

## CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>2</b>
<b>1.0 BACKGROUND .....</b>	<b>8</b>
<b>2.0 OBJECTIVES .....</b>	<b>10</b>
<b>3.0 METHODOLOGY .....</b>	<b>11</b>
<b>4.0 SAMPLE DESIGN &amp; SELECTION .....</b>	<b>13</b>
<b>5.0 PRECISION OF ESTIMATES .....</b>	<b>14</b>
<b>5.0 CONDUCT OF SURVEY .....</b>	<b>15</b>
<b>6.0 ANALYSIS FOCUS GROUPS .....</b>	<b>19</b>
<b>6.0 ANALYSIS IN-DEPTH INTERVIEWS .....</b>	<b>36</b>
<b>6.0 ANALYSIS HOUSEHOLD SURVEY .....</b>	<b>50</b>
<b>APPENDIX :</b>	
<b>A Moderator's Guide .....</b>	<b>116</b>
<b>B In-Depth Discussion Guide .....</b>	<b>118</b>
<b>C Household Questionnaire .....</b>	<b>120</b>

## **EXECUTIVE SUMMARY**

### **Focus Groups**

#### ***Integrated Solid Waste Management Programme (ISWMP) terminology***

Most participants when asked what came to their mind on hearing Integrated Solid Waste Management Programme thought of household waste or garbage to be collected.

More mature participants placed emphasis on the words 'integrated' and 'management' suggesting that there should be some structure to the operation.

#### ***Interest in environmental issues***

There was a high level of concern for environmental issues from the aspect of indiscriminate practices, indiscriminate behaviour and apparent lack of respect for the environment due to the level of indiscriminate dumping, burning, and littering which seems to have become a normal way of life.

#### ***Awareness of ISWMP initiatives undertaken by SWPU (Solid Waste Project Unit)***

A few of the initiatives by the SWPU had a fair level of general awareness, while most of the initiatives had very limited or no awareness.

#### ***Solid waste disposal facilities***

Again there was general awareness of some of the facilities and limited awareness of others.

### ***Practices relative to 3Rs***

Most participants were aware of concepts of Reduce, Re-use, and Recycle and they practiced these concepts where possible. However when asked about 'Recovery' most participants had no grasp of this concept.

Separation and disposal of household garbage seemed to be limited to practices which are easily accommodated within the household environment.

### ***Responsibility for healthy environment***

There was general consensus on the individual bearing prime responsibility for a healthy environment even if that is not the known practice.

Some felt that if there were stronger legislation or penalties individuals would be more likely to comply.

There was relatively high praise by most participants for the job being done by the SSA given their known limitations.

Group participants would like the SSA to have a fully functional fleet of garbage trucks to ease the current situation.

### ***Evaluation of ISWMP***

Few participants mentioned that initially there was hype and then a lull during which time other national concerns had impactful campaigns which shifted the focus.

In looking at behaviour change over the past two years younger participants said that some young individuals make an effort to litter less or to be less obvious in doing so.

Older participants suggested that changes made by them were as a result of their maturity and not because of campaign efforts.

They all mentioned however that efforts would be more fruitful if the campaigns were more impactful and had the 'in your face' effect similar to the HIV/AIDS campaign.

Participants felt generally that people would be more responsive to environmental concerns and proper garbage disposal practices if it was more convenient for them to do so.

## **In-Depth interviews**

### ***Interest in environmental issues***

There were three major common concerns as follows:

- Illegal dumping      *especially of household garbage*
- Littering              *number of garbage bags on the road, and blatant violations by*  
*motorists while on the road*
- Lack of response to environmental education

There were also some positive environmental activities mentioned which included increased awareness of the importance of the environment, more clean-up activities, more recycling and improvement in the SSA service.

### ***Awareness of ISWMP initiatives undertaken by SWPU (Solid Waste Project Unit)***

Most participants were aware of several of the interventions and listed the impact within their organisation as follows:

- Increase in recycling
- Proper disposal of refuse
- Increased awareness of the environment

Some initiated Recycling Programmes and Environmental Awareness Programmes.

Students in primary schools were described as being very enthusiastic about the recycling programmes and one targeted business has constructed a recycling plant on their premises to encourage the activity among staff and customers.

### ***Practices relative to 3Rs***

Most participants were aware of concepts of Reduce, Re-use, and Recycle and they made it part of their function to practice these concepts to include any material they use.

### ***Evaluation of ISWMP***

Most of the respondents were of the opinion that the programme was very good one and that the success would be dependent on behaviour changes in the public.

Respondents suggested that more education should be provided at an early age to build on the practices for the future. They felt that people need to be exposed to the detrimental consequences of poor environmental practices as this might shock them into more responsible behaviour.

## **Household Survey**

### **Integrated Solid Waste Management Programme (ISWMP) terminology**

Most participants when asked what came to their mind on hearing Integrated Solid Waste Management Programme thought of garbage disposal, sewage, and old items for disposal.

### ***Interest in environmental issues***

There was a high level of interest in environmental issues.

Major concerns focused on pollution, dumping, littering, improper garbage disposal, air pollution and indiscriminate burning.

### ***Awareness of ISWMP initiatives undertaken by SWPU (Solid Waste Project Unit)***

A few of the initiatives by the SWPU had a fair level of general awareness, while most of the initiatives had very limited or no awareness.

### ***Solid waste disposal facilities***

Again there was general awareness of some of the facilities and limited awareness of others.

### ***Practices relative to 3Rs***

Most participants were aware of concepts of Reduce, Re-use, and Recycle and they practiced these concepts where possible. However when asked about 'Recovery', most participants had no grasp of this concept.

Separation and disposal of household garbage seemed to be limited to practices which are easily accommodated within the household environment.

While there is major concern for burning of garbage, the incidence though at a level of concern is not at a level that should cause a panic and the alternative actions are not necessarily convenient or attractive.

### ***Responsibility for healthy environment***

The vast majority of respondents felt that the prime responsibility for ensuring a healthy environment should be on each individual.

However, respondents felt that the responsibility for solid waste management activities should be the purview of government and, most would not be willing to pay for garbage collection.

### ***Perceived goals for ISWMP***

Most respondents would like to see the ISWMP efforts produce a cleaner country, more education on waste management and a reduction in health issues due to poor environmental practices.

### ***Evaluation of ISWMP***

There was a high rating in the evaluation of the efforts and initiatives of the ISWMP with many more people giving a high rating than those giving a low rating.

Householders felt that by undertaking activities like the practice of the 3Rs, they would help improve the efforts of the ISWMP. They also had high praises for the job being done by the SSA.

## **1.0 BACKGROUND**

The Integrated Solid Waste Management Programme (ISWMP) addresses all aspects of solid waste management with a view to improving the existing system for this sector through the provision of physical and non-physical components that will enhance the island approach to solid waste management. The comprehensive programme includes the construction and upgrade of physical facilities, improved waste collection and disposal systems, waste reduction and recycling, education and awareness, economic, environmental and legal aspects.

The ISWMP is being executed through the Ministry of the Environment and Drainage. The agency responsible for the execution of most aspects of this programme is the Solid Waste Project Unit (SWPU).

The education and awareness component of the Programme is of particular importance, since it seeks to effect attitudinal changes in the public, obtaining their support and participation for the programme to ensure optimum success as the other areas of the ISWMP come on stream.

The education programme targets all publics, including the private sector, public sector and formal educational institutions. It aims to promote the non-physical components and their role in the overall management of waste on the island.



## **Introduction**

The education and outreach programme is being executed through formal and informal approaches, including community activities. To date the SWPU has undertaken fourteen such activities as follows:

- Developed and introduced a brochure series focusing on the ISWMP and the impacts of  
proper and improper solid waste management practices;
- Developed the solid waste management website, [www.solid.gov.bb](http://www.solid.gov.bb)
- Introduced interactive solid waste management software in schools across the island;
- Erected anti-litter signage across the island;
- Introduced the Bring Your Own Bag promotion in stores across the island;
- Had promotions in the media on the need for waste reduction, reuse and recycling;
- Had promotions in the media re: give-aways of the reusable bags;
- Mounted a number of exhibits at various schools and business places;
- Participated in various expositions;
- Held seminars for various community groups and certain professional groupings;
- Held displays and lectures at various business place across the island;
- Held displays at non-governmental organizations;
- Developed and implanted recycling and composting activities including Home Composting Workshops and the 4R's Fair;
- Developed the Solid Waste Colouring and Activities Books;

To measure the efficacy of the Education Outreach Initiatives so far and to plan effectively for the future the SWPU sought to undertake appropriate research to assist in charting a way forward.



## 2.0 OBJECTIVES

The Core objective of the planned research was to determine the Knowledge, Attitude and Perception/Practice (KAP) on the Education Outreach Initiatives of the ISWMP among the general public.

Other objectives for the exercise are as follows:

- Conduct KAP with respect to solid waste management in Barbados;
- Measure awareness and effectiveness of the media utilized so far;
- Examine awareness and use of current solid waste facilities;
- Assess the public's KAP in respect of the ISWMP;
- Assess public perception on who should manage and pay for solid waste management activities;
- Assess awareness, understanding and impression of some ISWMP current initiatives;
- Assess the extent to which the public is involved in solid waste management activities;
- Examine public perception on how they can become more involved in the ISWMP;
- Examine behaviour change activities undertaken as a result of the Education Outreach Initiatives;
- Examine public perception of unmet needs relative to solid waste management activities;
- Obtain public perception on the direction the ISWMP should take, and what they would like to see the entity achieve;



### **3.0 METHODOLOGY**

In order to achieve the objectives outlined above, both Qualitative and Quantitative research methodologies were recommended.

The Qualitative component will provide the option to explore in-depth the general thinking and attitudes about the stated objectives, and this will help to inform specifics on the areas to be explored through Quantitative research methodology.

#### **Qualitative Research**

For the qualitative research, a series of Focus groups, and In-Depth interviews were conducted to determine in a non-quantitative manner the attitudes, issues, concerns, misinformation, and information gaps, relative to Solid Waste management.

Participants for the focus groups were chosen using a set of criteria determined in collaboration with the client.

In-depth interviews were carried out with key personnel who could render constructive criticism and suggestions relative to solid waste management processes.

These individuals/entities were selected in collaboration with the client.

Conveners were selected to recruit participants for the focus groups given specific selection criteria.

Focus groups consisted of 8-10 participants and the group discussions were held in neutral locations where the participants felt comfortable.

A moderator's guide was developed in collaboration with the Client to ensure that all target objectives are met.

Focus group discussions and In-depth interviews were facilitated by experienced moderators. The results of the Qualitative Research were analyzed, and form part of this report submitted to the client.

Some of the key results from the focus group discussions served as inputs for the household survey for quantitative measurement, which in turn will assist in the formulation of inputs into the design of interventions/public awareness programmes should they become necessary.



### **Quantitative Research**

This allowed for baseline measurement, and the possibility of measuring in the future, the effects of any interventions taken as a result of the outcome of the baseline study.

A questionnaire was developed in collaboration with the client, ensuring that all objectives are met, and was administered in face to face interviews with selected respondents.

Adequate field support staff was engaged to ensure smooth execution of the study, and this included trained experienced interviewers who were briefed specifically for this exercise to ensure the quality of data gathering expected, and trained experienced supervisors to ensure that the survey was carried out as outlined. There was a 5%-10% field validation exercise to assure the integrity of the information gathered.

The completed questionnaires were edited (100%) for consistency, and completeness, and were prepared for coding and data entry and processing by computer. The data were processed using SPSS which is compatible with exporting to most data processing formats.

The processed data were analyzed, and form part of the reports prepared for the client.

The processed data were analyzed by the following demographics:

- Socio-economic category
- Age group
- Sex
- Highest level of education achieved

The reports focus on analyses for each of the areas outlined in the objectives.

## 4.0 SAMPLE DESIGN & SELECTION

In order for this study to be meaningful adequate sample size and sample design were crucial elements.

The inclusion of Focus groups and In-Depth interviews helped to bring more focus on the areas for quantification.

The sampling frame used was the updated census data in Barbados.

A stratified sample of the population was targeted, using an interlocking quota control design which ensured adequate representation of the sample in the national population.

To get a stratified sample, all parishes were included, and then appropriate numbers will be drawn from a sample of enumeration districts according to the proportionate population in each parish.

The first stage involved a random sample of all **Enumeration Districts** in the island, drawn proportionately to the population of the parish relative to the overall population.

The second stage involved the selection of **households** within areas in the sampled enumeration districts.

Households were selected with a given interval, from a random starting point, to allow for the completion of the appropriate number of interviews for the **Enumeration District** and hence the parish.

The third stage involved the selection of the respondent at the selected household.

An interlocking quota set with controls on age and sex was used for the selection of the respondent at the household. Only one person was selected per household.



The achieved sample would therefore be representative of the national population, and should eliminate the need for any weighting of the data for analysis.

## 5.0 PRECISION OF ESTIMATES OF POPULATION PROPORTIONS

The precision of estimates of population proportions from sample sizes (n) of 1 000, 500 and 100

is given below. As a general guide the coefficients of variation of less than 10% would indicate that

the sample size is adequate for detecting significant differences between the stated population proportions.

### Precision of the Estimates of Population Proportions

P		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
							0.9		
n = 1000	S.e.(p)	0.0089	0.0160	0.0209	0.0239	0.0249	0.0239	0.0209	0.0160
	c.v.(%)	8.9	8.0	6.9	5.9	5.0	4.0	3.0	2.0
1.0									
n = 500	S.e.(p)	0.0180	0.0320	0.0420	0.0480	0.0500	0.0480	0.0420	0.0320
	c.v.(%)	18.0	16.0	14.0	12.0	10.0	8.0	6.0	4.0
n = 100	S.e.(p)	0.0909	0.1616	0.2120	0.2423	0.2542	0.2423	0.2120	0.1616
	c.v.(%)	91.0	80.8	70.7	60.6	50.8	40.4	30.3	20.2

where p is the estimate of population proportions, s.e (p) is the square root of the variance and c.v is coefficient of variations.

## 6.0 CONDUCT OF SURVEY

The survey as outlined was conducted during the period March 21<sup>st</sup> to April 20<sup>th</sup> 2012.

During that period the achieved samples were as follows:

### **Focus groups (3)**

- 1 Mixed 15-20 years**
- 2 Mixed 21-45 years**
- 3 Mixed 46 years and older**

### **In-depth interviews (20)**

### **Household survey (502) island wide**

The demographic description of the achieved household sample of five hundred and two (502) respondents is outlined in the following tables:

Crosstabulation: COL6 AGE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL6					
16-19	10	30	40		
	6.3	9.7	8.0		
20-29	8	31	59	98	
	23.5	19.6	19.0	19.5	
30-39	9	38	73	120	
	26.5	24.1	23.5	23.9	
40-49	9	38	70	117	
	26.5	24.1	22.6	23.3	
50-59	4	30	50	84	
	11.8	19.0	16.1	16.7	
60+	4	11	28	43	
	11.8	7.0	9.0	8.6	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL7 # OF PERSONS IN HH

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL7					
1	4 11.8	12 7.6	24 7.7	40 8.0	
2	12 35.3	30 19.0	57 18.4	99 19.7	
3	11 32.4	48 30.4	59 19.0	118 23.5	
4	6 17.6	46 29.1	70 22.6	122 24.3	
5	1 2.9	13 8.2	48 15.5	62 12.4	
6		4 2.5	27 8.7	31 6.2	
7		3 1.9	10 3.2	13 2.6	
8		1 .6	7 2.3	8 1.6	
9+		1 .6	8 2.6	9 1.8	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL8 ECONOMIC ACTIVITY

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL8					
STUDENT		16 10.1	31 10.0	47 9.4	
EMPLOYED	29 85.3	120 75.9	219 70.6	368 73.3	
UNEMPLOYED	1 2.9	6 3.8	36 11.6	43 8.6	
HOMEMAKER		7 4.4	5 1.6	12 2.4	
RETIRED	4 11.8	9 5.7	19 6.1	32 6.4	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL10 EDUCATION LEVEL By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL10					
PRIMARY		1.3	2	42	44
		26.6	55.5	42.6	
SECONDARY			42	172	214
		31.0	29.0	27.7	
VOCATIONAL			49	90	139
		31.0	1.3	10.6	
COLLEGE			49	4	53
		100.0	10.1	.6	
UNIVERSITY			16	2	52
		100.0	10.1	.6	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL10A COMPUTER IN HH By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL10A					
YES	34	143	190	367	
	100.0	90.5	61.3	73.1	
NO	15	120	135		
	9.5	38.7	26.9		
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL10B VEHICLE IN HH By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL10B					
YES	34	136	161	331	
	100.0	86.1	51.9	65.9	
NO	22	149	171		
	13.9	48.1	34.1		
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL10C CELL PHONE IN HH By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL10C					
YES	34	153	296	483	
	100.0	96.8	95.5	96.2	
NO	5	14	19		
	3.2	4.5	3.8		
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL10D MCTV IN HH By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL10D					
YES	19	72	74	165	
	55.9	45.6	23.9	32.9	
NO	15	86	236	337	
	44.1	54.4	76.1	67.1	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL10E DIRECTV IN HH By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL10E					
YES	13	29	41	83	
	38.2	18.4	13.2	16.5	
NO	21	129	269	419	
	61.8	81.6	86.8	83.5	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL10F LIMETV IN HH By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL10F					
YES	1	2	3	6	
	2.9	1.3	1.0	1.2	
NO	33	156	307	496	
	97.1	98.7	99.0	98.8	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

## 7.0 ANALYSIS - FOCUS GROUPS

### 7.1 Top of Mind Impressions of the ISWMP terminology

***Participants were asked to indicate what came to their mind when they hear the term. All of the participants mentioned household waste or garbage to be collected, and some mentioned larger items which were no longer usable in the household and ready to be disposed of.***

The following were also mentioned:

- Recycling
- Care for the environment
- Reduction and disposal of garbage

Younger participants primarily students thought of human bodily waste, sewage, and items which could be separated before being placed for collection.

More mature participants focused on words like 'Integrated' and 'Management' suggesting that there is a structured system for collecting and disposing of household waste.

One participant who had lived overseas said that the system here is now in its infancy stages compared to the system in other countries like Canada, UK, and USA where there are laws governing individual behavior, and that modified behavior redounds to the benefit of successful programmes with enforced penalties for infringement.

## **7.2 Interest in Environmental Issues**

Participants were asked about their interest in environmental issues.

Most of the participants did have some concern for the environment especially as it relates to the following:

- Improper disposal of larger items/illegal dumping/hazardous items
- Indiscriminate burning (affecting asthmatics)
- Garbage cans not being readily accessible, and not properly used when they are
- Unsightly/untidy/overgrown areas
- Littering even with small items has become second nature for many who only

think of the

effects when there is flooding from blocked drains or infestation from rodents etc.

Some of the older participants mentioned that sensitivity or lack of it towards the environment is in our culture, as Barbadians would not litter overseas, and we do not see tourists littering here.

The older participants felt that there needs to be more communication between the SSA and communities, ensuring greater consistency with days for garbage collection, understanding the limitations they face with trucks not being functional at times.

They also expressed concern about children who seem to have no regard for the environment, and suggested that children should be educated on environmental issues in the home.



### **7.3 Awareness and Efficacy of the ISWMP Initiatives undertaken by the SWPU**

***It would seem that many of the initiatives undertaken targeted specific groups and were not done on a national basis resulting in limited awareness outside of the target groups. The limited awareness however does not mean that behaviour changes did not take place among the specific target groups that would have spin-off benefits to the general community***

Participants were asked about their awareness/recall of a set of initiatives and activities undertaken by the Solid Waste Project Unit on behalf of the Integrated Solid Waste Management Programme.

Most participants in all of the groups seemed unaware of the Solid Waste Project Unit as an Entity on its own.

#### ***Brochure Series***

There was no indication of awareness or recall of the brochure series among any of the groups.

When shown the brochures most participants did not find the graphics on them attractive or captivating at a glance, and as a result would not have explored further to see what information was in them.

#### ***Solid Waste Management Website***

There was no indication of awareness or recall of the Solid Waste Management Website among any of the groups.

#### ***Solid Waste Management software***

There was no indication of awareness or recall of the Solid Waste Management Software among any of the groups.

### ***Anti-Litter Signage***

There was general awareness among group participants of the Anti –Litter signage and the attendant penalties for infringement of the anti-litter regulations.

Group participants suggested however that it is more anti-dumping rather than littering because people seeing the signs would relate its reference to large or bulky items. They also mentioned that the location of the signs were generally overgrown with bush or grass and the signs were small, making the signs almost invisible or ineffective as you would see items discarded in the vicinity of the signage.

There was a suggestion that a skip or other suitable container should be placed where some of the anti-litter signs are so that people would consciously dispose of their items in the container provided instead of dumping them where the signs are located.

Participants concluded that the anti-litter signage is not as effective as it could be because the listed penalties are not being enforced.

Some jokingly mention that you see more signs than garbage bins and suggested that to appeal to individuals not to do illegal dumping there should be some facility that would accommodate legal disposal at those sites.

### ***Bring your own bag promotion***

There was general awareness of the promotion of ‘Green bags or re-useable bags’ to reduce the number of plastic bags to be used at the supermarket.

Some remembered the bags being sold by the supermarket and they felt that while it is environmentally expedient having to pay for it is a disincentive.

Some felt that persons spending over a certain amount or shopping at a location over a certain number of times should be given a complimentary reusable bag by that entity.

While many of the participants said they owned a reusable shopping bag they generally do not remember to take it with them when they are going to the supermarket.

A few keep the bag in their vehicles and suggested that others should do the same so that it is available when they go shopping.

A few also mentioned that the bag itself is not practical for shopping as you would require multiple bags or consideration should be given to size variation.

A few participants also suggested that a small incentive should be given by the retail outlet for consistent use of the reusable bag.

When asked about the media promotion involving giveaways of the reusable bags, participants could not recall the 'giveaways' only that the bags were on sale at some supermarkets.

### ***Media Promotion on waste reduction, reuse and recycling***

Some participants mentioned awareness of ads in various media as follows:

- Ads in the newspaper (talking garbage cans).
- Ads about clean-up campaigns.
- Ads on GIS.
- Ads advising against placing glass among household garbage/separation of

garbage

A few participants had no recent awareness of the 3Rs promotion.

### ***Exhibits at various schools and business places***

Some participants recalled exhibits in primary schools while others mentioned a presence at a careers day show case but it did not draw much attention.

A few were definitely not aware of any such promotions.

***Participation in various activities or expos***

Most participants were unaware of the Solid Waste Project Unit participation in expos. Although participants visited Agro Fest the SWPU booth was probably overlooked as there was no interest in that area, but a few participants mentioned visiting a booth by the SSA. Some SJPP students had visited the water fair at Queens Park but mainly because of their interest in engineering.

***Seminars for community groups and professional groupings***

The only awareness of this initiative came from a few participants in the older age group (>45yrs).

***Displays and lectures at business places***

There was no indication of awareness or recall of this initiative.

***Home composting workshops and 4Rs fair***

There was limited awareness of this initiative mainly among the older age group, where a few indicated some familiarity with the process and others expressed interest in composting, however there was no mention of the 4Rs fair.

***Solid Waste coloring and activities book***

There was limited recall among the 21-45 years age group but that recall did not include any recent activity.

#### **7.4 Awareness and opinion on tangible promotional items**

Participants were asked to indicate their awareness of tangible promotional items and state their opinions of the material.

Most of the participants expressed unawareness of the items. Some of the participants within the younger group recalled seeing the items at school or at sporting events such as netball games.

They mentioned that the items were suited for little children and little to attract or influence adult behavior

#### **7.5 Recall of media programmes/Advertisements**

Participants were asked about recall of media programmes or advertisements viewed.

There was limited awareness of media programmes or advertisements. One participant within the older group (above 45) recalled viewing GIS advertisements of environmental lectures.

It was mentioned within the middle group (21-45) that the media programmes or advertisements seen were automatically associated with the Sanitation Service Authority.

## **7.6 Awareness and Efficacy of current solid waste disposal facilities**

Participants were asked to indicate their awareness of the current solid waste disposal facilities and to comment on their effectiveness.

### ***Mangrove Pond landfill***

There was general awareness of this landfill by all participants and they mentioned that improvements have been made at the facility.

### ***Bagatelle Bulky Waste Disposal Site***

There was limited awareness of the facility among two of the groups. Some participants within the younger group (students) expressed awareness of the site and that awareness was due to the ‘metal men’ who visited their district.

A few participants in the middle group however felt they should be paid something for their bulk disposable products (fridges, stoves, washing machines, etc.) because these men on-sell the items to the recycling entities.

### ***Rock Hall Asbestos Disposal Site***

None of the participants among the groups expressed awareness of this facility.

### ***Lonesome Hill Blood and Grease Disposal Site***

Participants were generally unaware of this facility. It was familiar to one participant in the younger group (21-45) because of her association with the medical field.

### ***Sustainable Barbados Recycling Centre***

There was general awareness of this facility. Some participants within the middle group (21-45) were aware of its activities but could not identify the site by name.

One participant within the older group credited the awareness of the SBRC to the displays at Agrofest.

### ***Greenland Landfill***

Most participants expressed awareness of this facility by name and the controversy around it but not of any activity involved.



## **7.7 Practices Relative to Reduce, Reuse and Recycle**

Participants were asked to indicate their practices regarding Reduce, Reuse and Recycle and provide examples of the specific items relative to each activity.

A question was asked about the difference between Re-using and Recycling to ensure that the participants understood that the concepts were different.

Participants are well aware of the concept of re-using, but most thought of recycling as the same activity, and not with the idea of producing a new item.

There is the need therefore to enlighten the general public of the difference so there is a focus on two separate activities versus the perception of both being considered the same.

### ***Reduce***

Limited effort was made to reduce waste among the middle and the younger groups.

A more conscious effort was made among the older group (over 45).

Some participants indicated that they reduced the wastage of plastic bottles by purchasing items which are available in concentrated form such as dishwashing liquid and also lessened the amount of carbonated beverages they purchased.

### ***Re-use***

Most of the participants indicated that they reused certain items and provided examples as follows:

- Plastic bags
- Plastic bottles
- Plastic containers
- Card board boxes

Yogurt cartons were also used by one participant for hatching and growing seedlings.

## ***Recycle***

Most of the participants said they practiced recycling and primarily did so with glass and plastic bottles because of the monetary returns on them.

Paper and newspapers were also recycled but it was stated that the process of having to drive to a collection or recycling facility was a major inconvenience to the householder.

They suggested that the behaviour would get greater compliance if the processes were made easier.

## ***Recovery***

Participants were asked to indicate their knowledge of the 4<sup>th</sup> 'R' (Recover).

Most participants had not heard of the term before and were therefore unable to express their understanding of the word within the given context.

Participants expressed awareness of the process of recovery but only when given an illustration for example generation of energy from waste, including incineration and use of land-fill gases to reduce the dependence on fossil fuel.

## **7.8 Separation of household garbage**

Participants were asked to indicate if they separated their garbage prior to disposing of it.

Most participants indicated that they only separated plastic bottles for recycling purposes while others suggested that they put all the garbage together for collection.

Some mentioned that they would be more likely to get involved in the activity if it was organized by an entity or became an enforced law.

## **7.9 Composting**

Participants were asked about their awareness and practice of composting.

There was a general awareness of composting among the middle and older groups (21-45) and (>45).

Some participants from the younger group knew of the activity due to its practice in their kitchen garden.

It was felt that there was no real interest in the activity unless you owned a kitchen garden.

### **7.10 Burning of garbage**

Participants were asked to indicate if they burnt garbage, what they burnt and their reasons for burning.

Most participants indicated that they did not burn their garbage or had reduced the activity. A few of the younger participants expressed concern about the impact of the activity on the ozone layer, but participants in the other groups were more concerned about the effects on their neighbors particularly persons with health issues such as asthma.

Some participants said that one of the reasons why individuals burnt garbage was the tradition of the activity and the unawareness of the agencies set up to collect the debris which is usually burnt such as old wood, dry trees and grass.

### **7.11 Prime responsibility for a healthy environment**

Participants were asked to provide their opinions on who should have the prime responsibility for a healthy environment.

The general response given was that the responsibility should lie with the individual. There was a feeling that some individuals might think that government should assume such responsibility.

It was mentioned among the younger group (students) that even though it was an individual effort, persons were not displaying this in their daily activities.

Reference was made to the good example displayed by the SSA at Agro Fest where they were constantly cleaning up rather than waiting until the end of the event to have a massive clean-up.

## **7.12 Factors that would encourage Barbadians to pay more attention to environmental issues**

Participants were asked to share their thoughts on factors which had the potential of making Barbadians pay more attention to environmental issues.

Most participants felt that there should be greater enforcement of the anti-litter legislation. Some suggested that perpetrators should be highlighted in the media and this would serve as a deterrent for others.

Some were concerned that it might take an outbreak of a severe health threatening situation to sensitize Barbadians to the importance of ensuring a healthy environment.

Participants among the older age group suggested that more attention should be paid to specifically identified areas such as Bridgetown where there seems to be little regard for the environment, especially with the recent designation of a world heritage site.

Some participants felt that exposing Barbadians to the derelict conditions in some African countries where garbage disposal is a problem and little attention is paid to the environment, as an eye opener that might shock persons into becoming more proactive in maintaining a healthy environment.

Others felt that if Barbadians were exposed to the pristine conditions of cities in Canada and the USA where environmental maintenance is practiced, this would make Barbadians want to aspire to be like them.

Some suggested that issues of environmental concern could be made the responsibility of the Constituency Councils who would in turn get the communities to be responsible for their clean up and maintenance.

### **7.13 Propensity to pay for household garbage collection**

Most participants would be reluctant to pay for garbage collection seeing that the activity is now performed by the SSA without a direct cost to the individual household.

There was a suggestion by participants that many individuals would opt to burn their garbage if they had to pay for it to be collected.

A few mentioned that they would pay for a garbage collection service as a last resort if the current system cannot function properly.

### **7.14 Adequacy of current garbage collection system**

Participants were asked about the adequacy of the garbage collection system by the SSA. Most of them felt that the SSA was doing a very good job given their limitations.

Some felt that there should be more communication between the SSA and the communities to have a better understanding of the garbage collection schedules.

It was suggested that the SSA should increase their garbage collection activities on festive occasion and at Christmas time.

### **7.15 Unmet needs relative to collection and disposal of household garbage**

Some participants felt that it is time for the SSA to have a fully functional fleet of garbage trucks which would reduce the strain on the workers, householders, and the island as a whole.

Some also suggested making it easier for people to access centralized collection points for recycling, and having discussions with communities so that problems could be highlighted and resolved.

## **7.16 Evaluation of the Integrated Solid Waste Management Programme (ISWMP)**

A few participants mentioned that several years ago there was much hype around initiatives that were undertaken by the ISWMP, but since then things seemed to have gone into a lull and not as much is heard about solid waste management as you would hear about the HIV/AIDS campaign.

Some mentioned that the brochures were not impactful and as a result did not attract people.

## **7.17 Behaviour change in past two years**

Most of the younger participants said there was little or no behaviour change for them as it relates to the environment.

Where any change existed it was a conscious effort to litter less or to be less obvious in doing so.

Changes in the middle and older groups were as a result of their getting older but not necessarily as a result of any initiatives by the ISWMP.

Some suggested that behaviour change might have been more effective if the initiatives had an impact and follow-up similar to that of the HIV/AIDS campaign.

They suggested that using the sides of Transport Board buses could be an effective way as they would be 'in your face', and ever present to effect a change in thinking and a change in behaviour.

### **7.18 Most appropriate communication strategies**

Participants were asked to indicate the types of information that would affect behaviour change on environmental issues and the media that should be used to be most effective.

The areas of concern would be the areas that were prevalent throughout the group discussions but the media were quite varied in the suggestions from the participants as follows:

- More ads on television
- Social media – Facebook
- Radio- newscast & call-in programmes
- Online information- internet
- More interaction at the community level (churches, schools, community councils)
- Have brochures with more attractive graphics
- Consistency/repetition of initiatives/messages
- Sponsorship and promotion of events
- Have radio call-in programmes with a focus on the environment

Participants feel that people would be more responsive to environmental concerns and the proper collection and disposal of garbage if it was made easier for the processes to be followed.

More attention needs to be paid to convenience for the householder and the selling of the benefits of a healthy environment where the individual householder feels that he or she can make a meaningful contribution.



## **8.0 ANALYSIS - IN-DEPTH INTERVIEWS**

### **8.1 Concerns about environmental issues**

***Respondents were asked about their concerns regarding environmental issues. They were also asked to mention any positive or negative activity which they observed regarding environmental practices.***

There were three major common concerns among the respondents as follows:

- Illegal dumping
- Littering
- Lack of response to environmental education

#### ***Illegal Dumping***

Some of the respondents expressed concern over the indiscriminate dumping of household waste, construction material and leaves from hedges within both developed and undeveloped residential areas.

It was stated that this activity resulted in the contamination of natural resources such as water and it also caused gullies, cane fields and neighbourhoods to become polluted. The accumulation of waste was also said to provide favorable conditions under which vermin such as mosquitoes, flies and mice can reproduce.

#### ***Littering***

Most of the respondents indicated that they were concerned about the amount of littering being done. There was a particular concern about littering by motorists who blatantly dispose of their garbage on the roads while travelling.

One participant also made mention of the amount of plastic bags which are visible in public areas.



***Lack of response to Environmental Education***

Some of the participants mentioned that there was an insufficient response to the education provided on environmental issues and subsequently, the environment is treated poorly through practices such as littering and burning.

***Over Development***

Two of the respondents expressed concern about the amount of buildings being constructed versus the presence of untouched natural surroundings. It was mentioned that a “concrete jungle” has been created. This was said to be a concern for individuals who immensely enjoy the outdoors.

***Lack of recycling***

It was mentioned by one respondent, that the activity of recycling needs to be encouraged more among Barbadians and also taken more seriously. It was also stated, that Barbados should have an advanced recycling system.

Reference was made to international countries such as Canada, which were said to have implemented effective recycling programmes years ago. It was suggested that large businesses should have colour-coded bins on the premises for customer use.

***Unsanitary conditions after garbage collection***

Excess refuse was said to be left on the ground after the weekly garbage collection, which was both visually irritating and unhealthy. There was also concern about the odour which comes from garbage which is not collected on the scheduled day.

Respondents also mentioned other environmental concerns as follows:

- Indiscriminate burning of waste
- Soil erosion/land conservation/overgrown vegetation on vacant land
- Lack of recycling
- Increase in carbon foot print

## **8.2 Positive Environmental Activity**

Four common positive environmental activities were mentioned as follows:

- Increased awareness of the importance of environmental preservation
- More clean-up activities being conducted
- More recycling practiced
- Increase in the level of the service provided by Sanitation Service Authority

### ***Increased awareness of the importance of environmental preservation***

Some of the respondents mentioned that Barbadians were more aware of the importance of preserving the environment. The example was provided of participation in call- in programmes where persons expressed concerns as it related to areas such as illegal dumping and the pollution of the water supply.

One respondent suggested that the level of awareness should be accredited to the environmental education provided by the government.

### ***More clean-up activities***

Some of the respondents indicated that there was an increase in the amount of clean-up campaigns being conducted by government departments and community groups. Mention was also made of youth groups and churches which were said to be making the effort to clean up the gullies and beaches. It was mentioned that the country generally appeared to be in a cleaner state.

### ***Increased recycling***

Some of the respondents said that effort was being made to encourage individuals to recycle more and there has been a noticeable increase in the activity. The activity was said to be enjoyed by children who eagerly share the information with their parents.

It was stated that people were returning bottles and utilizing recycling facilities such as B's recycling more often. It was also mentioned that there was a decrease in the amount of equipment being dumped as a result of the knowledge and use of these recycling facilities.

One respondent suggested that more information should be given about the facilities which recycle cardboard boxes and paper.

### ***Increase in the Sanitation Service Authority's level of service***

Some of the respondents mentioned that they have observed an increase in the level of service provided by the Sanitation Service Authority and that they were doing an excellent job with regard to garbage collection across the island.

### **8.3 Initiatives or activities from the Solid Waste Project Unit's intervention**

Respondents were asked about the impact of the initiatives or activities from the Solid Waste Project Unit's intervention. They were also asked to identify any actions and benefits derived as a result of the intervention and any limitations which existed.

#### ***Impact of Intervention***

Most of the respondents were aware of the SWPU's intervention and were able to identify changes within the organization as follows:

- Increase in recycling
- Proper disposal of refuse
- Increased awareness of the environment

#### ***Increase in recycling***

Most respondents indicated that the education provided on recycling has encouraged a greater practice of the activity.

Students at some of the primary schools have been introduced to the recycling facilities and were encouraged to practice the activity both within the school and at home. Individuals within targeted communities were also said to be recycling more as a result of the intervention. One of the NGO's has also initiated a recycling programme as a result of the information gained.

#### ***Proper disposal of refuse***

The information provided by the Solid Waste Project Unit's Intervention has enabled several respondents to become more disciplined in their efforts at refuse disposal. This practice is especially prevalent in homes and businesses.

***Increased awareness of the environment***

Respondents stated that information received from the SWPU's intervention has increased their knowledge about the environment. A reduction of previous habitual activities had been noted within some of the organizations as a result of the knowledge gained about the consequences.

Respondents listed other impacts as follows:

- Composting initiatives
- Sourcing of separation bins
- Increased environmental monitoring

***Actions Taken***

The intervention has allowed for the creation of new practices and methods within homes, communities and businesses. Respondents have stated that they have altered some of their activities and implemented programmes to facilitate proper environmental practices.

Most of the respondents have initiated activities such as the following:

- Recycling Programmes
- Environmental Awareness Programmes

***Recycling Programmes***

Recycling is one of the major initiatives that most respondents have sought to implement within their homes, their communities, and their businesses.

Students at primary schools were described as very enthusiastic about this prospect and have begun to collect bottles for recycling at school. One of the targeted businesses has constructed a recycling plant on their premises to encourage the activity among staff, and patrons.





### ***Environmental Awareness Programmes***

The intervention has created and increased interest in the environment particularly at the primary schools. Literature provided by the Solid Waste Project Unit has been utilized in lesson plans for Health and Family Life as well as Science subjects on the curriculum.

### ***Benefits***

Some respondents were able to identify benefits which were derived from applying practices within their respective homes, communities and businesses.

These benefits included the following:

- Reduction of operational costs
- Increased interaction between government and households
- Charitable efforts

### ***Reduction of operational costs***

Some of the respondents indicated that strict purchasing policies had been implemented in their businesses as a means of ultimately reducing waste. By implementing these policies these businesses were also able to reduce operational costs.

It was also mentioned that the householders were able to become more economical by reusing waste and composting, as these activities decreased the amount of money spent on new items and fertilizers.

### ***Increased communication between government and householders***

The information provided by the unit regarding the names of recyclers and bulky waste disposal

facilities, was useful as it enabled some of the government institutions to share it with the public.

### ***Charitable Efforts***

Some respondents were able to donate money acquired from the recycling activities which they conducted. One of the churches also indicated that recycling programmes provided assistance with fundraising efforts.

### ***Constraints***

One respondent mentioned that organisational culture was a constraint to reducing waste within the organization since most of the employees were not in the habit of using the office material considerably. It was also mentioned by another respondent, that their organization initiated a recycling programme but the lack of public cooperation was a hindrance to the effort.

#### **8.4 Awareness of other Initiatives undertaken by the solid Waste Management Programme**

Respondents indicated that they were aware of the following initiatives:

- Composting workshops
- Recycling Programmes
- Expos at Lloyd Erskine Sandiford Centre
- Brochures Series
- Town Hall meetings
- UWI recycling projects
- School visits
- Colouring books
- Published manuals for schools
- Bring your own bag promotion

## **8.5 Practices relative to Reduce, Re-use and Recycle**

Respondents were asked to indicate practices within their organizations regarding Reduce, Re-use and Recycle and provide examples of each activity. A question was also asked about the difference between Reusing and Recycling to ensure that the participants understood that the concepts are different.

### ***Reduce***

Respondents indicated that they reduced the use of the following items:

- Paper
- Plastic bags
- Electricity

### ***Re-use***

Most of the respondents indicated that they reused plastic bottles as well as paper within the organisation. Toilet paper rolls were also reused by schools and community groups to make lamp shades and napkin holders.

It was also mentioned that the staff at one of the schools reused egg trays to assist the students with counting exercises. Juice boxes were also used to provide a demonstration of the buying and selling concepts.

Respondents also indicated that they reused other items as follows:

- Envelopes
- Damaged goods
- Old fabric
- Old toner cartridges
- Office equipment
- Supermarket bags

## ***Recycle***

Most of the respondents mentioned that they recycled paper as well as plastic bottles which were taken to recycling facilities such as B's recycling.

Some respondents indicated that they recycled other items as follows:

- Metals
- Glass
- Cans
- Oil

## ***Understanding the difference between re-use and recycling concepts***

Most of the respondents understood the difference between the two terms while a few of them were unaware of what the differences were.

Reusing was defined as using an item in its original form for a completely different purpose. Recycling was generally understood as taking an item and making a new product from it.

## **8.6 Factors that would encourage Barbadians to pay more attention to environmental issues**

Respondents were asked to share their thoughts on factors which had the potential of making Barbadians pay more attention to environmental issues.

Most respondents felt that if Barbadians were fined for illegal dumping they would desist from this practice and it would act as a warning for others who had thoughts of engaging in illegal dumping.

Some respondents also suggested that persons should be receiving some form of financial incentive for positively contributing to the environment. For instance, one respondent suggested that this financial incentive should be allocated on a yearly basis and the individuals should be highlighted in the media.

Another factor suggested was the implementation of environmental education programmes in schools, businesses and communities.

Some of the respondents believed that once children were taught environmental studies this would allow them to apply the principles they learnt in practical settings both at school and at home.

One respondent suggested that if the Sanitation Service Authority neglected their duties Barbadians would finally realize the impact which negligent environmental practices have on the environment.

Respondents also listed other factors such as:

- More media advertising
- Rules & regulations governing the environment
- More involvement by community groups, churches & schools
- Involvement of constituency councils





## **8.7 Evaluation of the Integrated Solid Waste Management Programme**

Most of the respondents held the opinion that the programme was a very good one. They mentioned however, that its success was dependent on the response of the public with regard to behavior changes.

One respondent mentioned that as a tourist destination, Barbados needs such a programme to set a similar standard of the international countries which are 'Going Green'.

## **8.8 Suggested Improvements to the Integrated Solid Waste Management Programme**

A common suggested improvement was the need for increased promotion of the unit and its activities.

Most of the respondents also suggested that more education should be provided at the primary and nursery level regarding proper environmental practices as an effort to equip the future generation.

It was also mentioned that young students may have more influence on their parents and therefore would be able to encourage them to practice safe environmental activities.

The suggestion was made by one of the respondents that twice annually or quarterly workshops should be held which highlight the consequences of poor environmental practices. Another respondent suggested documentaries of these consequences should be televised, so that persons could appreciate them in a visual sense.

Other suggested improvements were as follows:

- Colour-coded receptacles in public areas
- Increased encouragement to composting
- More presentations within large companies
- An island wide collection of recyclable items.



## **9.0 ANALYSIS - HOUSEHOLD SURVEY**

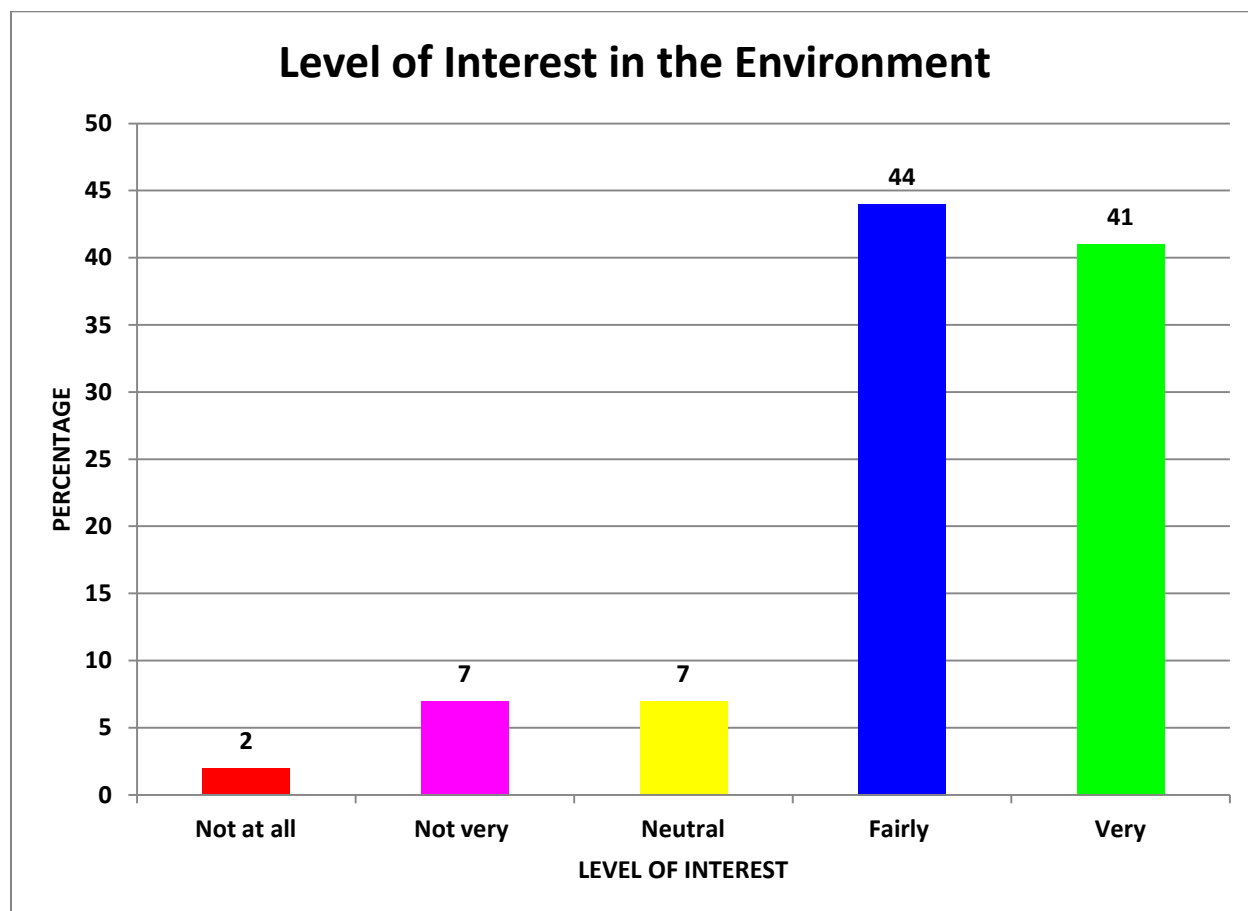
### **9.1 Interest in Environmental Issues**

Participants were asked about their interest in environmental issues.

The vast majority of the respondents (84%) said that they were either very or fairly interested in environmental issues. A few of them (9%) said that they were either not very or not at all interested in environmental issues.

Those who were very or fairly interested in environmental issues were found in slightly higher proportions among middle and upper socio-economic groups, the forty years and older age groups, and all except students.

There was no difference with respect to sex or education level of the respondents.



Crosstabulation: COL11 INTEREST IN ENVIRONMENTAL ISSUES By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL11					
NOT AT ALL			4	6	10
		2.5	1.9	2.0	
NOT VERY		1	6	28	35
		2.9	3.8	9.0	7.0
NEUTRAL		2	10	21	33
		5.9	6.3	6.8	6.6
FAIRLY		11	72	136	219
		32.4	45.6	43.9	43.6
VERY		20	66	119	205
		58.8	41.8	38.4	40.8
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL11 INTEREST IN ENVIRONMENTAL ISSUES By COL5 SEX

COL5→	Count	MALE	FEMALE	Row
Col Pct			Total	
COL11				
NOT AT ALL		7	3	10
		3.0	1.1	2.0
NOT VERY		13	22	35
		5.5	8.3	7.0
NEUTRAL		17	16	33
		7.2	6.0	6.6
FAIRLY		101	118	219
		42.8	44.4	43.6
VERY		98	107	205
		41.5	40.2	40.8
Column	236	266	502	
Total	47.0	53.0	100.0	

Crosstabulation: COL11 INTEREST IN ENVIRONMENTAL ISSUES By COL6 AGE

COL6→	Count	16-19	20-29	30-39	40-49	50-59	60+	Row
Col Pct						Total		
COL11								
NOT AT ALL		1	3	4	1	1	10	
		2.5	3.1	3.3	1.2	2.3	2.0	
NOT VERY		6	10	12	6	1	35	
		15.0	10.2	10.0	5.1	2.3	7.0	
NEUTRAL		5	8	10	5	3	33	
		12.5	8.2	8.3	4.3	3.6	6.6	
FAIRLY		18	45	50	57	37	219	
		45.0	45.9	41.7	48.7	44.0	43.6	
VERY		10	32	44	49	27	205	
		25.0	32.7	36.7	41.9	51.2	40.8	
Column	40	98	120	117	84	43	502	
Total	8.0	19.5	23.9	23.3	16.7	8.6	100.0	



Crosstabulation: COL11 INTEREST IN ENVIRONMENTAL ISSUES By COL8 ECONOMIC ACTIVITY

COL8→	Count	STUDENT	EMPLOYED	UNEMPLOY	HOMEMAKE	RETIRED	Row
Col Pct		ED	R		Total		
COL11							
NOT AT ALL	2	6	2		10		
	4.3	1.6	4.7		2.0		
NOT VERY	6	24	4	1	35		
	12.8	6.5	9.3	3.1	7.0		
NEUTRAL	4	28		1	33		
	8.5	7.6		3.1	6.6		
FAIRLY	22	169	12	8	219		
	46.8	45.9	27.9	66.7	25.0	43.6	
VERY	13	141	25	4	205		
	27.7	38.3	58.1	33.3	68.8	40.8	
Column	47	368	43	12	32	502	
Total	9.4	73.3	8.6	2.4	6.4	100.0	

Crosstabulation: COL11 INTEREST IN ENVIRONMENTAL ISSUES By COL10 EDUCATION LEVEL

COL10→	Count	PRIMARY	SECONDAR	VOCATION	COLLEGE	UNIVERSI	Row
Col Pct		Y	AL	TY	Total		
COL11							
NOT AT ALL	1	5	2	2	10		
	2.3	2.3	3.8	3.8	2.0		
NOT VERY	1	17	14	1	35		
	2.3	7.9	10.1	1.9	3.8	7.0	
NEUTRAL	1	13	8	8	33		
	2.3	6.1	5.8	15.1	5.8	6.6	
FAIRLY	20	83	75	20	219		
	45.5	38.8	54.0	37.7	40.4	43.6	
VERY	21	96	42	22	205		
	47.7	44.9	30.2	41.5	46.2	40.8	
Column	44	214	139	53	52	502	
Total	8.8	42.6	27.7	10.6	10.4	100.0	

## 9.2 Major environmental concerns

The vast majority of the participants did have some concern for the environment and the concerns are listed as follows:

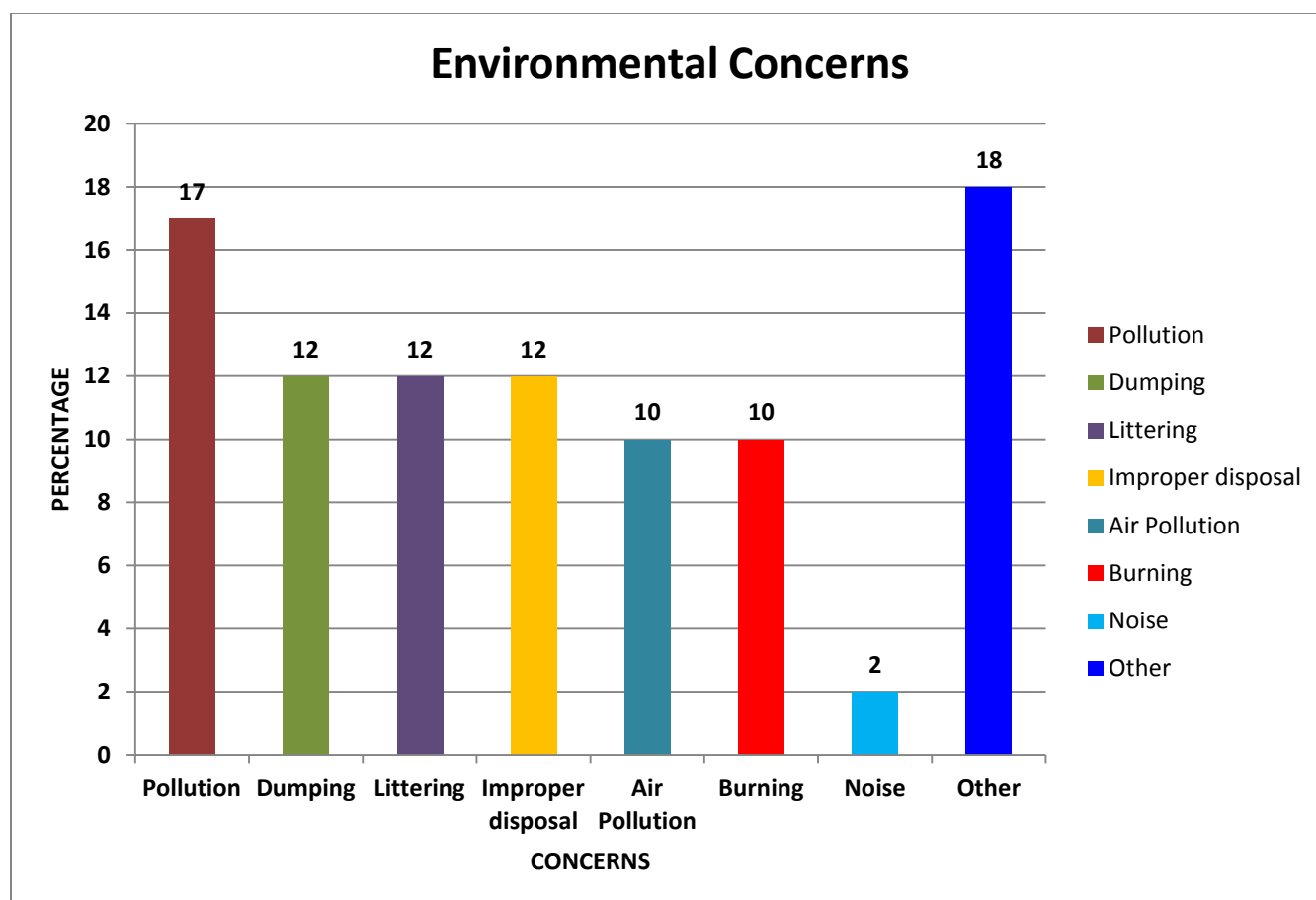
- Pollution (17%)
- Dumping (12%)
- Littering (12%)
- Improper garbage disposal (12%)
- Air pollution (10%)
- Indiscriminate burning (10%)
- Noise Pollution (2%)
- Other (18%)

<i>Untidy surroundings-</i>	3	
<i>Beach erosion -</i>		3
<i>Improper drainage systems -</i>		3
<i>The use of agricultural land for housing -</i>	2	
<i>Global warming and climate change</i>		2
<i>The need for environmental preservation -</i>		2
<i>Water pollution -</i>	2	
<i>Wells that need cleaning -</i>	1	
<i>The amount of waste generated -</i>	1	
<i>The amount of overgrown vegetation -</i>		1
<i>Indiscriminate use of hazardous substances -</i>		1
<i>Water wastage -</i>		1
<i>Lack of recycling -</i>	1	
<i>Liquid waste -</i>	1	



A small group of the respondents (7%) did not express any particular environmental concern.

Those who mentioned pollution as a major concern were found more among middle and upper socio-economic households, the under fifty years age group, both employed and unemployed persons, and those with post-secondary education.



Crosstabulation: COL12 MAJOR CONCERN ABOUT THE ENVIRONMENT By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL12					
N/A	1	7	29	37	
	2.9	4.4	9.4	7.4	
POLLUTION	7	37	43	87	
	20.6	23.4	13.9	17.3	
GARBAGE/DISPOSAL	4	15	40	59	
	11.8	9.5	12.9	11.8	
DUMPING	6	11	43	60	
	17.6	7.0	13.9	12.0	
BURNING STUFF	4	17	28	49	
	11.8	10.8	9.0	9.8	
AIR POLLUTION	2	11	38	51	
	5.9	7.0	12.3	10.2	
LITTERING	2	25	33	60	
	5.9	15.8	10.6	12.0	
NOISE POLLUTION		7	2	9	
	4.4	.6	1.8		
OTHER	8	28	54	90	
	23.5	17.7	17.4	17.9	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL12 MAJOR CONCERN ABOUT THE ENVIRONMENT By COL5 SEX

COL5→	Count	MALE	FEMALE	Row
Col Pct			Total	
COL12				
N/A	20	17	37	
	8.5	6.4	7.4	
POLLUTION	38	49	87	
	16.1	18.4	17.3	
GARBAGE/DISPOSAL	30	29	59	
	12.7	10.9	11.8	
DUMPING	33	27	60	
	14.0	10.2	12.0	
BURNING STUFF	14	35	49	
	5.9	13.2	9.8	
AIR POLLUTION	30	21	51	
	12.7	7.9	10.2	
LITTERING	28	32	60	
	11.9	12.0	12.0	
NOISE POLLUTION	3	6	9	
	1.3	2.3	1.8	
OTHER	40	50	90	
	16.9	18.8	17.9	
Column	236	266	502	
Total	47.0	53.0	100.0	

Crosstabulation: COL12 MAJOR CONCERN ABOUT THE ENVIRONMENT By COL6 AGE

COL6→	Count	16-19	20-29	30-39	40-49	50-59	60+	Row
Col Pct								
COL12								
N/A		1	7	13	8	5	3	37
	2.5	7.1	10.8	6.8	6.0	7.0	7.4	
POLLUTION		8	17	23	26	9	4	87
	20.0	17.3	19.2	22.2	10.7	9.3	17.3	
GARBAGE/DISPOSAL		1	14	16	9	13	6	59
	2.5	14.3	13.3	7.7	15.5	14.0	11.8	
DUMPING		7	12	18	14	6	3	60
	17.5	12.2	15.0	12.0	7.1	7.0	12.0	
BURNING STUFF		3	3	13	13	9	8	49
	7.5	3.1	10.8	11.1	10.7	18.6	9.8	
AIR POLLUTION		3	12	8	15	11	2	51
	7.5	12.2	6.7	12.8	13.1	4.7	10.2	
LITTERING		8	13	14	13	8	4	60
	20.0	13.3	11.7	11.1	9.5	9.3	12.0	
NOISE POLLUTION		2	2	1	2	2	2	9
	2.0	1.7	.9	2.4	4.7	1.8		
OTHER		9	18	13	18	21	11	90
	22.5	18.4	10.8	15.4	25.0	25.6	17.9	
Column	40	98	120	117	84	43	502	
Total	8.0	19.5	23.9	23.3	16.7	8.6	100.0	

Crosstabulation: COL12 MAJOR CONCERN ABOUT THE ENVIRONMENT By COL8 ECONOMIC ACTIVITY

COL8→	Count	STUDENT	EMPLOYED	UNEMPLOY	HOMEMAKE	RETIRED	Row
Col Pct		ED	R				
COL12							
N/A		3	22	10	2	37	
	6.4	6.0	23.3		6.3	7.4	
POLLUTION		12	70	4	1	87	
	25.5	19.0	9.3		3.1	17.3	
GARBAGE/DISPOSAL		2	44	6	2	59	
	4.3	12.0	14.0	16.7	15.6	11.8	
DUMPING		7	45	4	2	60	
	14.9	12.2	9.3	16.7	6.3	12.0	
BURNING STUFF		2	29	7	3	49	
	4.3	7.9	16.3	25.0	25.0	9.8	
AIR POLLUTION		6	38	4	2	51	
	12.8	10.3	9.3	16.7	3.1	10.2	
LITTERING		7	47	2	1	60	
	14.9	12.8	4.7	8.3	9.4	12.0	
NOISE POLLUTION		1	7		1	9	
	2.1	1.9		8.3		1.8	
OTHER		7	66	6	1	90	
	14.9	17.9	14.0	8.3	31.3	17.9	
Column	47	368	43	12	32	502	
Total	9.4	73.3	8.6	2.4	6.4	100.0	

Crosstabulation: COL12 MAJOR CONCERN ABOUT THE ENVIRONMENT By COL10 EDUCATION LEVEL

COL10→	Count	PRIMARY	SECONDAR	VOCATION	COLLEGE	UNIVERSI	Row
Col Pct		Y	AL	TY	Total		
COL12							
N/A		9	23	3	1	1	37
		20.5	10.7	2.2	1.9	1.9	7.4
POLLUTION		7	29	26	14	11	87
		15.9	13.6	18.7	26.4	21.2	17.3
GARBAGE/DISPOSAL		3	30	19	2	5	59
		6.8	14.0	13.7	3.8	9.6	11.8
DUMPING		2	33	13	4	8	60
		4.5	15.4	9.4	7.5	15.4	12.0
BURNING STUFF		7	24	10	1	7	49
		15.9	11.2	7.2	1.9	13.5	9.8
AIR POLLUTION		3	20	21	4	3	51
		6.8	9.3	15.1	7.5	5.8	10.2
LITTERING		4	23	18	12	3	60
		9.1	10.7	12.9	22.6	5.8	12.0
NOISE POLLUTION			3	1	2	3	9
		1.4	.7	3.8	5.8	1.8	
OTHER		9	29	28	13	11	90
		20.5	13.6	20.1	24.5	21.2	17.9
Column	44	214	139	53	52	502	
Total	8.8	42.6	27.7	10.6	10.4	100.0	

### 9.3 Top of mind impressions of the ISWMP terminology

Participants were asked to indicate what came to their mind when they hear the term Integrated Solid Waste Management Programme.

The largest individual group ( 40%) said that what came to their mind was 'garbage disposal', and this was followed by 13% who mentioned 'sewage', a similar group ( 13%) who mentioned 'old household appliances' to be disposed of, 10% who mentioned 'old cars' and 'metal', 9% who mentioned 'recycling', 4% who mentioned 'pollution', and 4% who mentioned 'illegal dumping'.

There were several other items mentioned by much smaller individual groups, and are listed as follows:

<i>Environmental preservation</i>	-	10
<i>Waste Management-</i>		8
<i>Committees</i>	-	8
<i>Reusing waste</i>	-	8
<i>Managing waste</i>	-	8
<i>Waste disposal facilities</i>	-	6
<i>Littering</i>	-	6
<i>Air pollution</i>	-	5
<i>Septic tanks</i>	-	4
<i>Scientific activity</i>	-	4
<i>Reducing waste</i>	-	4
<i>Cleanliness</i>	-	4
<i>Bodily waste</i>	-	3
<i>Health-</i>		3
<i>Pumping wells</i>	-	3
<i>Solutions</i>	-	3
<i>Productivity</i>	-	3

Sanitation services -	2	
Prevention -	2	
Separation of garbage -		2
Heavy equipment -	2	
Providing a service for the environment -	2	
Teamwork -	2	
Overgrown vegetation -		2
Disposal of old clothes -	2	
Bottles, paper, cans -	2	
Recycling solid waste -		2
Waste reduction -	1	
Composting -	1	
A cleaner Barbados -	1	
Waste treatment -	1	
Contamination -	1	
Plastic-	1	
Drainage -	1	
Change -	1	
Health -	1	
Recovering energy from waste -	1	
Water wastage -		1
Something which is renewable -	1	
De-bushing -	1	
Good garbage collection -	1	
Separation of garbage -		1

Crosstabulation: COL13 MEANING OF ISWMP

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL13					
N/A	1	10	45	56	
	2.9	6.3	14.5	11.2	
GARBAGE/DISPOSAL	10	51	79	140	
	29.4	32.3	25.5	27.9	
HH APPLIANCES	1	10	21	32	
	2.9	6.3	6.8	6.4	
OLD CARS/METALS	8	18	26		
	5.1	5.8	5.2		
SEWAGE	3	11	19	33	
	8.8	7.0	6.1	6.6	
RECYCLING	1	8	14	23	
	2.9	5.1	4.5	4.6	
POLLUTION	2	1	6	9	
	5.9	.6	1.9	1.8	
DUMPING	4	3	7		
	2.5	1.0	1.4		
OTHER	16	55	105	176	
	47.1	34.8	33.9	35.1	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL14 MEANING OF ISWMP

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL14					
N/A	15	84	206	305	
	44.1	53.2	66.5	60.8	
GARBAGE/DISPOSAL	4	14	27	45	
	11.8	8.9	8.7	9.0	
HH APPLIANCES	7	21	28		
	4.4	6.8	5.6		
OLD CARS/METALS	11	9	20		
	7.0	2.9	4.0		
SEWAGE	3	6	13	22	
	8.8	3.8	4.2	4.4	
RECYCLING	2	8	5	15	
	5.9	5.1	1.6	3.0	
POLLUTION	1	3	7	11	
	2.9	1.9	2.3	2.2	
DUMPING	3	3	7	13	
	8.8	1.9	2.3	2.6	
OTHER	6	22	15	43	
	17.6	13.9	4.8	8.6	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL15 MEANING OF ISWMP

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL15					
N/A	27	131	280	438	
	79.4	82.9	90.3	87.3	
GARBAGE/DISPOSAL	6	7	13		
	3.8	2.3	2.6		
HH APPLIANCES	1	2	3		
	.6	.6	.6		
OLD CARS/METALS	1	2	3		
	2.9	1.3	.6		
SEWAGE	2	5	3	10	
	5.9	3.2	1.0	2.0	
RECYCLING	2	3	1	6	
	5.9	1.9	.3	1.2	
POLLUTION	1	1	2		
	.6	.3	.4		
DUMPING	1	1	1		
	.3	.2	.2		
OTHER	2	9	15	26	
	5.9	5.7	4.8	5.2	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	



## 9.4 Awareness and Efficacy of the ISWMP Initiatives undertaken by the SWPU

Respondents were asked about their awareness of the activities/initiatives undertaken by the SWPU and they were also asked to give a score out of ten to rate the efficacy of each activity/initiative.

### Brochure Series

Only 6% of the sample volunteered awareness of this initiative and a further 12% indicated prompted awareness making overall 18%. This awareness was higher among middle and upper socio-economic households. The mean score for efficacy of this initiative was 5.65.

Crosstabulation: COL16A AWARENESS OF BROCHURE SERIES

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct					Total
COL16A					
NOT AWARE	23	122	267	412	
	67.6	77.2	86.1	82.1	
VOLUNTEERED	5	13	14	32	
	14.7	8.2	4.5	6.4	
PROMPTED	6	23	29	58	
	17.6	14.6	9.4	11.6	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Mean efficacy 5.659

### Anti-Litter Signage

One in five respondents (20%) volunteered awareness of this initiative and a further 36% indicated prompted awareness making overall awareness 56%. This was well spread across socio-economic households. The mean score for efficacy of this initiative was 6.64.

Crosstabulation: COL17A AWARENESS OF ANTI-LITTER SIGNAGE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL17A					
NOT AWARE	12	66	143	221	
	35.3	41.8	46.1	44.0	
VOLUNTEERED	11	31	57	99	
	32.4	19.6	18.4	19.7	
PROMPTED	11	61	110	182	
	32.4	38.6	35.5	36.3	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Mean efficacy 6.644

### Bring your own bag promotion

One third of the respondents (33%) volunteered awareness of this initiative and a further 46% indicated prompted awareness making overall awareness 79%. This was well spread across socio-economic households. The mean score for efficacy of this initiative was 7.06.

Crosstabulation: COL18A AWARENESS OF BRING YOUR OWN BAG PROMO By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL18A					
NOT AWARE	7	25	72	104	
	20.6	15.8	23.2	20.7	
VOLUNTEERED	13	55	97	165	
	38.2	34.8	31.3	32.9	
PROMPTED	14	78	141	233	
	41.2	49.4	45.5	46.4	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Mean efficacy 7.059

### Media Promotion on Waste Reduction, Reuse and Recycling

Over a third of the respondents (37%) volunteered awareness of this initiative and a further 40% indicated prompted awareness making overall awareness 77%. This was well spread across socio-economic households. The mean score for efficacy of this initiative was 7.26.

Crosstabulation: COL19A AWARENESS OF MEDIA PROMO ON 3RS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL19A					
NOT AWARE	5	34	78	117	
	14.7	21.5	25.2	23.3	
VOLUNTEERED	18	63	102	183	
	52.9	39.9	32.9	36.5	
PROMPTED	11	61	130	202	
	32.4	38.6	41.9	40.2	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Mean efficacy 7.259

### Media Promotion- giveaways of reusable bags

A quarter of the respondents (26%) volunteered awareness of this initiative and a further 31% indicated prompted awareness making overall awareness 57%. This was well spread across socio-economic households. The mean score for efficacy of this initiative was 6.82

Crosstabulation: COL20A AWARENESS OF MEDIA PROMO ON REUSEABLE BAGS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL20A					
NOT AWARE	10	63	142	215	
	29.4	39.9	45.8	42.8	
VOLUNTEERED	12	42	76	130	
	35.3	26.6	24.5	25.9	
PROMPTED	12	53	92	157	
	35.3	33.5	29.7	31.3	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Mean efficacy 6.820

### **Participation in various activities/Expos**

Just over one in ten (13%) of the respondents volunteered awareness of this initiative and a further 23% indicated prompted awareness making overall awareness 36%. This awareness was higher among middle and upper socio-economic households. The mean score for efficacy of this initiative was 6.35.

Crosstabulation: COL21A AWARENESS OF VARIOUS ACTIVITIES/EXPOS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL21A					
NOT AWARE	12	91	218	321	
	35.3	57.6	70.3	63.9	
VOLUNTEERED	14	19	32	65	
	41.2	12.0	10.3	12.9	
PROMPTED	8	48	60	116	
	23.5	30.4	19.4	23.1	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Mean efficacy 6.346

### **Seminars for community groups and professional groupings**

One in ten (10%) respondents volunteered awareness of this initiative and a further 14% indicated prompted awareness making overall awareness 24%. This awareness was higher among middle and upper socio-economic households. The mean score for efficacy of this initiative was 5.97.

Crosstabulation: COL22A AWARENESS OF SEMINARS FOR GROUPS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL22A					
NOT AWARE	20	109	254	383	
	58.8	69.0	81.9	76.3	
VOLUNTEERED	9	15	26	50	
	26.5	9.5	8.4	10.0	
PROMPTED	5	34	30	69	

	14.7	21.5	9.7	13.7	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

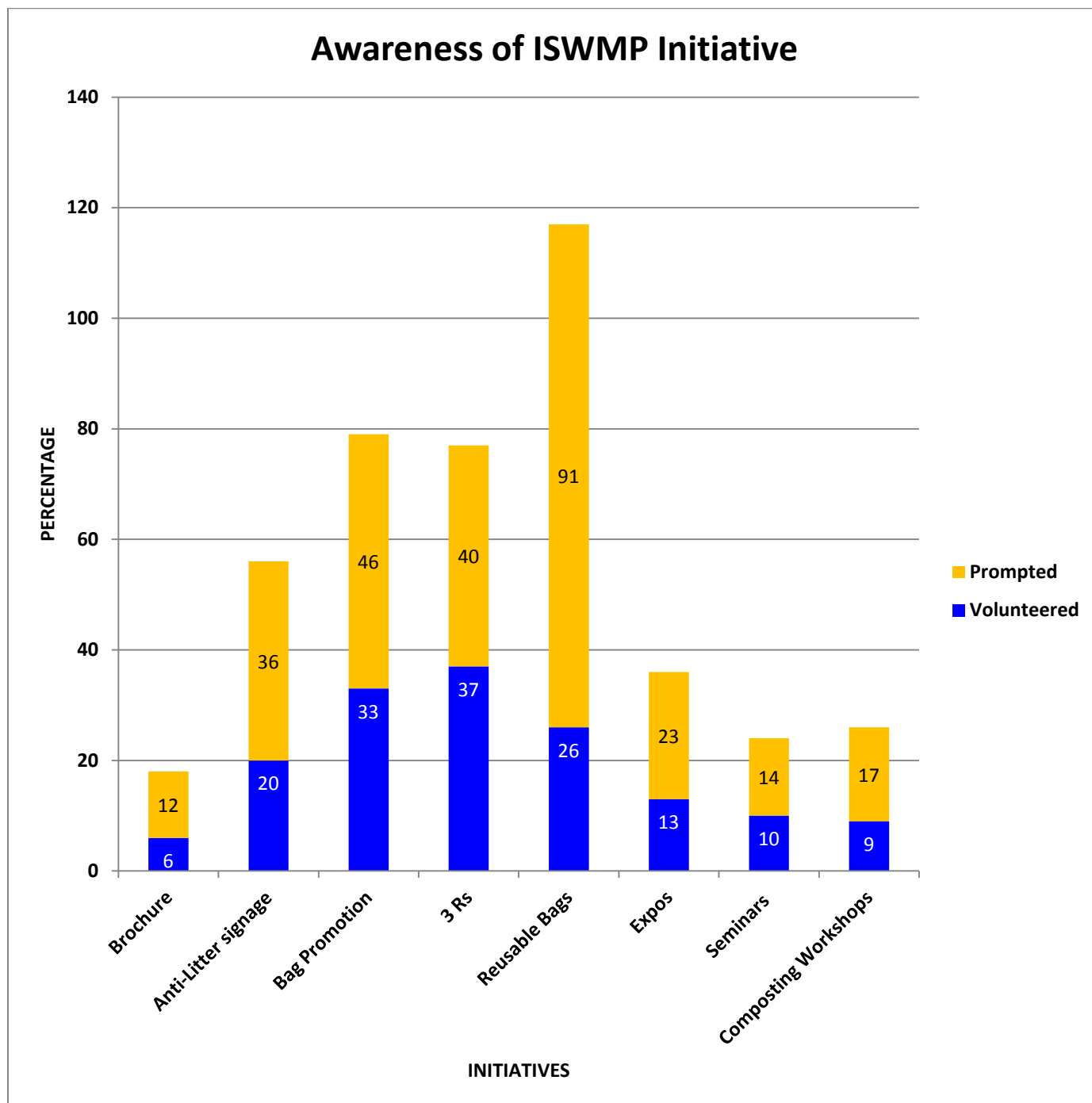
Mean efficacy 5.974

### ***Home composting workshops and 4Rs fair***

Almost one in ten (9%) respondents volunteered awareness of this initiative and a further 17% indicated prompted awareness making overall awareness 26%. This awareness was higher among middle and upper socio-economic households. The mean score for efficacy of this initiative was 6.06.

Crosstabulation: COL23A AWARENESS OF COMPOSTING WORKSHOPS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct					
COL23A					
NOT AWARE	20	105	246	371	
	58.8	66.5	79.4	73.9	
VOLUNTEERED	11	12	22	45	
	32.4	7.6	7.1	9.0	
PROMPTED	3	41	42	86	
	8.8	25.9	13.5	17.1	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

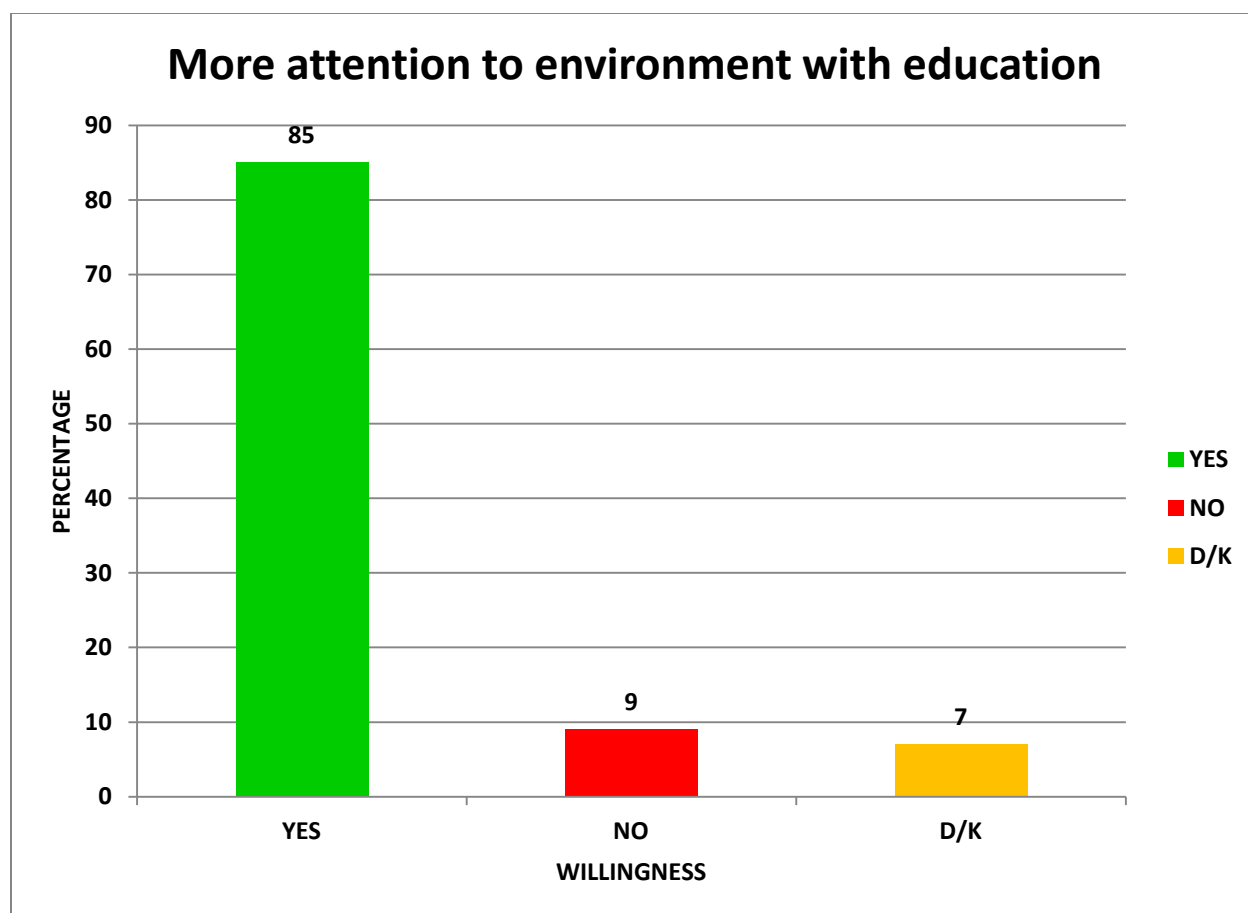


### 9.5 Willingness to pay more attention to the environment with more targeted education\*\*\*\*\*

Respondents were asked if they thought that more targeted education would encourage Barbadians to pay more attention to the environment.

The vast majority of the respondents (85%) said that they believed that with more targeted education Barbadians would be willing to pay more attention the environment, and these individuals were found well spread across socio-economic groups, and by sex, but was higher among those under 60 years of age, and all except retired persons.

A few of the respondents (9%) gave a negative response to the question.



Crosstabulation: COL24 WILLING TO PAY MORE ATTENTION TO ENVIRON By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL24					
YES	32	134	259	425	
	94.1	84.8	83.5	84.7	
NO	2	13	28	43	
	5.9	8.2	9.0	8.6	
D/K	11	23	34		
	7.0	7.4	6.8		
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL24 WILLING TO PAY MORE ATTENTION TO ENVIRON By COL5 SEX

COL5→	Count	MALE	FEMALE	Row
Col Pct			Total	
COL24				
YES	192	233	425	
	81.4	87.6	84.7	
NO	26	17	43	
	11.0	6.4	8.6	
D/K	18	16	34	
	7.6	6.0	6.8	
Column	236	266	502	
Total	47.0	53.0	100.0	

Crosstabulation: COL24 WILLING TO PAY MORE ATTENTION TO ENVIRON By COL6 AGE

COL6→	Count	16-19	20-29	30-39	40-49	50-59	60+	Row
Col Pct						Total		
COL24								
YES	35	82	98	103	73	34	425	
	87.5	83.7	81.7	88.0	86.9	79.1	84.7	
NO	2	8	16	10	4	3	43	
	5.0	8.2	13.3	8.5	4.8	7.0	8.6	
D/K	3	8	6	4	7	6	34	
	7.5	8.2	5.0	3.4	8.3	14.0	6.8	
Column	40	98	120	117	84	43	502	
Total	8.0	19.5	23.9	23.3	16.7	8.6	100.0	



Crosstabulation: COL24 WILLING TO PAY MORE ATTENTION TO ENVIRON By COL8 ECONOMIC ACTIVITY

COL8→ Col Pct	Count	STUDENT ED	EMPLOYED R	UNEMPLOY Total	HOMEMAKE	RETIRED	Row
COL24							
YES	41 87.2	311 84.5	36 83.7	12 100.0	25 78.1	425 84.7	
NO	3 6.4	32 8.7	5 11.6		3 9.4	43 8.6	
D/K	3 6.4	25 6.8	2 4.7		4 12.5	34 6.8	
Column Total	47 9.4	368 73.3	43 8.6	12 2.4	32 6.4	502 100.0	

Crosstabulation: COL24 WILLING TO PAY MORE ATTENTION TO ENVIRON By COL10 EDUCATION LEVEL

COL10→ Col Pct	Count	PRIMARY Y	SECONDAR AL	VOCATION TY	COLLEGE	UNIVERSI	Row
COL24							
YES	37 84.1	185 86.4	111 79.9	45 84.9	47 90.4	425 84.7	
NO	3 6.8	20 9.3	11 7.9	5 9.4	4 7.7	43 8.6	
D/K	4 9.1	9 4.2	17 12.2	3 5.7	1 1.9	34 6.8	
Column Total	44 8.8	214 42.6	139 27.7	53 10.6	52 10.4	502 100.0	

### Reusable shopping bags in the household

Most of the respondents (73%) said that they have a reusable shopping bag in their household.

This incidence was well spread across socio-economic households.

### Frequency of using reusable bags

Just over one in five respondents (22%) said that they used their reusable bags every time they went shopping, while just under half (49%) used theirs sometimes.

Use was fairly well spread across demographic groups but it is crucial to have more individuals commit to using their re-usable bags 'every time' instead of 'sometimes'.

Crosstabulation: COL25 HAVE A REUSEABLE BAG IN HH By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL25					
YES	32	115	220	367	
	94.1	72.8	71.0	73.1	
NO	2	43	90	135	
	5.9	27.2	29.0	26.9	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL26 FREQUENCY OF USING RESUSEABLE BAG By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL26					
EVERYTIME	12	25	42	79	
	37.5	21.7	19.1	21.5	
SOMETIMES	9	57	113	179	
	28.1	49.6	51.4	48.8	
SELDOM	6	10	20	36	
	18.8	8.7	9.1	9.8	
NEVER	5	23	45	73	
	15.6	20.0	20.5	19.9	
Column	32	115	220	367	
Total	8.7	31.3	59.9	100.0	

## 9.6 Awareness and Efficacy of current solid waste disposal facilities

Respondents were asked about their awareness and use of some current solid waste disposal/recycling facilities and they were also asked to give a score out of ten to rate the efficacy of each facility.

### ***Mangrove Pond landfill***

Almost two thirds of the respondents (65 %) volunteered awareness of this facility and a further 33% indicated prompted awareness making overall awareness 98%. This was well spread across socio-economic households.

One in five of those aware of the facility (22%) had used it.

Based on the experience of those who were aware of the facility or what they had heard, they gave a mean score of 7.80 for efficacy of the facility.

Crosstabulation: COL27 AWARE OF MANGROVE POND LANDFILL By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL27					
NOT AWARE	1	5	6	12	
	2.9	3.2	1.9	2.4	
VOLUNTEERED	20	98	207	325	
	58.8	62.0	66.8	64.7	
PROMPTED	13	55	97	165	
	38.2	34.8	31.3	32.9	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL28 USE MANGROVE POND LANDFILL By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL28					
YES	8	26	74	108	
	24.2	17.0	24.3	22.0	
NO	25	127	230	382	
	75.8	83.0	75.7	78.0	
Column	33	153	304	490	
Total	6.7	31.2	62.0	100.0	

Mean efficacy 7.803



### Bagatelle Bulky Waste Disposal Site

Just under a third of the respondents (30 %) volunteered awareness of this facility and a further 25% indicated prompted awareness making overall awareness 55%. This was spread across households but was higher among the upper and middle socio-economic households.

One in six of those aware of the facility (16%) had used it.

Based on the experience of those who were aware of the facility or what they had heard, they gave a mean score of 7.37 for efficacy of the facility.

Crosstabulation: COL30 AWARE OF BAGATELLE BULKY WASTE DISPOSAL By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL30					
NOT AWARE	9	60	158	227	
	26.5	38.0	51.0	45.2	
VOLUNTEERED	15	50	85	150	
	44.1	31.6	27.4	29.9	
PROMPTED	10	48	67	125	
	29.4	30.4	21.6	24.9	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL31 USE OF BAGATELLE BULKY WASTE DISPOSAL SI By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL31					
YES	3	10	30	43	
	12.0	10.2	19.7	15.6	
NO	22	88	122	232	
	88.0	89.8	80.3	84.4	
Column	25	98	152	275	
Total	9.1	35.6	55.3	100.0	

Mean efficacy 7.368

### Rock Hall Asbestos Disposal Site

Just over one in ten (13%) respondents volunteered awareness of this facility and a further 24% indicated prompted awareness making overall awareness 37%. This was well spread across socio-economic households. One in twenty of those aware of the facility (5%) had used it.

Based on the experience of those who were aware of the facility or what they had heard, they gave a mean score of 6.34 for efficacy of the facility.

Crosstabulation: COL33 AWARENESS OF ROCKHALL ASESTOS DISPOSAL S By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL33					
NOT AWARE	18	92	208	318	
	52.9	58.2	67.1	63.3	
VOLUNTEERED	6	20	40	66	
	17.6	12.7	12.9	13.1	
PROMPTED	10	46	62	118	
	29.4	29.1	20.0	23.5	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL34 USE OF ROCKHALL ASESTOS DISPOSAL SITE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL34					
YES	3	6	9		
	4.5	5.9	4.9		
NO	17	63	96	176	
	100.0	95.5	94.1	95.1	
Column	17	66	102	185	
Total	9.2	35.7	55.1	100.0	

Mean efficacy 6.336

### Lonesome Hill Blood and Grease Disposal Site

One in ten (11%) respondents volunteered awareness of this facility and a further 21% indicated prompted awareness making overall awareness 32%. This was well spread across socio-economic households.

One in twenty five of those aware of the facility (4%) had used it.

Based on the experience of those who were aware of the facility or what they had heard, they gave a mean score of 6.87 for efficacy of the facility.

Crosstabulation: COL36 AWARENESS OF LONESOME HILL BLOOD & GREAS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL36					
NOT AWARE	17	110	215	342	
	50.0	69.6	69.4	68.1	
VOLUNTEERED	9	11	36	56	
	26.5	7.0	11.6	11.2	
PROMPTED	8	37	59	104	
	23.5	23.4	19.0	20.7	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL37 USE OF LONESOME HILL BLOOD & GREASE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL37					
YES	2	1	3	6	
	11.8	2.1	3.2	3.8	
NO	15	47	92	154	
	88.2	97.9	96.8	96.3	
Column	17	48	95	160	
Total	10.6	30.0	59.4	100.0	

Mean efficacy 6.864

### Sustainable Barbados Recycling Centre

A quarter of the respondents (25%) volunteered awareness of this facility and a further 18% indicated prompted awareness making overall awareness 43%. This was found higher among the middle and upper socio-economic households.

One in ten of those aware of the facility (11%) had used it.

Based on the experience of those who were aware of the facility or what they had heard, they gave a mean score of 7.57 for efficacy of the facility.

Crosstabulation: COL39 AWARENESS OF SBRC By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL39					
NOT AWARE	14	77	197	288	
	41.2	48.7	63.5	57.4	
VOLUNTEERED	14	44	65	123	
	41.2	27.8	21.0	24.5	
PROMPTED	6	37	48	91	
	17.6	23.4	15.5	18.1	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL40 USE OF SBRC By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL40					
YES	4	6	13	23	
	20.0	7.4	11.5	10.7	
NO	16	75	100	191	
	80.0	92.6	88.5	89.3	
Column	20	81	113	214	
Total	9.3	37.9	52.8	100.0	

Mean efficacy 7.571



## Greenland Landfill

Less than half of the respondents (40%) volunteered awareness of this facility and a further 42% indicated prompted awareness making overall awareness 82%. This was well spread across socio-economic households.

Crosstabulation: COL42 AWARE OF GREENLAND LANDFILL By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL42					
NOT AWARE	7	34	48	89	
	20.6	21.5	15.5	17.7	
VOLUNTEERED	15	65	121	201	
	44.1	41.1	39.0	40.0	
PROMPTED	12	59	141	212	
	35.3	37.3	45.5	42.2	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

### ***B's Recycling***

Less than half of the respondents (42%) volunteered awareness of this facility and a further 8% indicated prompted awareness making overall awareness 51%. This was found higher among the middle and upper socio-economic households.

About half of those aware of the facility (49%) had used it.

Based on the experience of those who were aware of the facility or what they had heard, they gave a mean score of 8.48 for efficacy of the facility.

### ***Ace Recycling***

A very small group of the respondents (7%) volunteered awareness of this facility and a further 4% indicated prompted awareness making overall awareness 11%. This was well spread across socio-economic households.

A quarter of those aware of the facility (25%) had used it.

Based on the experience of those who were aware of the facility or what they had heard, they gave a mean score of 6.73 for efficacy of the facility.

### ***Scrap Man***

Almost one in five respondents (18%) volunteered awareness of this facility and a further 10% indicated prompted awareness making overall awareness 28%.

This was well spread across socio-economic households.

Just over a quarter of those aware of the facility (27%) had used it.

Based on the experience of those who were aware of the facility or what they had heard, they gave a mean score of 7.46 for efficacy of the facility.

### ***American Recycling***

Only 3% of the respondents volunteered awareness of this facility and a further 1% indicated prompted awareness making overall awareness 4%.

Crosstabulation: COL43 AWARENESS OF B's RECYCLING By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL43					
NOT AWARE	8	70	169	247	
	23.5	44.3	54.5	49.2	
VOLUNTEERED	24	75	114	213	
	70.6	47.5	36.8	42.4	
PROMPTED	2	13	27	42	
	5.9	8.2	8.7	8.4	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL44 USE OF B's RECYCLING By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL44					
YES	15	48	62	125	
	57.7	54.5	44.0	49.0	
NO	11	40	79	130	
	42.3	45.5	56.0	51.0	
Column	26	88	141	255	
Total	10.2	34.5	55.3	100.0	

Mean efficacy 8.481

Crosstabulation: COL46 AWARENESS OF ACE RECYCLING By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL46					
NOT AWARE	28	136	284	448	
	82.4	86.1	91.6	89.2	
VOLUNTEERED	3	14	19	36	
	8.8	8.9	6.1	7.2	
PROMPTED	3	8	7	18	
	8.8	5.1	2.3	3.6	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL47 USE OF ACE RECYCLING By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL47					
YES	8	6	14		
	34.8	23.1	25.5		
NO	6	15	20	41	
	100.0	65.2	76.9	74.5	
Column	6	23	26	55	
Total	10.9	41.8	47.3	100.0	

Mean efficacy 6.729



Crosstabulation: COL49 AWARENESS OF SCRAP MAN

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL49					
NOT AWARE	25	113	225	363	
	73.5	71.5	72.6	72.3	
VOLUNTEERED	8	31	52	91	
	23.5	19.6	16.8	18.1	
PROMPTED	1	14	33	48	
	2.9	8.9	10.6	9.6	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL50 USE OF SCRAP MAN

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL50					
YES	1	15	21	37	
	11.1	33.3	24.7	26.6	
NO	8	30	64	102	
	88.9	66.7	75.3	73.4	
Column	9	45	85	139	
Total	6.5	32.4	61.2	100.0	

Mean efficacy 7.455

Crosstabulation: COL52 AWARENESS OF AMERICAN RECYCLING

By COL9 SEC

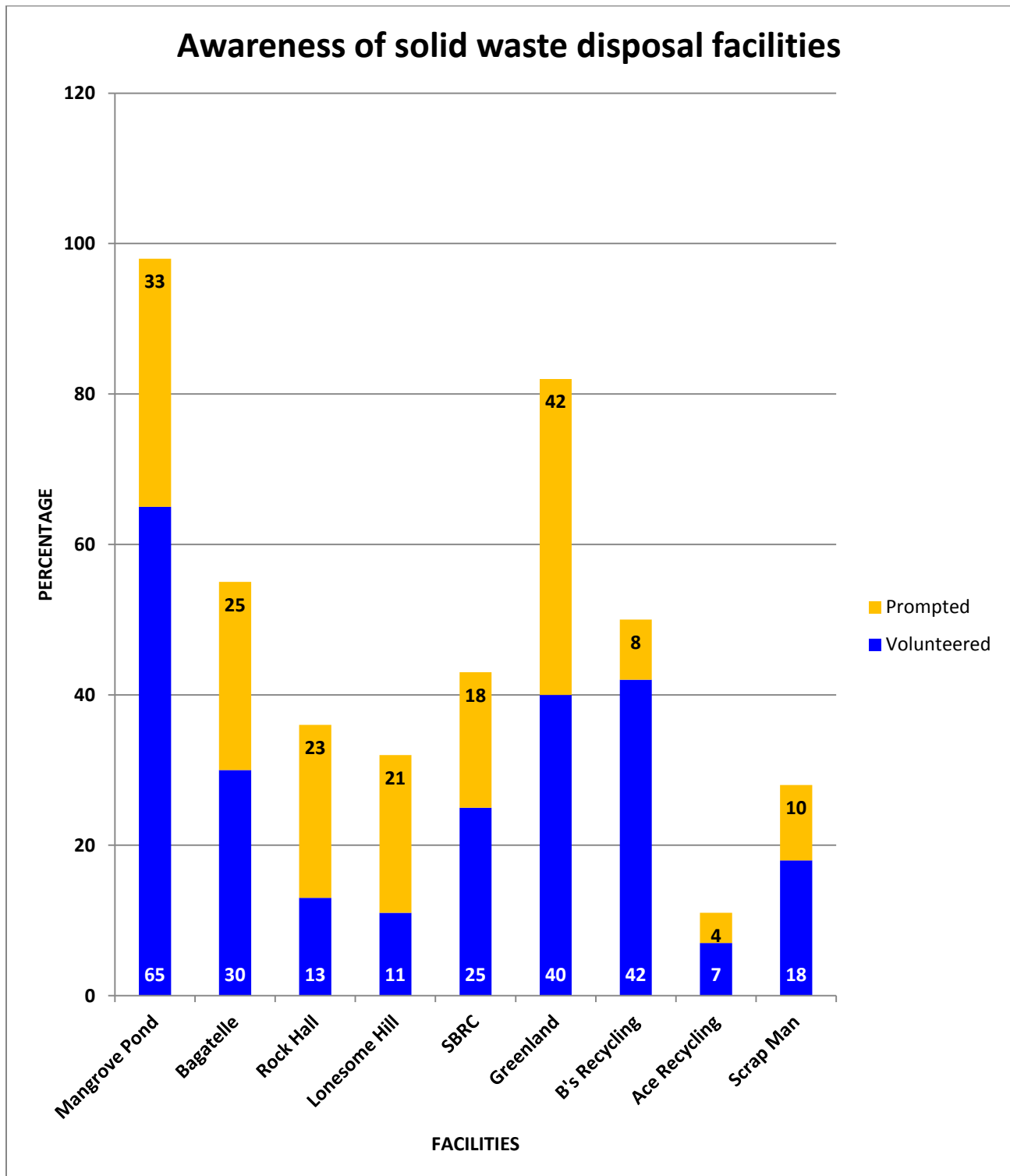
COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL52					
NOT AWARE	33	151	297	481	
	97.1	95.6	95.8	95.8	
VOLUNTEERED	6	9	15		
	3.8	2.9	3.0		
PROMPTED	1	1	4	6	
	2.9	.6	1.3	1.2	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL53 USE OF AMERICAN RECYCLING

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL53					
YES	1	1	2		
	14.3	7.7	9.5		
NO	1	6	12	19	
	100.0	85.7	92.3	90.5	
Column	1	7	13	21	
Total	4.8	33.3	61.9	100.0	

Mean efficacy 6.000



## 9.7 Practices Relative to Reduce, Re-use and Recycle

Participants were asked to indicate if they currently Reduce, Reuse, Recycle, separate household waste or do composting, and to provide specific examples of each activity. They were also asked to indicate their willingness to do each activity which was not practiced. With reference to the 3 Rs fewer than 10% indicated a lack of interest in the practice.

### **Reduce**

Over half of the respondents (54%) indicated that they currently reduced waste and a further 38% said that they would be willing to practice the activity.

Current practitioners were found in higher proportions among middle and upper socio-economic households.

The items for which householders set out to reduce use are listed in the table below.

Item	%
Plastic bags	41
Plastic bottles	35
Glass bottles	34
Paper	27
Cans	24
Other items	2

<i>Plastic containers</i>	-	1
<i>Vegetable skins</i>	-	2
<i>Old wood</i>	-	1
<i>Cooking Oil</i>	-	1

Crosstabulation: COL61 REDUCE WASTE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct					Total
COL61					
NOT INTERESTED			4	34	38
		2.5	11.0	7.6	
CURRENTLY		24	99	150	273
		70.6	62.7	48.4	54.4
WILLING		10	55	126	191
		29.4	34.8	40.6	38.0
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL66 REDUCE-GLASS BOTTLES By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct					Total
COL66					
N/A		10	55	125	190
		29.4	35.7	45.3	40.9
YES		17	52	87	156
		50.0	33.8	31.5	33.6
NO		7	47	64	118
		20.6	30.5	23.2	25.4
Column	34	154	276	464	
Total	7.3	33.2	59.5	100.0	

Crosstabulation: COL67 REDUCE-PLASTIC BOTTLES By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct					Total
COL67					
N/A		10	55	125	190
		29.4	35.7	45.3	40.9
YES		15	56	91	162
		44.1	36.4	33.0	34.9
NO		9	43	60	112
		26.5	27.9	21.7	24.1
Column	34	154	276	464	
Total	7.3	33.2	59.5	100.0	

Crosstabulation: COL68 REDUCE-PLASTIC BAGS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct					Total
COL68					
N/A		10	55	125	190
		29.4	35.7	45.3	40.9
YES		16	67	109	192
		47.1	43.5	39.5	41.4
NO		8	32	42	82
		23.5	20.8	15.2	17.7
Column	34	154	276	464	



Total 7.3 33.2 59.5 100.0

Crosstabulation: COL69 REDUCE-CANS

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL69					
N/A	10	55	125	190	
	29.4	35.7	45.3	40.9	
YES	12	39	58	109	
	35.3	25.3	21.0	23.5	
NO	12	60	93	165	
	35.3	39.0	33.7	35.6	
Column	34	154	276	464	
Total	7.3	33.2	59.5	100.0	

Crosstabulation: COL70 REDUCE-PAPER

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL70					
N/A	10	55	125	190	
	29.4	35.7	45.3	40.9	
YES	11	47	66	124	
	32.4	30.5	23.9	26.7	
NO	13	52	85	150	
	38.2	33.8	30.8	32.3	
Column	34	154	276	464	
Total	7.3	33.2	59.5	100.0	

Crosstabulation: COL71 REDUCE-OTHER ITEMS

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL71					
N/A	10	55	125	190	
	29.4	35.7	45.3	40.9	
YES	2	3	6	11	
	5.9	1.9	2.2	2.4	
NO	22	96	145	263	
	64.7	62.3	52.5	56.7	
Column	34	154	276	464	
Total	7.3	33.2	59.5	100.0	

Crosstabulation: COL71 REDUCE-OTHER ITEMS

By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL71					
N/A	10	52	137	199	
	30.3	35.6	47.9	42.8	
YES	2	3	6	11	
	6.1	2.1	2.1	2.4	
NO	21	91	143	255	
	63.6	62.3	50.0	54.8	

Column 33 146 286 465  
Total 7.1 31.4 61.5 100.0

## Re-use

Over two thirds of the respondents (69%) indicated that they currently reused waste and a further 23% said that they would be willing to practice the activity.

Current practitioners were found well spread across socio-economic households.

The items which householders set out to reuse are listed in the table below.

Item	%
Plastic bags	56
Plastic bottles	63
Glass bottles	34
Paper	30
Cans	8
Other items	7

Boxes -	4
Vegetable skins -	2
Plastic utensils -	1
Buckets -	1
Jewellery boxes -	1
Pencil holders -	1
Plastic bowls -	1
Old furniture -	1
Galvanize -	1
Clothing -	1

Crosstabulation: COL62 RE-USE WASTE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL62					
NOT INTERESTED	1	12	24	37	
	2.9	7.6	7.7	7.4	
CURRENTLY	29	120	199	348	
	85.3	75.9	64.2	69.3	
WILLING	4	26	87	117	
	11.8	16.5	28.1	23.3	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL72 RE-USE-GLASS BOTTLES By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL72					
N/A	4 12.1	26 17.8	87 30.4	117 25.2	
YES	15 45.5	57 39.0	88 30.8	160 34.4	
NO	14 42.4	63 43.2	111 38.8	188 40.4	
Column	33	146	286	465	
Total	7.1	31.4	61.5	100.0	

Crosstabulation: COL73 RE-USE-PLASTIC BOTTLES By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL73					
N/A	4	26	87	117	
	12.1	17.8	30.4	25.2	
YES	25	96	174	295	
	75.8	65.8	60.8	63.4	
NO	4	24	25	53	
	12.1	16.4	8.7	11.4	
Column	33	146	286	465	
Total	7.1	31.4	61.5	100.0	

Crosstabulation: COL74 RE-USE-PLASTIC BAGS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL74					
N/A	4	26	87	117	
	12.1	17.8	30.4	25.2	
YES	18	86	155	259	
	54.5	58.9	54.2	55.7	
NO	11	34	44	89	
	33.3	23.3	15.4	19.1	
Column	33	146	286	465	
Total	7.1	31.4	61.5	100.0	

Crosstabulation: COL75 RE-USE-CAN By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL75					
N/A	4	26	87	117	
	12.1	17.8	30.4	25.2	
YES	2	12	23	37	
	6.1	8.2	8.0	8.0	
NO	27	108	176	311	
	81.8	74.0	61.5	66.9	
Column	33	146	286	465	
Total	7.1	31.4	61.5	100.0	

Crosstabulation: COL76 RE-USE-PAPER By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL76					
N/A	4	26	87	117	
	12.1	17.8	30.4	25.2	
YES	8	52	77	137	
	24.2	35.6	26.9	29.5	
NO	21	68	122	211	
	63.6	46.6	42.7	45.4	
Column	33	146	286	465	
Total	7.1	31.4	61.5	100.0	

Crosstabulation: COL77 RE-USE-OTHER ITEMS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL77					
N/A	4	26	87	117	
	12.1	17.8	30.4	25.2	
YES	4	11	17	32	
	12.1	7.5	5.9	6.9	
NO	25	109	182	316	
	75.8	74.7	63.6	68.0	
Column	33	146	286	465	
Total	7.1	31.4	61.5	100.0	

## Recycle

Over two thirds of the respondents (69%) indicated that they currently recycled waste and a further 25% said that they would be willing to practice the activity.

Current practitioners were found well spread across socio-economic households.

The items which householders set out to recycle are listed in the table below.

Item	%
Plastic bags	29
Plastic bottles	69
Glass bottles	48
Paper	24
Cans	17
Other items	4

<i>Appliances</i>	-	1
<i>Plastic containers</i>	-	1
<i>Vegetable skins</i>	-	1
<i>Wood</i>	-	1

Crosstabulation: COL63 RECYCLE WASTE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL63					
NOT INTERESTED	1	9	21	31	
	2.9	5.7	6.8	6.2	
CURRENTLY	25	109	210	344	
	73.5	69.0	67.7	68.5	
WILLING	8	40	79	127	
	23.5	25.3	25.5	25.3	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL78 RE-RECYCLE-GLASS BOTTLES By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL78					
N/A	7	39	79	125	
	21.2	26.2	27.3	26.5	
YES	15	70	141	226	
	45.5	47.0	48.8	48.0	
NO	11	40	69	120	
	33.3	26.8	23.9	25.5	
Column	33	149	289	471	
Total	7.0	31.6	61.4	100.0	

Crosstabulation: COL79 RECYCLE-PLASTIC BOTTLES By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL79					
N/A	7	39	79	125	
	21.2	26.2	27.3	26.5	
YES	25	101	200	326	
	75.8	67.8	69.2	69.2	
NO	1	9	10	20	
	3.0	6.0	3.5	4.2	
Column	33	149	289	471	
Total	7.0	31.6	61.4	100.0	

Crosstabulation: COL80 RECYCLE-PLASTIC BAGS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL80					
N/A	7	40	80	127	
	21.2	26.8	27.7	27.0	
YES	6	41	87	134	
	18.2	27.5	30.1	28.5	
NO	20	68	122	210	
	60.6	45.6	42.2	44.6	
Column	33	149	289	471	
Total	7.0	31.6	61.4	100.0	

Crosstabulation: COL81 RECYCLE-CAN By COL9 SEC

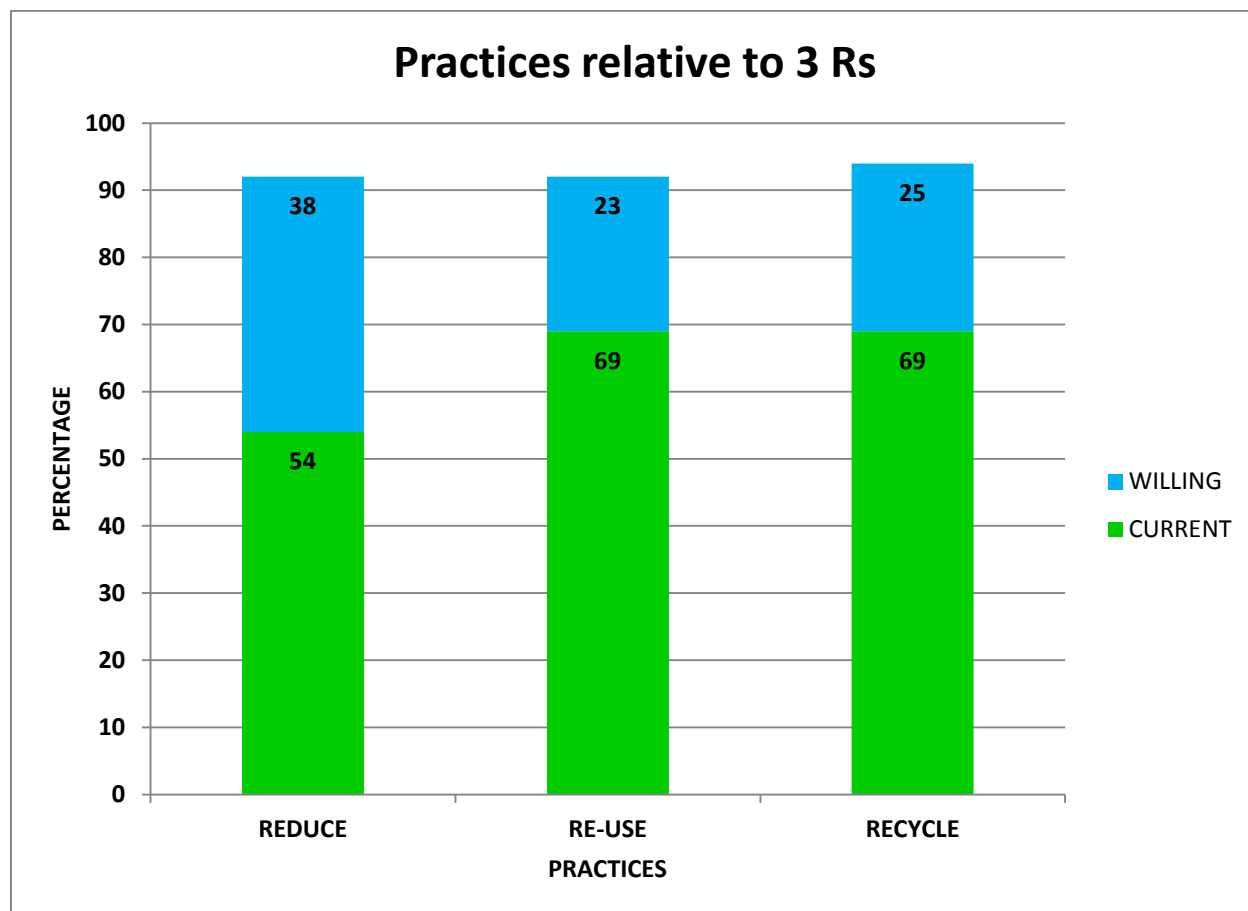
COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL81					
N/A	7	40	79	126	
	21.2	26.8	27.3	26.8	
YES	7	29	44	80	
	21.2	19.5	15.2	17.0	
NO	19	80	166	265	
	57.6	53.7	57.4	56.3	
Column	33	149	289	471	
Total	7.0	31.6	61.4	100.0	

Crosstabulation: COL82 RECYCLE-PAPER By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL82					
N/A	7	40	79	126	
	21.2	26.8	27.3	26.8	
YES	7	36	70	113	
	21.2	24.2	24.2	24.0	
NO	19	73	140	232	
	57.6	49.0	48.4	49.3	
Column	33	149	289	471	
Total	7.0	31.6	61.4	100.0	

Crosstabulation: COL83 RECYCLE-OTHER ITEMS By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL83					
N/A	7	41	79	127	
	21.2	27.5	27.3	27.0	
YES	3	6	11	20	
	9.1	4.0	3.8	4.2	
NO	23	102	199	324	
	69.7	68.5	68.9	68.8	
Column	33	149	289	471	
Total	7.0	31.6	61.4	100.0	





### Separation of household garbage

Fewer than half of the respondents (41%) indicated that they currently separate household garbage and a further 46% said that they would be willing to practice the activity. Current practitioners were found well spread across socio-economic households.

Crosstabulation: COL64 SEPERATE HOUSEHOLD GARBAGE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL64					
NOT INTERESTED	3	20	42	65	
	8.8	12.7	13.5	12.9	
CURRENTLY	14	58	133	205	
	41.2	36.7	42.9	40.8	
WILLING	17	80	135	232	
	50.0	50.6	43.5	46.2	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

### Composting

A comparatively smaller group of respondents (17%) indicated that they currently do composting from waste and a further 47% said that they would be willing to practice the activity.

Both current practitioners and those willing to undertake the activity were found well spread across socio-economic households.

Crosstabulation: COL65 COMPOSTING By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL65					
NOT INTERESTED	9	55	116	180	
	26.5	34.8	37.4	35.9	
CURRENTLY	7	33	44	84	
	20.6	20.9	14.2	16.7	
WILLING	18	70	150	238	
	52.9	44.3	48.4	47.4	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	



### ***Understanding of the term Recover***

Respondents were asked to indicate their understanding of the terminology 'Recover' in the 4Rs concept and what it meant to them.

It would seem that individuals are not clear on the meaning of the terminology.

The following responses were given:

○ Reuse	-	81
○ Recycle	-	31
○ Return to normal	-	37
○ Retrieve/Recovery	-	58
○ Improvement	-	17
○ Revive/save	-	20
○ To sustain	-	6
○ Separate waste	-	6
○ Recover energy used in producing a product	-	4
○ To repair	-	3
○ To receive	-	3
○ To make a by-product of something	-	3
○ To cover	-	2
○ To reduce waste	-	2
○ To use an item for its full lifespan	-	2
○ The practice of doing things in a more sustainable way	-	1
○ To survive	-	1
○ Fresh air	-	1
○ Proper treatment of recycled waste	-	1
○ To resupply	-	1
○ To reinforce	-	1
○ A renewable resource	-	1
○ To replenish	-	1

○ To generate	-	1	
○ Organizing	-	1	
○ To recover costs	-	2	
○ Composting	-	1	
○ Storage of waste until collection	-	1	
○ Collection of material	-	-	1
○ To stop something from recurring	-	-	1

## 9.8 Burning of garbage

Participants were asked to indicate if they burnt garbage, what they burnt and their reasons for burning.

About one in five respondents (21%) indicated that they did burn garbage, and these were found more among lower socio-economic households.

Just over three quarters of the sample (79%) said they did not burn their garbage or had reduced the incidence of such activity.

Crosstabulation: COL85 BURN GARBAGE By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL85					
YES	2	28	77	107	
	5.9	17.7	24.8	21.3	
NO	32	130	233	395	
	94.1	82.3	75.2	78.7	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

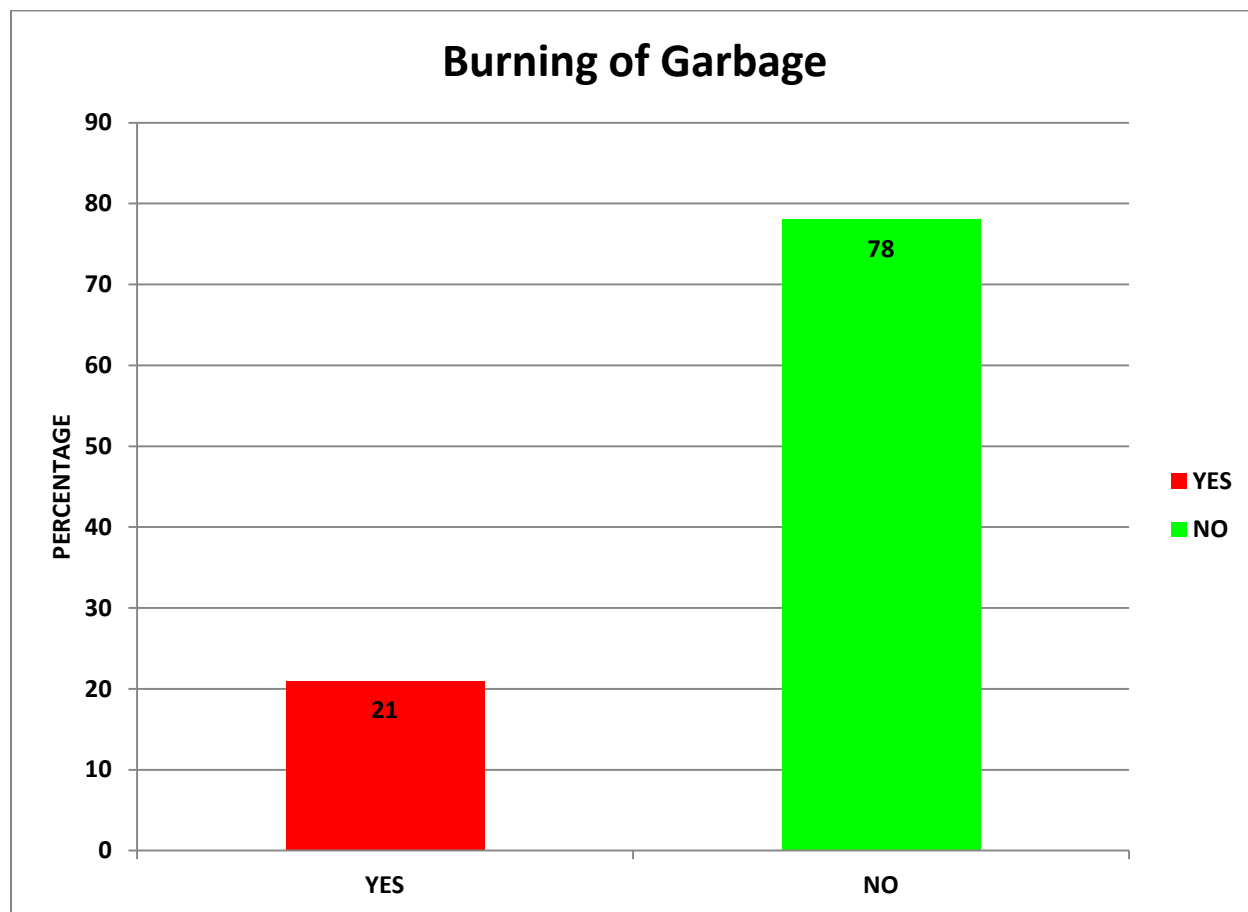
When asked what they burn respondents mentioned the following items:

○ Leaves/branches	-	50
○ Paper	-	35
○ Old wood	-	20
○ Grass	-	16
○ Plastic	-	14
○ Clothes	-	11
○ Cardboard Boxes	-	5
○ Garbage	-	4
○ Documents	-	2
○ Coconut shells	-	2
○ Debris	-	2
○ Vegetable matter	-	2

○ Toys	-	1
○ Cement bags	-	1
○ Cans	-	1
○ Styrofoam containers	-	1
○ Old household appliances	-	1
○ Animal feed bags	-	1

When asked their reason for burning the following answers were given:

○ It is convenient	24
○ Keeps the surroundings tidy	23
○ Use the ashes as a fertilizer	9
○ Get rid of pests (e.g. termites, snails, roaches, rodents)	7
○ Usual activity	6
○ Infrequent garbage collection	5
○ It reduces the amount of plant matter in the garbage	4
○ To eliminate the odour caused by garbage accumulation	3
○ Waste is not degradable	3
○ Private material	2
○ It is cost-efficient means of garbage disposal	2
○ The amount of garbage is too much to be collected	2
○ Too many leaves on the premises	2
○ Items are not reusable	1
○ Limited areas for garbage disposal	1
○ Preferred choice of garbage disposal	1
○ Insufficient storage for material	1

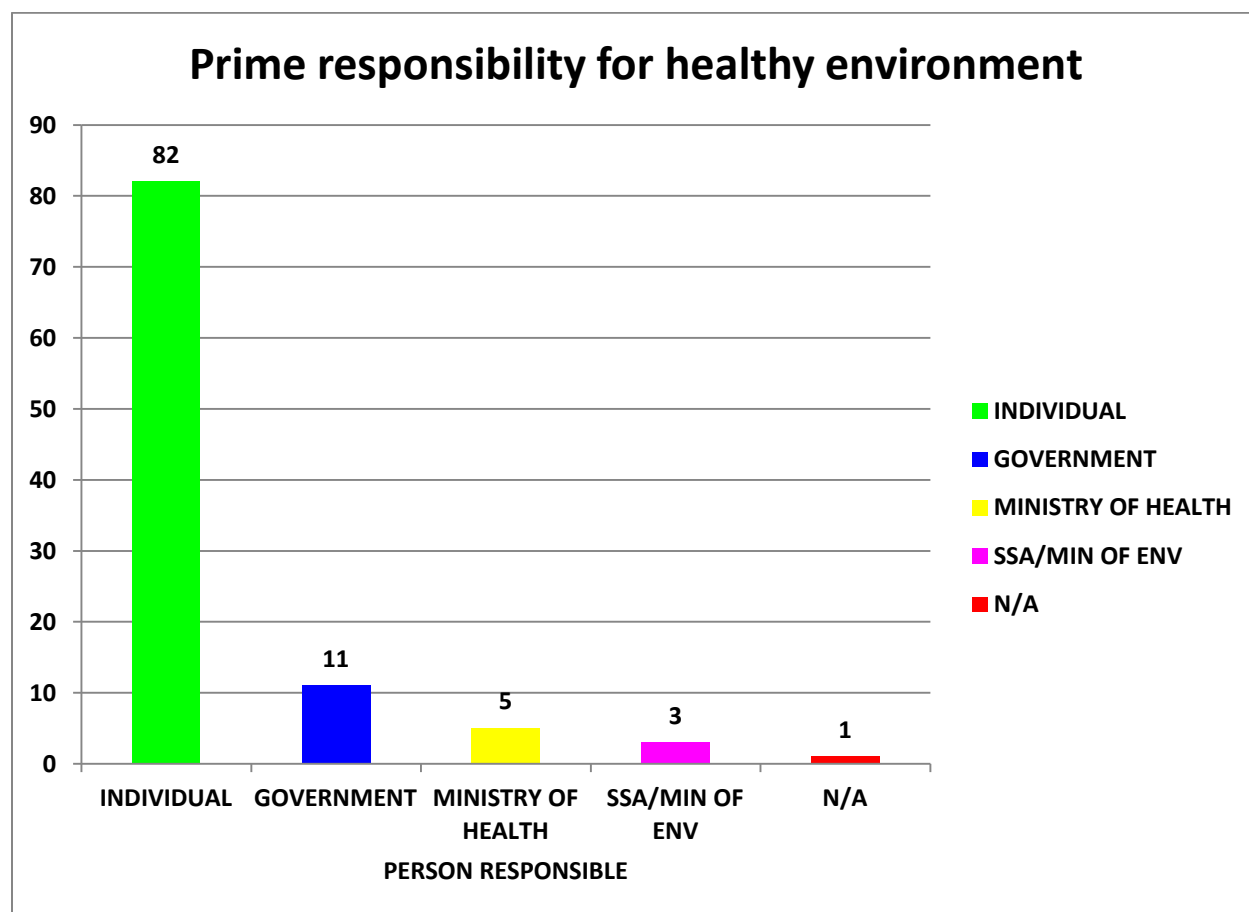


### 9.9 Prime responsibility for a healthy environment

Participants were asked to indicate who they thought should have the prime responsibility for a healthy environment.

The vast majority of respondents (82%) felt that this responsibility should lie with the individual, while the remainder felt that it should be the responsibility of government (11%) or the Ministry of Health and the Environment (6%) should bear that responsibility. A few mentioned the SSA.

This majority opinion was well spread by socio-economic groups, sex, and age group, among all but students and retired persons, and those with post-primary education.





Crosstabulation: COL88 PRIME RESPONSIBILITY FOR HEALTHY ENVIRON By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL88					
N/A		1	3	4	
		.6	1.0	.8	
INDIVIDUALS	31	136	242	409	
	91.2	86.1	78.1	81.5	
GOVERNMENT	1	14	39	54	
	2.9	8.9	12.6	10.8	
MIN OF HEALTH		5	22	27	
	3.2	7.1	5.4		
MIN OF ENVIRONME	2	2		4	
	5.9	1.3	.8		
SSA		4	4		
		1.3	.8		
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL88 PRIME RESPONSIBILITY FOR HEALTHY ENVIRON By COL5 SEX

COL5→	Count	MALE	FEMALE	Row
Col Pct			Total	
COL88				
N/A	2	2	4	
	.8	.8	.8	
INDIVIDUALS	190	219	409	
	80.5	82.3	81.5	
GOVERNMENT	29	25	54	
	12.3	9.4	10.8	
MIN OF HEALTH	12	15	27	
	5.1	5.6	5.4	
MIN OF ENVIRONME	2	2	4	
	.8	.8	.8	
SSA	1	3	4	
	.4	1.1	.8	
Column	236	266	502	
Total	47.0	53.0	100.0	

Crosstabulation: COL88 PRIME RESPONSIBILITY FOR HEALTHY ENVIRON By COL6 AGE

COL6→	Count	16-19	20-29	30-39	40-49	50-59	60+	Row
Col Pct								
COL88								
N/A			1	1	2	4		
		.8	.9	2.4		.8		
INDIVIDUALS	32	78	104	91	69	35	409	
	80.0	79.6	86.7	77.8	82.1	81.4	81.5	
GOVERNMENT	7	13	10	13	8	3	54	
	17.5	13.3	8.3	11.1	9.5	7.0	10.8	
MIN OF HEALTH	1	6	3	8	5	4	27	
	2.5	6.1	2.5	6.8	6.0	9.3	5.4	
MIN OF ENVIRONME			1	3			4	
		.8	2.6			.8		
SSA	1	1	1	1	4			
	1.0	.8	.9		2.3	.8		
Column	40	98	120	117	84	43	502	
Total	8.0	19.5	23.9	23.3	16.7	8.6	100.0	

Crosstabulation: COL88 PRIME RESPONSIBILITY FOR HEALTHY ENVIRON By COL8 ECONOMIC ACTIVITY

COL8→	Count	STUDENT	EMPLOYED	UNEMPLOY	HOMEMAKE	RETIRED	Row
Col Pct		ED	R				
COL88							
N/A	4			4			
	1.1			.8			
INDIVIDUALS	34	307	34	10	24	409	
	72.3	83.4	79.1	83.3	75.0	81.5	
GOVERNMENT	10	37	4	1	2	54	
	21.3	10.1	9.3	8.3	6.3	10.8	
MIN OF HEALTH	3	14	4	1	5	27	
	6.4	3.8	9.3	8.3	15.6	5.4	
MIN OF ENVIRONME		4				4	
	1.1				.8		
SSA	2	1		1	4		
	.5	2.3		3.1	.8		
Column	47	368	43	12	32	502	
Total	9.4	73.3	8.6	2.4	6.4	100.0	

Crosstabulation: COL88 PRIME RESPONSIBILITY FOR HEALTHY ENVIRON By COL10 EDUCATION LEVEL

COL10→	Count	PRIMARY	SECONDAR	VOCATION	COLLEGE	UNIVERSI	Row
Col Pct		Y	AL	TY	Total		
COL88							
N/A		1	3		4		
	2.3	1.4			.8		
INDIVIDUALS		33	169	118	42	47	409
	75.0	79.0	84.9	79.2	90.4	81.5	
GOVERNMENT		5	25	12	9	3	54
	11.4	11.7	8.6	17.0	5.8	10.8	
MIN OF HEALTH		4	16	6	1		27
	9.1	7.5	4.3	1.9		5.4	
MIN OF ENVIRONME				1	1	2	4
		.7	1.9	3.8	.8		
SSA		1	1			4	
	2.3	.5	1.4		.8		
Column	44	214	139	53	52	502	
Total	8.8	42.6	27.7	10.6	10.4	100.0	

### ***Responsibility for Solid Waste Management activities***

Participants were asked to indicate who they thought should pay for Solid Waste Management Activities.

The majority of respondents (62%) felt that government should undertake this responsibility, while just under a quarter (23%) felt that everyone should be asked to pay.

A small group mentioned other agencies/entities as follows:

<i>Offenders</i>	-	3
<i>The solid waste management committee-</i>		3
<i>Both the public and the government</i>	-	2
<i>Ministry of health</i>	-	2
<i>Persons who can afford it</i>	-	1
<i>Households and businesses</i>	-	1
<i>Both the government and the private sector</i>	-	1
<i>Social groups along with the government</i>	-	1
<i>Businesses which collect waste for recycling</i>		1

Those who felt that government should pay were found well spread by socio-economic groups, sex, age group, economic activity, and those with post primary education.



Crosstabulation: COL89 WHO SHOULD PAY FOR SOLID WASTE MANAGEMEN By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL89					
N/A		2	12	33	47
	5.9	7.6	10.6	9.4	
EVERYONE		10	44	60	114
	29.4	27.8	19.4	22.7	
GOVERNMENT		21	92	197	310
	61.8	58.2	63.5	61.8	
PRIVATE SECTOR			1	1	2
	.6	.3	.4		
OTHER		1	9	19	29
	2.9	5.7	6.1	5.8	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Crosstabulation: COL89 WHO SHOULD PAY FOR SOLID WASTE MANAGEMEN By COL5 SEX

COL5→	Count	MALE	FEMALE	Row
Col Pct			Total	
COL89				
N/A		19	28	47
	8.1	10.5	9.4	
EVERYONE		57	57	114
	24.2	21.4	22.7	
GOVERNMENT		145	165	310
	61.4	62.0	61.8	
PRIVATE SECTOR			2	2
	.8	.4		
OTHER		15	14	29
	6.4	5.3	5.8	
Column	236	266	502	
Total	47.0	53.0	100.0	

Crosstabulation: COL89 WHO SHOULD PAY FOR SOLID WASTE MANAGEMEN By COL6 AGE

COL6→	Count	16-19	20-29	30-39	40-49	50-59	60+	Row
Col Pct						Total		
COL89								
N/A		4	9	11	10	8	5	47
	10.0	9.2	9.2	8.5	9.5	11.6	9.4	
EVERYONE		6	20	35	23	21	9	114
	15.0	20.4	29.2	19.7	25.0	20.9	22.7	
GOVERNMENT		28	64	71	72	47	28	310
	70.0	65.3	59.2	61.5	56.0	65.1	61.8	
PRIVATE SECTOR			1		1			2
	1.0		.9			.4		
OTHER		2	4	3	11	8	1	29
	5.0	4.1	2.5	9.4	9.5	2.3	5.8	
Column	40	98	120	117	84	43	502	
Total	8.0	19.5	23.9	23.3	16.7	8.6	100.0	

Crosstabulation: COL89 WHO SHOULD PAY FOR SOLID WASTE MANAGEMEN By COL8 ECONOMIC ACTIVITY

COL8→		Count	STUDENT	EMPLOYED	UNEMPLOY	HOMEMAKE	RETIRED	Row
Col Pct			ED	R		Total		
COL89								
N/A		4	33	4	1	5	47	
		8.5	9.0	9.3	8.3	15.6	9.4	
EVERYONE		9	92	6	2	5	114	
		19.1	25.0	14.0	16.7	15.6	22.7	
GOVERNMENT		32	218	31	7	22	310	
		68.1	59.2	72.1	58.3	68.8	61.8	
PRIVATE SECTOR			2				2	
		.5				.4		
OTHER		2	23	2	2		29	
		4.3	6.3	4.7	16.7		5.8	
Column		47	368	43	12	32	502	
Total		9.4	73.3	8.6	2.4	6.4	100.0	

Crosstabulation: COL89 WHO SHOULD PAY FOR SOLID WASTE MANAGEMEN By COL10 EDUCATION LEVEL

COL10→		Count	PRIMARY	SECONDAR	VOCATION	COLLEGE	UNIVERSI	Row
Col Pct			Y	AL	TY	Total		
COL89								
N/A		10	24	6	4	3	47	
		22.7	11.2	4.3	7.5	5.8	9.4	
EVERYONE		8	41	35	15	15	114	
		18.2	19.2	25.2	28.3	28.8	22.7	
GOVERNMENT		24	134	88	32	32	310	
		54.5	62.6	63.3	60.4	61.5	61.8	
PRIVATE SECTOR			1		1		2	
		.5		1.9		.4		
OTHER		2	14	10	1	2	29	
		4.5	6.5	7.2	1.9	3.8	5.8	
Column		44	214	139	53	52	502	
Total		8.8	42.6	27.7	10.6	10.4	100.0	

### Willingness to pay for garbage collection

Respondents were asked if they would be willing to pay for their household garbage to be collected.

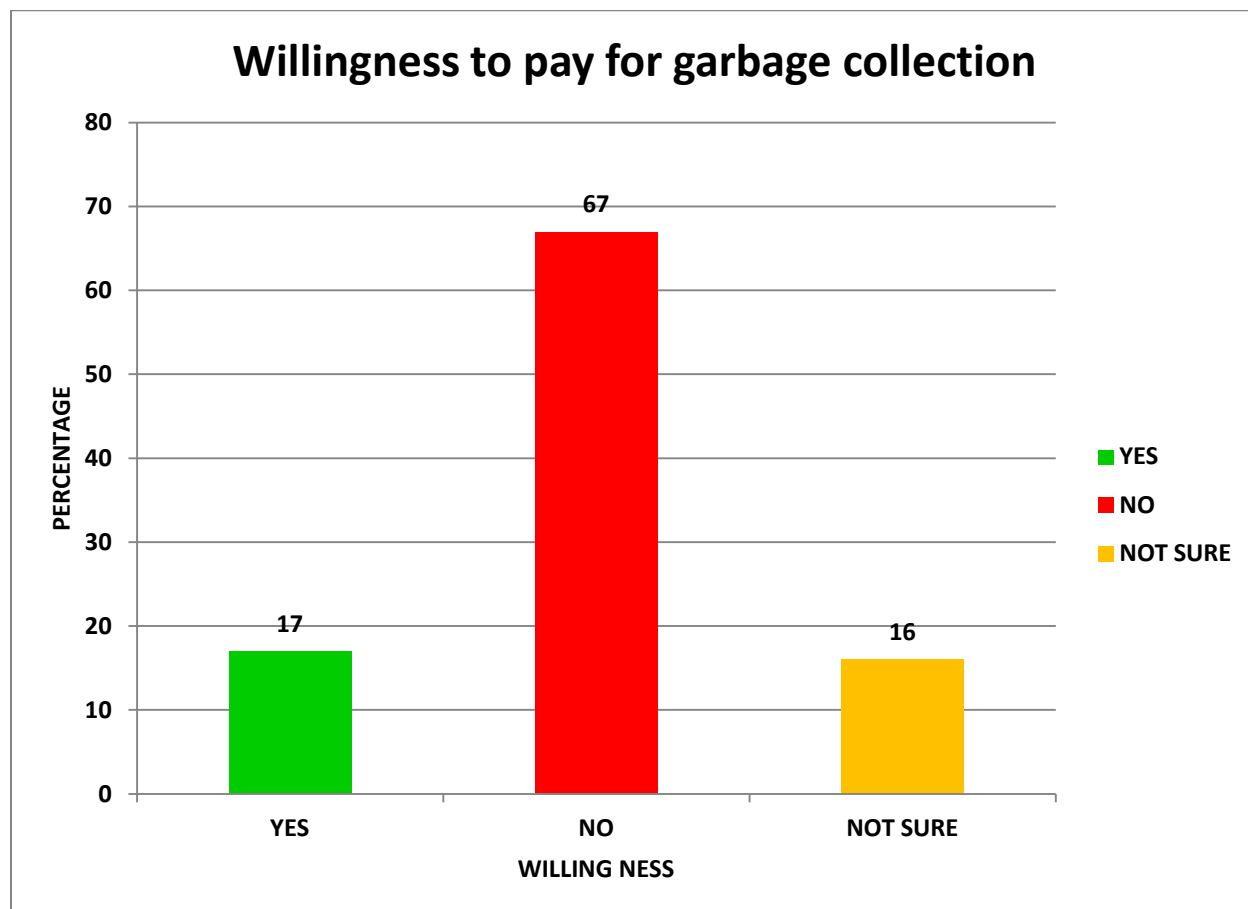
A relatively small group (17%) said they would be willing to pay for garbage collection, while two thirds (67%) said they would not do so.

Those who would be willing to pay were well spread across socio-economic groupings.

Crosstabulation: COL102 WILLING TO PAY FOR COLLECTION OF HH GARB By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct				Total	
COL102					
YES	5	32	49	86	
	14.7	20.3	15.8	17.1	
NO	24	97	214	335	
	70.6	61.4	69.0	66.7	
D/K	5	29	47	81	
	14.7	18.4	15.2	16.1	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	





### 9.10 Desired achievement for the ISWMP

Respondents were asked to indicate what they would like to see the Integrated Solid Waste Management Programme achieve for Barbados.

Several items were mentioned and are listed as follows:

○ A cleaner country	-	169
○ More education on waste management	-	115
○ A reduction in health issues caused by poor environmental practices-		45
○ Increase awareness of environmental issues	-	32
○ Encourage Barbadians to Reduce, Reuse, Recycle and Recover	-	23
○ Develop educational programmes about the 4R's	-	19
○ Enforce fines for illegal dumping	-	14
○ More clean-ups (e.g. beaches, gullies)	-	12
○ Significantly reduce improper disposal of household waste	-	11
○ Make the activity of burning garbage illegal	-	9
○ Impose fines for littering	-	8
○ Ensure a dependable garbage collection system	-	7
○ Establish disposal sites which accommodate a variety of waste materials	-	6
○ Reduce air pollution	-	5
○ Reduction in the amount of waste that goes into the landfill	-	5
○ Develop a programme to maintain Bridgetown	-	5
○ Encourage a collective effort to preserve the environment	-	5
○ More waste separation (distribution of color-coded bins)	-	4
○ Ensure that the garbage is put out on the correct days	-	4
○ Better provisions for dumping waste	-	3
○ Develop a more effective recycling programme	-	3
○ Reduce the need for waste disposal sites	-	2
○ Provision of more garbage cans	-	2
○ A reduction in garbage collection cost for the government	-	1

○ Reduce damage to the coral reefs	-	1
○ Reduce improper disposal of industrial waste	-	1
○ Facilitate the recycling of various types of waste	-	1
○ Bring the country up to date with the latest methods of waste management		1
○ Refurbish solid waste		1
○ Maximize the life that we get out of a landfill	-	1
○ Proper toilet facilities in each household	-	1
○ Privatization of solid waste collection from households-		1
○ Establish an integrated household garbage management system		1
○ Better quality garbage trucks	-	1
○ Create employment opportunities to maintain the environment		1
○ Curb the stench from dumps	-	1
○ Clean drainage	-	1
○ Encourage use of incinerators to avoid dumping	-	1
○ Greater public and private investments in waste management-		1

### 9.11 Rating of the ISWMP Initiatives

Respondents were asked to give a score out of ten to evaluate the efforts and initiatives of the Integrated Solid Waste Management Programme.

The rating was reasonably high with a mean score of 7.0 where over a quarter of the respondents gave a score of 9 or ten, and where only 5% gave a score below 5.

#### COL104 SCORE FOR ISWMP INITIATIVES

Value Label	Value	Frequency	Valid Percent	Cum Percent	Percent
1	1	6	1.2	1.2	1.2
2	2	10	2.0	2.0	3.3
3	3	10	2.0	2.0	5.3
4	4	25	5.0	5.1	10.4
5	5	75	14.9	15.3	25.8
6	6	66	13.1	13.5	39.3
7	7	73	14.5	14.9	54.2
8	8	94	18.7	19.2	73.4
9	9	65	12.9	13.3	86.7
10	10	65	12.9	13.3	100.0
	0	13	2.6	MISSING	
TOTAL		502	100.0	100.0	
Mean	7.004				

### 9.12 Household helping ISWMP

Respondents were asked to name three activities that can be undertaken in the household to help the ISWMP.

Several activities were mentioned and are listed as follows:

- Recycle garbage 33%
- Proper garbage disposal 28%
- Separate garbage 26%
- Having clean surroundings 19%
- Reuse things 18%
- Reduce waste 17%

Several other items were mentioned but by smaller groups of individuals and are listed as follows:

- Practice the 4 R's - 3
- Educate others on waste management - 3
- Secure garbage cans - 3
- Plant more trees - 2
- Ensure that drains are cleared - 2
- Freeze poultry until garbage collection - 2
- Use biodegradable materials - 2
- Stop water wastage - 2
- Use reusable shopping bags - 1
- Take responsibility for cleaning the surroundings - 1
- Use renewable resources - 1
- Attend environmental workshops - 1
- Practice healthy habits - 1
- Avoid activities which cause air pollution - 1



### 9.13 Best medium for information

Respondents were asked to indicate the best medium for getting information to them.

The following media options are listed below:

○ Television	-	209	
○ Newspapers	-	114	
○ Radio	-	61	
○ Direct Mail	-	32	
○ Internet	-	25	
○ Flyers	-	23	
○ Emails	-		20
○ Leaflets	-	19	
○ Brochures	-	14	
○ Town hall meetings	-	12	
○ Facebook	-	12	
○ Cell phones (text messages, BlackBerry messenger)	-	11	
○ Billboards/signs	-	8	
○ Magazines	-	7	
○ Seminars	-	6	
○ Newsletter	-	6	
○ Books	-	6	
○ Literature	-	3	
○ Workshops	-	2	
○ Expositions	-	1	

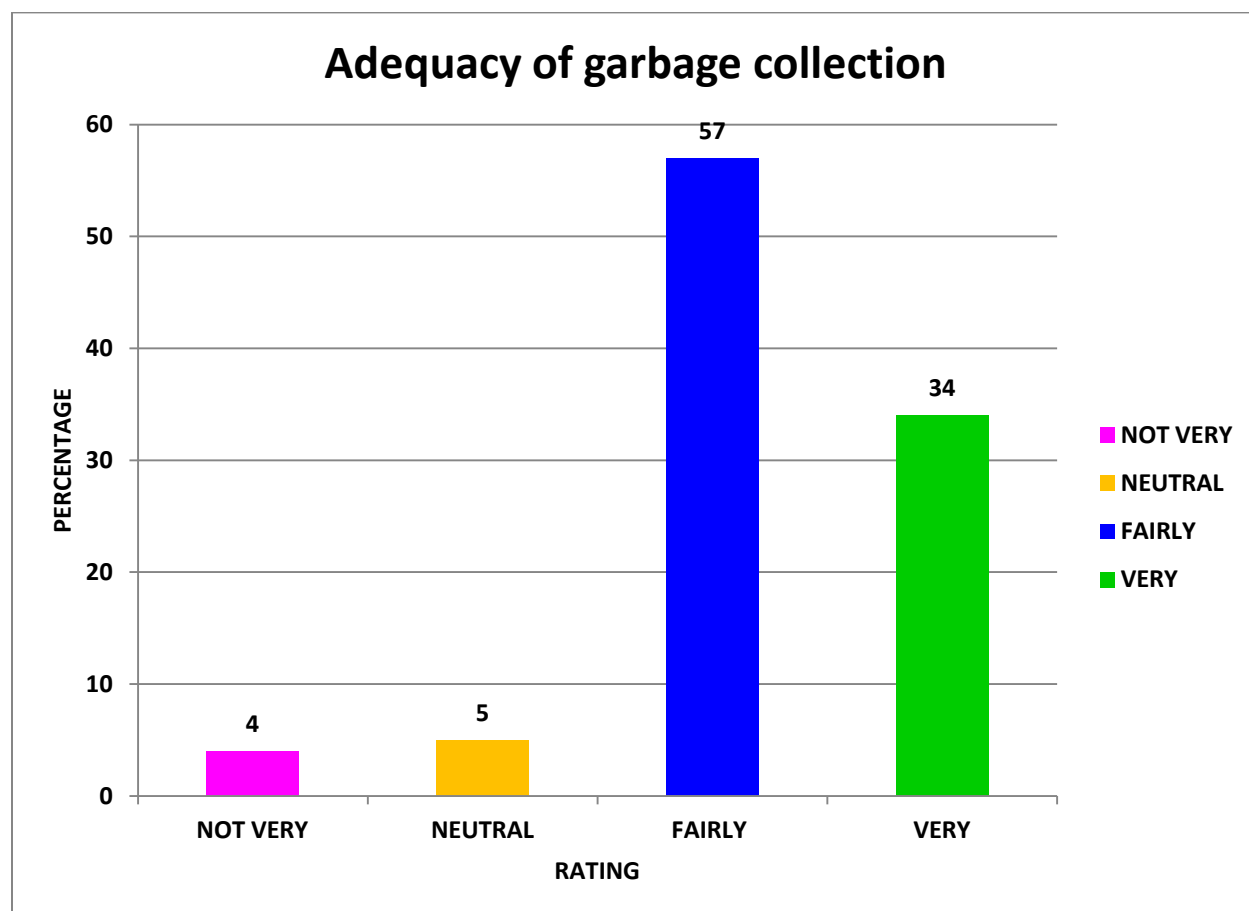
### 9.14 Adequacy of the garbage collection system

Respondents were asked to rate the adequacy of the garbage collection system in their area by the SSA.

The vast majority mentioned that the system was either 'Very' (34%) or 'Fairly' (57%) adequate.

Very few of the respondents (4%) suggested any level of inadequacy.

The favorable rating was well spread across demographic groups.





Crosstabulation: COL110 ADEQUACY OF CURRENT GARBAGE COLLECTION By COL9 SEC

COL9→	Count	UPPER	MIDDLE	LOWER	Row
Col Pct			Total		
COL110					
N/A		5	5		
		1.6	1.0		
NOT AT ALL		1	1	2	
	.6	.3	.4		
NOT VERY		3	15	18	
	1.9	4.8	3.6		
NEUTRAL		1	9	13	23
	2.9	5.7	4.2	4.6	
FAIRLY		16	89	180	285
	47.1	56.3	58.1	56.8	
VERY		17	56	96	169
	50.0	35.4	31.0	33.7	
Column	34	158	310	502	
Total	6.8	31.5	61.8	100.0	

Respondents were asked to state what they would like to see done to improve collection and disposal of household garbage.

Suggestions by respondents are listed as follows:

○ Frequent garbage collection	-	95
○ More equipment	-	39
○ Collection on designated days	-	41
○ More garbage bins	-	18
○ Separation of garbage	-	9
○ Provision of skips in various communities	-	7
○ Post collection cleaning	-	7
○ Proper garbage disposal	-	6
○ Professional workers	-	5
○ Provision of separation bins	-	4
○ Better equipment	-	4
○ Reduce improper disposal of large appliances	-	3
○ Notification of the collection schedule	-	3
○ More staff	-	3
○ Avoid collection at peak hours	-	2

○ Disposal of garbage on collection days	-	3	
○ Provision of cleaning equipment for workers		-	2
○ Community cleanups	-		2
○ Covered garbage cans		-	2
○ Distribution of metal garbage bins	-	2	
○ Prevent leakage from trucks		-	2
○ Assistance from private personnel		-	1
○ Establishment of Neighbourhood recycling depots		-	1
○ Provide education for workers on safety/health practices		-	1
○ Nightly collection	-	1	
○ Recycling	-	2	
○ Law enforcement for illegal dumping		-	1
○ Quicker service for collection of large appliances		-	1
○ Reuse more (old tyres)	-	1	
○ Separate collection days for different types of waste		-	1
○ Proper garbage cans		-	1
○ Reduce the amount of garbage disposed		-	1
○ Improved garbage collection method		-	1
○ Collection of other waste products		-	1
○ Utilization of recycling bins	-	1	
○ Restoration of old trucks	-	1	
○ More staff	-	1	
○ Notifications of truck shortages	-	1	
○ Collection of sorted garbage		-	1

## **APPENDICES**

### **APPENDIX - A - Moderator's Guide**

#### **MODERATORS GUIDE**

1. Discuss Top of Mind impressions of the terminology “Integrated Solid Waste Management”.
2. Discuss interest in environmental issues.
3. Discuss awareness of initiative or activities undertaken by the Solid Waste Project Unit.
4. Evaluate efficacy of each initiative undertaken:
  - Brochure Series
  - Solid Waste Management Website
  - Solid Waste Management Software
  - Anti-Litter Signage
  - Bring your own bag promotion
  - Media promotion on -Waste Reduction, Re-use and Recycling
  - Media promotion – giveaways of the re-useable bags
  - Exhibit at various schools and business places
  - Participation in various expositions or Expos
  - Seminars for community groups and professional groupings
  - Displays and lectures at business places
  - Displays at NGOs
  - Home composting workshops and 4Rs fair
  - Solid waste coloring and activities books
- 4a. Discuss awareness and opinion on tangible promotional items (pens, rulers, water bottles etc);

- 4b. Discuss recall of media programs/ads (Radio, TV, Print, GIS etc.);
5. Discuss awareness and efficacy of current solid waste disposal facilities:
  - Mangrove Pond Landfill ( Mount Stinkeroo)
  - Bagatelle bulky waste disposal site (near Trowel plastic)
  - Rock Hall Asbestos disposal site (St. Philip)
  - Lonesome Hill blood & grease Disposal site
  - Sustainable Barbados Recycling Centre (SBRC)  
(Vaucluse)
  - Greenland Landfill
6. Discuss practices relative to:
  - Reduce- What items?
  - Re-use- What items?
  - Recycle- What items?
  - (Ensure understanding of difference between “re-cycle” & ”re-use”
7. Discuss 3 Rs to 4 Rs. The concept of Recovery (energy from waste e.g. Bio-diesel, incineration etc.)
8. Discuss separation of household garbage.
9. Discuss composting. Option outside of the home/commercial potential;
10. Discuss burning of garbage – What? Why? 3 Rs to 4 Rs discuss 4<sup>th</sup> R
11. Discuss prime responsibility for a healthy environment.....Why?
12. Discuss factors that would get Barbadians to pay more attention to the environmental issues.
13. Discuss propensity to pay for household garbage collection for recycling.
14. Discuss adequacy of current garbage collection system.
15. Discuss unmet needs relative to collection and disposal of household garbage.
16. Evaluate the ‘Integrated Solid Waste Management Programme’.

17. To what extent would you say your behaviour has changed in past two years on environmental issues?
18. Discuss most appropriate communication strategies (content and media) to effect behaviour change on environmental issues. (Social media?)

## **APPENDIX - B - In-Depth Interviews**

### **IN-DEPTH DISCUSSION GUIDE**

1. Discuss concerns about environmental issues (Positives and Negatives).
2. Discuss the initiative(s) or activity(s) from the Solid Waste Project Unit's intervention in terms of:
  - What impact did it have on your company/organization?
  - Subsequent action taken
  - If not, what constraints existed and any plans for subsequent action?
  - What benefits were derived from the intervention?
3. What other initiatives are you aware of that have been undertaken by the Integrated Solid Waste Management Programme?
  - Brochure Series
  - Solid Waste Management Website
  - Solid Waste Management Software
  - Anti-Litter Signage
  - Bring your own bag promotion
  - Media promotion on -Waste Reduction, Re-use and Recycling
  - Media promotion – giveaways of the re-useable bags
  - Exhibit at various schools and business places
  - Participation in various expositions or Expos
  - Seminars for community groups and professional groupings

- Displays and lectures at business places
  - Displays at NGOs
  - Home composting workshops and 4Rs fair
  - Solid waste coloring and activities books
4. Discuss practices within your organization relative to:
- Reduce- What items?
  - Re-use- What items?
  - Recycle- What items?
  - (Ensure understanding of difference between “re-cycle” & ”re-use”
5. Discuss factors that would get Barbadians to pay more attention to environmental issues.
6. Overall what do you think of the ‘Integrated Solid Waste Management Programme’?
7. What more would you like to see done by the Integrated Solid Waste Management Programme?

**APPENDIX - C - Household Questionnaire****HOUSEHOLD QUESTIONNAIRE****APRIL 2012**

Int	Resp	ED	C
1	2	3	4

Good morning/evening, I am a representative of SYSTEMATIC MARKETING. We are conducting a household survey on people's knowledge, attitudes, and practices regarding solid waste management, and would like to speak with someone 16 years or older. The information gathered in this survey is for statistical purposes and will be kept strictly confidential.

**IF RESPONDENT REFUSES TO CO-OPERATE TERMINATE AND RECORD, OTHERWISE PROCEED WITH SELECTION ACCORDING TO QUOTA SHEET**

**OFFICE USE**

- i Sex: Male ( )1 Female ( )2 [ ]5
- ii Age: 16-19 ( )1 20-29 ( )2 30-39 ( )3 40-49 ( )4 50-59 ( )5 60+ ( )6 [ ]6
- iii Including yourself, how many persons are there in your household? \_\_\_\_\_ [ ]7
- iv Are you: Student ( )1 Employed ( )2 Unemployed ( )3 Homemaker ( )4 Retired ( )5 [ ]8  
Occupation \_\_\_\_\_ [ ]9
- v Education Level: Primary ( )1 Secondary ( )2 Technical/Vocational ( )3  
Community College ( )4 University ( )5 [ ]10
100. Which of the following do you have in your household? Computer ( ) Vehicle ( ) Cell Phone ( ) [ ]10c  
MCTV ( ) DirecTV ( ) Lime TV ( ) [ ]10f

**General Level of Awareness**

- 101 How interested are you in environmental issues?  
Very 5 Fairly 4 Neutral 3 Not very 2 Not at all 1 [ ]11
- 101a What concerns you most about the environment?  
\_\_\_\_\_  
\_\_\_\_\_ [ ]12
- 102 When you hear the words "Integrated Solid Waste Management what comes to your mind...

1 <sup>st</sup>	_____	[ ]13
2 <sup>nd</sup>	_____	[ ]14
3 <sup>rd</sup>	_____	[ ]15

**READ** Over the years the Solid Waste Project Unit has undertaken Education Outreach Initiatives and Activities of the Integrated Solid Waste Management Programme, to help the public better understand proper methods of waste prevention, reduction, re-use, recycling, and disposal.

103 What initiatives or activities are you aware of that have been undertaken by the Solid Waste Project Unit?

[Code 1 if awareness is volunteered]

FOR EACH INITIATIVE NOT VOLUNTEERED ASK.....Have you seen or heard of .....?

[Code 2 if awareness is prompted and if not known code 0]

103a For each initiative known, ask.....What score out of 10 would you give to rate the effectiveness of that initiative?

Activity/Initiative	103	103a	
	V/P	Score	Col
Brochure Series			16a-b
Anti-Litter Signage			17a-b
Bring your own bag promotion			18a-b
Media promotion on -Waste Reduction, Re-use and Recycling			19a-b
Media promotion – giveaways of the re-useable bags			20a-b
Participation in various activities and Expos			21a-b
Seminars for community groups and professional groupings			22a-b
Home composting workshops and 4Rs fair			23a-b

103b. Do you believe that with more targeted education Barbadians would be willing to pay more attention to the environment? Yes ( )1 No ( )2 DK ( )3 [ ]24

103c. Do you have a re-usable shopping bag in your household? Yes ( )1 No ( )2 [ ]25

103d. [IF YES ABOVE] When you go shopping do you take it with you.....  
Every time ( )1 Sometimes ( )2 Seldom ( )3 Never ( )4 [ ]26

104 Which current solid waste disposal/or recycling facilities are you aware of?  
[Code 1 if awareness is volunteered] FOR EACH ONE NOT KNOWN ASK .....Have you heard of.....?  
[Code 2 if awareness is prompted and if not known code 0]

104a. FOR EACH ONE KNOWN ASK .....Have you ever used the facility.....?

104b For each one known ask .....What score out of 10 would you give to rate the effectiveness of the facility?

	104	104a	104b	
	V/P	Use	Score	Col
Mangrove Pond Landfill ( Mount Stinkeroo)				27-29
Bagatelle bulky waste disposal site (near Trowel Plastic)				30-32



Rock Hall Asbestos disposal site (St. Philip)				33-35
Lonesome Hill blood & grease Disposal site				36-38
Sustainable Barbados Recycling Centre (SBRC) (Vaucluse)				39-41
Greenland Landfill (St. Andrew)				42
	<b>V</b>	<b>Use</b>	<b>Score</b>	
B's Recycling				43-45
Ace Recycling				46-48
Scrap Man				49-51
American Recycling				52-54
				55-57
				58-60

105 Which of the following do you currently do?

105a For each one not currently done ask .....Would you be willing to....(each one not done)?

	105	105a	
	Currently	Willing	Col
Reduce waste			61
Re-use waste			62
Recycle waste			63
Separate Household waste			64
Composting			65

105b. For those who currently Reduce waste ask....What specific items do you reduce?

Glass bottles ( ) Plastic bottles ( ) Plastic bags ( ) Cans ( ) Paper ( )  
Other items \_\_\_\_\_ [ ][ ][ ][ ][ ][ ] 66-71

105c. For those who currently Re-use waste ask....What specific items do you re-use?

Glass bottles ( ) Plastic bottles ( ) Plastic bags ( ) Cans ( ) Paper ( )  
Other items \_\_\_\_\_ [ ][ ][ ][ ][ ][ ] 72-77

105d. For those who currently Recycle waste ask....What specific items do you recycle?

Glass bottles ( ) Plastic bottles ( ) Plastic bags ( ) Cans ( ) Paper ( )  
Other items \_\_\_\_\_ [ ][ ][ ][ ][ ][ ] 78-83

105e. Nowadays there is reference to 4Rs in Solid Waste Management (Reduce, Re-use, Recycle and Recover)  
What does the term 'Recover' mean to you? \_\_\_\_\_ [ ] 84

105f Do you burn any of your garbage? Yes ( ) 1 [Go to 105g] No ( ) 2 [Go to 106] [ ] 85

105g If Yes.....What do you burn? \_\_\_\_\_ [ ] 86

105h Why? \_\_\_\_\_ [ ] 87

106 Who do you think should have the prime responsibility for ensuring a healthy environment?

[ ] 88

107 Who do you think should pay for Solid Waste management activities?

[ ]89

108 Would you be willing to pay for your household garbage to be collected for recycling?

Yes ( )1 No ( )2 DK ( )3

[ ]102

109 Overall what would you like to see the Integrated Solid Waste Management Programme achieve for Barbados?

---



---



---

[ ]103

110. What score out of ten would you give to the efforts and initiatives of the 'Integrated Solid Waste Management Programme' \_\_\_\_\_

[ ]104

111. What three activities do you think your household can undertake to help the efforts of the Integrated Solid Waste Management Programme?

i. \_\_\_\_\_

ii. \_\_\_\_\_

iii. \_\_\_\_\_

[ ]105

[ ]106

[ ]107

112. What type of information would you like to get to inform you of Environmental issues and to encourage a change in attitudes towards better environmental practices?

---



---

[ ]108

113. What do you think is the best way (media) to get information to you?

---



---

[ ]109

114. How adequate is the current system of garbage collection? Would you say it is...

Very ( )5 Fairly ( )4 *Neutral* ( )3 Not very ( )2 Not at all ( )1

[ ]110

115. What would you like to see done to improve collection and disposal of household garbage?

---



---

[

]111

Name \_\_\_\_\_

Address \_\_\_\_\_

Tel: \_\_\_\_\_

THANK RESPONDENT