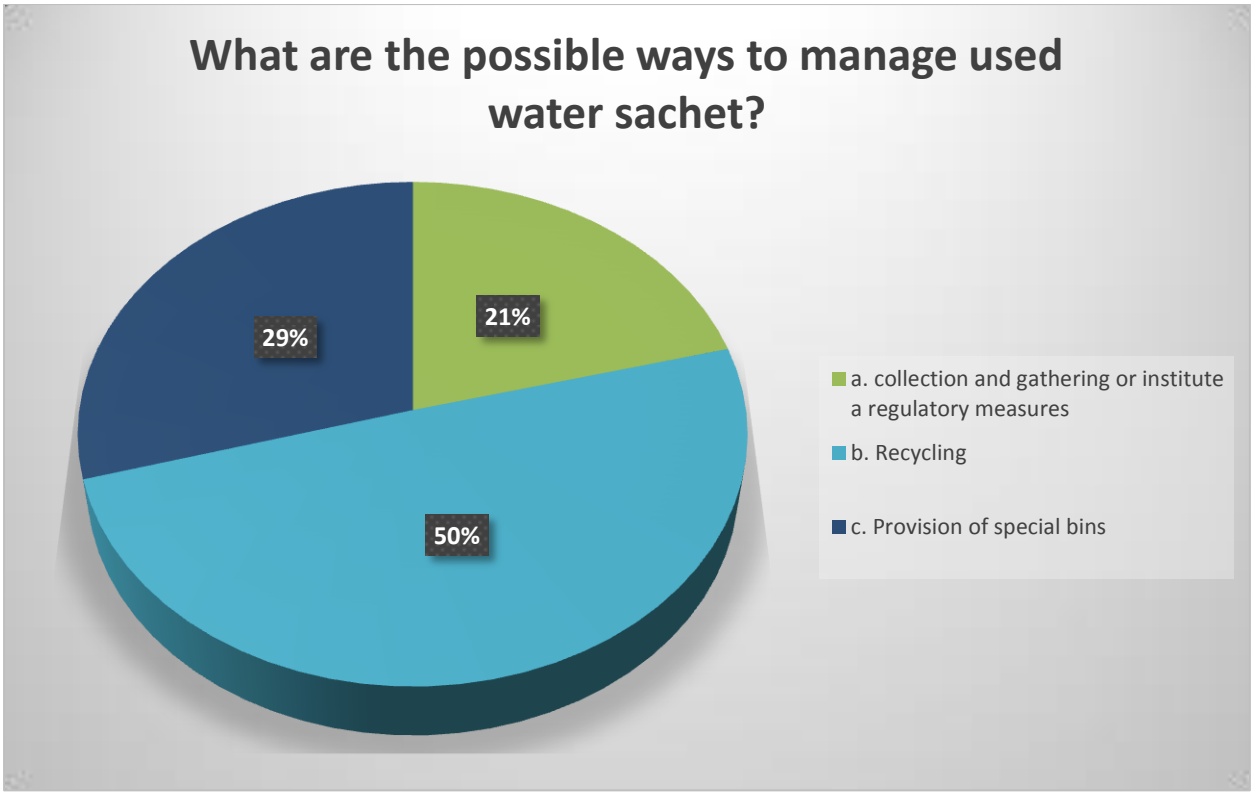

Figure 12 Questionnaire Response 3

Source; Assessment data 2015

From the figure 12, out of the 310 respondents, 154 representing 50% mentioned the possible ways to manage used water sachet is to recycle, 65 representing 21% suggested collection and gathering into sacks or instituting a regulatory measures to check those who dispose of them, whiles 91 representing 29% suggested special bins be made available for collection and disposal.

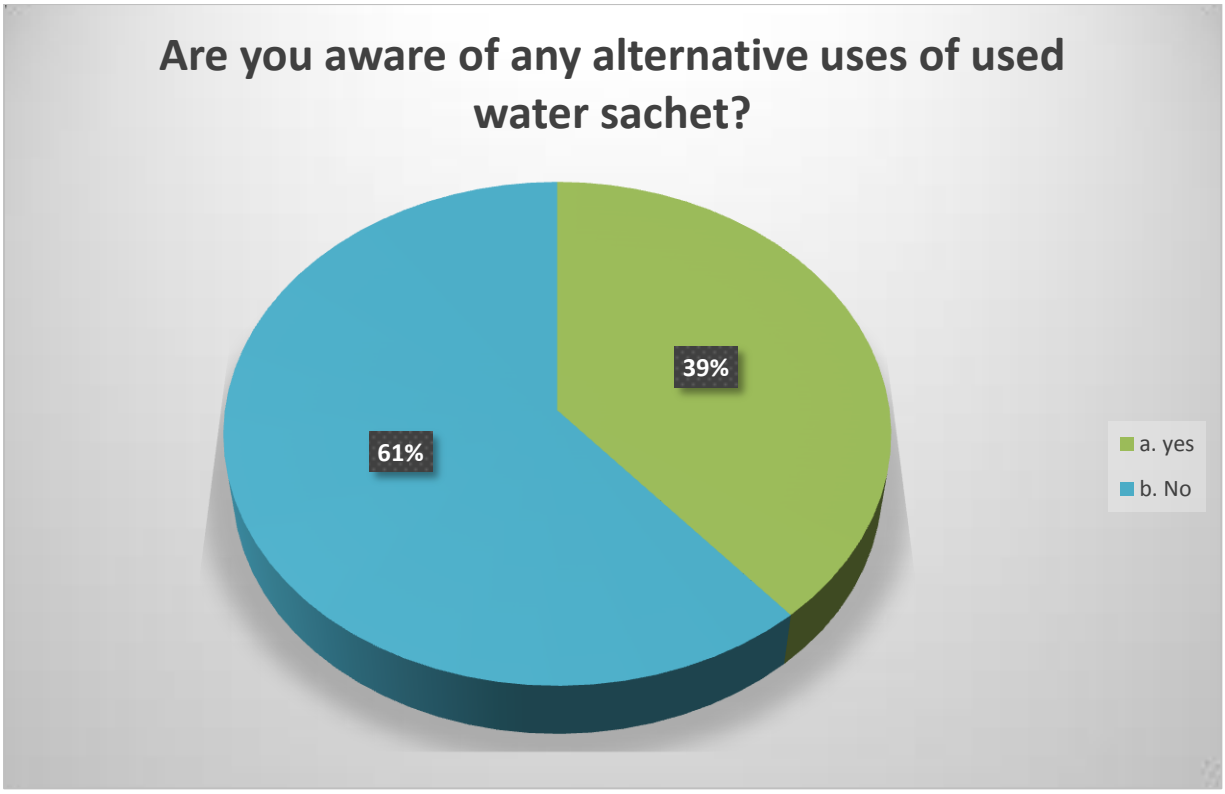

Figure 13 Questionnaire Response 4

Source: assessment data 2015

From Figure 13, 120 out of 310 respondents representing 39% are aware of alternative uses of used water sachet whiles 190 respondents representing 61% are not aware of any alternative uses of used water sachet.

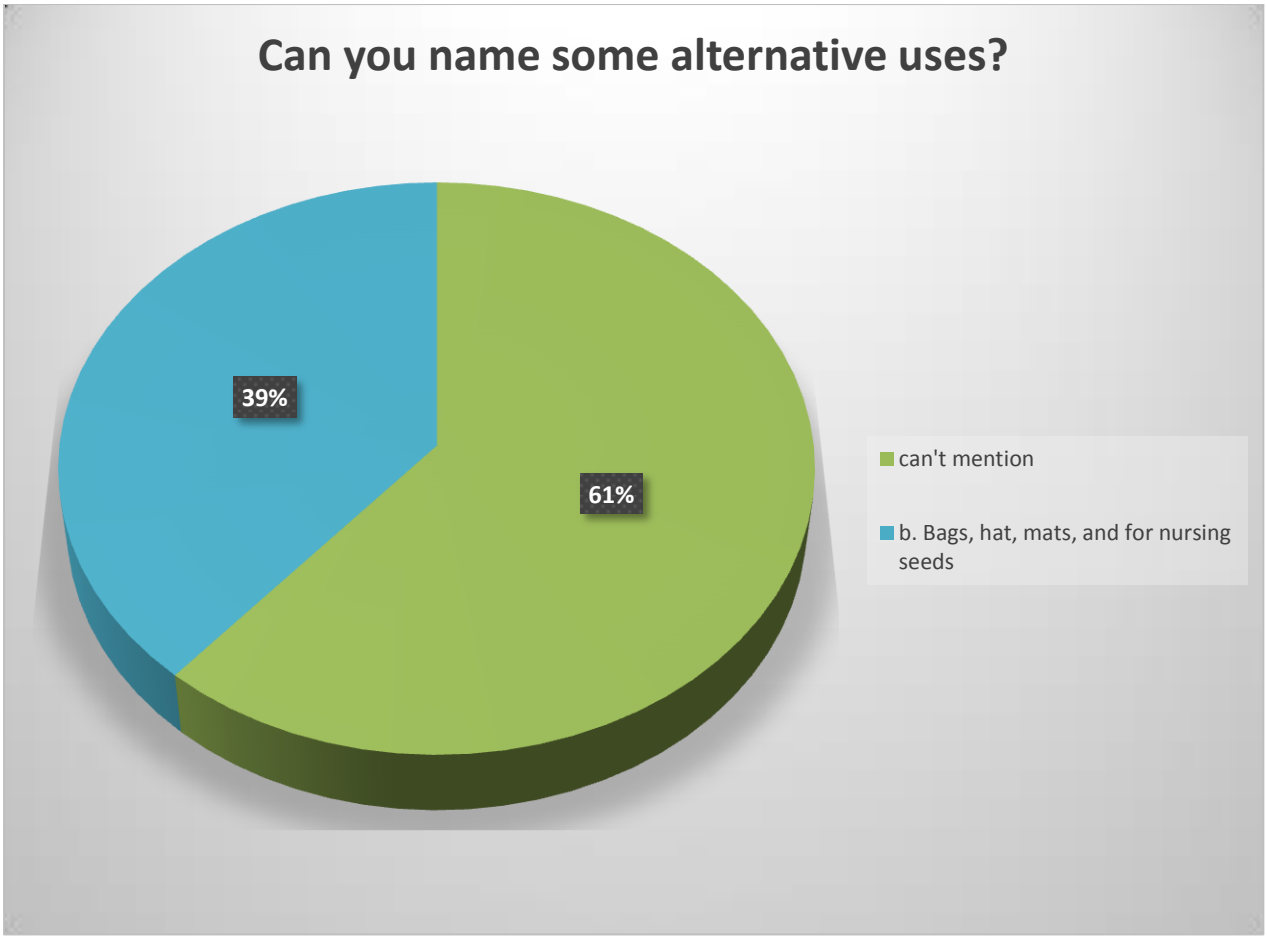

Figure 14 Questionnaire Response 5

Source; Assessment data 2015

From Figure 14 above, , 190 out of 310 respondents representing 61% were not able to mention or name some alternative uses of used water sachet whiles 120 respondents representing 39% named alternative uses of used sachet bags.

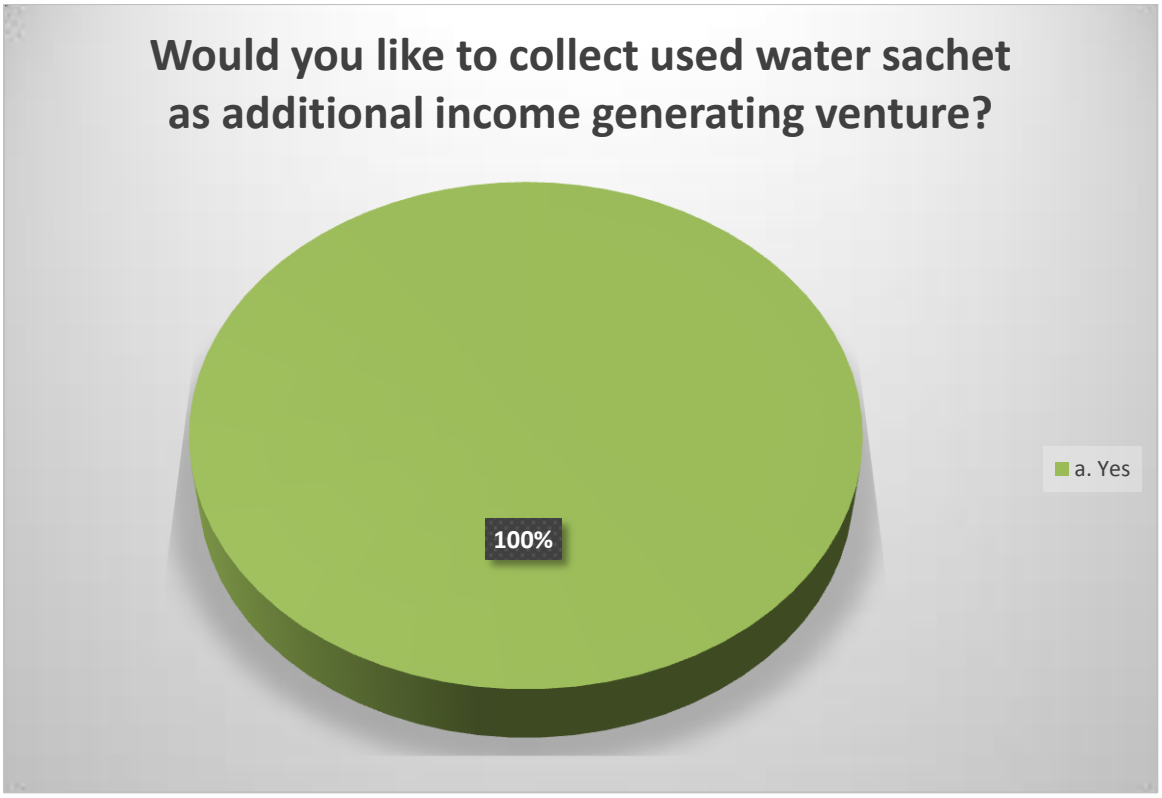

Figure 15 Questionnaire Response 6

Source: assessment data 2015

From figure 15, all the 310 respondents, representing 100% said they would like to collect used water sachet as additional income generating venture.

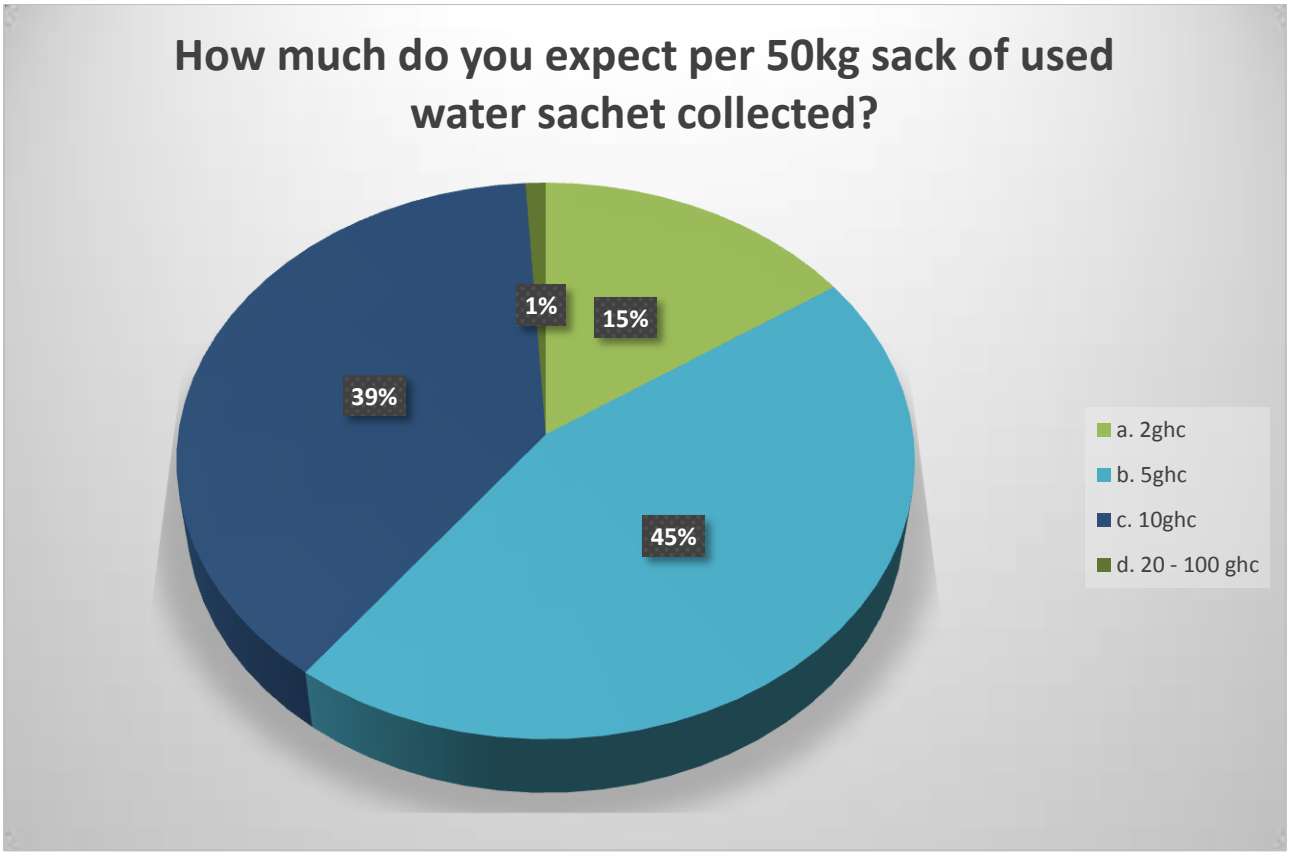

Figure 16 Questionnaire Response 7

Source: assessment data 2015

From figure 16 out of 310 respondents, 48 representing 15% , expected 2ghc per 50kg sack of used water sachet collected, 139 representing 45% , expected 5ghc per 50kg sack of used water sachet collected, 130 representing 39% , expected 10ghc per 50kg sack of used water sachet collected and 3 representing 1% expected between 20 – 100ghc.

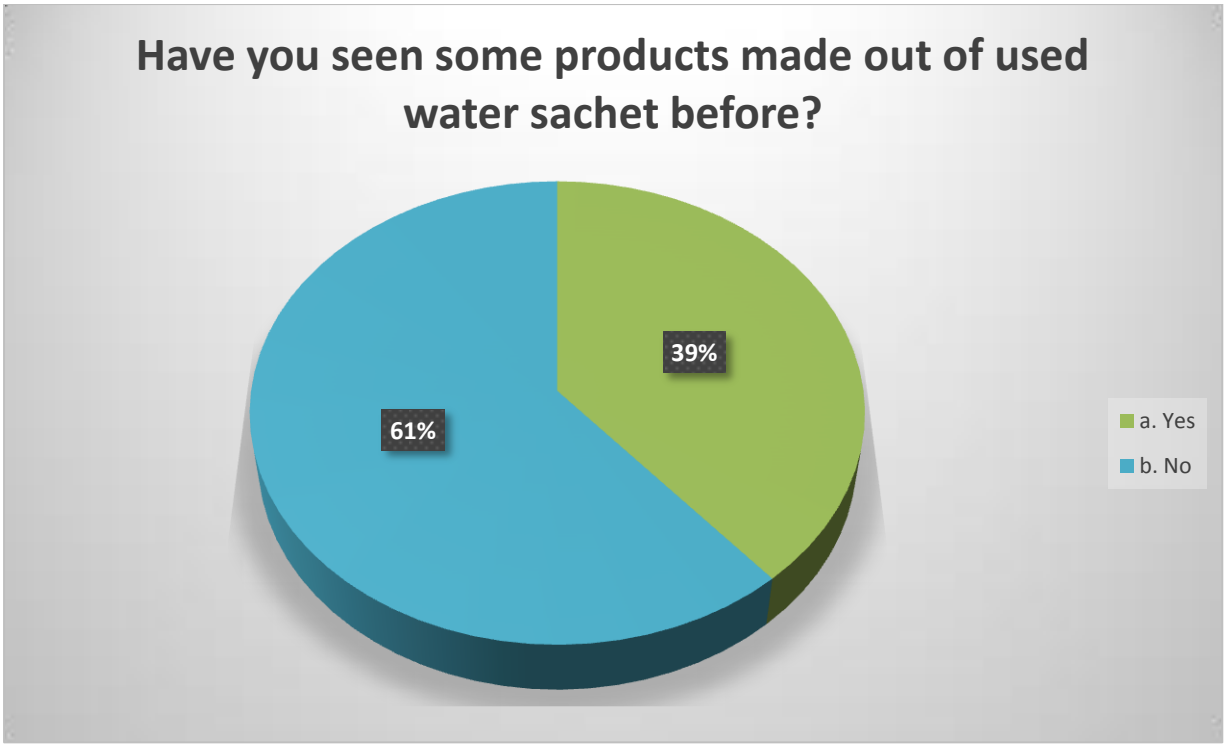

Figure 17 Questionnaire Response 8

Source: assessment data 2015

From figure 17 out of 310 respondents, 120 representing 39% did say yes to have seen some products made out of used water sachet before as mentioned in figure 5 whereas 190 representing 61% said no.

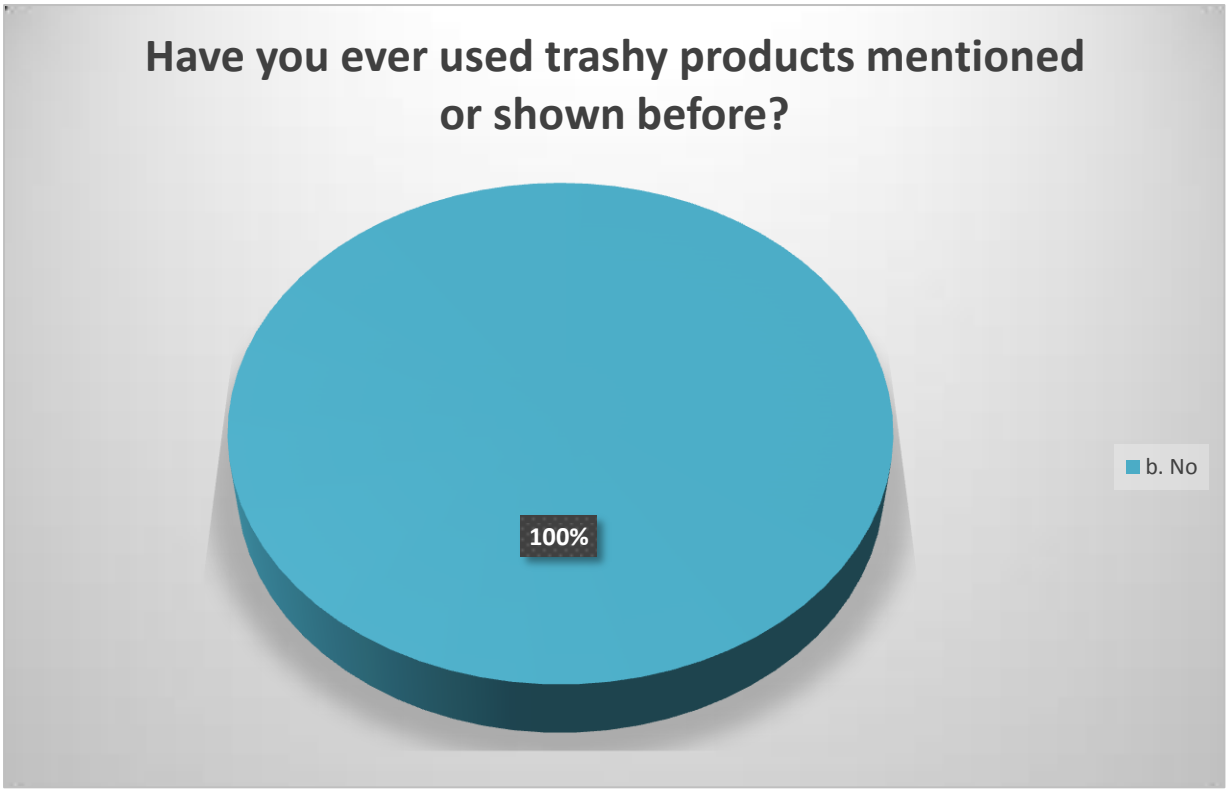

Figure 18 Questionnaire Response 9

Source: assessment data 2015

From figure 18, all the respondents said they have not used trashy products before.

Figure 19 Questionnaire Reponse 10

Source: assessment data 2015

From figure 19, none of the total respondents of 310 have ever used trashy product before as asked in figure 9 above and that makes it not possible for the respondents to express their likeness or satisfaction from the use of trashy products.

Figure 20 Questionnaire Response 11

Source: assessment data 2015

From figure 20, out of total respondents of 310, all of them are ready and would like to use products of used plastic items.

2.1.3 Results in general

Information gathered and analysed provided the following results:

- All the target groups and individuals interviewed and interacted with alluded to the fact that plastic waste has a serious implication on the environment, especially at landing sites.

- Almost all the three hundred and forty community members interviewed including the forty-five youth, men and women who participated in the focus group discussions showed their willingness to collect the plastic waste for a fee, and the amount expected per 50kilo bag ranges from Two (2) and Ten (10) Ghana cedis, with Twenty (20) to One hundred (100) Ghana cedis as the highest fee per 50kilo bag.

- Interactions with five entrepreneurs in Accra, Apowa, Busua and Dixcove revealed that Trashy Bag business has a huge potential but what is needed is education on segregating plastic waste from organic waste.

- The entrepreneurs' and sales outlets revealed the following as the fast moving items; Azonto ladies bags, school bags, smart bags, laptop sleeves, hat and pencil case.

- Upon seeing the kind of items derived from recycled materials, fish processors and all those interviewed in the communities expressed their desire to use

especially, plastic mat, and were excited to see school bags made out of plastic waste.

- Fifteen (15), - 4% of members of Ankobra and Axim community would want to be trained on the production of trashy bags.

CHAPTER THREE

3.1 Business Model

With the above results, the study finds the under mentioned business model as appropriate tool to develop the Trashy Bag business and tackle the sanitation problem at the landing sites where the study was conducted.
The business model provides a holistically approach and will yield better result in terms of improving the livelihood of the people, profitability, social-inclusiveness, and knowledge management (community sensitization and local resource planning).

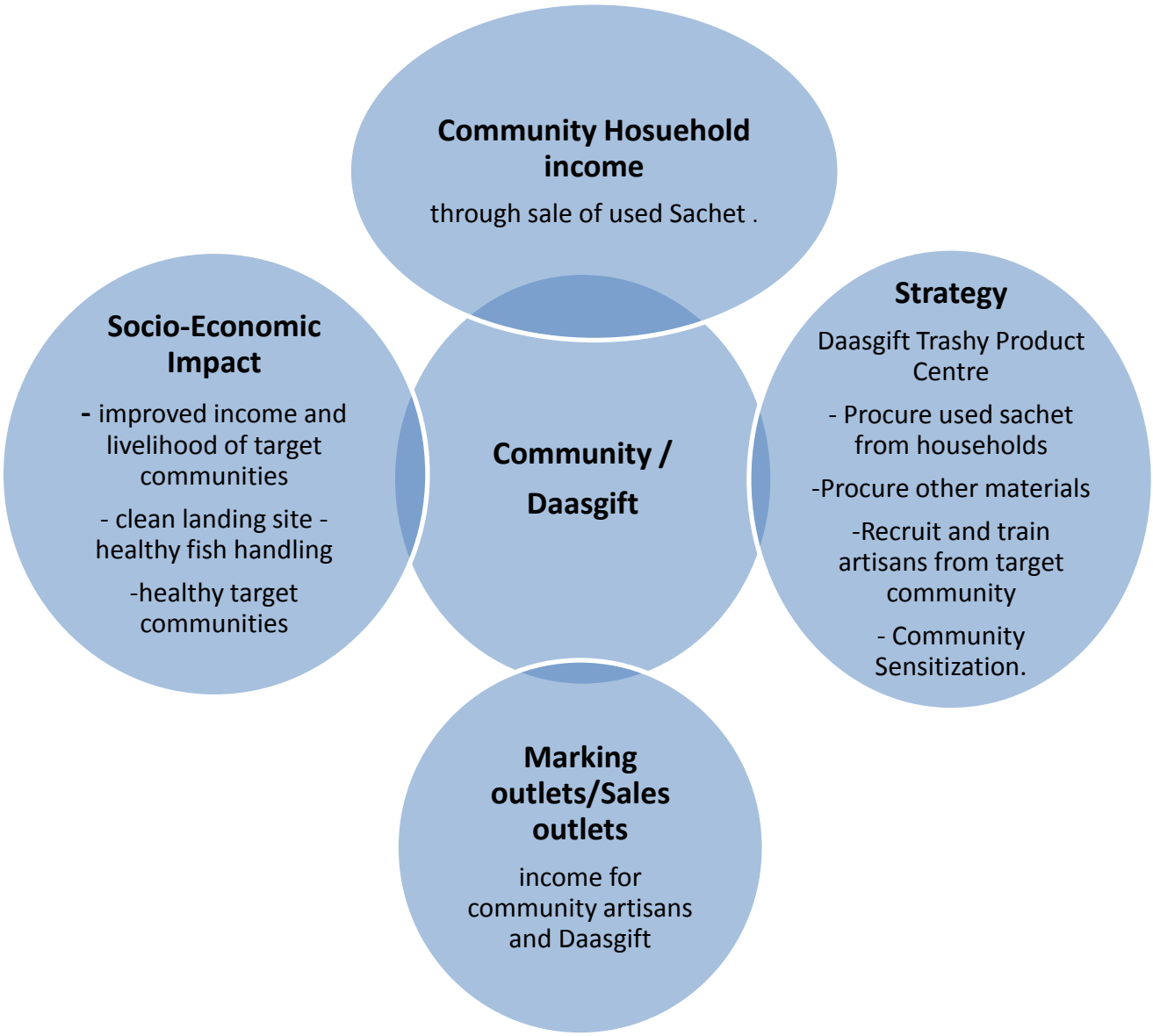

Figure 21 Trashy Bag Business Model

CHAPTER FOUR

4.1 Conclusions

Based on the data and analyses made in respect of sanitation assessment, the result has shown that plastic recycling activities have economic benefit and thus would provide an important livelihood support.

The results of the assessment has also shown that apart from individual incomes that could accrued from the collection and sale of plastics waste, the landing sites stand to benefit through waste minimization and would have a rippling effect on fishing at the various landing sites. Aside hundreds of individuals willing to collect plastic materials as another livelihood venture, 15, that is, 4% of the community members are willing to be trained to produce trashy bags.

The high degree of labour intensity of the waste picking and sorting processes will enable hundreds of people to earn income and thus reaping the economic benefit of the system, thus, 96% of the respondents stand to benefit immensely.

The assessment concludes that owing to the great potential of plastic recycling and Trashy Bag business for both local and international market, investing in the business would provide alternative livelihood to the people and help sanitize the landing sites in the Ankobra Estuary.

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