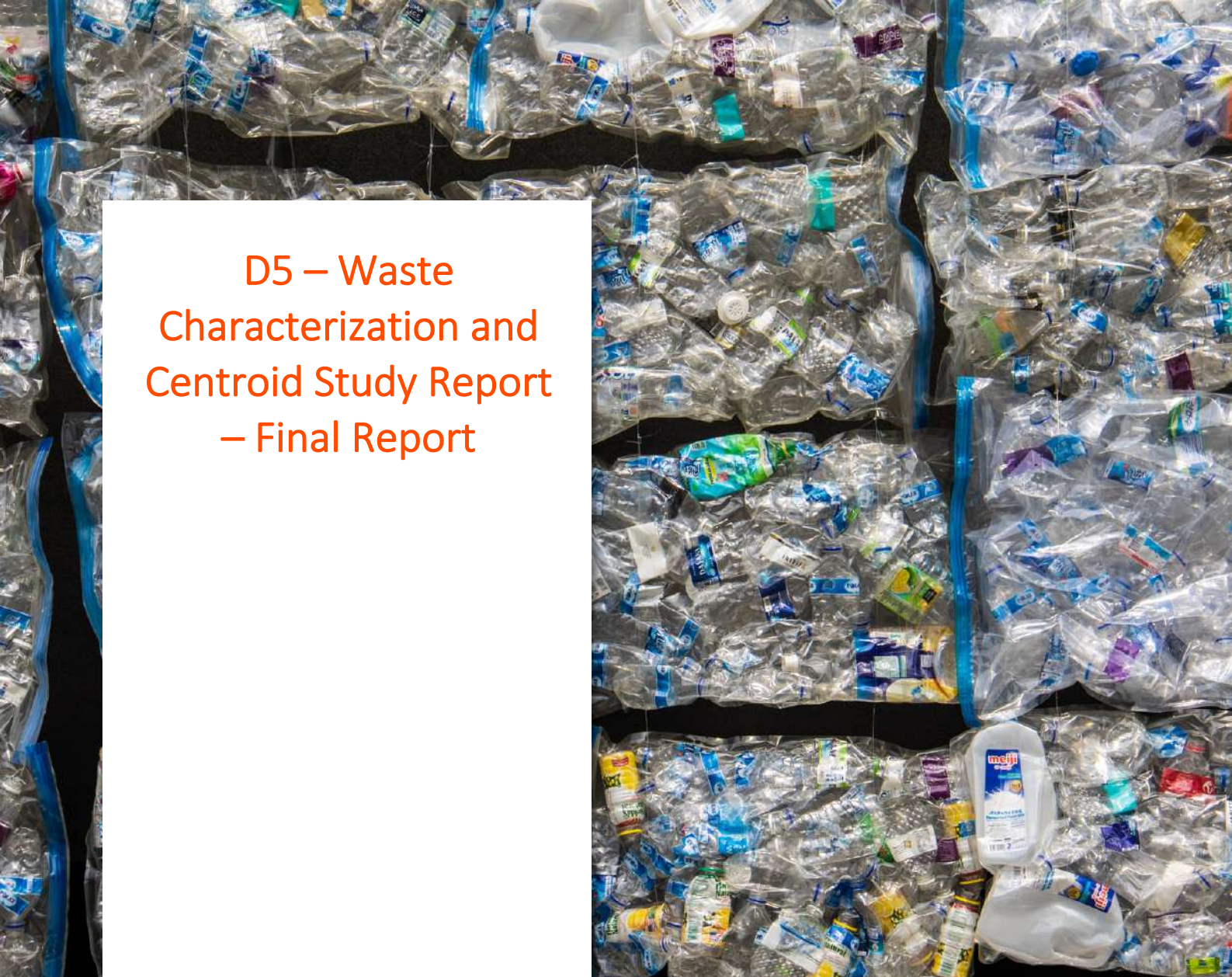




D5 – Waste Characterization and Centroid Study Report – Final Report

Consulting Services for a Waste
Characterization Study in Trinidad &
Tobago

July 2023



CONTENTS

1	EXECUTIVE SUMMARY	10
2	INTRODUCTION	14
3	DESCRIPTION OF SOLID WASTE MANAGEMENT PROCESS IN TRINIDAD AND TOBAGO	16
3.1	Waste Production.....	18
3.1.1	Best Practices on Recycling	20
3.1.2	Final Destination.....	21
3.1.3	Public Perception	21
3.2	National Strategy for Waste Management.....	21
4	THE METHODOLOGY USED FOR IMPLEMENTING THE STUDY	23
4.1	Waste and conditions to carry out the characterizations	23
4.2	Objective of the characterization in Trinidad and Tobago	24
4.3	Capacity Building Session	25
4.4	Methodology used for the Characterization Exercise	26
4.5	Sampling Location	26
4.5.1	Sampling Location in Trinidad	26
4.6	Sampling Scheme adopted.....	27
4.7	Human Resources	29
4.8	Material means needed	30
5	THE SUMMARY OF SAMPLING PLAN AND RATIONALE	32
5.1	The Summary of Physical Sampling Plan	32
5.2	The Schedule for Quartely Execution of the Characterization Exercise	37
5.3	The Summary of Chemical Sampling Plan	37
5.3.1	Sampling and Samples	37
5.3.2	Probabilistic or non-probabilistic sampling.....	38
5.3.3	Sampling location and frequency (standard).....	39
5.4	Sampling procedures and sample preparation	40
5.5	Method used for Chemical Analysis.....	41
5.6	Preservation, Storage and Transport procedures of samples.....	41
6	DESCRIPTION OF GENERATOR CATEGORIES	43

7	FIELDWORK CHALLENGES	45
8	DESCRIPTION OF THE RESULTS (PHYSICAL AND CHEMICAL CHARACTERIZATION)	46
8.1	Diwali Characterization	48
8.2	Wet Characterization	58
8.2.1	Beetham Landfill.....	58
8.2.2	Forres Park Landfill.....	72
8.2.3	Guapo Landfill.....	85
8.2.4	Guanapo Landfill	93
8.3	Carnival Characterization	107
8.3.1	Beetham Landfill.....	107
8.3.2	Forres Park Landfill.....	115
8.3.3	Guanapo Landfill	123
8.4	Dry Characterization.....	131
8.4.1	Beetham Landfill.....	131
8.4.2	Forrest Park Landfill.....	142
8.4.3	Guanapo Landfill	153
8.4.4	Guapo Landfill.....	165
9	ANALYSIS OF THE RESULTS OF THE PHYSICAL AND CHEMICAL CHARACTERIZATION	176
9.1	Beetham Landfill physical results.....	177
9.1.1	Results of Physical Characterization by Municipality.....	180
9.2	Beetham Landfill chemical results	189
9.3	Forres Park Landfill physical results.....	192
9.3.1	Results of Physical Characterization by Municipality.....	195
9.4	Forres Park Landfill chemical Results.....	205
9.5	Guanapo Landfill Physical results.....	208
9.5.1	Results of Physical Characterization by Municipality.....	211
9.6	Guanapo Landfill chemical results	219
9.7	GUAPO Results of Physical Characterization by Municipality	222
9.8	Guapo Landfill chemical results	224
9.9	Trinidad waste physical and chemical results.....	227
9.10	Summary.....	230
9.11	Landfill's waste results comparation	234

9.12	2010 vs 2022 results	235
10	ANALYSIS OF THE RESULTS FROM THE CENTROID STUDY	237
10.1	Analysis of the results From the Centroid Study	237
10.2	Methodology of the centroid study.....	238
10.3	Results and analysis of the centroid study	239
10.4	Waste production projection for the next 20 years.....	241
11	CASE STUDY – BEVERAGE PACKAGING DEPOSIT SYSTEM FOR PLASTIC, GLASS, FERROUS METALS AND ALUMINUM.....	242
11.1	Norway and Lithuania	243
11.2	The Netherlands.....	244
11.3	Germany	245
12	RECOMMENDATIONS.....	246
12.1	Institutional and Infrastructure Recommendations.....	247
12.2	Operational project to increase recyclable waste (paper and cardboard, plastic, glass, biowaste, and others recyclable waste)	249
13	CONCLUSIONS	255
14	ACKNOWLEDGEMENTS.....	262
15	BIBLIOGRAPHY.....	263
16	ANNEXES.....	265
16.1	ANNEX A - Calendar of the characterization	265
16.1.1	Diwali calendar	265
16.1.2	Wet calendar	265
16.1.3	Carnival calendar.....	266
16.1.4	Dry calendar	267
16.2	ANNEX B -Photographic record.....	268
16.3	ANNEX C: Bulletins and Densities from Diwali.....	269
16.4	ANNEX D: Bulletins and Densities from Wet Season.....	270
16.5	ANNEX E: Bulletins and Densities from Carnival.....	271
16.6	ANNEX F: Bulletins and Densities from Dry Season.....	272
16.7	ANNEX G: Summary of responses obtained from the survey carried out	273

INDEX OF TABLES

Table 1 - Waste production in the Diwali festivity	11
Table 2 - Waste production in the Carnival festivity	11
Table 3 - Waste production in the wet and dry seasons	11
Table 4 - Beverage Containers production in the Carnival festivities	11
Table 5 - Beverage Containers production	11
Table 6 - Beverage Containers production	11
Table 7 - Unsorted waste chemical composition in Trinidad	12
Table 8 - Waste production per municipalities	19
Table 9- Baling data of the Beverage Container Recycling Facility (2015-2021)	20
Table 10 - Resume of the answers to the question four of the survey	22
Table 11- Human resources to be allocated to carry out a characterization	29
Table 12 - Minimum number of samples for characterization of municipal waste produced	32
Table 13– Quantity of material per sample	33
Table 14 - Recommended sampling point depending on container type and shape	40
Table 15 - Catalog of Sorting by components to be used in the physical characterization of the sample.	44
Table 16 – Identification and number of chemically characterized samples	173
Table 17 – Waste chemical composition	175
Table 18 – Results by categories of the characterization on Beetham Landfill (tons)	177
Table 19 – Percentage of recycable waste and non recycable waste on Beetham Landfill	178
Table 20- Total of Beverage Containers in unsorted waste at the Beetham landfill	179
Table 21 - Analytical results of chemical characterization at Beetham Landfill	190
Table 22 – Waste chemical composition of Beetham landfill	191
Table 23 – Results by categories of the characterization on Forres Park Landfill	192

Table 24 - Percentage of recycable waste and non recycable waste on Forres Park Landfill	193
Table 25 - Total of Beverage Containers in unsorted waste at the Forres Park landfill	194
Table 26 - Analytical results of chemical characterization at Forres Park Landfill	206
Table 27 - Waste chemical composition of Forres Park landfill.....	207
Table 28 – Results by categories of the characterization on Guanapo Landfill (tons).....	208
Table 29 - Percentage of recycable waste and non recycable waste on Guanapo Landfill	209
Table 30 – Total of Beverage Containers in unsorted waste at the Guanapo landfill.....	210
Table 31 - Analytical results of chemical characterization at Guanapo Landfill.....	220
Table 32 - Waste chemical composition of Guanapo landfill	221
Table 33 - Analytical results of chemical characterization at Guapo Landfill.....	225
Table 34 - Waste chemical composition of Guapo landfill	226
Table 35 – Results by categories of the characterization of the waste produced	227
Table 36 – Percentage of recycable waste and non recycable waste on the waste produced In Trinidad on 2022	228
Table 37– Total of Beverage Containers in unsorted waste in Trinidad* on 2022	229
Table 38– Chemical composition of waste from Trinidad	230
Table 39 – Waste composition 2022 vs Waste composition 2010.....	235
Table 40 – Country Scorecard, of the component waste management	246
Table 41 – Percentage of recycable waste and other waste on the waste produced	255
Table 42 – Results by categories of the characterization of the waste produced in Trinidad on 2022 ..	255

INDEX OF FIGURES

Figure 1 - Representation of the scope of Transfer Stations	13
Figure 2- Location of the landfills in Trinidad and Tobago	17
Figure 3- Organizational chart	17
Figure 4- Waste production considering the 3 landfills managed by SWMCOL.....	18
Figure 5— Capacity building session (Guanapo)	25
Figure 6- Capacity building session (Guanapo)	25
Figure 7- Area of work in Guanapo after raining	27
Figure 8 - Area of work in Guanapo	27
Figure 9- Practical process for conducting the characterization exercise.....	28
Figure 10- Daily volumes of vehicles entering Beetham Landfill	34
Figure 11— Trip origin distribution (Easter): Beetham Landfill.....	34
Figure 12— Trip origin distribution (August): Beetham Landfill	35
Figure 13— Sample, increments and sub-samples.....	39
Figure 14— Examples of points to collect samples	40
Figure 15— Chemical Samples	42
Figure 16 – Guanapo unloading zone	Figure 17 – Forres Park unloading zone
Figure 18– Beetham unloading zone.....	47
Figure 19– Waste composition in Beetham Landfill (tons).....	177
Figure 20 – Waste composition in Beetham Landfill	178
Figure 21 – Beverage Containers in Beetham Landfill	179
Figure 22– Waste composition in Forres Park Landfill (tons)	192
Figure 23 – Waste composition in Forres Park Landfill.....	193
Figure 24 – Beverage Containers in Forres Park Landfill	194
Figure 25 – Waste composition in Guanapo (tons)	208

Figure 26 – Waste composition in Guanapo	209
Figure 27 – Beverage Containers in Guanapo Landfill	210
Figure 28 – Waste composition in Trinidad* on 2022	227
Figure 29 – Waste composition In Trinidad on 2022	228
Figure 30 – Total of Beverage Containers in unsorted waste in Trinidad on 2022	229
Figure 31 – Waste chemical compositon – Heavy Metals - in Trinidad.....	232
Figure 32 – Beverage Containers in Trinidad	234
Figure 33 – Waste composition in Trinidad	234
Figure 34 – Comparison of recyclable components present in waste in Trinidad, between the years 2010 and 2022	236
Figure 35 – Comparison of no recyclable components present in waste in Trinidad, between the years 2010 and 2022	236
Figure 36- Circuit of the waste	238
Figure 37– Methodology of the centroid study	238
Figure 38– Representation of the scope of TS.....	240
Figure 39– Estimation of the waste production until 2043	241
Figure 40– Representation of Norwegian and Lithuanian deposit system	243
Figure 41 - Representation of Netherland deposit system.....	244
Figure 42 - Representation of German deposit system	245
Figure 43 – Representation of ecopoint, with a buffer of 100m, intersecting some households.....	251
Figure 44 – Mobile ecocenter	253
Figure 45 – Datacenter	254

ACRONYMS AND ABBREVIATIONS

- SWMCOL – Solid Waste Management Company Limited
- ASTM - American Society for Testing and Materials
- ERRA – European Recovery and Recycling Association
- EPI - Environmental Performance Index
- TS – Transfer Stations
- WRAP – Workplace Waste Reduction and Recycling Programme
- PSRP – Public Sector Recycling Programme
- MCRP – Municipal Curbside Recycling Programme

1 EXECUTIVE SUMMARY

The purpose of this study is primarily:

1. Quantify the total municipal solid waste generated in Trinidad and Tobago.
2. Determine the per capita waste generated.
3. Establish the composition of waste generated by:
 - a. Residential sector; and
 - b. Institutional, Commercial, and Industrial (ICI) sectors
4. Capture the nuances of seasonal activities such as major holidays and festivities that have a significant impact on the composition and generation of waste including Easter, Carnival, Diwali, and Christmas.
5. Assess the gross calorific value, moisture, and mineral content of the waste through:
 - a. Proximate Analysis -moisture, total solids, total volatile solids, total organic carbon ash; and
 - b. Ultimate Analysis -including Phosphorus, Nitrogen, Sulphur, Sodium, Potassium, Carbon/Nitrogen; pH, gross calorific value, heavy metals.

The Scope of Work for this study included 4 Phases, in a total of 15 tasks, to fulfill the original Terms of Reference, as follows:

- **Phase 1** – Inception Mission, Planning & Organization of Process.
- **Phase 2** – Waste Characterization Methodology.
- **Phase 3** – Quarterly Waste Characterizations.
- **Phase 4** – Project conclusion.

The salient outcomes of the project are the following:

1. The characterization of the unsorted waste in Trinidad, which followed the categories and sub-categories agreed upon with SWMCOL, allowed the consultancy group to have a picture of the municipal waste produced during the period of one year (Dry and Wet period) and in Diwali and Carnival festivities.

Waste Composition	Value
Organic Food	19,06%
Garden Waste	7,03 %
Papers	21,28%
Composites	1,11%
Plastics	11,64%
Textiles	7,05%
Sanitary Textiles	7,45%
Beverage Containers	11,77%
Construction and Demolition	5,00%
Glass	2,03%
Metals	4,98%
Hazardous Waste	0,91%
Bulky Waste	0,00%
Thin Elements	0,70%

Table 1 - Waste production in the Diwali festivity

Waste Composition	Value
Organic Food	14,10%
Garden Waste	12,32%
Papers	17,01%
Composites	1,33%
Plastics	11,38%
Textiles	4,66%
Sanitary Textiles	3,88%
Beverage Containers	15,40%
Construction and Demolition	11,66%
Glass	2,80%
Metals	3,85%
Hazardous Waste	1,24%
Bulky Waste	0,00%
Thin Elements	0,36%

Table 2 - Waste production in the Carnival festivity

Waste Composition	Value
Organic Food	20,60%
Garden Waste	11,81%
Papers	17,96%
Composites	2,18%
Plastics	12,84%
Textiles	6,39%
Sanitary Textiles	4,98%
Beverage Containers	9,18%
Construction and Demolition	8,79%
Glass	2,05%
Metals	2,25%
Hazardous Waste	0,66%
Bulky Waste	0,00%
Thin Elements	0,32%

Table 3 - Waste production in the wet and dry seasons

2. This study also provided information about the beverage container production in the same period.

Beverage Containers	Value
PET - Clear	42,10%
Glass – Clear	18,50%
Glass – Green	17,50%
Aluminum – Cans	11,20%
Glass – Brown	6,50%
Tetra pack	2,30%
Glass – Blue	1,60%
Metal – Cans	0,40%
Glass – Other Colors	0,00%
PET – Blue	0,00%
PET – Black	0,00%
HDPE – Colored	0,00%
HDPE – Natural	0,00%
PET – Green	0,00%
PET – Other Colors	0,00%

Table 4 - Beverage Containers production in the Carnival festivities

Beverage Containers	Value
PET - Clear	55,20%
Glass – Clear	14,40%
Tetra pack	10,20%
Aluminum – Cans	9,30%
Glass – Brown	4,00%
Glass – Green	2,50%
PET - Blue	2,50%
Metal – Cans	1,70%
PET - Green	0,30%
Glass – Blue	0,00%
HDPE – Natural	0,00%
PET – Other Colors	0,00%
Glass – Other Colors	0,00%
PET – Black	0,00%
HDPE – Colored	0,00%

Table 5 - Beverage Containers production in the Diwali festivities

Beverage Containers	Value
PET - Clear	50,00%
Glass – Clear	18,90%
Glass – Green	9,30%
Glass - Brown	8,00%
Tetra pack	7,00%
Aluminum – Cans	5,50%
Glass- Blue	1,00%
Metal – Cans	0,30%
HDPE – Colored	0,10%
PET – Blue	0,00%
Glass – Other Colors	0,00%
PET – Black	0,00%
HDPE – Natural	0,00%
PET – Green	0,00%
PET – Other Colors	0,00%

Table 6 - Beverage Containers production in the wet and dry season

3. From the chemical analysis done on the samples from the 3 landfills during the wet and dry period, the results show the following values:

General components	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Moisture (105°C)	%	17	59,6	11,1	30,7
Ash (815°C)	%(db)	17	9,8	2,2	6,3
Volatile solids	%(db)	17	85,3	43,8	75,2
Total solids	%	17	88,9	40,4	69,3
Gross calorific value	MJ/kg (db)	17	31,4	18,7	24,0
Carbon	% (w/w)(db)	17	66,0	47,3	56,6
pH	% (w/w)(db)	17	9,2	6,3	7,3
Total nitrogen	% (w/w)(db)	17	1,3	0,3	0,7
Sulphur (S) Total	% (w/w)(db)	17	0,2	0,0	0,1
TOC (total organic carbon)	% (w/w)(db)	17	65,0	47,1	56,4
Heavy metals	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Arsenic (As)	mg/kg (db)	17	<limit of quantification	<limit of quantification	<limit of quantification
Lead (Pb)	mg/kg (db)	17	19,0	<limit of quantification	6,8
Cadmium (Cd)	mg/kg (db)	17	0,5	<limit of quantification	<limit of quantification
Chromium (Cr)	mg/kg (db)	15	296,0	5,0	40,3
Copper (Cu)	mg/kg (db)	17	126,0	8,0	32,2
Nickel (Ni)	mg/kg (db)	16	182,0	2,0	32,2
Mercury (Hg)	mg/kg (db)	17	0,09	<limit of quantification	0,08
Zinc (Zn)	mg/kg (db)	16	305,0	22,0	68,4

Table 7 - Unsorted waste chemical composition in Trinidad

4. Based on the Centroid Study, in order to take advantage of existing infrastructures and with the aim of reducing operating costs, the consultancy group proposes 6 transfer stations. In the case of Beetham and Guanapo Landfill, the suggestion is that an adaptation is made to the existing infrastructure.

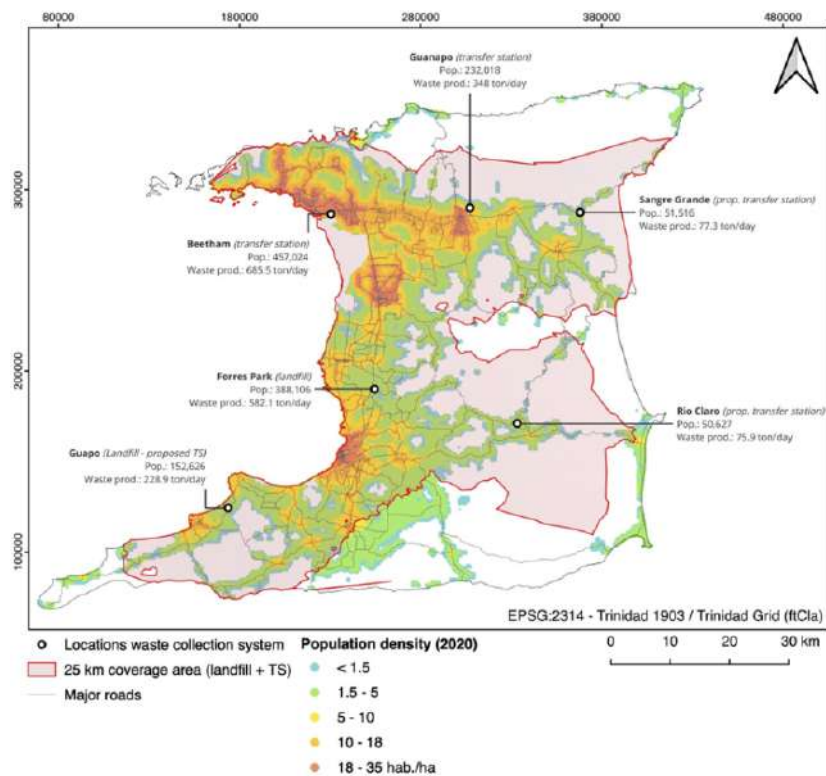


Figure 1 - Representation of the scope of Transfer Stations

2 INTRODUCTION

Trinidad and Tobago is perceived to be progressively above average with respect to environmental management; moving from the 90th position to the 59th position among 180 countries measured on the Yale Environmental Performance Index over the period 2006 – 2022.

The concept of Circular Economy is based on the principles of reduction, reuse, recovery and recycling of materials and energy. It assumes itself as a key element to promote the decoupling between economic growth and the increase in resource consumption.

In this context, the value of products and materials is maintained for as long as possible. The production of waste and the use of resources is reduced to a minimum, and when products reach the end of their useful life, resources remain in the economy to be reused and regenerate value. This paradigm shift in the economic model enhances the maximization of the economic value of the product, but at the same time, it is assumed as a challenge for the different sectors of national economic activity.

In this process, waste characterization is particularly important to assess, not only the implemented management programs and the equipment needs but also the evolution of possibilities regarding treatment and valorisation methods of waste materials as well as establishing programs of environmental education.

Moreover, waste characterization allows finding out the determination of waste composition, both in terms of different categories and fractions, making it possible to determine the existing recycling potential.

With this document, it is intended to present the characterization results referring to the wet and dry periods and the festive period of Diwali and Carnival, in order to contribute with proposals and recommendations to improve the waste management system, namely:

- Information on the waste production of the communities and in Trinidad
- The potential of recyclables in the different communities
- The potential of recyclable waste in Trinidad
- The per capita of waste generated
- Location for the construction of transfer stations
- Projection of waste production for the next 20 years

- Demonstration of a case study on the implementation of a refund system

Within the scope of the Waste Characterization study for Trinidad and Tobago, this document will also give some recommendations about new projects that could be implemented in Trinidad and Tobago, that could reduce the waste sent to the landfill, and increase the sustainability of the waste management, creating value for the economy.

3 DESCRIPTION OF SOLID WASTE MANAGEMENT PROCESS IN TRINIDAD AND TOBAGO

Trinidad and Tobago has several challenges in Solid Waste Management (SWM), most of which are a consequence of several legislative, institutional, infrastructural, social, and economic absences and difficulties.

There is a lack of a single overarching body with the necessary regulatory authority and mandate to address all aspects of waste management. Consequently, several agencies are currently involved in SWM, and their regulatory roles/responsibilities are not always clear. Added to this is the presence of several entities with responsibility for waste collection within the same community, i.e., for the same flow there is more than one entity doing the collection, or, the responsibility for collection of a particular flow for the different service providers is divided by locations.

This reality is perceptible in the responses obtained from the surveys sent (Annex G) on waste management. From the analysis of the surveys, the perception is that the municipality's only concern is the collection of waste, preferably garbage, regardless of its destination. Added to this, the presence of several private companies and the absence of weighing, provides an inefficient service and probably a high cost for the corporations.

In Trinidad, the waste is disposed of in the country's major landfills managed by SWMCOL: **(1) Beetham Landfill**, on the outskirts of Port of Spain, posing an ecological threat, as it is located in a wetland environment; **(2) Forres Park Landfill**, in Claxton Bay, which is pointed out as the future engineered sanitary landfill, correctly located in the centre of the country, a **(3) Guanapo Landfill** in Arima, where the underlying aquifer and all the surface water downstream of the site is threatened, and **(4) Guapo Landfill** that is managed by Point Fortin Regional Corporation. Additionally, there is Studley Park in Tobago, under the management responsibility of the Tobago House of Assembly (THA).

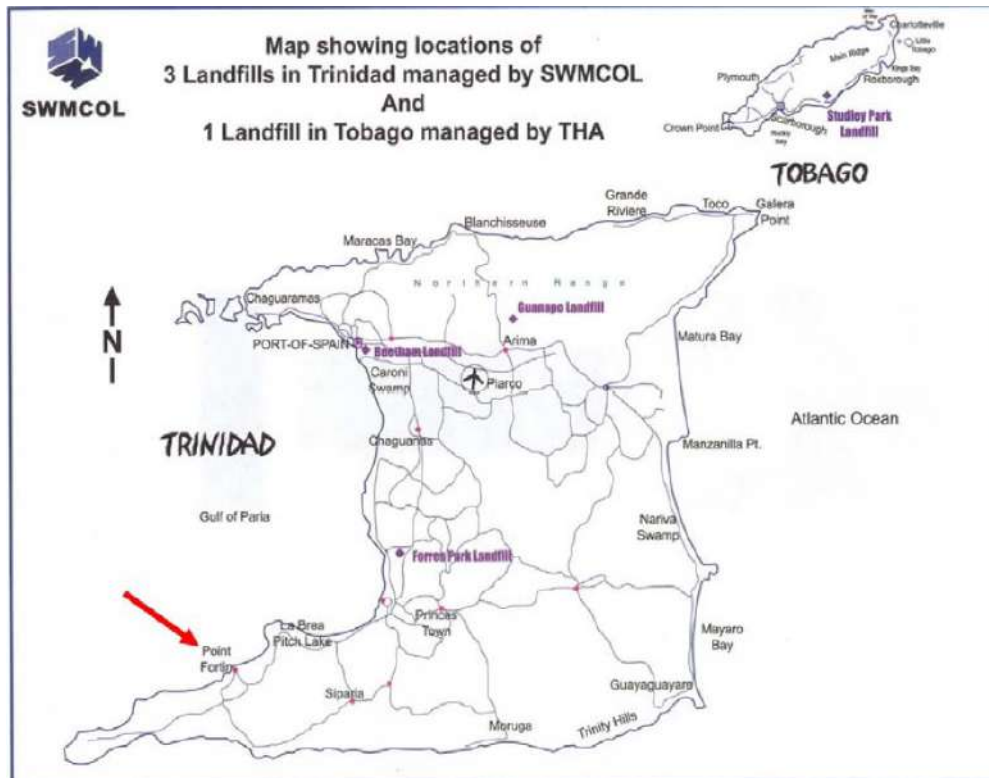


Figure 2- Location of the landfills in Trinidad and Tobago

Furthermore SWMCOL, has the responsibility to provide consultancy and advisory services to the local authorities (Regional and Borough Corporations and National Assemblies).

In fact, in Trinidad and Tobago, SWMCOL (that belongs to the Ministry of Utilities), the Municipal Corporations of the Ministry of Local Government in Trinidad and Tobago House of Assembly, the Ministry of Public Utilities, the Ministry of Finance, the Ministry of Planning and Development, are the main public agencies involved in solid waste management in the country.

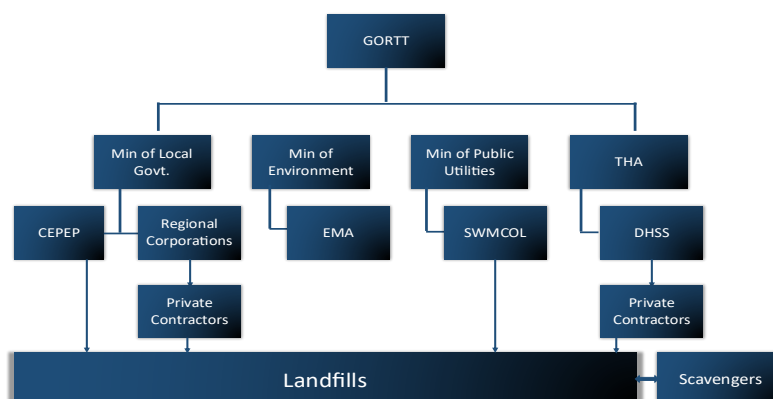


Figure 3- Organizational chart

3.1 WASTE PRODUCTION

The production of municipal waste in Trinidad and Tobago has been characterized by some fluctuations in recent years:

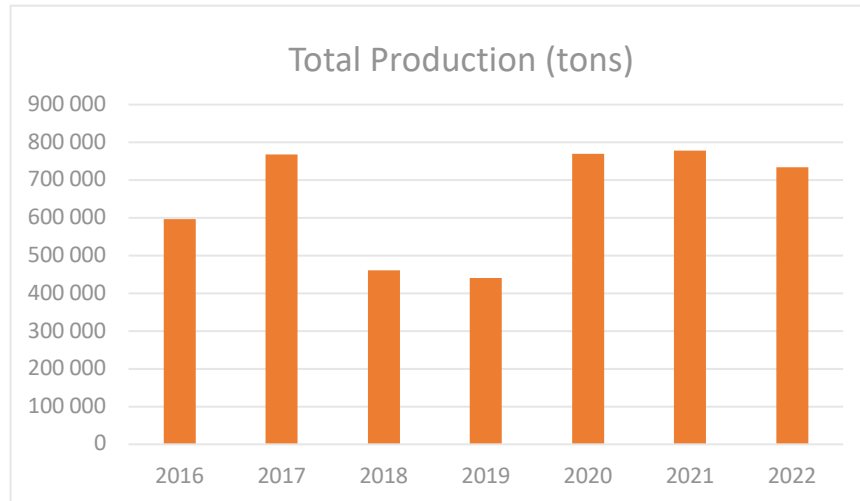


Figure 4- Waste production considering the 3 landfills managed by SWMCOL

In the last three years, the amount of waste has peaked at around 770 000 tons/year. It should be noted that the absence of weighing systems and a methodology for controlling entry into landfills could help to explain these fluctuations.

With the results of the last characterization done in 2010 and with the generation rate, calculated in 2002 for all the municipalities, the consultants were able to calculate with some margin of error, the potential of recyclable waste, that existed in the unsorted waste.

Municipalities	Population ¹	Generation Rate (kg./person/day) ²	Total production of waste per year (tons/year)	Paper (%) ³	Potential of Paper in UW - 2010	Plastic (%) ⁴	Potential of Plastic in UW - 2010	Glass (%) ⁵	Potential of Glass in UW - 2010
City of Port of Spain	37.074	5,1	69 013	27%	18 633	14%	9 662	8%	5 521
City of San Fernando	48.838	1,3	23 173	19%	4 403	27%	6 257	12%	2 781
Arima	33.606	1,1	13 492	28%	3 778	17%	2 294	8%	1 079
Point Fortin	20.235	1,4	10 340	17%	1 758	23%	2 378	14%	1 448
Chaguanas	83.516	2,8	85 353	25%	21 338	22%	18 778	9%	7 682
Couva/Tabaquite/Talparo	34.866	0,7	8 908	25%	2 227	22%	1 960	9%	802
Penal/Debe	89.392	0,7	22 839	16%	3 654	24%	5 481	10%	2 284
Diego Martin	102.957	0,7	26 305	26%	6 839	16%	4 209	8%	2 104
Princes Town	102.375	0,4	14 946	20%	2 989	29%	4 334	9%	1 345
Rio Claro/Mayaro	35.650	0,5	6 506	19%	1 236	28%	1 822	9%	586
Sangre Grande	75.766	0,7	19 538	25%	4 885	21%	4 103	10%	1 954
San Juan/Laventille	156.722	3,2	183 051	22%	40 271	15%	27 458	9%	16 475
Siparia	86.949	2,5	79 340	20%	15 868	18%	14 281	16%	12 694
Tunapuna/Piarco	215.119	2,2	172 740	31%	53 549	17%	29 366	9%	15 547
Total	1.123.065	1,66 (median value)	735 544	23%	181 429	21%	132 382	10%	72 301

Table 8 - Waste production per municipalities

¹ Values from census 2011² Values from 2002 – Regional evaluation municipal solid waste management services³ Values from the Trinidad Solid Waste Characterization and Centroid Study 2010 - CBCL⁴ Values from the Trinidad Solid Waste Characterization and Centroid Study 2010 - CBCL⁵ Values from the Trinidad Solid Waste Characterization and Centroid Study 2010 - CBCL

3.1.1 BEST PRACTICES ON RECYCLING

In recent years, there have been different projects implemented in Trinidad and Tobago with the aim of promoting recycling.

One of the initiatives created was the municipal curbside recycling program, in which communities were selected. The recycling program focused on the collection of some materials, like beverage containers, glass bottles, aluminum cans, and tetra packs. At the end of the process, they are transferred to NAMDEVCO.

SWMCOL processes beverage containers for recycling at a facility in Port of Spain. Currently, the beverage containers that are being processed include plastics (mainly types 1 and 2), tetra packs (liquid food carton packages), aluminum cans and glass. Some private and public companies are involved in UW recycling.

One of the successful initiatives is promoted by Carib Glassworks Ltd, which has been in the recycling business for over 50 years. They have many collection depots in Trinidad for non-color and colored glass.

ACE Recycling is also involved in the business of recycling paper, cardboard, and newspaper.

As it can be seen in Table 9 the trend of increasing amount of recyclables treated at the beverage container recycling facility until 2019 (figures from 2020 and 2021 should be ignored, due to the COVID 19 Pandemic) is a good example of what could be an alternative to the current waste management problem in Trinidad and Tobago

Yearly Summary Baling Data Beverage Container Recycling Facility														
	2015		2016		2017		2018		2019		2020		2021	
	Total Bales	Total Weight	Total Bales	Total Weight	Total Bales	Total Weight	Total Bales	Total Weight	Total Bales	Total Weight	Total Bales	Total Weight	Total Bales	Total Weight
PET Clear	32	5821	310.50	85,519.00	369.00	120,144.70	284.00	98,760.00	493.00	144,413.00	332.00	95,189.00	265.00	65,892.00
PET Blue	5	808	91.00	24,269.50	198.00	68,135.50	177.00	70,070.00	428.00	135,242.00	334.00	105,084.00	204.00	62,038.00
PET Green	6	1322	6.00	1,812.00	15.00	3,947.00	11.00	3,804.50	14.00	4,617.00	15.00	3,695.00	8.00	4,936.00
PET Clear Thermowrapped							8.00	3,010.00	61.00	19,598.00	35.00	9,053.00	11.00	2,945.00
PET Clear Dirty							14.00	2,724.00	1.00	416.00	12.00	2,036.00	2.00	340.00
PET Detergent									9.00	3,429.00	20.00	6,621.00	14.00	4,587.00
PET Oil Bottles									5.00	1,828.00	10.00	3,890.00	7.00	2,177.00
PET G - Egg Crates			8.00	3,139.00			2.00	860.00	11.00	4,563.00	7.00	3,295.00	1.00	270.00
PET Black					11.00	3,456.50	7.00	2,263.00	1.00	348.00	1.00	363.00	3.00	751.00
HDPE			6.00	2,476.50	30.00	15,555.10	49.00	25,559.20	72.00	34,399.00	57.00	24,838.00	38.00	14,589.00
HDPE Oil									1.00	536.00	18.00	9,238.00	9.00	4,357.00
HDPE Motor Oil													2.00	836.00
5 Gallon Bottles							1.00	318	3.00	969.00	9.00	2,641.00	0.00	0.00
Shrink Wrap (LDPE)									3.00	1,743.00	1.00	183.00	0.00	0.00
Aluminum Cans	3	746.1	28.00	5,959.50	9.00	2,322.50	9.00	2,450.00	21.00	5,064.00	15.00	3,035.00	8.00	1,415.00
Tetrapak	1	387.6	1.00	626.50	6.00	4,530.70	3.00	1,874.00	16.00	10,903.00	17.00	11,434.00	7.00	4,378.00
Cardboard	10	6098.5	59.00	32,439.50	9.00	6,051.40	163.00	112,083.50	65.00	38,608.00	1.00	410.00	0.00	0.00
Shredded Paper							4.00	1,848.00	8.00	4,687.00	10.00	5,822.00	3.00	1,527.00
Totals	57	15,183.20	509.5	156,241.50	647	224,143.40	732.00	325,624.20	1212	411,363.00	894	291,827.00	582	171,038.00

Table 9- Baling data of the Beverage Container Recycling Facility (2015-2021)

3.1.2 FINAL DESTINATION

In Trinidad and Tobago most of the collected waste is disposed of in the three major landfills: the Beetham landfill, which is the largest landfill in the country, and receives more than half of unsorted waste, the Forres Park landfill in Claxton Bay which is the only engineered sanitary landfill and Guanapo landfill in Arima.

According to the EMA annual report from 2021, last year were disposed of 777 999 tons of unsorted waste in the 3 landfills of Trinidad, which means that 2 131 tons are discarded daily. If it is considered the value estimated in 2010, of almost 1 917 tons produced daily, it can be seen as an increment of almost 11%. This is important information to consider because the production of waste is somehow a mirror of the economic growth of a country. Between 2005 and 2010, there was an increase in daily waste generation of 24%, consistent with the strong rate of economic growth. It is important to note that in these periods of time, there were the impacts of the economic crisis in 2008 and the COVID-19 Pandemic.

3.1.3 PUBLIC PERCEPTION

The public perception about municipal waste management is that the country has a major problem with waste management, being blamed for many flooding problems and associated with public health issues, such as gastroenteritis, dengue fever and leptospirosis.

Even if the public seems to support recycling initiatives and has called on the government to implement more broad-based and sustainable recycling initiatives, overall, the projects were implemented on a small scale and only in some of the regions.

The implementation of education and awareness strategies that promote the Reduction, Reuse and Recycling of waste in order to enhance the circularity of materials and reduce environmental impacts will be valued by the public, as it contributes to improving their quality of life.

3.2. NATIONAL STRATEGY FOR WASTE MANAGEMENT

Trinidad and Tobago does not currently have a consolidated and integrated solid waste management strategy. Although several initiatives have been done, the lack of a single overarching body with the necessary regulatory authority and mandate to address all aspects of waste management, as well as given that their regulatory roles/responsibilities are not always clear, these are basic issues that Trinidad and Tobago should pay attention to.

In order to have a better understanding of the projects and strategies of selective collection present in each Corporations, the consultancy group developed an inquiry addressing this question. Find below a summary of the answers:

Table 10 - Resume of the answers to the question four of the survey

Corporations	What kind of projects exist in your corporation for the collection of recyclable waste, in the residential and commerce and services?
Point Fortin	The Point Fortin Borough Corporation in partnership with Solid Waste Management Company Limited (SWMCOL) has been conducting a Curbside Recycling Program since it was launched in the year 2019. The project aims at collecting materials such as glass bottles and jars, plastic bottles, beverage cans and tetra pack cartons. The target population is approximately fifteen hundred (1 500) households, primary and secondary schools within the community. The Point Fortin Borough Corporation, Public Health Department in collaboration with SWMCOL, through its Curbside Recycling Program also aims at sensitizing the public through training programs, handouts or pamphlets in the respective six (6) electoral districts. Curbside recyclables are dropped off at the Guapo Landfill Site to be picked up by SWMCOL on a regular basis. To date, the project has been very successful.
Rio Claro/ Mayaro	No project currently exists in the Mayaro Rio Claro Regional Corporation for the collection of recyclable waste, in the residential and commerce and services.
SGRC	ICare Project in schools. Historically the curb-side recycling project was successfully completed in 2019.
Diego Martin	Currently, there are no existing projects for the collection of recyclable waste.
POS	At present, bottle shaped plastic containers are used at City Hall and some Divisions, they are also placed within the confines of the City, E.g. the Central Business areas and the Woodbrook area along the pavements.
Princes Town	Currently, the Princes Town Regional Corporation is not engaged in any projects for the collection of recyclable waste.
Arima	Currently no projects are under implementation

4 THE METHODOLOGY USED FOR IMPLEMENTING THE STUDY

Solid waste characterization is a process that aims at identifying the quantity of objects and materials resulting from the processing and use of consumer goods. Composition is thus the term used to describe the individual components that make up a waste stream and their relative distribution within that group, usually using percentage values by weight, (Tchobanoglous, George; Theisen, Hilary; Vigil, Samuel A. “Integrated Solid Waste Management: Engineering Principles and Management Issues”. McGraw-Hill International Editions, United States of America, 1993).

As with any experimental study, solid waste characterization requires a working method that defines the criteria for planning and preparing it and the practical procedure to be applied. It is therefore important to know a little of its history - the origin of the waste, the territorial characteristics of the area covered (urban, rural or mixed), the type of predominant economic activities (commercial, tourism, industrial, agricultural...), the quantities produced, the means of collection, the type of disposal equipment, the treatment operations available, the information and awareness of its producers regarding shared responsibility in this matter.

4.1 WASTE AND CONDITIONS TO CARRY OUT THE CHARACTERIZATIONS

According to the characteristics of the waste, it may be difficult to create a single methodological process to determine the physical characteristics of municipal waste. Municipal waste is characterized by three types of waste which, depending on their origin, have distinct characteristics:

- **Industrial waste:** waste from premises forming part of a hospital or nursing home or from any factory within the meaning of the Factories Ordinance and any premises occupied by a body corporate established by or under any written law for the purpose of carrying on under national ownership any industry or part of an industry or any undertaking but excluding waste from any mine or quarry.
- **Commercial waste:** waste from premises used wholly or mainly for the purpose of trade or business or for the purpose of sport, recreation or entertainment.
- **Domestic waste:** waste from a private dwelling or residential home or from a school or other educational establishment.

According to these waste types, it is easy to point out some reasons that may hinder the creation of a single methodological process to determine the physical characteristics of municipal waste.

It is critical to bear in mind that the characteristics of the waste and its management have an impact on the characterization campaigns. Solid waste of institutional origin can easily be characterized quantitatively and qualitatively. The raw materials used in the systematic processes that give rise to by-products are not altered and lead to waste with a very structured and homogeneous nature. Municipal solid waste, depending on its legal definition, may include waste of domestic and non-domestic origin. Since they originate from producers with different daily living habits, they tend to have very different qualitative and quantitative characteristics.

Waste collection and treatment systems also have an influence on this process. The technological solutions available for waste management vary between countries and sometimes between regions within the same country. They necessarily reflect the financial means available or made available by the competent authorities and the applicability, if any, of a waste management policy.

The fact that the characterization is carried out according to some criteriums, turn the comparison of results between different management systems a difficult process to execute. It is also important to take into consideration that waste characterization is conducted according to the treatment solutions used and the legal framework in force, whereby its design varies according to the intended objectives, existing infrastructures, and characteristics of the management system. This results in some diversity in the depth of the factors that build a methodology.

4.2 OBJECTIVE OF THE CHARACTERIZATION IN TRINIDAD AND TOBAGO

A significant number of samples from different origins (residential, institutional) were characterized with the objective of obtaining information on the weight of the different waste streams in the unsorted waste streams in order to enable the Government of the Republic of Trinidad and Tobago and SWMCOL to build a waste management strategy, integrated in the National Development Strategy of Trinidad and Tobago -Vision 2030 in order to fulfill the Sustainable Development Goals (SDGs) outlined by the United Nations.

The results of each season and festivity will be presented in another chapter, in which the results per landfill and community will be analyzed.

4.3 CAPACITY BUILDING SESSION

Given the strategic importance of this task, the consultancy group proposed an initial training session for key SWMCOL staff, and all the technicians involved in the waste characterization process that took occur during the festivity of Diwali, as well in the assembly of all equipment at the place of operations.

The theoretical session took place at the SWMCOL facilities where the characterization methodology was presented, using a PowerPoint presentation and a video filmed at LIPOR's facilities, in which it was possible to observe all the phases of the characterization process.

It was also conducted a session with the members of the KWL team, this session took place at the premises of the company KWL, where during a morning was presented the methodology of characterization of waste, the safety rules, the procedure of registration of entry of the trucks in the dump, the methodology of the collection of samples for chemical analysis.

In the Guanapo landfill, the field training for SWMCOL technicians took place, in which the arrival of the truck, the completion of the block and the separation at the sorting table were simulated, it was demonstrated how the containers should be distributed, the importance of identifying the flow that should be placed in the bin, using a sticker paper with identification by color and designation of sub-categories, and the importance of the whiteboard to write different useful information for the sorting team, as well as the demonstration of the method of collecting samples of waste to send for chemical analysis.



Figure 5— Capacity building session (Guanapo)



Figure 6- Capacity building session (Guanapo)

4.4 METHODOLOGY USED FOR THE CHARACTERIZATION EXERCISE

In line with the best practices of the European Union, to carry out the characterization campaign, the consultancy group had to consider the definition of a number of aspects, namely:

- Number of samples to be carried out;
- Temporal distribution of samples to be carried out;
- Origin of vehicles to be characterized;
- Weighing at origin (The entrance of installation);
- Catalogue of fractions to be sorted;
- Statistical parameters;
- Equipment, human resources, materials resources, and other necessary means.

Despite all the efforts of SWMCOL, the conditions for carrying out the characterizations were a little different in each landfill, however, as a general basis, the above-mentioned methodology was followed, except for the weighing at origin, due to the lack of scale in every landfill.

4.5 SAMPLING LOCATION

Sampling was carried out in a pavilion or covered area, with all the essential conditions for its performance, including a connection point for electricity, water, lighting, and waterproof flooring.

4.5.1 SAMPLING LOCATION IN TRINIDAD

Sampling location was carried out inside each landfill, in an area that was waterproof flooring, and it had point for electricity, water and lighting. However, it is important to note that the area used for unloading the load was an open-air area, which had some implications as far as the weight of the samples is concerned, due to the rain and the contamination of the material, especially for the chemical sampling. The area in which the characterization took place was a covered area.



Figure 7- Area of work in Guanapo after raining



Figure 8 - Area of work in Guanapo

4.6 SAMPLING SCHEME ADOPTED

To know the specific characteristics of a given mass of waste, it is necessary to proceed with the respective characterization, identifying which fractions are present and the relative weight of each one of them.

It was important to deepen the knowledge and the characterization of waste with a view to assessing the recycling potential, achieving the targets and ensuring a table standardized regulation, enabling the provision of essential statistical information for compliance with reporting obligations at the community level.

The sampling can be stratified, integrating the contribution of different sectors, such as different types of population or producers, in which case the number of samples to be carried out must be distributed proportionally by the estimated amount of waste produced in each sector. In addition, “the sampling must be random⁶, and the samples may be constituted from the content of waste collection vehicles to be characterized, or from the mass of waste accumulated in the areas reception of the destination sorting or treatment facilities”.

⁶ This is only possible, if we have a list of the loads, that are unload in the landfill.

The characterization process has the following steps as exemplified below:

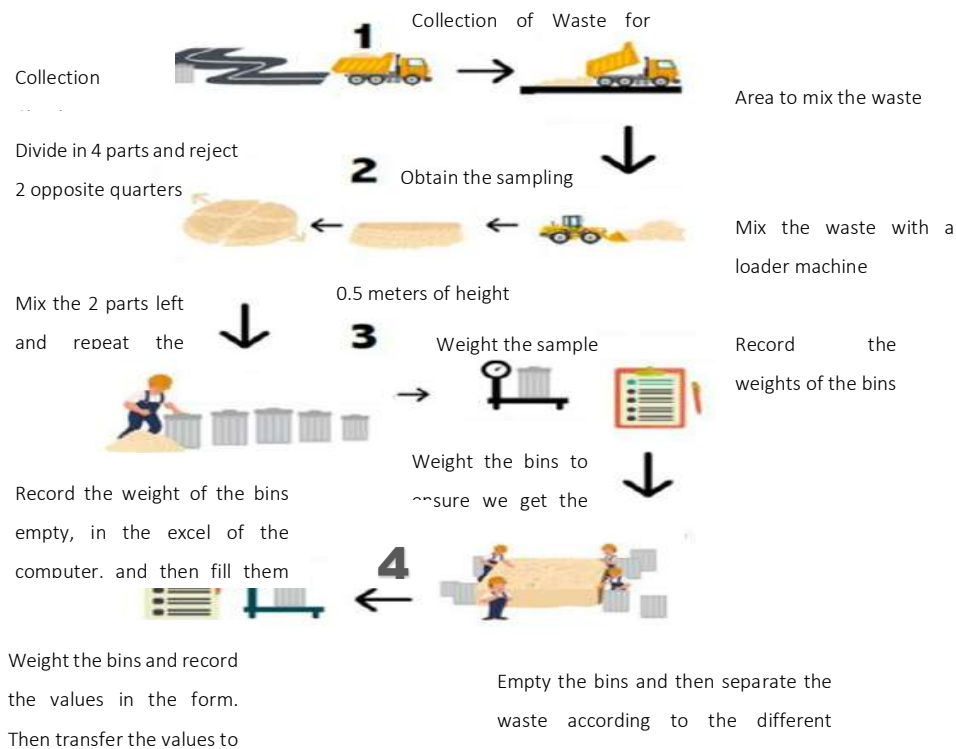


Figure 9- Practical process for conducting the characterization exercise

Other methodologies for the quantification and physical characterization of solid urban waste exist, which can be adopted differently from situation to situation, depending, among other factors, on the characterization objectives and the means (human, material and financial) available.

4.7 HUMAN RESOURCES

The technical team involved in Waste Characterization has as its main characteristics and its multidisciplinary approach. Therefore, below it is presented a table describing the professional category, functions to be performed, main tasks, responsibilities, and capacities and also the required education level.

Professional Category	Functions to be performed (Main tasks and responsibilities)	Required skills and education
General Coordinator	- Act as direct interlocutor with SWMCOL - Coordinate with SWMCOL the logistics of the characterization process - Organise the execution of the work requested - Ensure the correct execution of the study - Intercede in problematic situations - Prepare and give training courses on waste sorting and characterization - Prepare and send the corresponding reports within the established deadlines	- Maximum responsibility - Organization - Knowledge of the waste area, specifically waste characterization - Computer knowledge from user's perspective
Operational Manager	- Preparing waste characterization campaigns in the field - Coordinating resources (human and material) - Supporting the training of the waste collection workers - Articulate the logistics of the waste characterization process with SWMCOL - Record in manual and digital format the data from the waste characterization campaigns - Comply with the General Coordinator's guidelines in a correct and timely manner - Keep the General Coordinator informed about the activities under their responsibility	- Computer literacy from the user's perspective - Experience in handling waste - Experience in coordinating teams - Ability to work in a stressful environment - Capacity to work in a stressful environment - Responsibility - Level of Education - Obligatory Education
Waste collectors	- Sort the waste to be characterized as specified - Fill the buckets - Carry out the washing of the workplace and the equipment - Properly store the equipment - Comply with the hierarchical superior's instructions in a correct and timely manner; - Keep the supervisor informed about the activities under his/her responsibility	- Experience in handling waste; - Ability to work in a team; - Ability to work in a stressful environment; - Responsibility - Level of Education - Basic Education

Table 11- Human resources to be allocated to carry out a characterization

The team that worked in the characterization process, was constituted by:

- 1 General Coordinator;
- 1 Operational Manager;
- 5 Waste collectors.

4.8 MATERIAL MEANS NEEDED

Depending on the circumstances, as the conditions to do the characterizations (place, area to work), or the number of components to be considered for the physical characterization of the sample, it is needed to adapt the required material, to conduct the characterizations. In this case, the consultancy group defined a list of materials that were considered necessary for the characterization:

- 28 Bins (capacity 140 liters)
- 5 Bins (capacity 140 liters);
- 6 Bins (capacity 600 liters);
- 1 Floor scale or Electronic Pallet Scale in each landfill;
- 1 Laptop with office;
- 2 Mobile phone or walkie talkie;
- 1 Video camera;
- 1 Camera;
- 1 Printer;
- 50 Paper Sheets;
- Ink cartridges (Colour in Black and White);
- 1 White Board;
- 2 Shovel;
- 2 Broom;
- 2 Catcher;
- 2 First Aid Kit;
- 10 Plastic Bags.

Another component that is extremely important is the condition of the workers, so it was important to provide a personal protective equipment, like:

- 1 pair per employee and per day of gloves;
- 1 pair per employee of Safety footwear;
- 1 pair per employee and per week of protective gloves;
- 1 pair per employee and per day of masks;

- If applicable 1 per employee helmet;
- 1 pair per employee and per day of a protective suit;
- 1 Sorting table per landfill.

5 THE SUMMARY OF SAMPLING PLAN AND RATIONALE

5.1 THE SUMMARY OF PHYSICAL SAMPLING PLAN

According to the methodology, the number of samples must be distributed proportionally to the estimated annual production of waste affected by each sorting or treatment facility at the destination.

In cases where the stratification of sampling is intended to obtain the individualized physical composition of municipal waste produced by sector, a minimum of 5 samples per sector must be guaranteed.

Flows to be characterized	Number of samples/campaign ⁷
Unsorted waste	21
Selective collection of biowaste	10
Selective collection of paper/cardboard	5
Selective collection of plastic/metal/cardboard liquid food packaging	10
Selective glass collection	2
Other individualized flow	5

Table 12 - Minimum number of samples for characterization of municipal waste produced

In the case of the waste characterization study for Trinidad and Tobago, the flow to study it is the unsorted waste, and the number recommended by the Portuguese Ordinance *No. 851/2009, of August 7th* will be followed.

Regarding the sample quantity, sample sizes between 100 kg and 200 kg were used, guaranteeing a confidence level of 95% and a relative precision of the average weight of the constituent samples in each characterized flow should be less than 10%, values recommended in ASTM International and ERRA methodologies.

In this study, the recommended amount of constituent material in each sample is given in Table 13.

⁷ A minimum of characterization defines by Ordinance *No. 851/2009, of 7th August*

Flows to be characterized	Weight of the sample (Kg) ⁸
Unsorted waste	200

Table 13– Quantity of material per sample

To determine the number of samples per origin to characterize, one critical phase of the process, it is important to possess a large quantity of data that should be collected at the entrance gate of SWMCOL facilities, such as:

- Provenance/Origin;
- Identification of the circuit;
- Flow that is being transported;
- Time and date of entry and time and date of exit of the "facilities";
- Carrier;
- License plate number of the vehicle;
- Weight of the load.

Taking into account the before mentioned information, it is possible to obtain enough data to determine the number of landfill entries/discharges per origin. With this information, it allows making a distribution of the total number of characterizations to be carried out in the defined period of time and how many characterizations should be done per municipality/provenance.

An example of what is mentioned above is the reasoning used to determine the distribution of samples characterized that will be done in the periods (wet, dry, and in the festivities), per provenance.

Firstly, sum the volume of vehicles entering the landfill.

⁸ if the truck does not have enough residues to make up the required weight, the load should be characterized to the end.

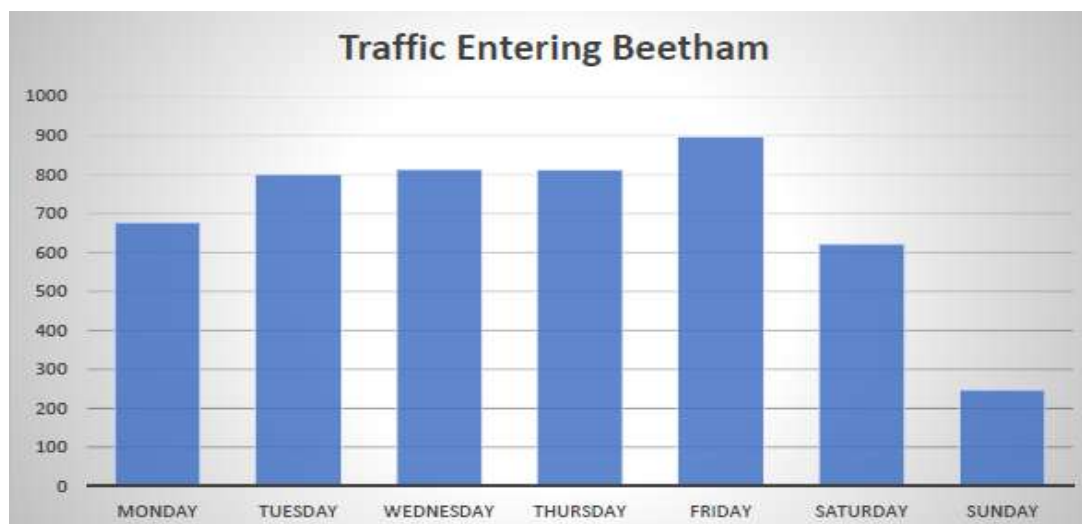


Figure 10- Daily volumes of vehicles entering Beetham Landfill

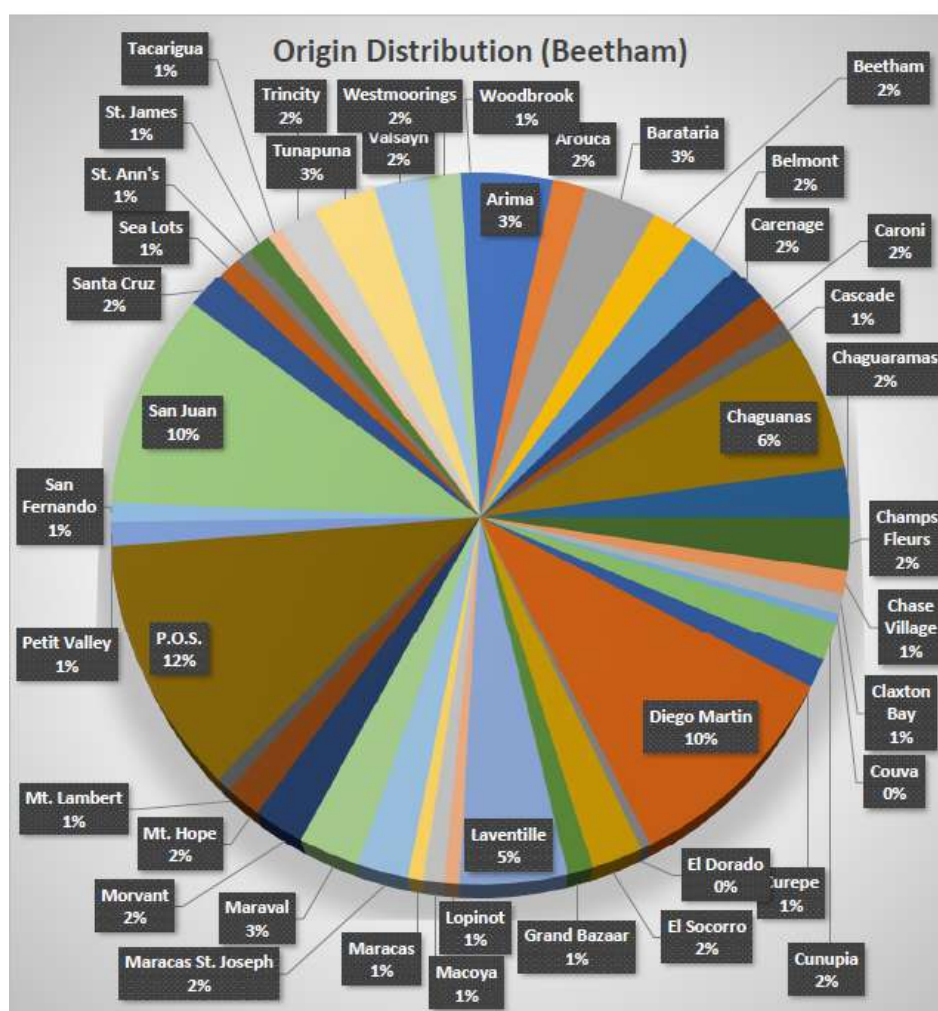


Figure 11- Trip origin distribution (Easter): Beetham Landfill

Then, it needs to be considered the origins of the vehicles that enter Beetham Landfill in percentages or deducted the value in percentages in the Figure below:

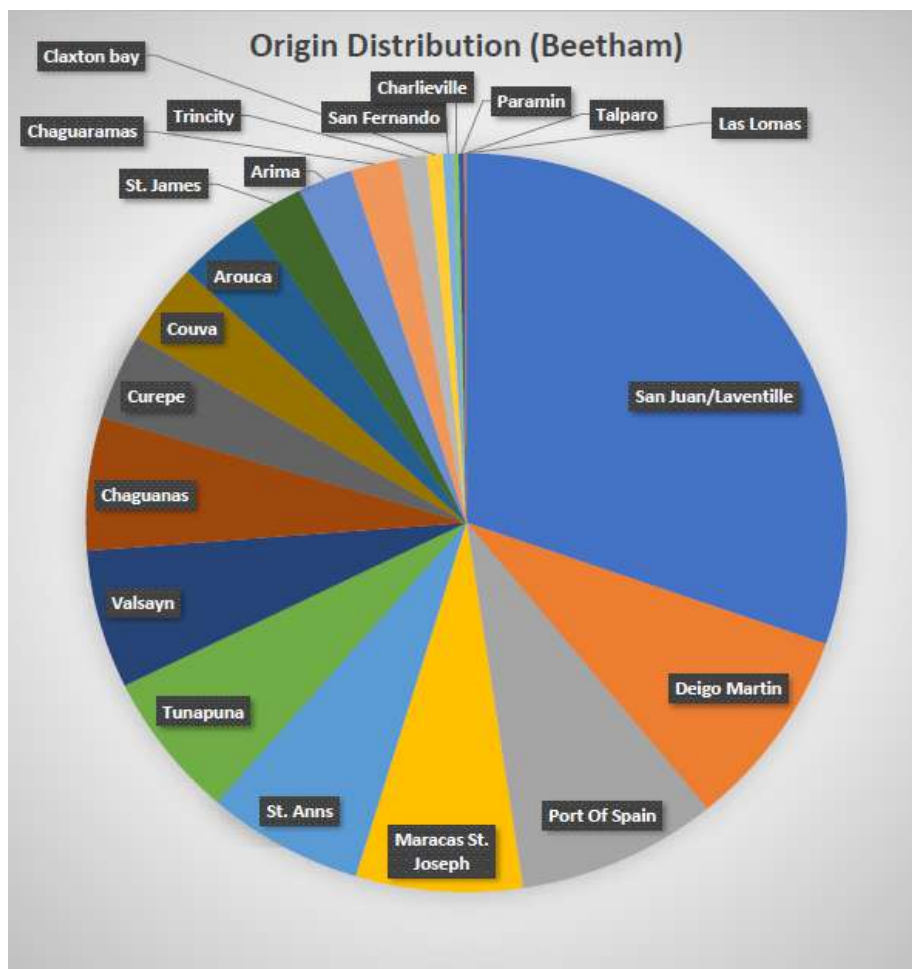


Figure 12– Trip origin distribution (August): Beetham Landfill

After that, considering the number of characterizations defined, it is calculated the number of samples that will be characterized per origin.

$$\begin{aligned} & \text{Number of samples per origin} \\ &= \% \text{ origin distribution} \times \text{number of characterization} \end{aligned}$$

It is important to mention that is imperative to have more precise data as possible to reduce the error margin.

Due to not having more precise data, because of the inexistence of a weighing bridge at the entrance of the landfill, it caused a lack of information like:

- Provenance;
- Identification of the circuit;
- Flow that is being transported;
- Weight of the load.

The consultancy team was able to make a proposal for characterizations schedule using the results based on the Caritrans data, using the equation above identified, and based on our large experience.

To have a good representation of the unsorted waste production of each municipality that will allow to get good and satisfactory results, was decided to have a minimum of 2 characterizations schedules. The schedule is presented in Annex A.

In the case of the sampling, if there is a concierge where a set of information is recorded (provenance, transporter, weight,...), the recommendation for the selection of the waste collection vehicles to be characterized, is based on the weekly pattern of the intakes of the vehicles at the facilities:

- For the selection of the N vehicles whose waste will be subject to analysis during the sampling period, N numbers between 1 and T should be randomly generated, where T is the average number of total entries/week;
- From this procedure will result the order numbers of arrivals of the vehicles to be considered for sampling and their probable time interval, according to the pattern verified.

If, through the application of this methodology, results an excessive number of samples to be characterized in a single workday or a sampling to be done on a Sunday, it must be rejected and replaced by another one.

The ideal is, once this pattern is determined, the function “INT(RANDOM()*(Final number-Initial number)+Initial number)” of the “Microsoft Excel” program is used to generate a series of random numbers for the selection of vehicles whose residues will be analyzed in each of the sampling weeks. If not possible, using this formula, the selection of the same circuit should be avoided so that a characterization of a given flow can be representative as much as possible of the country's reality.

In view of the arrival times of the vehicles, and to be able to have the sample and the municipal waste characterization available, the sequential count of the vehicles must be carried out from 00:00 on the day of the characterization. Considering that loss of sample mass may occur through water evaporation, the

sampling units should be screened as soon as possible after collection. Therefore, it is recommended that the screening of the sample should take place in a timeline of 24h, after arriving

5.2 THE SCHEDULE FOR QUARTELY EXECUTION OF THE CHARACTERIZATION EXERCISE

The processing of data obtained in the total of the sampling campaigns carried out in each year must result in the average physical composition of the characterized flows, expressed in terms of the average values obtained for the percentage by weight of each category and subcategory, on a wet weight basis.

At the level of each category, the following statistical parameters must also be determined:

- Minimum;
- Maximum;
- Median;
- Standard deviation;
- Coefficient of variation;
- Confidence interval of the mean, with 95% probability;
- Percent error, with 95% probability.

The percentage error of the average values obtained for the categories bio-waste, paper/cardboard, plastic, glass, metals, and fines must be less than 20%. If this situation does not occur, the sampling conditions must be reviewed for the characterization to be carried out in the following year, statistically determining the minimum number of samples to be considered to obtain that minimum precision.

5.3 THE SUMMARY OF CHEMICAL SAMPLING PLAN

5.3.1 SAMPLING AND SAMPLES

Sampling is the process of selecting a portion of material small enough in volume to be conveniently transported and handled in the laboratory, but adequately representative of the entire environment sampled. Sampling and testing for basic characterization and compliance verification purposes is carried out by independent and properly qualified institutions and persons. Laboratories shall have proven experience in residue testing and analysis as well as an effective quality assurance system. Sampling and testing may be carried out by waste producers or landfill operators, provided they have set up a quality assurance system including periodic independent control. If replicate sampling is necessary, the sampling plan must provide for it.

5.3.2 PROBABILISTIC OR NON-PROBABILISTIC SAMPLING

There are two fundamental approaches to sampling, probability and non-probability, and the former should be chosen whenever possible, but especially if high reliability is required.

Probable Sampling

The basis of this approach is that each element of the population has an equal (small) probability of being sampled, even if a large amount of waste is involved. It simulates the composition and properties of the whole material as well as possible, it is representative. When sampling is done independently, this approach is known as simple random. It meets the statistical rules but does not guarantee that all parts of the population are equally represented.

If the intervals between samples are regularly spaced after the first sample is random, this is systematic sampling. In this case it is important to make sure that there are no systematic properties accompanying the sampling variation. If the samples are random on the surface but according to predefined strata, this is stratified sampling. This preserves the advantages of random sampling, ensuring that all strata of the system have a predefined number of samples.

Non-probable sampling

Non-probable sampling does not follow statistical methods and implies that samples are taken, at best, using semi-probable methods. The need for its use arises when representative or probable sampling of the entire population is impossible, given resources or conditions. In any case, it should come as close as possible to it.

This type of sampling almost always results in samples coming from sub-populations, which is obviously more restrictive. On the other hand, non-probable sampling can be done deliberately at a point in the specific population that is to be investigated. If within the sub-population the sampling can follow probabilistic principles, the sampling is representative at least within the sub-population, but not for the overall population.

When sampling is done based on accessibility, cost, efficiency, or something of this sort, there is no way to assess uncertainty either here or in subsequent sampling steps, which can have major financial or environmental consequences. The terms "convenience sampling" or "ad hoc sampling" are also often

used. The uncertainty resulting from this type of sampling, and therefore the quality of the information obtained, depends very much on the quality of the previous information about the waste.

5.3.3 SAMPLING LOCATION AND FREQUENCY (STANDARD)

Samples may be individual or composite (with two or more increments). In the case of composite sampling, the proportions of each sub-sample must be respected. The size of an individual sample is dictated by the grain size, heterogeneity and the volume of sampled material. An increment is the amount of material obtained through a single act of sampling and is combined with other increments to form a composite sample. The figure below shows the differences between samples, increments and sub-samples.

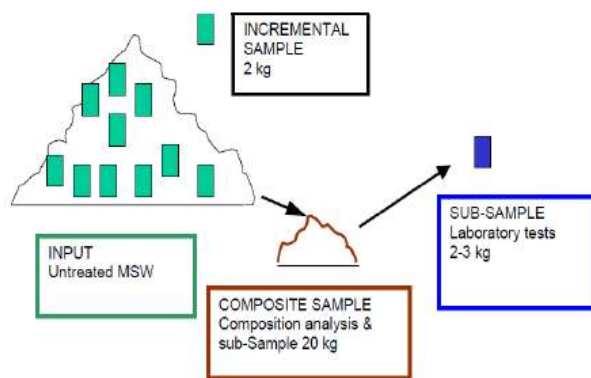


Figure 13– Sample, increments and sub-samples

The importance of the sample or increment size depends on the type of material. In the case of granular materials, the minimum is dictated by the need to sample all sizes of particles present. In the case of liquids, there is no special requirement since the particle size is on the molecular scale. A sample must be large enough to minimize or exclude errors caused by the variability of the material. To get an average concentration in a waste, one or more composite samples must be collected. If the intended result is the range of variation in the concentration of the waste, at least three single samples must be collected. For heterogeneous wastes difficult to sample and whose representativeness cannot be defined with a single sample, the choice of method and number of samples should be defined by the several stakeholders and registered in the sampling plan.

The duration of the program should be defined by the objectives of the study. Otherwise, it should be defined according to the temporal variation of the cycles with a larger scale verified in the system (daily, monthly, annual, or other variations). The duration of a harvest should be defined according to the

temporal variation of the smaller scale cycles, if it is possible to identify them. Since not much information is generally available about the system, the sampling frequency can be defined considering the objectives of the test program and the criteria: repetition of sampling in the smaller-scale time cycles and evaluation of the costs associated with the frequency as a function of the technical information that can be obtained. In the next table is presented the recommended sampling point according to the type and shape of the container where the waste is located.

Container type	Sampling point
Waste pile	Take samples from at least three points: top, middle, and bottom, from each section take four equidistant aliquots, with the sampler entering the heaps obliquely

Table 14 - Recommended sampling point depending on container type and shape

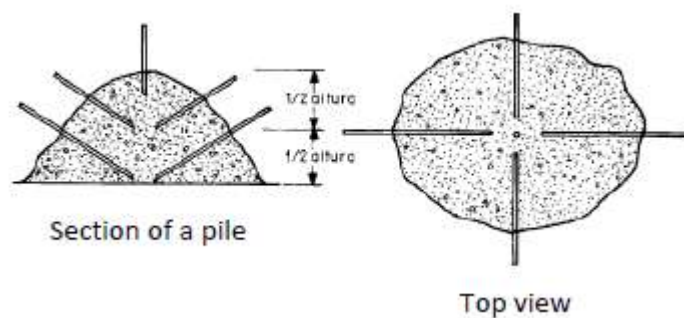


Figure 14– Examples of points to collect samples

5.4 SAMPLING PROCEDURES AND SAMPLE PREPARATION

Before the sampling process begins, all elements of the sampling plan should be checked. A visual description of the material should be made and the location (geographical coordinates) and the condition of the waste to be sampled should be registered, complemented with a photographic record. In principle there should be no changes to the sampling plan, but if these are necessary and do not alter the sequence of the test program, the sampling technician may take responsibility for them himself. If the changes affect the objective of the test program, they should be authorized from above, and if this is not possible, they should be recorded and authorized on return. The procedures for sampling preparation and sampling are identified and are in accordance with the European standard EN 14899, the associated technical report CEN/TR 15310 - 2 and the Ordinance No. 200/2002 of March 5th. The selection of

sampling techniques is made according to the physical state of the material (liquid, mud or solid), its form of deposition/ storage (drum, tank, etc.), the expected degree of heterogeneity and the test level. The necessary equipment may be mentioned in the descriptions of the procedures that follow, but only briefly.

Based on what was described above, we decided to describe the procedure to collect non-probability sample from a large waste pile.

A.) Procedure to collect a non-probability sampling procedure of a large waste pile

Collect individual samples from a specific part of the pile, is presented in Figure 12 – Examples of points to collect samples

5.5 METHOD USED FOR CHEMICAL ANALYSIS

The most common approach to solid waste analysis is to collect a certain amount of waste and take a few samples, to screen, pulverize, analyze these samples in a Certified Laboratory and to calculate from such procedures the waste composition.

The following analyses were performed:

- Proximate analysis - moisture, total solids, total volatile solids, total organic carbon, and ash
- Ultimate analysis - including Phosphorus, Nitrogen, Sulphur, Sodium, Potassium, Carbon/ Nitrogen; pH, gross calorific value, heavy metals.

5.6 PRESERVATION, STORAGE AND TRANSPORT PROCEDURES OF SAMPLES

The European Standard EN 14899, the Associated Technical Report TR 15310 - 4 and *Ordinance* 200/2002 describe the conditions and the proper procedures for packaging, preservation, storage, and transport of samples of liquids, solids, pastes and sludge waste. There is some flexibility in the choice of approach, method, and equipment but the choice of procedures must be in accordance with the laboratory analyzing the samples. The transport of samples must be done ensuring its integrity and respecting the chain of custody.

The containers can be made of several materials and should be chosen to reduce the attachment to its walls or reaction of chemical species or even photosynthetic activity. If possible, all containers shall be

disposable. If not, they must be properly cleaned prior to sampling. Each sample vessel should be given a readable and unique code, using labels, identifying stickers or indelible ink markers.

To better understand the chain of custody, in the moment of the collection of the samples until obtain the results of the chemical analysis, a chain of custody form must be filled out.

The consultancy team decided to make the chemicals analyses in an independent Portuguese laboratory: the *LCR - Laboratório de Caracterização de Resíduos* (Waste Characterization Laboratory) that is an internationally accredited laboratory according to the NP EN ISO/IEC 17025. A very well-prepared institution that has a highly qualified team, which the consultants already worked in several other Projects, giving confidence in the results and performance.

In this case, each chemical sampling collected was in accordance with the Portuguese laboratory, and the transport of samples was done with the concern to ensure its integrity and respecting the chain of custody. However, in some cases there were some issues with port customs, causing some delays in the delivery of the sample to the laboratory. Thus, causing discrepancies in some of the ultimate analysis.



Figure 15– Chemical Samples

6 DESCRIPTION OF GENERATOR CATEGORIES

The main objectives of the unsorted waste characterization campaign are the following:

- Determine the current characteristics of the waste sent to landfill, considering the specifications.
- Provide SWMCOL, and consequently the municipalities involved, with the necessary information to assess compliance with legal requirements and to contribute to decision-making regarding future technological solutions for the integrated management of solid waste.
- It was conducted waste characterizations in two distinct periods (wet and dry as well as in 2 important festivities) in a year, as they represented social activity within the patterns that characterize communities in general, regardless of their development degree and social habits.
- Characterizations were carried out at specific times of the year due to the occurrence of seasonal events/festivities, which involve a floating population concentrated in a short period of time and with a significant impact on waste production.
- It was planned to train the employees responsible for the sorting and assist them during the characterization that occurred during the festivity of Diwali, as well in the assembly of all equipment at the place of operations.
- Following the Europeans methodologies, which we consider complete and advanced, and in accordance with the Ordinance No. 851/2009 of August 7th, and as per SWMCOL's request to include more categories by size and colour, the categories of components to be considered for the physical characterization of the sample are described in the following table:

Sorting Catalogue	
Categories of the target components, in the physical characterization of waste from the multimaterial fraction	
Categories	Sub/Categories
Biowaste	Organic food
	Garden Waste
Papers	Cardboard and packaging (Clean uncoated corrugated including Kraft and line board)
	Office Papers (High grade paper)
	Newspaper/ Magazines
	Mixed paper (low grade recyclable paper)
	Contaminated with fat
	Other papers (other non-recyclable mixed paper)
Beverage Containers	Clear and colored (blue, green, black, other) PET containers (sorted by size)
	Clear and colored (natural, colored) HDPE containers (sorted by size)
	Clear and colored (blue, green, brown other) Glass (sorted by size)
	Tetra Packs (sorted by size)
	Aluminum Cans
	Metal (Tin/Steel) Cans

Sorting Catalogue	
Categories of the target components, in the physical characterization of waste from the multimaterial fraction	
Categories	Sub/Categories
Plastic	Non-Beverage Container Recyclables
	Mixed plastics
	Plastic packaging
Glass	Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass
	Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.
Textiles	Packaging Textiles
Sanitary Textiles	
Metals	Tin/steel cans (non-beverage container)
	Aluminum cans (non-beverage container)
	Ferrous metals (non-tin/ metal cans)
	White waste (not electronics)
	Reminder/composite/ bimetals (non-tin/metal cans)
	Other non-ferrous
Construction and Demolition Waste	
Compostise (Waste Electrical and Electronic Equipment/ E-waste)	Large and small household appliances
	IT and Telecommunication equipment's
	Consumer Equipment and Photovoltaic Panels
	Lighting Equipment
	Electrical and Electronic Tools (non-large scale) stationary industrial tools)
	Medical Devices
	Monitoring and Control Instruments
	Automatic Dispensers
Household Hazardous Waste	Paint/Solvent/Fuel
	Batteries (both dry cell, rechargeable and lead acid) e.g., Car batteries, flashlights, small appliance, etc
	Healthcare waste
	Used Oil
	Remainder/ Composite Household Hazardous
Bulky waste	
Fine elements (<20mm)	

Table 15 - Catalog of Sorting by components to be used in the physical characterization of the sample.

7 FIELDWORK CHALLENGES

As it was agreed, SWMCOL provided human resources, namely a loader machine driver and a truck driver, as well as material resources for the execution of the physical characterization, namely (sorting table, containers, scales, table, support tables, chairs, etc).

However, regarding the equipment is concerned, the consultancy team found some unforeseen situations that, despite not affecting the overall quality of the service, had an impact on the daily work and the organization of the work in the field. Specifically:

- **Equipment:** Ensuring that the necessary equipment is onsite at the start of work. This is particularly an issue on the first and second days of the site works. Some of the equipment broke down (scale, backhoe), and that cause some delay, obligating the team to change the plan for the respective day.
- **Coordination:** Coordination between the office and the operational team responsible for the waste characterization, on practice, was not so fluent, regular, and clear as wished. This had impact and cause delays in the conclusion of the tasks and the work, in general.
- **Planning:** The project team had to find workarounds to ensure that the project was delivered on time and to standard, and the backup arrangements for equipment failures by contractors (backhoe & truck) was not adequate.
- **Sampling Location:**
 - Forres Park - because of the slope of the terrain, which, in the event of heavy rain, would cause flooding and could contaminate the samples.
 - Guanapo – the indicated place was small, which did not allow the quartering to be carried out in the best conditions. In addition, it did not allow having more than one load to characterize.

Despite the challenges the team acknowledged the support by the technician of SWMCOL as well, from most of the site's supervisors. At the end, was possible to finish all the work with the required quality and data collection enough to apply and concluded the statistical methodology.

8 DESCRIPTION OF THE RESULTS (PHYSICAL AND CHEMICAL CHARACTERIZATION)

As agreed, the characterization took place in 4 different periods. Two of the characterization exercises were done with the objective of building a picture of the production of the waste produced in Trinidad, in the wet and dry season.

The other 2 exercises were carried out during festival periods, with the aim of understanding what kind of waste is produced during festivities and what differences there are compared to the waste produced during the rest of the year.

During Diwali festivities, 15 characterizations were performed, 5 in each of the landfills (Beetham, Guanapo and Forres Park). Waste from 13 communities in Trinidad was characterized during the period from October 21st to October 28th.

In the wet season, 68 characterizations were carried out, 21 done in Beetham and Guanapo landfill.

In Forres Park 26 characterizations were carried out, as the characterization of the unsorted waste from Guapo took place at the Forres Park landfill. This happened due to being the best option logistically, as the equipment for the characterization was already at the Forres Park landfill, and the proximity to the 2 communities (Siparia and Point Fortin)

During the carnival 30 characterizations were performed, 10 in each landfill (Beetham, Guanapo and Forres Park). In total the waste produced in 15 communities during February 15th and February 24th was characterized.

The last exercise took place in the dry season, where 67 characterizations were carried, 21 done in Beetham and Guanapo landfill, 26 in Forres Park in this case because, the characterization of the unsorted waste from Guapo, took place at the Forres Park landfill, during the period from 27 of February to 4 of April.

The calendar follows in the Annex A



Figure 16 – Guanapo unloading zone



Figure 17 – Forres Park unloading zone



Figure 18– Beetham unloading zone

8.1 DIWALI CHARACTERIZATION

DIWALI Results	Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
		Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
CATEGORIES and SUB/CATEGORIES	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9
ORGANIC FOOD																
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms	---	2,00%	23,93%	15,64%	12,84%	5,74%	12,62%	9,46%	34,85%	20,17%	36,58%	13,72%	21,75%	27,39%	23,83%	25,41%
Garden Waste																
Grass/Leaves/Brush/Pruning	---	1,00%	14,56%	3,72%	3,39%	5,74%	0,00%	8,96%	2,99%	6,47%	1,99%	5,74%	5,69%	22,95%	17,27%	4,93%
Branches and stumps	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PAPERS																
Newspaper and Magazines	---	1,00%	0,00%	0,99%	0,97%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	7,48%	1,98%	0,00%	0,00%	0,00%
Office Papers	---	0,50%	1,23%	1,24%	1,21%	3,00%	0,49%	3,23%	1,00%	0,00%	0,10%	0,75%	0,00%	0,00%	0,00%	0,00%
Contaminated with fat	---	5,24%	2,96%	1,99%	1,94%	4,00%	2,23%	1,99%	1,99%	0,75%	0,25%	0,50%	0,49%	0,25%	0,97%	3,75%
Other Papers	---	3,99%	0,00%	1,74%	1,21%	0,00%	0,00%	1,00%	0,00%	0,00%	1,74%	0,00%	6,43%	0,00%	0,00%	0,00%
Cardboard Packaging	---	24,20%	3,95%	7,45%	17,93%	27,22%	28,21%	15,93%	11,20%	1,49%	4,23%	14,47%	12,61%	2,47%	16,54%	6,41%
Mixed Paper	---	5,99%	0,49%	0,74%	1,70%	4,00%	4,45%	1,00%	1,24%	0,50%	1,00%	0,00%	7,91%	7,65%	8,51%	9,13%

DIWALI Results	Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
		Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
CATEGORIES and SUB/CATEGORIES	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9
COMPOSITES																
Large And Small Electrical Household Appliances	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment	---	0,25%	0,35%	0,00%	2,42%	0,00%	0,25%	3,48%	0,20%	1,74%	0,00%	1,25%	1,98%	0,00%	0,00%	0,00%
Consumer equipment and Photovoltaic Panels	---	0,75%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment	---	0,00%	0,00%	0,00%	0,97%	0,00%	0,00%	1,00%	0,00%	0,00%	0,50%	0,00%	0,49%	0,00%	0,00%	0,00%
Electrical and Eletronic Tools	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,99%	0,00%	0,00%	0,00%
Medical Devices	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS																
Non-Beverage Container Recyclables (1 to 7)	---	7,98%	3,70%	2,98%	6,30%	2,00%	0,49%	3,73%	5,73%	1,00%	1,24%	1,75%	1,48%	0,99%	1,70%	1,48%
Plastic packaging	---	1,90%	1,73%	0,99%	0,24%	8,74%	11,38%	5,23%	2,99%	10,95%	8,46%	9,23%	7,42%	10,61%	9,73%	6,91%
Mixed plastics	---	1,25%	4,49%	2,23%	3,15%	4,00%	4,95%	4,73%	3,48%	0,25%	1,49%	0,75%	1,73%	1,48%	1,12%	0,49%
TEXTILES																
Packaging Textiles	---	0,50%	5,43%	9,18%	7,27%	4,75%	3,46%	4,23%	4,23%	11,45%	8,21%	17,96%	7,17%	8,39%	4,13%	9,37%

DIWALI Results	Communities	San Fernando (Forbes Park, Landfill)	Claxton Bay (Forbes Park, Landfill)	Couva (Forbes Park, Landfill)	Gasparillo (Forbes Park, Landfill)	Chaguanas (Forbes Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Grande (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
		Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
CATEGORIES and SUB/CATEGORIES	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Grande	5	4	19	11	10	3 San Juan	9
SANITARY TEXTILES	---	13,22%	10,61%	16,63%	5,33%	10,49%	5,94%	4,48%	4,73%	8,46%	4,23%	7,24%	2,72%	4,44%	4,13%	9,13%
BEVERAGE CONTAINERS																
PET - Clear																
	.<= 250 ML	0,25%	1,73%	3,47%	1,21%	0,01%	1,56%	0,06%	0,00%	0,01%	1,25%	0,00%	0,03%	2,22%	0,00%	0,00%
	.> 250 ML until 700 ML	11,22%	3,50%	0,99%	8,04%	6,24%	6,93%	4,73%	6,97%	3,74%	3,48%	1,50%	0,64%	1,48%	1,70%	4,44%
	.> 700 ML until 1L	0,00%	0,00%	1,54%	0,02%	0,00%	0,00%	0,00%	0,01%	0,02%	0,29%	0,05%	0,25%	1,23%	0,97%	0,00%
	.> 1L until 2L	1,75%	0,99%	0,99%	2,96%	1,75%	0,54%	0,12%	0,02%	0,39%	0,24%	0,34%	0,10%	0,08%	0,73%	1,97%
	.> 2 L until 3.78 L	1,50%	0,00%	0,25%	0,00%	0,20%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,05%	0,49%	0,00%	0,00%
PET - Blue																
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	1,31%	1,26%	0,03%	0,00%	0,00%	0,26%	0,00%	0,01%	0,01%	0,05%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	1,31%	0,05%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

DIWALI Results	Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
CATEGORIES and SUB/CATEGORIES	Type of Load	Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9
PET - Green																
	.<= 250 ML	0,00%	0,05%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,01%	0,00%	0,00%	0,01%	0,00%	0,18%	0,05%	0,00%	0,02%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,10%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,01%	0,00%	0,00%	0,00%	0,02%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																
	.<= 250 ML	0,00%	0,00%	0,00%	0,01%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

DIWALI Results	Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
CATEGORIES and SUB/CATEGORIES	Type of Load	Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,05%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural																
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,02%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured																
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

DIWALI Results	Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
CATEGORIES and SUB/CATEGORIES	Type of Load	Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK																
	.<= 250 ML	0,10%	0,00%	1,49%	0,00%	0,20%	1,48%	0,00%	0,06%	0,02%	0,00%	0,02%	0,35%	0,00%	0,24%	0,49%
	.> 250 ML until 700 ML	0,40%	1,38%	1,24%	0,24%	0,00%	0,12%	0,10%	0,01%	0,05%	0,25%	0,00%	0,59%	0,01%	0,15%	0,30%
	.> 700 ML until 1L	0,00%	1,48%	0,00%	1,45%	0,25%	1,48%	0,15%	1,89%	0,25%	0,25%	0,07%	0,00%	0,04%	0,83%	0,49%
GLASS - Clear																
	.<= 250 ML	0,00%	1,97%	0,00%	0,00%	0,75%	0,74%	1,00%	0,00%	0,75%	0,75%	0,02%	0,00%	0,49%	0,24%	0,00%
	.> 250 ML until 700 ML	0,75%	0,00%	0,00%	0,73%	0,50%	0,25%	0,25%	3,24%	1,00%	1,87%	0,22%	0,49%	0,99%	0,00%	0,74%
	.> 700 ML until 1L	0,25%	0,49%	0,00%	0,97%	0,25%	0,00%	0,04%	0,25%	1,00%	0,00%	1,25%	0,74%	0,49%	0,97%	0,99%
GLASS - Blue																
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

DIWALI Results	Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
CATEGORIES and SUB/CATEGORIES	Type of Load	Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Green																
	.<= 250 ML	0,00%	0,12%	0,00%	0,00%	0,00%	0,10%	0,00%	0,00%	0,00%	0,00%	0,02%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,50%	0,00%	0,00%	0,24%	0,25%	0,00%	0,00%	0,10%	0,75%	1,00%	0,00%	0,74%	0,12%	0,05%	0,00%
	.> 700 ML until 1L	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,22%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown																
	.<= 250 ML	0,00%	0,25%	0,00%	0,10%	0,50%	0,25%	0,07%	0,18%	1,24%	0,50%	0,20%	0,00%	0,00%	0,73%	0,49%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,10%	0,02%	0,25%	0,20%	0,50%	0,25%	0,05%	0,49%	0,20%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,25%	0,00%	0,00%	0,00%	0,05%	0,00%	0,20%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors																
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

DIWALI Results	Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
		Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
CATEGORIES and SUB/CATEGORIES	Type of Load	Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS																
	.<= 250 ML	0,05%	0,00%	0,00%	0,00%	1,25%	0,12%	0,00%	0,00%	0,00%	0,00%	0,02%	0,00%	0,06%	0,49%	0,25%
	.> 250 ML until 700 ML	1,25%	0,74%	4,22%	3,63%	1,25%	0,12%	0,10%	0,20%	0,03%	0,00%	0,17%	0,40%	0,25%	0,10%	1,48%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,10%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS																
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	1,21%	0,00%	0,00%	0,00%	0,00%	0,00%	0,08%	0,50%	0,25%	0,25%	0,00%	0,49%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		1,50%	1,73%	0,50%	1,45%	0,00%	2,97%	3,48%	0,00%	22,16%	14,43%	7,48%	8,16%	1,23%	1,70%	8,14%
GLASS																
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers	---	0,00%	5,28%	4,72%	0,48%	0,00%	3,96%	4,23%	3,73%	0,00%	0,00%	0,75%	0,99%	0,25%	0,97%	0,49%

DIWALI Results	Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfill)	DIEGO MARTIN (Beetham Landfill)	PORT OF SPAIN (Beetham Landfill)	San Juan (Beetham Landfill)	Morvant (Beetham Landfill)
		Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
CATEGORIES and SUB/CATEGORIES	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.	---	0,00%	0,05%	0,00%	0,97%	0,00%	0,00%	0,20%	0,00%	1,59%	0,50%	1,00%	0,25%	0,00%	0,00%	0,00%
METALS																
Tin/steel cans - Non Beverage	---	2,99%	3,45%	3,23%	3,88%	0,25%	3,46%	3,73%	0,50%	1,99%	1,74%	0,00%	0,00%	1,48%	1,70%	1,48%
Aluminium cans - Non Beverage	---	5,24%	0,25%	4,22%	0,48%	2,75%	0,15%	4,23%	3,98%	0,75%	0,25%	0,75%	1,98%	1,48%	0,00%	0,00%
Ferrous Metals	---	0,00%	0,99%	0,00%	0,48%	0,25%	0,25%	0,00%	0,00%	0,00%	1,49%	0,50%	0,99%	0,00%	0,00%	0,00%
Other Non ferrous	---	0,00%	0,00%	0,10%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,50%	0,59%	0,00%	0,00%	0,00%
White Waste	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals	---	0,25%	0,05%	1,24%	0,97%	0,00%	0,25%	4,48%	1,99%	0,00%	0,00%	0,50%	0,25%	0,25%	0,00%	0,00%
HAZARDOUS WASTE																
Batteries	---	1,50%	0,00%	3,23%	0,00%	0,00%	0,00%	1,99%	1,24%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Paint/Solvent/Fuel	---	0,00%	0,00%	0,99%	0,00%	1,00%	0,00%	0,75%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%
Used Oil	---	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	1,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/ Composite Household Hazardous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,85%	0,00%	0,00%	0,00%	0,00%	0,00%
Healthcare Waste	---	0,00%	0,10%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

DIWALI Results		Communities	San Fernando (Forres Park, Landfill)	Claxton Bay (Forres Park, Landfill)	Couva (Forres Park, Landfill)	Gasparillo (Forres Park, Landfill)	Chaguanas (Forres Park, Landfill)	Arima (Guanapo Landfill)	Arima (Guanapo Landfill)	Sangre Gandre (Guanapo Landfill)	Trincity (Guanapo Landfill)	Arima (Guanapo Landfill)	Tunapuna (Beetham Landfiil)	DIEGO MARTIN (Beetham Landfiil)	PORT OF SPAIN (Beetham Landfiil)	San Juan (Beetham Landfiil)	Morvant (Beetham Landfiil)
CATEGORIES and SUB/CATEGORIES	Type of Load	Mixed Load	Residential	Residential	Residential	Mixed Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	55	FR2	27	Gasparillo	13	Arima	91	Sangre Gandre	5	4	19	11	10	3 San Juan	9	
THIN ELEMENTS (<20mm)	---	0,25%	1,73%	2,06%	0,97%	1,00%	0,49%	0,50%	0,50%	0,00%	0,25%	0,50%	0,74%	0,25%	0,49%	0,74%	



SWMCOL

8.2 WET CHARACTERIZATION

8.2.1 BEETHAM LANDFILL

Wet Characterization Beetham Landfill	Communities	San Juan	Diego Martin	Port of Spain	Diego Martin	Port of Spain	Chaguanas	Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
CATEGORIES and SUB/CATEGORIES	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
ORGANIC FOOD																						
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms		25,57 %	12,34 %	8,50%	8,01%	13,41 %	31,03%	27,17 %	20,09 %	34,12 %	27,18 %	19,54%	1,74%	26,61 %	18,64 %	30,55 %	29,05%	37,01 %	26,06 %	31,46%	76,27%	0,74%
Garden Waste																						
Grass/Leaves/Brush/Pruning		13,40 %	5,71%	7,75%	30,79 %	12,09 %	2,54%	8,04%	0,00%	3,36%	4,49%	8,91%	69,12%	4,82%	9,72%	8,59%	6,89%	0,00%	12,91 %	3,81%	0,00%	0,00%
Branches and stumps		0,00%	0,00%	0,00%	18,35 %	8,79%	0,00%	0,00%	4,78%	1,20%	0,00%	0,00%	4,23%	0,69%	4,56%	1,91%	0,00%	1,72%	5,63%	0,00%	0,00%	0,00%
PAPERS																						
Newspaper and Magazines		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,47%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Beetham Landfill								Diego Martin	San Fernando	Maracas	San Fernando	Chaguaromas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
Office Papers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Contaminated with fat		3,92%	1,60%	5,50%	7,59%	7,91%	5,85%	2,39%	2,15%	5,05%	4,49%	6,93%	0,99%	5,73%	1,39%	2,86%	1,48%	0,74%	5,40%	8,58%	0,48%	0,00%
Other Papers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Cardboard Packaging		4,95%	4,11%	13,50%	1,05%	4,18%	7,88%	5,22%	7,65%	6,25%	6,23%	13,36%	1,49%	5,73%	3,57%	2,86%	4,19%	5,15%	5,16%	0,71%	1,94%	28,89%
Mixed Paper		6,80%	24,91%	10,50%	4,43%	3,74%	6,36%	13,91%	3,59%	6,49%	3,74%	6,93%	1,24%	2,98%	16,26%	2,63%	10,09%	4,41%	3,29%	10,96%	2,42%	7,41%
COMPOSITES																						
Large And Small Electrical Household Appliances		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment		0,00%	0,23%	4,25%	1,69%	0,00%	0,25%	0,00%	0,96%	0,72%	5,49%	0,00%	0,00%	0,00%	0,00%	0,48%	0,00%	1,47%	0,23%	0,00%	0,00%	0,00%
Consumer equipment and Photovoltaic Panels		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Beetham Landfill								Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
Lighting Equipment		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Electrical and Eletronic Tools		0,41%	0,23%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,24%	0,00%	0,00%
Medical Devices		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS																						
Non-Beverage Container Recyclables (1 to 7)		1,44%	0,46%	0,25%	0,42%	0,88%	1,78%	0,87%	1,20%	0,48%	2,00%	0,99%	0,25%	3,67%	3,77%	1,43%	3,20%	0,98%	1,64%	0,71%	0,00%	0,00%
Plastic packaging		7,42%	9,83%	10,75 %	5,06%	10,33 %	9,16%	10,87 %	9,80%	8,65%	9,73%	4,70%	5,72%	11,70 %	20,23 %	9,31%	8,86%	4,17%	6,81%	9,06%	16,71%	51,36%
Mixed plastics		1,44%	1,60%	0,00%	0,84%	0,88%	1,78%	1,52%	2,63%	2,88%	2,49%	1,48%	0,25%	0,92%	0,40%	1,43%	2,46%	1,72%	1,64%	0,95%	0,73%	0,00%
TEXTILES																						

Wet Characterization Beetham Landfill								Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
Packaging Textiles		6,60%	8,68%	4,75%	1,90%	15,60%	14,24%	9,78%	11,72%	6,01%	13,97%	15,83%	0,99%	4,59%	4,76%	8,83%	17,73%	13,24%	16,67%	11,68%	0,00%	0,00%
SANITARY TEXTILES		7,84%	5,03%	22,75%	0,00%	2,42%	7,63%	5,00%	6,93%	7,21%	2,00%	6,68%	0,00%	8,72%	1,39%	9,31%	6,40%	6,86%	2,82%	3,34%	0,00%	0,00%
BEVERAGE CONTAINERS																						
PET - Clear																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	6,39%	1,60%	3,00%	0,63%	2,86%	3,05%	1,96%	3,59%	1,92%	2,99%	1,48%	2,73%	3,44%	1,59%	5,97%	3,94%	4,41%	2,11%	2,86%	0,73%	0,99%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,21%	0,46%	0,50%	0,00%	0,22%	0,51%	0,22%	0,77%	0,29%	0,25%	0,25%	0,00%	0,46%	0,20%	0,48%	0,74%	0,49%	0,47%	0,24%	0,48%	0,00%
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,48%	0,05%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Blue																						

Wet Characterization Beetham Landfill																						
	Communities	San Juan	Diego Martin	Port of Spain	Diego Martin	Port of Spain	Chaguanas	Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Beetham Landfill								Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	Diego Martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						

Wet Characterization Beetham Landfill								Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Beetham Landfill																						
	Communities	San Juan	Diego Martin	Port of Spain	Diego Martin	Port of Spain	Chaguanas	Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK																						

Wet Characterization Beetham Landfill								Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
	.<= 250 ML	0,21%	0,00%	0,00%	0,00%	0,00%	0,05%	0,00%	0,24%	0,24%	0,00%	0,00%	0,25%	0,00%	0,04%	0,00%	0,00%	0,00%	0,00%	0,00%	0,24%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,25%	0,21%	0,44%	0,00%	0,43%	0,00%	0,00%	0,25%	0,00%	0,00%	0,23%	0,00%	0,24%	0,25%	0,25%	0,23%	0,24%	0,00%	0,00%
	.> 700 ML until 1L	0,41%	0,00%	0,00%	0,21%	0,44%	0,51%	0,22%	0,24%	0,72%	0,25%	0,00%	0,05%	0,69%	0,20%	0,72%	0,25%	0,74%	0,23%	0,24%	0,00%	0,00%
GLASS - Clear																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,76%	0,00%	0,00%	0,48%	0,00%	0,00%	0,00%	0,00%	0,00%	0,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,62%	0,00%	0,50%	0,42%	0,88%	0,76%	0,43%	0,24%	0,72%	0,50%	0,49%	0,99%	0,46%	0,00%	0,72%	0,74%	0,74%	0,70%	1,19%	0,00%	3,70%
	.> 700 ML until 1L	0,21%	0,00%	0,25%	0,63%	0,44%	0,00%	0,65%	0,72%	0,00%	0,25%	0,00%	0,50%	0,92%	0,00%	1,43%	0,00%	0,49%	0,47%	0,86%	0,00%	0,00%
GLASS - Blue																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Beetham Landfill																						
	Communities	San Juan	Diego Martin	Port of Spain	Diego Martin	Port of Spain	Chaguanas	Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Green																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,23%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,82%	0,00%	0,50%	0,00%	0,44%	0,51%	0,22%	0,00%	0,00%	0,00%	0,25%	0,50%	0,00%	0,40%	0,48%	0,25%	0,00%	0,94%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,21%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,23%	0,00%	0,00%	0,00%
GLASS - Brown																						
	<= 250 ML	0,00%	0,00%	0,00%	0,21%	0,00%	0,25%	0,00%	0,00%	0,72%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	1,03%	0,69%	0,75%	0,00%	0,44%	0,25%	0,22%	0,48%	0,00%	0,50%	0,00%	0,75%	0,46%	0,20%	0,95%	0,49%	0,00%	0,70%	0,95%	0,00%	0,00%

Wet Characterization Beetham Landfill								Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
	.> 700 ML until 1L	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,72%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,23%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS																						
	.<= 250 ML	0,41%	0,14%	0,00%	0,04%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,05%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,50%	0,00%	0,22%	0,00%	0,43%	0,00%	0,24%	0,00%	0,00%	0,75%	0,23%	0,20%	0,48%	0,49%	0,49%	0,23%	0,24%	0,00%	0,00%

Wet Characterization Beetham Landfill																						
	Communities	San Juan	Diego Martin	Port of Spain	Diego Martin	Port of Spain	Chaguanas	Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		7,22%	21,25 %	5,00%	14,76 %	11,87 %	3,05%	8,70%	21,76 %	9,37%	10,97 %	7,67%	7,21%	12,61 %	11,31 %	5,01%	1,23%	9,56%	4,46%	10,72%	0,00%	6,91%
GLASS																						
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers		1,03%	0,00%	0,00%	0,00%	0,00%	0,00%	1,09%	0,00%	0,48%	0,00%	3,22%	0,00%	2,52%	0,00%	0,00%	0,00%	1,72%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Beetham Landfill																						
	Communities	San Juan	Diego Martin	Port of Spain	Diego Martin	Port of Spain	Chaguanas	Diego Martin	San Fernando	Maracas	San Fernando	Chaguanas	Port of Spain	Maracas	Curepe	St Anns	Tunapuna	Curepe	St Anns	Valsayn	Valsayn	Tunapuna
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Domestic
	Route Number or Location	#2 Aranguez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Maracas	San Juan	Caranage	Port of Spain and environs	St Joseph	Curepe/St Augustine	St Anns / Cascade	El Dorado	Curepe	St Anns / Cascade	Curepe/Valsayn	Valsayn/Grand Baazar	Tunapuna
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METALS																						
Tin/steel cans - Non Beverage		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Aluminium cans - Non Beverage		1,24%	0,46%	0,00%	1,90%	0,88%	1,02%	0,00%	0,24%	0,96%	0,75%	0,49%	0,00%	1,38%	0,20%	0,48%	1,23%	1,23%	0,23%	0,71%	0,00%	0,00%
Ferrous Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Other Non ferrous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE																						

Wet Characterization Beetham Landfill																						
	Communities	San Juan	Diego Marti n	Port of Spai n	Diego Marti n	Port of Spain	Chaguar amas	Diego Marti n	San Ferna ndo	Mara cas	San Ferna ndo	Chaguar amas	Port of Spain	Mara cas	Curep e	St Anns	Tunap una	Curep e	St Anns	Valsayn	Valsayn	Tunap una
CATEGORIES and SUB/CATEGORIES	Type of Load	Reside ntial	Reside ntial	Come rcial	Reside ntial	Reside ntial	Residenti al	Reside ntial	Reside ntial	Reside ntial	Reside ntial	Residenti al	Comm ercial	Reside ntial	Reside ntial	Reside ntial	Reside ntial	Reside ntial	Reside ntial	Residenti al	Commer cial	Domes tic
	Route Number or Location	#2 Arang uez	diego martin	Port of Spain	Diego Martin	Port of Spain	Caranage	Diego Martin	San Juan	Marac as	San Juan	Caranage	Port of Spain and envira ns	St Joseph	Curep e/St August ine	St Anns / Cascad e	El Dorad o	Curep e	St Anns / Cascad e	Curepe/V alsayn	Valsayn/ Grand Baazar	Tunap una
Batteries		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Paint/Solvent/Fuel		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Used Oil		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/ Composite Household Hazardous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Healthcare Waste		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)		0,41%	0,69%	0,00%	0,00%	0,66%	0,76%	0,65%	0,24%	1,44%	1,25%	0,49%	0,25%	0,00%	0,99%	1,43%	0,00%	0,74%	0,70%	0,24%	0,00%	0,00%

8.2.2 FORRES PARK LANDFILL

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Communities	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romain	Claxton Bay	Gasparillo	La Romain	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romain	Claxton Bay	Gasparillo	La Romain	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
ORGANIC FOOD																							
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms	---	28,33 %	49,04 %	16,47 %	18,14 %	22,12 %	20,60 %	28,08 %	15,63 %	24,94 %	31,75 %	21,10 %	21,27 %	31,34 %	37,06 %	11,90 %	15,44 %	6,79 %	19,30 %	21,05 %	42,55 %	29,63 %	8,92 %
Garden Waste																							
Grass/Leaves/Brush/Pruning	---	1,94 %	8,37 %	19,81 %	6,37 %	8,89 %	3,72 %	0,00 %	15,88 %	4,24 %	8,25 %	27,34 %	6,60 %	2,87 %	20,97 %	6,43 %	13,24 %	7,29 %	13,03 %	13,03 %	3,51 %	8,15 %	10,60 %
Branches and stumps	---	0,00 %	6,94 %	17,18 %	0,00 %	13,22 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	4,27 %	0,00 %	0,00 %	7,42 %	0,00 %	12,53 %
PAPERS																							
Newspaper and Magazines	---	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Office Papers	---	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
Contaminated with fat	---	3,63%	0,96%	5,49%	15,69%	4,09%	2,73%	9,11%	7,69%	6,73%	9,25%	3,84%	5,62%	9,81%	7,07%	6,67%	8,33%	10,06%	8,52%	14,04%	7,92%	11,11%	7,71%
Other Papers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,11%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Cardboard Packaging	---	5,57%	3,59%	1,91%	7,35%	9,86%	1,49%	0,00%	2,23%	4,99%	2,50%	3,36%	7,33%	0,00%	1,22%	10,48%	4,66%	6,03%	16,29%	12,28%	9,15%	4,94%	4,58%
Mixed Paper	---	2,66%	0,96%	7,40%	4,41%	4,33%	8,68%	11,08%	16,63%	5,99%	9,25%	1,68%	9,78%	8,61%	0,00%	12,38%	16,42%	6,28%	3,51%	4,51%	4,21%	8,64%	2,65%
COMPOSITES																							
Large And Small Electrical Household Appliances	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment	---	1,94%	3,59%	0,00%	2,70%	0,00%	0,00%	6,65%	0,00%	12,22%	0,00%	0,00%	1,96%	0,00%	3,17%	2,86%	22,30%	1,51%	3,76%	0,00%	9,15%	0,00%	3,61%
Consumer equipment and Photovoltaic Panels	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
Electrical and Electronic Tools	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Medical Devices	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS																							
Non-Beverage Container Recyclables (1 to 7)	---	1,69%	3,35%	0,48%	5,15%	0,72%	0,00%	0,25%	0,25%	3,74%	1,75%	0,72%	0,73%	0,96%	0,00%	2,14%	0,98%	3,77%	0,75%	1,25%	3,22%	0,00%	4,34%
Plastic packaging	---	10,65%	6,22%	5,97%	5,39%	4,57%	6,95%	3,69%	10,67%	7,73%	5,00%	5,52%	4,89%	5,26%	0,49%	7,86%	2,21%	17,60%	2,26%	4,01%	7,92%	7,16%	11,57%
Mixed plastics	---	4,36%	1,44%	0,24%	5,15%	5,05%	1,49%	0,00%	0,50%	0,25%	2,25%	4,08%	2,93%	3,83%	0,00%	4,29%	1,47%	5,78%	0,00%	3,51%	0,25%	0,00%	5,06%
TEXTILES																							
Woven sacks that pack products, clothes, carpets etc	---	16,46%	0,00%	0,48%	12,50%	8,17%	21,34%	18,47%	5,71%	3,74%	3,00%	3,36%	2,44%	13,16%	6,34%	11,90%	0,00%	4,78%	0,00%	4,26%	0,00%	6,67%	4,58%

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Communities	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
SANITARY TEXTILES	---	7,75%	4,55%	11,69%	9,56%	3,37%	0,99%	9,36%	0,00%	2,74%	6,25%	11,27%	11,98%	7,89%	7,56%	5,71%	6,13%	10,06%	7,27%	5,26%	0,00%	7,65%	5,54%
BEVERAGE CONTAINERS																							
PET - Clear																							
	.<= 250 ML	0,00%	1,20%	0,00%	0,00%	0,00%	0,00%	6,65%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,31%	0,00%	4,26%	1,48%	0,00%	3,13%
	.> 250 ML until 700 ML	2,18%	0,24%	3,58%	1,47%	2,88%	8,68%	0,00%	1,74%	1,75%	2,00%	3,12%	1,71%	4,31%	1,22%	1,19%	2,94%	1,76%	2,76%	0,00%	0,00%	6,42%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,24%	0,00%	0,00%	0,00%	1,72%	0,00%	1,25%	0,00%	0,00%	0,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,24%	0,72%	0,00%	0,25%	0,72%	0,00%	0,00%	0,74%	2,99%	0,75%	0,24%	0,00%	0,72%	1,22%	0,95%	0,00%	0,25%	1,25%	0,75%	0,00%	0,00%	0,48%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,30%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Blue																							
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green																							
	≤ 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
	Communities	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																							
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																							
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural																							
	≤ 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
	Communities	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured																							
	≤ 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK																							
	≤ 250 ML	0,24%	1,20%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,48%	1,22%	0,00%	0,00%	0,00%	0,00%	1,26%	0,00%	0,00%	0,00%	0,00%	0,24%

Wet Characterization Forres Park Landfill																							
	Communities	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,74%	0,00%	0,00%	0,48%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,24%	0,24%	0,00%	0,96%	0,99%	0,00%	0,00%	1,00%	0,50%	0,00%	0,24%	0,72%	0,24%	0,00%	0,00%	0,25%	0,75%	0,00%	0,00%	0,00%	0,48%
GLASS - Clear																							
	≤ 250 ML	0,00%	0,48%	0,24%	0,00%	0,00%	1,24%	0,99%	1,49%	1,00%	0,00%	0,00%	1,96%	1,20%	0,29%	0,00%	0,00%	0,50%	1,00%	0,50%	0,00%	0,00%	0,72%
	> 250 ML until 700 ML	0,48%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,75%	0,75%	0,00%	0,00%	0,00%	0,00%	1,43%	0,00%	0,00%	0,00%	0,00%	0,00%	2,72%	0,96%
	> 700 ML until 1L	0,00%	2,15%	0,00%	0,00%	0,72%	0,00%	3,45%	0,00%	2,24%	0,00%	0,00%	0,00%	0,00%	0,73%	0,00%	0,00%	1,01%	0,00%	1,75%	0,00%	0,00%	2,17%
GLASS - Blue																							
	≤ 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,10%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Green																							
	≤ 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,01%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	2,66%	0,72%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,75%	0,00%	0,00%	0,00%	0,24%	0,00%	0,95%	0,00%	0,00%	1,25%	0,00%	0,00%	0,00%	1,69%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown																							
	≤ 250 ML	1,45%	0,72%	0,24%	0,00%	0,96%	0,00%	0,00%	1,24%	2,74%	1,00%	0,48%	0,00%	0,96%	1,46%	0,00%	0,00%	0,75%	0,00%	0,00%	0,00%	0,00%	1,20%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,51%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
GLASS - Other Colors																							
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS																							
	.<= 250 ML	0,24%	0,24%	0,24%	0,00%	0,72%	0,74%	0,00%	0,00%	1,75%	0,00%	0,00%	0,24%	0,72%	0,00%	0,48%	0,00%	0,75%	0,25%	0,25%	0,00%	0,00%	0,24%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS																							

Wet Characterization Forres Park Landfill																							
	Communities	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romaine	Claxton Bay	Gasparillo	La Romaine	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		0,00%	0,00%	3,82%	4,17%	6,73%	20,35 %	0,00%	17,87 %	0,00%	14,50 %	5,04%	12,96 %	2,63%	6,09%	9,76%	5,88%	0,00%	11,53 %	7,02%	0,00%	6,91%	0,00%
GLASS																							
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers	---	3,15%	0,72%	0,00%	0,74%	1,20%	0,00%	0,00%	0,00%	1,50%	0,00%	7,43%	0,00%	0,00%	3,90%	1,43%	0,00%	2,26%	3,01%	0,00%	3,22%	0,00%	3,61%
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romain	Claxton Bay	Gasparillo	La Romain	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
METALS																							
Tin/steel cans - Non Beverage	---	2,42%	1,91%	0,00%	0,00%	0,24%	0,00%	0,00%	0,00%	0,75%	0,00%	0,00%	4,40%	0,00%	0,00%	0,00%	0,00%	1,51%	0,00%	0,00%	0,00%	0,00%	0,00%
Aluminium cans - Non Beverage	---	1,69%	0,24%	4,06%	0,49%	0,48%	0,00%	0,49%	0,50%	0,25%	0,75%	0,48%	0,49%	1,67%	0,49%	1,19%	0,00%	2,77%	0,50%	2,01%	0,00%	0,00%	3,13%
Ferrous Metals	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Other Non ferrous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE																							
Batteries	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Paint/Solvent/Fuel	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Used Oil	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/Composite Household Hazardous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Forres Park Landfill																							
CATEGORIES and SUB/CATEGORIES	Type of Load	residential	residential	residential	residential	residential	industrial	residential	residential	commercial	residential	residential	residential	residential	residential	residential	residential	residential	mixed	residential	commercial	residential	residential
	Route Number or Location	Penal	Penal	San Fernando	Chaguana	Chaguana	Couva	Couva	San Fernando	La Romain	Claxton Bay	Gasparillo	La Romain	Princes Town	La Brea	Princes Town	La Brea	Marabella	Chaguana	Marabella	Penal	Gasparillo	Claxton Bay
Healthcare Waste	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)	---	0,24%	0,24%	0,24%	0,25%	0,00%	0,00%	0,00%	0,50%	2,99%	0,50%	0,00%	0,49%	0,00%	0,49%	0,00%	0,00%	0,00%	0,50%	0,25%	0,00%	0,00%	0,24%

8.2.3 GUAPO LANDFILL

Wet Characterization Guapo Landfill					
CATEGORIES and SUB/CATEGORIES	Type of Load	Communities		Siparia	
	Route Number or Location	Siparia / Fyzabad		Point Fortin	
ORGANIC FOOD					
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms	---		34,84%	22,01%	32,68%
Garden Waste					
Grass/Leaves/Brush/Pruning	---		5,26%	6,94%	9,76%

Wet Characterization Guapo Landfill					
CATEGORIES and SUB/CATEGORIES	Communities	Siparia	Siparia	Point Fortin	Point Fortin
	Type of Load	Residential	Residential	Residential	Residential
	Route Number or Location	Siparia / Fyzabad	Siparia	Point Fortin	Point Fortin
Branches and stumps	---	0,00%	0,00%	0,00%	0,00%
PAPERS					
Newspaper and Magazines	---	0,00%	0,00%	0,00%	0,00%
Office Papers	---	0,00%	0,00%	0,00%	0,00%
Contaminated with fat	---	7,02%	2,15%	5,37%	2,87%
Other Papers	---	0,00%	0,00%	0,00%	0,00%
Cardboard Packaging	---	2,26%	1,67%	3,41%	4,07%
Mixed Paper	---	3,01%	5,02%	11,46%	5,02%
COMPOSITES					
Large And Small Electrical Household Appliances	---	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment	---	0,00%	4,78%	0,00%	0,00%
Consumer equipment and Photovoltaic Panels	---	0,00%	0,00%	0,00%	0,00%
Lighting Equipment	---	0,00%	0,00%	0,00%	0,00%
Electrical and Eletronic Tools	---	0,00%	0,00%	0,00%	0,00%
Medical Devices	---	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments	---	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers	---	0,00%	0,00%	0,00%	0,00%
PLASTICS					

Wet Characterization Guapo Landfill					
	Communities	Siparia	Siparia	Point Fortin	Point Fortin
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential
	Route Number or Location	Siparia / Fyzabad	Siparia	Point Fortin	Point Fortin
Non-Beverage Container Recyclables (1 to 7)	---	1,00%	1,91%	2,20%	0,72%
Plastic packaging	---	9,27%	14,59%	3,90%	11,24%
Mixed plastics	---	4,01%	2,87%	2,20%	5,26%
TEXTILES					
Woven sacks that pack products, clothes, carpets etc	---	12,28%	8,13%	3,41%	16,03%
SANITARY TEXTILES	---	8,27%	11,96%	8,54%	5,98%
BEVERAGE CONTAINERS					
PET - Clear					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	1,25%	4,31%	2,44%	3,11%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,75%	0,48%	0,49%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,72%
PET - Blue					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guapo Landfill					
CATEGORIES and SUB/CATEGORIES	Communities	Siparia	Siparia	Point Fortin	Point Fortin
	Type of Load	Residential	Residential	Residential	Residential
	Route Number or Location	Siparia / Fyzabad	Siparia	Point Fortin	Point Fortin
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%
PET - Green					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%
PET - Black					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%
PET - Black					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guapo Landfill					
	Communities	Siparia	Siparia	Point Fortin	Point Fortin
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential
	Route Number or Location	Siparia / Fyzabad	Siparia	Point Fortin	Point Fortin
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%
HDPE - Natural					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%
TETRA PACK					
	.<= 250 ML	0,25%	0,00%	0,00%	0,24%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,50%	0,24%	0,49%	0,48%
GLASS - Clear					

Wet Characterization Guapo Landfill					
CATEGORIES and SUB/CATEGORIES	Communities	Siparia	Siparia	Point Fortin	Point Fortin
	Type of Load	Residential	Residential	Residential	Residential
	Route Number or Location	Siparia / Fyzabad	Siparia	Point Fortin	Point Fortin
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,50%	0,96%	0,98%	0,96%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	1,20%
GLASS - Blue					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
GLASS - Green					
	.<= 250 ML	0,25%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,72%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,48%
GLASS - Brown					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	1,00%	0,96%	0,00%	0,72%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guapo Landfill					
CATEGORIES and SUB/CATEGORIES	Communities	Siparia	Siparia	Point Fortin	Point Fortin
	Type of Load	Residential	Residential	Residential	Residential
	Route Number or Location	Siparia / Fyzabad	Siparia	Point Fortin	Point Fortin
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS					
	.<= 250 ML	0,25%	0,00%	0,24%	0,24%
	.> 250 ML until 700 ML	0,00%	0,24%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
METAL CANS					
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		5,51%	8,13%	10,00%	3,59%
GLASS					
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers	---	1,50%	1,20%	1,22%	0,96%
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.	---	0,00%	0,00%	0,00%	0,00%
METALS					
Tin/steel cans - Non Beverage	---	0,00%	0,00%	0,00%	1,20%
Aluminium cans - Non Beverage	---	1,00%	0,72%	0,73%	0,72%
Ferrous Metals	---	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guapo Landfill					
	Communities	Siparia	Siparia	Point Fortin	Point Fortin
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential
	Route Number or Location	Siparia / Fyzabad	Siparia	Point Fortin	Point Fortin
Other Non ferrous	---	0,00%	0,00%	0,00%	0,00%
White Waste	---	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals	---	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE					
Batteries	---	0,00%	0,00%	0,00%	0,00%
Paint/Solvent/Fuel	---	0,00%	0,00%	0,00%	0,00%
Used Oil	---	0,00%	0,00%	0,00%	0,00%
Remainder/ Composite Household Hazardous	---	0,00%	0,00%	0,00%	0,00%
Healthcare Waste	---	0,00%	0,00%	0,00%	0,00%
BULKY WASTE	---	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)	---	0,00%	0,00%	0,49%	0,00%

8.2.4 GUANAPO LANDFILL

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
ORGANIC FOOD																						
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms		68,81%	52,83%	30,66%	23,00%	38,61%	39,05%	39,90%	44,08%	15,91%	17,14%	30,05%	18,95%	19,42%	8,54%	8,02%	5,00%	23,59%	15,54%	0,00%	5,24%	8,39%
Garden Waste																						
Grass/Leaves/Brush/Pruning		7,24%	5,46%	5,60%	12,35%	5,04%	0,25%	2,46%	0,47%	9,03%	16,67%	0,00%	11,22%	5,76%	31,66%	9,52%	7,25%	4,67%	21,30%	0,00%	4,52%	19,18%
Branches and stumps		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,36%	0,00%	8,02%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PAPERS																						
Newspaper and Magazines		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Office Papers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
Contaminated with fat		2,66%	1,98%	0,97%	0,48%	3,60%	0,75%	5,42%	4,74%	14,96%	6,19%	5,17%	17,71%	1,20%	3,27%	1,25%	4,75%	9,83%	3,26%	0,00%	1,90%	5,76%
Other Papers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Cardboard Packaging		0,72%	13,64%	8,76%	7,51%	2,16%	5,47%	6,90%	22,27%	17,10%	5,95%	8,62%	0,75%	7,19%	4,77%	5,76%	7,00%	1,97%	8,27%	22,11%	3,57%	9,35%
Mixed Paper		2,41%	1,74%	4,38%	16,71%	4,56%	6,72%	6,40%	10,90%	0,00%	7,38%	16,26%	11,47%	2,64%	4,52%	4,01%	2,50%	3,69%	9,52%	0,00%	7,86%	3,60%
COMPOSITES																						
Large And Small Electrical Household Appliances		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	5,95%	4,19%	0,00%	4,56%	0,00%	2,51%	18,99%	0,00%	0,00%	3,69%	0,00%	0,00%
Consumer equipment and Photovoltaic Panels		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
Electrical and Electronic Tools		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	4,08%
Medical Devices		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS																						
Non-Beverage Container Recyclables (1 to 7)		0,97%	0,74%	1,46%	0,97%	1,44%	4,23%	1,23%	2,13%	1,66%	0,48%	0,00%	0,00%	4,56%	0,00%	3,26%	4,25%	0,49%	0,50%	0,00%	1,19%	5,76%
Plastic packaging		2,66%	6,45%	13,87%	7,51%	8,87%	19,40%	6,65%	4,74%	8,31%	3,57%	9,61%	5,99%	10,31%	6,53%	8,52%	9,50%	5,90%	1,00%	4,18%	3,57%	14,87%
Mixed plastics		0,24%	0,25%	0,24%	3,15%	0,48%	0,00%	1,97%	1,90%	0,24%	1,19%	10,59%	0,00%	0,24%	0,00%	1,75%	2,50%	5,65%	2,01%	0,00%	3,81%	0,00%
TEXTILES																						
Woven sacks that pack products, clothes, carpets etc		3,14%	5,46%	10,22%	9,93%	8,63%	1,99%	3,45%	0,00%	12,35%	16,90%	0,00%	23,94%	17,27%	0,00%	13,53%	11,49%	2,95%	4,01%	0,00%	25,71%	10,55%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
SANITARY TEXTILES		0,48%	0,00%	7,30%	4,12%	9,11%	9,20%	8,37%	0,47%	4,28%	2,14%	0,00%	5,24%	2,88%	0,00%	5,26%	10,00%	14,99%	6,02%	0,00%	10,71%	0,00%
BEVERAGE CONTAINERS																						
PET - Clear																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,96%	1,49%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	1,23%	0,50%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	3,14%	1,74%	1,22%	2,66%	3,84%	1,74%	3,69%	2,13%	1,19%	0,95%	4,43%	1,25%	3,36%	0,25%	0,50%	1,25%	0,00%	0,00%	0,00%	0,48%	1,68%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,72%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	1,19%	0,00%
	.> 1L until 2L	2,41%	0,50%	0,97%	0,97%	0,48%	1,49%	0,74%	0,71%	1,19%	0,24%	0,99%	0,25%	0,00%	0,00%	0,00%	0,80%	0,49%	0,00%	0,00%	1,90%	1,44%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,75%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Blue																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	arouca	arima	sangre grande	#6	arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK																						
	.<= 250 ML	0,24%	0,00%	0,00%	0,00%	0,24%	0,00%	0,00%	0,24%	0,24%	0,00%	0,25%	0,00%	0,48%	0,00%	0,75%	0,00%	0,00%	0,00%	0,00%	0,24%	0,24%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
	.> 250 ML until 700 ML	0,24%	0,50%	0,24%	0,24%	0,00%	0,00%	0,25%	0,00%	0,00%	0,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,72%
	.> 700 ML until 1L	0,00%	0,00%	0,24%	0,24%	0,24%	0,00%	0,49%	0,00%	0,24%	0,00%	0,74%	0,25%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%
GLASS - Clear																						
	.<= 250 ML	0,00%	0,50%	0,00%	0,00%	0,00%	0,00%	0,00%	0,24%	0,00%	0,24%	0,00%	0,00%	0,00%	0,00%	0,25%	0,25%	0,00%	0,75%	0,00%	0,71%	0,00%
	.> 250 ML until 700 ML	0,48%	0,00%	0,97%	0,00%	1,20%	0,75%	0,99%	0,00%	0,24%	0,00%	0,00%	0,75%	0,00%	0,00%	0,00%	0,50%	0,25%	0,00%	0,00%	0,24%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,24%	0,00%	0,72%	0,00%	0,99%	0,00%	0,71%	1,19%	5,67%	0,25%	0,00%	0,00%	1,00%	0,00%	3,19%	0,25%	0,00%	0,00%	0,00%
GLASS - Blue																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Green																						
	.<= 250 ML	0,00%	0,05%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,19%	0,00%	0,25%	0,00%	0,00%	0,00%	0,75%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,24%	0,48%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,00%	0,00%	0,25%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,50%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown																						
	.<= 250 ML	0,05%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,24%	0,24%	0,25%	0,25%	0,00%	0,00%	0,30%	0,75%	0,98%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,25%	0,73%	0,48%	0,24%	0,00%	0,49%	0,47%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	arouca	arima	sangre grande	#6	arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
GLASS - Other Colors																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS																						
	.<= 250 ML	0,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,47%	0,24%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,98%	0,00%	0,00%	0,24%	0,72%
	.> 250 ML until 700 ML	0,00%	0,25%	0,00%	0,00%	0,24%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS																						

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		0,00%	0,00%	9,00%	2,66%	7,19%	3,23%	6,65%	0,00%	8,08%	11,19%	0,00%	1,00%	5,04%	19,60%	14,03%	3,75%	18,43%	24,81%	60,44%	10,95%	8,87%
GLASS																						
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers		0,00%	1,98%	0,73%	0,00%	0,00%	0,00%	1,23%	0,00%	1,43%	0,00%	1,48%	0,00%	8,87%	2,76%	2,76%	2,75%	0,00%	0,00%	0,00%	1,90%	4,80%
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
METALS																						
Tin/steel cans - Non Beverage		1,93%	3,72%	0,00%	0,00%	0,96%	3,98%	0,74%	0,24%	0,48%	0,48%	0,74%	0,50%	0,24%	0,00%	3,26%	0,00%	0,49%	1,25%	0,00%	2,86%	0,00%
Aluminium cans - Non Beverage		0,00%	0,74%	1,22%	5,57%	0,00%	0,00%	0,00%	3,79%	0,48%	0,00%	0,00%	0,00%	1,92%	0,00%	1,00%	0,00%	0,00%	0,50%	0,00%	5,24%	0,00%
Ferrous Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	5,25%	0,00%	0,00%	9,58%	0,00%	0,00%
Other Non ferrous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE																						
Batteries		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Paint/Solvent/Fuel		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	18,09%	0,00%	0,00%	0,00%	0,00%	0,00%	5,71%	0,00%
Used Oil		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Wet Characterization Guanapo Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Institutional	Commercial	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Industrial	Residential	Residential	Mixed	Residential	Residential	Commercial	Commercial	Residential
	Route Number or Location	Arouca	Arima	Sangre Grande	Valencia	Arima	Arima	Arima	Arima	Sangre Grande	Arouca	Tunapuna	Valencia	Tunapuna	Wallerfield	Talparo	Talparo	Mayaro	Mayaro	Arima	Wallerfield	Arima
Remainder/ Composite Household Hazardous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Healthcare Waste		1,93%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)		0,00%	1,24%	0,97%	0,00%	0,72%	0,00%	0,49%	0,00%	0,24%	1,67%	0,74%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,24%	0,00%

8.3 CARNIVAL CHARACTERIZATION

8.3.1 BEETHAM LANDFILL

Carnival characterization Beetham Landfill											
	Communities	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Commercial	Residential	Residential
	Route Number or Location	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
ORGANIC FOOD											
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms	---	5,21%	11,92%	30,60%	19,70%	3,21%	0,00%	2,87%	8,68%	10,30%	18,90%
Garden Waste											
Grass/Leaves/Brush/Pruning	---	11,41%	5,84%	13,01%	8,48%	8,64%	0,00%	7,89%	8,19%	12,81%	18,66%
Branches and stumps	---	0,00%	10,71%	0,00%	6,73%	0,00%	0,00%	0,00%	6,20%	0,00%	0,00%
PAPERS											
Newspaper and Magazines	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Office Papers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Contaminated with fat	---	4,71%	9,25%	6,27%	5,99%	6,17%	9,68%	3,11%	6,70%	18,34%	4,55%
Other Papers	---	0,00%	0,00%	0,00%	0,00%	0,00%	8,19%	0,00%	0,00%	0,00%	0,00%
Cardboard Packaging	---	1,99%	3,65%	4,10%	1,25%	5,43%	0,00%	7,18%	3,23%	14,07%	6,22%

Carnival characterization Beetham Landfill											
CATEGORIES and SUB/CATEGORIES	Communities	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	Type of Load	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Commercial	Residential	Residential
	Route Number or Location	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
Mixed Paper	---	2,98%	6,08%	1,93%	6,73%	0,00%	0,00%	2,15%	3,23%	8,79%	7,89%
COMPOSITES											
Large And Small Electrical Household Appliances	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment	---	0,00%	2,92%	1,93%	3,24%	0,00%	0,00%	0,00%	0,00%	0,00%	1,67%
Consumer equipment and Photovoltaic Panels	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Electrical and Eleetronic Tools	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,48%
Medical Devices	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS											
Non-Beverage Container Recyclables (1 to 7)	---	1,49%	0,00%	1,93%	3,99%	0,00%	0,00%	7,18%	0,00%	7,54%	1,67%
Plastic packaging	---	6,95%	5,11%	8,43%	5,24%	1,98%	0,00%	5,50%	5,21%	4,27%	6,46%
Mixed plastics	---	4,71%	3,89%	4,58%	3,74%	4,20%	0,00%	4,78%	4,22%	0,00%	1,67%
TEXTILES											

Carnival characterization Beetham Landfill											
CATEGORIES and SUB/CATEGORIES	Communities	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	Type of Load	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Commercial	Residential	Residential
	Route Number or Location	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
Packaging Textiles	---	5,96%	2,92%	4,58%	2,00%	6,67%	0,00%	4,31%	0,00%	5,28%	4,31%
SANITARY TEXTILES	---	3,97%	9,25%	4,34%	3,49%	2,96%	0,00%	5,26%	0,00%	5,78%	3,11%
BEVERAGE CONTAINERS											
PET - Clear											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	3,23%	2,92%	2,17%	1,00%	0,74%	28,29%	7,89%	6,45%	2,01%	4,31%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	2,63%	4,71%	0,00%	0,24%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,15%	6,70%	0,00%	0,00%
PET - Blue											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization Beetham Landfill											
CATEGORIES and SUB/CATEGORIES	Communities	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	Type of Load	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Commercial	Residential	Residential
	Route Number or Location	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Other Colors											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural											

Carnival characterization Beetham Landfill											
CATEGORIES and SUB/CATEGORIES	Communities	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	Type of Load	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Commercial	Residential	Residential
	Route Number or Location	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK											
	.<= 250 ML	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	1,67%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,72%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Clear											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization Beetham Landfill											
CATEGORIES and SUB/CATEGORIES	Communities	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	Type of Load	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Commercial	Residential	Residential
	Route Number or Location	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	.> 250 ML until 700 ML	0,00%	0,73%	0,00%	1,75%	4,69%	14,64%	8,85%	5,71%	0,00%	1,67%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,35%
GLASS - Blue											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	3,72%	0,00%	0,00%	0,00%	0,00%
GLASS - Green											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	1,46%	0,96%	0,50%	4,20%	25,06%	4,07%	6,20%	0,00%	1,44%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown											
	.<= 250 ML	0,00%	2,19%	0,00%	2,24%	1,98%	0,00%	1,20%	0,00%	0,00%	3,59%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization Beetham Landfill											
CATEGORIES and SUB/CATEGORIES	Communities	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	Type of Load	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Commercial	Residential	Residential
	Route Number or Location	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS											
	.<= 250 ML	6,45%	3,65%	2,17%	2,00%	2,22%	9,93%	1,91%	6,70%	0,00%	1,67%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		36,72%	6,81%	7,23%	15,96%	16,05%	0,00%	10,77%	3,23%	10,55%	4,31%
GLASS											
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers	---	4,22%	7,30%	3,37%	1,75%	4,94%	0,00%	2,15%	3,72%	0,00%	1,20%
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization Beetham Landfill											
CATEGORIES and SUB/CATEGORIES	Communities	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
	Type of Load	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Commercial	Residential	Residential
	Route Number or Location	Laventille	Maraval	Port of Spain	Tunapuna	Diego Martin	Port of Spain	San Juan	Maraval	Diego Martin	San Juan
METALS											
Tin/steel cans - Non Beverage	---	0,00%	3,41%	2,41%	3,24%	8,64%	0,00%	2,15%	4,71%	0,00%	1,44%
Aluminium cans - Non Beverage	---	0,00%	0,00%	0,00%	0,25%	3,21%	0,00%	3,59%	5,71%	0,00%	0,00%
Ferrous Metals	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Other Non ferrous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE											
Batteries	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Paint/Solvent/Fuel	---	0,00%	0,00%	0,00%	0,00%	4,20%	0,00%	0,00%	0,00%	0,00%	0,00%
Used Oil	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/ Composite Household Hazardous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Healthcare Waste	---	0,00%	0,00%	0,00%	0,00%	9,38%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE											
	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)											
	---	0,00%	0,00%	0,00%	0,25%	0,49%	0,50%	0,72%	0,50%	0,25%	0,48%

8.3.2 FORRES PARK LANDFILL

Carnival Characterization Forres Park Landfill											
	Communities	Couva	Claxton Bay	Princes Town	Chaguanas	Couva	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Residential
	Route Number or Location	Couva	Claxton Bay	Princes Town	Chaguanas	Couva/Point Lisas	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
ORGANIC FOOD											
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms	---	13,22%	34,25%	33,97%	12,02%	22,22%	12,10%	25,12%	28,93%	18,86%	6,49%
Garden Waste											
Grass/Leaves/Brush/Pruning	---	2,49%	0,00%	5,50%	12,26%	11,36%	15,56%	0,00%	15,46%	18,11%	6,01%
Branches and stumps	---	12,97%	9,00%	16,51%	14,66%	9,63%	0,00%	14,63%	0,00%	0,00%	12,02%
PAPERS											
Newspaper and Magazines	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Office Papers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Contaminated with fat	---	8,98%	5,50%	6,94%	7,69%	12,35%	13,58%	12,44%	15,21%	6,95%	6,25%
Other Papers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Cardboard Packaging	---	9,48%	6,75%	0,00%	5,29%	5,68%	4,69%	0,98%	3,49%	2,98%	2,88%
Mixed Paper	---	8,73%	7,50%	3,11%	0,00%	3,46%	8,40%	2,68%	3,74%	3,72%	0,96%
COMPOSITES											

Carnival Characterization Forres Park Landfill											
	Communities	Couva	Claxton Bay	Princes Town	Chaguanas	Couva	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Residential
	Route Number or Location	Couva	Claxton Bay	Princes Town	Chaguanas	Couva/Point Lisas	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
Large And Small Electrical Household Appliances	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment	---	0,00%	5,00%	0,00%	0,00%	0,00%	0,00%	0,00%	4,49%	0,00%	2,64%
Consumer equipment and Photovoltaic Panels	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Electrical and Eletronic Tools	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Medical Devices	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS											
Non-Beverage Container Recyclables (1 to 7)	---	0,00%	0,00%	1,67%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Plastic packaging	---	4,49%	0,50%	6,70%	9,62%	6,42%	5,43%	1,22%	12,22%	4,47%	3,37%
Mixed plastics	---	6,98%	8,50%	3,35%	3,85%	1,98%	1,48%	2,68%	0,75%	3,47%	5,77%
TEXTILES											
Packaging Textiles	---	14,96%	3,75%	1,91%	0,00%	6,91%	6,17%	4,15%	1,25%	6,70%	0,48%
SANITARY TEXTILES	---	3,24%	5,25%	4,31%	0,00%	6,42%	9,38%	8,05%	6,23%	4,22%	0,00%

Carnival Characterization Forres Park Landfill											
	Communities	Couva	Claxton Bay	Princes Town	Chaguanas	Couva	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Residential
	Route Number or Location	Couva	Claxton Bay	Princes Town	Chaguanas	Couva/Point Lisas	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
BEVERAGE CONTAINERS											
PET - Clear											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	4,74%	2,00%	3,59%	4,81%	2,22%	2,22%	1,22%	2,74%	2,98%	3,13%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	3,59%	3,13%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Blue											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival Characterization Forres Park Landfill											
	Communities	Couva	Claxton Bay	Princes Town	Chaguanas	Couva	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Residential
	Route Number or Location	Couva	Claxton Bay	Princes Town	Chaguanas	Couva/Point Lisas	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival Characterization Forres Park Landfill											
	Communities	Couva	Claxton Bay	Princes Town	Chaguanas	Couva	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Residential
	Route Number or Location	Couva	Claxton Bay	Princes Town	Chaguanas	Couva/Point Lisas	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK											
	.<= 250 ML	0,00%	0,00%	0,48%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Clear											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	4,20%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,98%	0,00%	2,23%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival Characterization Forres Park Landfill											
	Communities	Couva	Claxton Bay	Princes Town	Chaguanas	Couva	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Residential
	Route Number or Location	Couva	Claxton Bay	Princes Town	Chaguanas	Couva/Point Lisas	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
GLASS - Blue											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Green											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,73%	0,00%	0,50%	0,72%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,98%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS											

Carnival Characterization Forres Park Landfill											
	Communities	Couva	Claxton Bay	Princes Town	Chaguanas	Couva	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Residential
	Route Number or Location	Couva	Claxton Bay	Princes Town	Chaguanas	Couva/Point Lisas	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	1,68%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		7,98%	10,25%	5,50%	21,39%	10,86%	15,80%	22,44%	5,24%	16,13%	15,63%
GLASS											
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers	---	1,75%	0,00%	2,63%	0,00%	0,00%	0,00%	0,73%	0,00%	6,20%	0,00%
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METALS											
Tin/steel cans - Non Beverage	---	0,00%	0,00%	0,00%	5,29%	0,00%	0,00%	0,00%	0,00%	0,00%	7,93%
Aluminium cans - Non Beverage	---	0,00%	0,00%	0,24%	0,00%	0,25%	0,00%	0,73%	0,00%	1,74%	4,09%
Ferrous Metals	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival Characterization Forres Park Landfill											
	Communities	Couva	Claxton Bay	Princes Town	Chaguanas	Couva	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Commercial	Residential	Residential
	Route Number or Location	Couva	Claxton Bay	Princes Town	Chaguanas	Couva/Point Lisas	La Romain	San Fernando	San Fernando	Chaguanas	Chaguanas
Other Non ferrous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE											
Batteries	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	18,27%
Paint/Solvent/Fuel	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Used Oil	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/ Composite Household Hazardous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Healthcare Waste	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)	---	0,00%	1,75%	0,00%	0,00%	0,25%	0,74%	0,24%	0,00%	0,74%	1,68%

8.3.3 GUANAPO LANDFILL

Carnival characterization											
Guanapo Landfill											
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Mixed	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
ORGANIC FOOD											
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms	---	9,70%	10,54%	12,56%	13,83%	15,46%	9,48%	5,88%	16,01%	7,23%	3,75%
Garden Waste											
Grass/Leaves/Brush/Pruning	---	5,72%	10,54%	6,65%	7,65%	5,99%	4,24%	5,64%	0,00%	3,24%	8,75%
Branches and stumps	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	9,07%	0,00%	0,00%	7,50%
PAPERS											
Newspaper and Magazines	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	5,67%	0,00%	7,50%
Office Papers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	4,41%	0,00%	0,00%	0,00%
Contaminated with fat	---	6,97%	6,62%	6,65%	6,67%	3,74%	0,00%	0,00%	4,19%	3,74%	0,00%
Other Papers	---	0,00%	0,00%	0,00%	0,00%	1,25%	0,00%	7,60%	0,00%	0,00%	2,00%
Cardboard Packaging	---	7,96%	3,92%	11,08%	8,15%	5,24%	4,24%	8,09%	2,96%	2,49%	6,00%
Mixed Paper	---	2,24%	3,43%	3,45%	4,94%	1,75%	2,49%	6,86%	0,00%	3,99%	3,75%
COMPOSITES											
Large And Small Electrical Household Appliances	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization											
Guanapo Landfill		Communities	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Mixed	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
IT and Telecommunication equipment	---	2,74%	0,00%	0,00%	0,00%	4,74%	0,00%	0,00%	4,68%	5,49%	0,00%
Consumer equipment and Photovoltaic Panels	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Electrical and Eletronic Tools	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Medical Devices	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS											
Non-Beverage Container Recyclables (1 to 7)	---	0,00%	0,00%	2,22%	0,00%	1,75%	3,24%	0,25%	5,17%	5,74%	0,00%
Plastic packaging	---	7,71%	4,17%	11,08%	0,25%	8,73%	6,73%	6,13%	8,87%	10,72%	8,50%
Mixed plastics	---	1,24%	12,99%	6,65%	3,46%	2,99%	4,24%	7,35%	3,45%	4,24%	4,00%
TEXTILES											
Packaging Textiles	---	4,23%	7,84%	4,93%	13,58%	1,50%	9,98%	3,68%	3,69%	3,74%	4,25%
SANITARY TEXTILES											
	---	6,22%	2,45%	7,14%	4,44%	3,24%	4,99%	0,00%	0,00%	2,74%	0,00%
BEVERAGE CONTAINERS											
PET - Clear											
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization

Guanapo Landfill											
Communities		Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Mixed	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
	.> 250 ML until 700 ML	3,73%	5,39%	2,71%	3,70%	5,24%	9,73%	5,64%	10,34%	10,22%	5,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	1,74%	0,00%	3,45%	1,73%	0,00%	2,00%	2,70%	3,20%	3,74%	0,00%
	.> 2 L until 3.78 L	0,75%	0,00%	1,23%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Blue											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization

Guanapo Landfill											
Communities		Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Mixed	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Other Colors											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization

Guanapo Landfill		Communities	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Mixed	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK											
	.<= 250 ML	0,50%	0,00%	2,46%	0,00%	0,00%	0,50%	1,23%	0,25%	1,25%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,75%	0,00%	0,25%	0,00%	0,00%
	.> 700 ML until 1L	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Clear											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	2,24%	2,21%	2,71%	0,00%	3,24%	9,23%	3,92%	5,42%	3,74%	1,75%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	2,24%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Blue											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	3,74%	0,00%	0,00%	0,00%	0,00%
GLASS - Green											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization

Guanapo Landfill											
Communities		Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Mixed	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
	.> 250 ML until 700 ML	3,48%	3,19%	0,00%	2,22%	5,24%	3,74%	3,68%	4,68%	4,99%	3,75%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	2,99%	1,75%	2,21%	2,71%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	1,98%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	2,24%	3,74%	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS											
	.<= 250 ML	1,99%	0,00%	4,43%	0,00%	0,00%	2,74%	2,21%	0,49%	1,25%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS											
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,50%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization											
Guanapo Landfill		Communities	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Mixed	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
CONSTRUCTION AND DEMOLITION WASTE		12,69%	14,95%	5,91%	21,48%	11,72%	1,25%	9,07%	4,68%	9,23%	15,99%
GLASS											
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers	---	8,46%	8,09%	1,97%	3,21%	2,99%	4,49%	3,92%	4,43%	3,74%	2,80%
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METALS											
Tin/steel cans - Non Beverage	---	0,00%	0,00%	2,71%	2,72%	4,24%	0,00%	0,00%	3,20%	3,24%	3,75%
Aluminium cans - Non Beverage	---	9,20%	3,43%	0,00%	0,00%	2,49%	6,73%	0,49%	2,46%	3,74%	0,00%
Ferrous Metals	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	8,00%
Other Non ferrous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE											
Batteries	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,20%	0,00%	0,00%
Paint/Solvent/Fuel	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,25%
Used Oil	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/ Composite Household Hazardous	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Carnival characterization											
Guanapo Landfill		Communities	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Mixed	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Sangre Grande	Arima	La Horquetta	Arima	Arima	Arima	Arima	Arima	Arima
Healthcare Waste	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)	---	0,25%	0,25%	0,00%	0,00%	1,00%	0,00%	0,00%	0,00%	0,00%	0,75%

8.4 DRY CHARACTERIZATION

8.4.1 BEETHAM LANDFILL

Dry Season Characterization Beetham Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
ORGANIC FOOD																						
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms		7,98%	20,80%	24,26%	4,01%	15,96%	14,18%	23,02%	10,70%	10,81%	24,94%	12,00%	31,17%	19,25%	7,96%	17,00%	7,77%	30,25%	8,23%	17,41%	20,05%	20,00%
Garden Waste																						
Grass/Leaves/Brush/Pruning		12,72%	11,03%	18,32%	4,26%	8,23%	0,00%	11,88%	5,97%	21,13%	5,68%	16,00%	5,74%	12,75%	63,18%	21,25%	27,57%	6,75%	20,95%	13,68%	6,19%	0,00%
Branches and stumps		0,00%	0,00%	0,00%	5,51%	0,00%	0,00%	0,00%	0,00%	0,00%	5,19%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PAPERS																						
Newspaper and Magazines		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Office Papers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Contaminated with fat		8,23%	3,26%	7,92%	2,76%	0,00%	2,74%	5,20%	6,72%	8,11%	6,17%	5,75%	7,48%	2,00%	0,75%	1,00%	2,76%	7,00%	8,48%	5,97%	6,68%	6,75%

Dry Season Characterization Beetham Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
Other Papers		0,00%	3,26%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Cardboard Packaging		0,25%	2,76%	10,15%	4,51%	9,23%	2,49%	2,72%	0,75%	5,16%	4,94%	0,00%	8,48%	8,25%	0,25%	1,00%	2,01%	4,75%	8,23%	1,00%	1,73%	2,50%
Mixed Paper		11,72%	9,27%	3,22%	20,55%	14,46%	6,72%	8,66%	12,44%	6,39%	9,88%	2,75%	4,74%	8,50%	3,98%	8,75%	2,76%	2,50%	5,74%	5,22%	3,96%	6,00%
COMPOSITES																						
Large And Small Electrical Household Appliances		0,00%	0,00%	0,00%	4,01%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,50%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment		0,00%	1,50%	3,71%	2,26%	2,24%	5,47%	0,00%	0,00%	2,95%	2,72%	0,00%	0,00%	6,00%	0,00%	14,50%	1,75%	0,00%	0,00%	5,97%	3,71%	3,75%
Consumer equipment and Photovoltaic Panels		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,49%	0,00%	0,00%	0,00%	0,00%	0,00%	5,22%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Electrical and Electronic Tools		0,00%	0,00%	1,49%	0,00%	0,00%	0,00%	9,16%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Medical Devices		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS																						

Dry Season Characterization Beetham Landfill		Communities	Belmont	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin	
Non-Beverage Container Recyclables (1 to 7)		1,00%	1,50%	3,96%	0,75%	1,50%	0,00%	0,00%	1,00%	1,47%	0,00%	4,00%	2,00%	1,50%	1,99%	1,75%	8,27%	1,50%	2,74%	0,25%	4,70%	1,50%	
Plastic packaging		10,72%	17,29%	1,49%	11,53%	9,23%	10,20%	6,93%	8,21%	0,98%	9,88%	11,50%	8,73%	10,00%	2,99%	4,00%	6,27%	10,25%	3,99%	10,95%	9,41%	12,00%	
Mixed plastics		0,00%	0,00%	0,00%	2,01%	1,75%	2,74%	3,47%	2,74%	2,70%	2,22%	0,00%	2,00%	3,00%	1,74%	0,00%	3,01%	0,00%	2,24%	0,00%	3,22%	6,00%	
TEXTILES																							
Packaging Textiles		4,24%	8,02%	0,99%	1,00%	2,99%	11,69%	0,50%	4,98%	2,95%	4,20%	9,75%	1,00%	2,50%	2,24%	0,50%	7,02%	4,00%	4,49%	3,23%	1,98%	2,50%	
SANITARY TEXTILES		5,99%	5,51%	9,41%	2,76%	2,99%	8,71%	3,22%	5,97%	5,41%	1,98%	9,50%	6,23%	4,00%	2,99%	1,25%	2,76%	7,25%	3,99%	4,23%	4,21%	5,50%	
BEVERAGE CONTAINERS																							
PET - Clear		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	<= 250 ML	0,00%	1,50%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 250 ML until 700 ML	5,24%	0,00%	1,24%	3,76%	1,00%	7,46%	6,19%	5,72%	7,86%	3,95%	5,00%	1,50%	4,00%	1,24%	5,50%	4,76%	1,75%	4,49%	1,99%	7,92%	8,00%	
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,25%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 1L until 2L	0,00%	0,00%	0,00%	3,01%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,75%	0,00%	0,00%	2,00%	0,00%	0,00%	1,50%	

Dry Season Characterization Beetham Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	1,75%	0,00%	0,00%	0,00%	0,00%	1,97%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,76%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Blue																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Beetham Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Beetham Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Coloured																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Beetham Landfill																						
CATEGORI ES and SUB/CATE GORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commerti al	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguram as	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguram as	Diego Martin
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK																						
	.<= 250 ML	0,25%	0,25%	1,24%	0,50%	1,25%	1,00%	0,00%	1,24%	0,25%	1,73%	1,25%	0,00%	0,25%	0,25%	0,00%	0,75%	0,50%	0,25%	1,00%	0,50%	0,25%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Clear																						
	.<= 250 ML	2,00%	1,25%	0,99%	1,75%	0,00%	0,00%	2,23%	1,99%	1,72%	0,00%	0,00%	0,00%	1,00%	0,00%	1,25%	0,00%	0,00%	0,25%	0,00%	0,25%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	1,75%	2,74%	0,00%	0,00%	0,00%	2,72%	0,00%	1,00%	0,00%	0,75%	0,00%	0,00%	2,25%	0,00%	0,00%	0,00%	0,75%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Blue																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Beetham Landfill																						
CATEGORI ES and SUB/CATE GORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commerti al	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguram as	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguram as	Diego Martin
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	1,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Green																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,50%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,50%	0,00%	2,76%	3,24%	3,48%	1,98%	0,00%	3,19%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,25%	1,25%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown																						
	.<= 250 ML	1,25%	0,25%	2,48%	2,01%	0,00%	2,24%	3,22%	0,00%	2,70%	0,49%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	1,00%	0,50%	1,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Beetham Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS																						
	<= 250 ML	1,25%	0,25%	1,24%	4,51%	0,75%	1,49%	0,50%	0,00%	0,00%	0,25%	0,00%	0,25%	0,00%	0,75%	0,00%	0,25%	0,25%	0,50%	4,98%	1,98%	2,75%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	1,23%	1,50%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		20,95%	7,02%	0,00%	0,00%	9,48%	9,45%	6,19%	22,64%	13,51%	0,00%	7,25%	10,22%	12,00%	2,24%	14,00%	10,03%	11,25%	11,97%	13,43%	17,57%	12,00%
GLASS																						

Dry Season Characterization Beetham Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers		2,74%	4,01%	4,70%	3,51%	4,99%	3,48%	1,73%	1,74%	0,49%	3,46%	5,75%	2,99%	4,50%	0,00%	3,00%	2,76%	5,50%	8,23%	4,48%	2,48%	4,50%
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METALS																						
Tin/steel cans - Non Beverage		3,49%	0,00%	3,22%	3,01%	3,24%	3,73%	2,97%	0,00%	0,00%	5,19%	2,75%	3,24%	0,00%	0,00%	0,75%	1,00%	1,50%	0,00%	0,00%	0,00%	0,00%
Aluminium cans - Non Beverage		0,00%	0,50%	0,00%	2,51%	5,74%	0,00%	0,00%	0,75%	0,00%	1,48%	5,00%	3,24%	0,50%	0,25%	0,25%	3,26%	0,25%	2,49%	4,98%	2,97%	2,50%
Ferrous Metals		0,00%	0,00%	0,00%	0,50%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Other Non ferrous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/ Bi-Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE																						
Batteries		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Beetham Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential
	Route Number or Location	Port of Spain	Diego Martin	Diego Martin	Tunapuna	Port of Spain	Tunapuna	Chaguramas	San Juan	St. Anns	San Juan	San Juan	Valsayn	Curepe	St. Joseph	Curepe	Valsayn	Port of Spain	St. Anns	Maracas St. Joseph	Chaguramas	Diego Martin
Paint/Solvent/Fuel		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Used Oil		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/ Composite Household Hazardous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Healthcare Waste		0,00%	0,00%	0,00%	2,51%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)		0,00%	0,25%	0,00%	2,01%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,25%	0,00%	0,25%

8.4.2 FORREST PARK LANDFILL

Dry Season Characterization Forres Park Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial
	Route Number or Location	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o
ORGANIC FOOD																						
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms	---	21,45%	21,00%	21,70%	45,66%	13,00%	15,38%	23,00%	19,20%	22,44%	17,87%	20,75%	20,20%	17,91%	19,25%	22,25%	21,20%	10,20%	13,47%	9,23%	17,25%	19,50%
Garden Waste	---																					
Grass/Leaves/Brush/Pruning	---	6,73%	12,75%	16,21%	15,88%	18,00%	11,66%	18,50%	0,00%	7,73%	7,94%	14,25%	4,74%	14,93%	10,75%	12,75%	0,00%	11,19%	0,00%	11,72%	6,25%	0,00%
Branches and stumps	---	0,00%	0,00%	0,00%	0,00%	6,75%	4,96%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	7,75%	0,00%	0,00%	8,73%	0,00%	0,00%	3,75%
PAPERS	---																					
Newspaper and Magazines	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	7,00%
Office Papers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Contaminated with fat	---	4,24%	8,00%	7,98%	5,71%	7,00%	0,00%	3,75%	0,00%	5,49%	5,71%	5,50%	11,22%	3,48%	7,00%	8,75%	4,24%	1,24%	7,23%	8,48%	7,50%	5,50%
Other Papers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Forres Park Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Gasparillo	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguanas	Penal	San Fernando	La Romain	San Fernando	Penal	La Brea	Chaguanas	Couva	La Romain	Chaguanas	Marabella	Marabella	Claxton Bay	Gasparillo
Cardboard Packaging	---	1,25%	4,25%	1,50%	4,22%	5,50%	11,17%	6,75%	1,75%	3,49%	8,19%	10,00%	3,74%	3,98%	0,00%	0,00%	7,98%	8,71%	9,98%	7,23%	2,75%	3,75%
Mixed Paper	---	6,48%	6,50%	4,99%	2,73%	6,25%	7,94%	3,00%	4,24%	0,50%	6,70%	5,25%	13,97%	2,74%	7,00%	2,75%	13,22%	9,45%	13,72%	2,00%	8,25%	7,25%
COMPOSITES	---																					
Large And Small Electrical Household Appliances	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,50%	0,00%	4,48%	0,00%	4,99%	0,00%	2,75%
Consumer equipment and Photovoltaic Panels	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Electrical and Electronic Tools	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Medical Devices	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers	---	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS																						

Dry Season Characterization Forres Park Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Gasparillo	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguanas	Penal	San Fernando	La Romain	San Fernando	Penal	La Brea	Chaguanas	Couva	La Romain	Chaguanas	Marabella	Marabella	Claxton Bay	Gasparillo
Non-Beverage Container Recyclables (1 to 7)	---	0,75%	0,00%	4,24%	1,99%	2,50%	1,24%	1,75%	0,00%	2,99%	5,21%	0,50%	1,75%	1,74%	5,00%	0,00%	2,74%	3,73%	0,00%	2,74%	3,50%	1,25%
Plastic packaging	---	9,98%	16,25%	7,48%	9,43%	7,25%	11,41%	4,00%	11,22%	7,73%	14,64%	4,75%	10,47%	10,20%	4,50%	4,25%	5,99%	4,23%	12,22%	9,48%	13,25%	6,75%
Mixed plastics	---	0,75%	1,50%	4,24%	0,50%	3,25%	0,99%	0,00%	5,49%	4,74%	5,71%	4,75%	2,74%	4,98%	0,00%	3,00%	2,74%	3,73%	3,49%	3,74%	6,50%	3,75%
TEXTILES																						
Packaging Textiles	---	2,74%	7,75%	7,73%	1,74%	8,50%	2,73%	3,25%	1,75%	17,96%	6,95%	2,75%	2,74%	7,71%	3,75%	0,75%	1,75%	13,93%	9,23%	6,48%	3,75%	2,75%
SANITARY TEXTILES	---	16,96%	4,00%	8,23%	2,23%	3,75%	3,97%	5,00%	7,73%	2,24%	1,49%	1,00%	1,25%	5,22%	9,75%	1,75%	6,23%	3,48%	0,00%	0,00%	3,25%	5,75%
BEVERAGE CONTAINERS																						
PET - Clear																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	3,24%	3,25%	2,24%	4,22%	7,00%	4,22%	2,75%	5,49%	7,98%	7,94%	2,25%	8,23%	3,48%	7,50%	5,25%	4,74%	3,23%	2,74%	5,74%	3,25%	4,50%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	1,49%	0,00%	2,49%	0,00%	0,74%	0,00%	1,75%	1,99%	2,50%	1,50%	1,75%	0,00%	0,00%	2,00%	0,00%	2,50%

Consulting Services for a Waste Characterization Study in Trinidad & Tobago

DF - Waste Characterization and Control Study Report - Final Report

Dry Season Characterization Forres Park Landfill																						
	Communit ies	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial
	Route Number or Location	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,25%	0,00%	0,00%	0,00%	0,50%	0,00%	0,00%	0,00%	0,00%	0,00%	1,75%	0,00%	0,00%	2,00%
PET - Blue																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%



Consulting Services for a Waste Characterization Study in Trinidad & Tobago

DF - Waste Characterization and Control Study Report - Final Report

Dry Season Characterization Forres Park Landfill																						
	Communit ies	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial
	Route Number or Location	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Forres Park Landfill																							
	Communit ies	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o	
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	
	Route Number or Location	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o	
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
HDPE - Natural																							
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
HDPE - Coloured																							
	<= 250 ML	0,00%	0,75%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	

Consulting Services for a Waste Characterization Study in Trinidad & Tobago

DF - Waste Characterization and Control Study Report - Final Report

Dry Season Characterization Forres Park Landfill																							
	Communit ies	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o	
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	
	Route Number or Location	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o	
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
TETRA PACK																							
	<= 250 ML	2,00%	0,00%	0,00%	0,99%	1,75%	0,99%	0,00%	1,75%	1,25%	1,24%	0,00%	1,75%	1,49%	1,75%	0,00%	1,75%	1,24%	0,00%	1,25%	0,00%	1,75%	
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	
GLASS - Clear																							
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	1,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,24%	2,49%	1,25%	0,00%	0,00%	1,75%	
	> 250 ML until 700 ML	1,00%	2,75%	0,00%	0,00%	0,00%	0,00%	1,50%	2,99%	0,00%	2,23%	1,75%	1,25%	1,24%	0,00%	3,00%	2,99%	0,00%	1,75%	2,24%	2,75%	0,00%	



Consulting Services for a Waste Characterization Study in Trinidad & Tobago

DF - Waste Characterization and Control Study Report - Final Report

Dry Season Characterization Forres Park Landfill																						
	Communit ies	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial
	Route Number or Location	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,25%	0,00%
GLASS - Blue																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,74%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,00%	0,00%	0,00%	0,00%	2,75%	0,00%
GLASS - Green																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	1,25%	0,00%	0,00%	0,00%	1,75%	0,00%	0,00%	2,49%	0,00%	0,00%	0,00%	1,50%	3,98%	3,50%	2,00%	2,24%	3,23%	3,24%	5,99%	2,25%	2,75%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,50%	0,00%	0,00%	1,75%	0,00%	2,73%	2,25%	0,00%	0,00%	0,00%	0,00%	2,00%	1,99%	0,00%	0,00%	1,75%	2,25%

Dry Season Characterization Forres Park Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Gasparillo	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguanas	Penal	San Fernando	La Romain	San Fernando	Penal	La Brea	Chaguanas	Couva	La Romain	Chaguanas	Marabella	Marabella	Claxton Bay	Gasparillo
	> 250 ML until 700 ML	1,25%	0,00%	0,00%	0,00%	0,00%	1,74%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,74%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,73%	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS																						
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,75%	1,25%	0,25%	0,75%	0,50%	0,25%	2,00%	2,25%	1,00%	0,00%	0,00%	1,50%	6,00%	1,25%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS																						

Waste Characterization and Control Study Report - Final Report																							
Dry Season Characterization Forres Park Landfill		Communit ies	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial
	Route Number or Location	Gasparill o	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguan as	Penal	San Fernand o	La Romain	San Fernand o	Penal	La Brea	Chaguan as	Couva	La Romain	Chaguan as	Marabel la	Marabel la	Claxton Bay	Gasparill o	
	<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		16,71%	8,75%	10,22%	0,00%	0,00%	12,90%	19,50%	0,00%	9,48%	0,00%	16,75%	0,00%	11,69%	10,25%	16,00%	9,23%	6,22%	7,98%	9,73%	5,50%	5,25%	
GLASS																							
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers		2,99%	0,00%	0,00%	3,97%	0,50%	3,72%	2,25%	2,49%	1,50%	1,49%	3,25%	2,00%	2,74%	4,25%	3,25%	3,24%	1,49%	3,24%	2,24%	0,00%	2,75%	
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METALS																							
Tin/steel cans - Non Beverage		0,00%	2,00%	3,24%	0,74%	1,25%	2,23%	0,00%	0,25%	0,00%	2,73%	3,25%	2,00%	0,00%	1,25%	0,00%	0,50%	0,00%	0,00%	0,00%	0,00%	0,00%	3,25%

Consulting Services for a Waste Characterization Study in Trinidad & Tobago

05 Waste Characterization and Control Study Report – Final Report

Dry Season Characterization Forres Park Landfill																						
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Gasparillo	Claxton Bay	Couva	Princes Town	La Brea	Princes Town	Chaguanas	Penal	San Fernando	La Romain	San Fernando	Penal	La Brea	Chaguanas	Couva	La Romain	Chaguanas	Marabella	Marabella	Claxton Bay	Gasparillo
Aluminium cans - Non Beverage		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,50%	0,00%	3,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Ferrous Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	4,49%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Other Non ferrous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	5,74%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite /Bi-Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE																						
Batteries		0,00%	0,00%	0,00%	0,00%	5,00%	0,00%	0,00%	7,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Paint/Solvent/Fuel		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	5,74%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Used Oil		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	7,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/ Composite Household Hazardous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Healthcare Waste		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
BULKY WASTE																						
THIN ELEMENTS (<20mm)		0,25%	0,50%	0,00%	0,00%	0,50%	0,00%	0,25%	0,00%	0,00%	0,25%	0,25%	0,00%	0,25%	0,00%	0,25%	0,25%	0,25%	0,00%	0,50%	0,25%	0,25%

8.4.3 GUANAPO LANDFILL

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St. Anthony Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
ORGANIC FOOD																						
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms		9,93%	19,50%	15,92%	12,22%	14,85%	31,50%	15,59%	0,00%	22,64%	13,25%	11,47%	12,00%	26,75%	20,15%	12,94%	9,70%	16,25%	13,97%	17,62%	14,93%	7,25%
Garden Waste																						
Grass/Leaves/Brush/Pruning		2,73%	11,75%	11,19%	8,73%	3,47%	6,75%	8,42%	16,67%	9,95%	23,25%	7,73%	0,00%	2,75%	0,00%	4,73%	9,20%	0,00%	22,19%	0,00%	7,21%	0,00%
Branches and stumps		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	6,22%	0,00%	0,00%	0,00%	7,75%	6,25%	0,00%	6,22%	4,98%	15,50%	0,00%	11,17%	0,00%	0,00%
PAPERS																						
Newspaper and Magazines		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	5,72%	0,00%
Office Papers		4,71%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Contaminated with fat		3,23%	6,50%	3,23%	4,24%	7,67%	9,00%	8,42%	2,74%	10,95%	4,50%	10,97%	8,00%	5,75%	6,97%	4,73%	9,45%	17,75%	11,47%	4,47%	11,19%	14,00%
Other Papers		0,00%	0,00%	12,44%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St. Anthony Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
Cardboard Packaging		5,21%	1,50%	5,22%	4,24%	8,42%	1,50%	7,18%	0,00%	0,75%	1,50%	7,73%	4,75%	1,25%	18,91%	2,49%	4,98%	1,75%	5,49%	1,74%	5,22%	5,00%
Mixed Paper		2,98%	2,00%	2,24%	4,99%	4,95%	0,00%	6,93%	0,00%	3,73%	4,25%	5,49%	3,75%	4,25%	7,21%	1,99%	2,24%	3,00%	3,74%	3,23%	3,73%	4,50%
COMPOSITES																						
Large And Small Electrical Household Appliances		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	9,70%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
IT and Telecommunication equipment		2,23%	0,00%	1,00%	0,00%	2,48%	0,00%	1,73%	0,00%	0,00%	4,75%	0,00%	0,00%	2,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Consumer equipment and Photovoltaic Panels		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lighting Equipment		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	9,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Electrical and Electronic Tools		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,73%	0,00%	0,00%	0,00%	0,00%	1,25%	0,00%	0,00%	0,00%	5,50%	0,00%	0,00%	0,00%	0,00%
Medical Devices		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Monitoring and Control Instruments		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Automatic Dispensers		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PLASTICS																						

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St anta Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
Non-Beverage Container Recyclables (1 to 7)		4,47%	4,25%	0,00%	4,74%	2,23%	0,00%	0,00%	0,00%	6,72%	4,25%	3,74%	1,50%	2,50%	1,74%	4,73%	0,75%	0,00%	3,74%	3,47%	3,73%	7,00%
Plastic packaging		8,19%	4,75%	11,19%	14,21%	10,15%	10,25%	12,13%	2,24%	10,95%	3,25%	14,21%	12,50%	15,00%	10,70%	7,96%	9,45%	2,50%	2,49%	14,14%	12,44%	10,50%
Mixed plastics		4,47%	3,50%	2,49%	2,99%	1,98%	3,00%	0,00%	0,00%	3,23%	0,75%	3,24%	0,00%	2,25%	3,73%	5,47%	1,99%	0,00%	2,74%	5,71%	4,23%	6,00%
TEXTILES																						
Packaging Textiles		3,47%	7,25%	10,70%	5,24%	4,21%	0,00%	3,22%	8,71%	0,00%	0,00%	5,24%	14,50%	0,00%	0,00%	9,70%	0,00%	7,25%	4,24%	5,46%	6,22%	0,00%
SANITARY TEXTILES		2,73%	4,00%	0,00%	5,74%	0,00%	13,50%	12,13%	0,00%	3,23%	6,25%	1,75%	0,00%	6,00%	0,00%	0,00%	0,00%	0,00%	3,49%	6,20%	3,48%	7,75%
BEVERAGE CONTAINERS																						
PET - Clear																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	4,96%	5,00%	4,23%	4,24%	10,89%	5,25%	5,94%	12,44%	4,23%	4,00%	5,24%	9,00%	2,75%	8,46%	7,71%	4,98%	1,75%	2,00%	2,23%	7,21%	2,00%
	.> 700 ML until 1L	2,23%	0,00%	0,00%	0,00%	1,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	4,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	3,23%	0,00%	0,00%	0,00%	1,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,75%	0,00%	0,00%	2,24%	4,98%	0,00%	0,00%	2,48%	0,00%	2,25%

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St anta Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
	.> 2 L until 3.78 L	0,00%	0,00%	1,49%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,99%	1,99%	0,00%	0,00%	0,00%	1,49%	0,00%
PET - Blue																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Green																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St anta Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
PET - Black																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St. Anthony Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HDPE - Natural																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St anta Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
HDPE - Coloured																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
TETRA PACK																						
	.<= 250 ML	1,24%	0,00%	0,00%	0,00%	1,49%	0,00%	0,00%	0,00%	0,00%	1,50%	0,00%	1,75%	2,25%	1,74%	0,00%	1,74%	0,00%	0,00%	1,49%	1,74%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	1,98%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Clear																						

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St anta Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	1,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1,74%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	3,72%	2,25%	2,24%	3,24%	2,23%	4,00%	1,24%	0,00%	0,00%	0,00%	5,74%	3,50%	1,25%	2,99%	0,00%	3,73%	0,00%	0,00%	3,97%	0,00%	11,00%
	.> 700 ML until 1L	5,46%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	5,47%	0,00%	0,00%	0,00%	0,00%	3,25%
GLASS - Blue																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,49%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Green																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	2,23%	3,75%	3,23%	2,24%	2,72%	0,00%	2,23%	0,00%	0,00%	0,00%	2,24%	0,00%	0,00%	3,73%	0,00%	1,74%	0,00%	3,74%	3,72%	0,00%	3,00%

Dry Season Characterization Guanapo Landfill	Commu nities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapun a	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapun a	Valencia	Wallerfie ld	Wallerfie ld	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Commer tial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial
	Route Number or Location	Arima	Arouca	Arouca	Arima/St anta Rosa	Sangre Grande	Arima	Talparo	Tunapun a	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapun a	Valencia	Wallerfie ld	Wallerfie ld	Valencia	Arima	Arima	Arima
	.> 700 ML until 1L	0,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Brown																						
	.<= 250 ML	0,50%	0,00%	0,00%	0,00%	1,24%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,50%	0,00%	3,48%	0,00%	2,24%	0,00%	0,00%	2,48%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	1,99%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,99%	0,00%	0,00%	0,00%	0,00%	0,00%
GLASS - Other Colors																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ALUMINIUM CANS																						
	.<= 250 ML	2,23%	0,00%	0,00%	0,00%	1,49%	0,00%	0,00%	0,00%	1,49%	0,00%	2,00%	1,25%	0,00%	0,00%	4,98%	0,75%	0,00%	0,00%	5,21%	0,75%	1,00%

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St. Anthony Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
METAL CANS																						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
CONSTRUCTION AND DEMOLITION WASTE		0,00%	13,75%	3,73%	10,22%	0,00%	10,25%	9,65%	20,65%	16,17%	16,25%	10,72%	0,00%	10,00%	0,00%	16,92%	9,70%	19,75%	17,46%	0,00%	0,00%	0,00%
GLASS																						
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers		3,23%	2,75%	2,99%	7,23%	3,96%	2,00%	1,49%	7,21%	5,97%	3,25%	1,50%	2,25%	3,75%	3,73%	0,25%	1,74%	1,50%	2,74%	2,73%	4,98%	3,00%
Other non-recyclable glass e.g., flat,		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Guanapo Landfill	Communities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Arima	Arouca	Arouca	Arima/St. Anthony Rosa	Sangre Grande	Arima	Talparo	Tunapuna	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapuna	Valencia	Wallerfield	Wallerfield	Valencia	Arima	Arima	Arima
pressed and blown glass materials, mirrors, light bulbs etc.																						
METALS																						
Tin/steel cans - Non Beverage		6,70%	0,00%	0,00%	0,00%	4,70%	0,00%	0,00%	3,23%	0,00%	4,75%	1,00%	1,75%	0,00%	0,00%	4,73%	1,00%	0,00%	0,00%	0,00%	3,23%	2,25%
Aluminium cans - Non Beverage		5,21%	7,25%	1,49%	5,49%	2,97%	3,00%	2,72%	0,00%	0,00%	0,00%	0,00%	1,75%	0,00%	0,00%	0,25%	1,49%	0,50%	0,25%	2,48%	2,49%	3,25%
Ferrous Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	3,73%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	4,25%	0,00%	0,00%	0,00%	0,00%
Other Non ferrous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
White Waste		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/composite/Bi-Metals		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
HAZARDOUS WASTE																						
Batteries		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	2,74%	0,00%	0,00%	0,00%	0,00%	3,50%	0,00%	0,00%	0,00%	2,25%	0,00%	0,00%	0,00%	6,00%
Paint/Solvent/Fuel		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Used Oil		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Remainder/Composite Household Hazardous		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%

Dry Season Characterization Guanapo Landfill	Commu nities	Arima	Arouca	Arouca	Arima	Sangre Grande	Arima	Talparo	Tunapun a	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapun a	Valencia	Wallerfie ld	Wallerfie ld	Valencia	Arima	Arima	Arima
CATEGORIES and SUB/CATEGORIES	Type of Load	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Commer tial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial	Resident ial
	Route Number or Location	Arima	Arouca	Arouca	Arima/St anta Rosa	Sangre Grande	Arima	Talparo	Tunapun a	Talparo	Sangre Grande	Arima	Mayaro	Mayaro	Tunapun a	Valencia	Wallerfie ld	Wallerfie ld	Valencia	Arima	Arima	Arima
Healthcare Waste		4,47%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	4,25%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,75%
BULKY WASTE		0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
THIN ELEMENTS (<20mm)		0,00%	0,25%	2,99%	0,00%	1,24%	0,00%	0,74%	0,00%	0,00%	0,00%	0,00%	0,50%	0,25%	0,00%	0,00%	0,25%	0,50%	0,25%	0,00%	0,00%	0,25%

8.4.4 GUAPO LANDFILL

Dry Season Characterization Guapo Landfill		Communities	Siparia	Point Fortin	Point Fortin	Siparia
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	Residential
	Route Number or Location	Siparia	Point Fortin	Point Fortin	Point Fortin	Siparia
ORGANIC FOOD						
Compostable food, Non-Compostable Food, Manures large quantities from domestic farms		17,82%	8,71%	31,16%		16,75%
Garden Waste						
Grass/Leaves/Brush/Pruning		14,85%	9,95%	4,52%		17,50%
Branches and stumps		0,00%	0,00%	0,00%		0,00%
PAPERS						
Newspaper and Magazines		0,00%	0,00%	0,00%		0,00%
Office Papers		0,00%	0,00%	0,00%		0,00%
Contaminated with fat		3,47%	9,20%	13,82%		11,00%
Other Papers		0,00%	0,00%	0,00%		0,00%
Cardboard Packaging		3,96%	4,98%	8,79%		2,75%
Mixed Paper		2,72%	8,96%	3,52%		4,25%
COMPOSITES						
Large And Small Electrical Household Appliances		0,00%	0,00%	0,00%		0,00%

Dry Season Characterization Guapo Landfill		Communities	Siparia	Point Fortin	Point Fortin	Siparia
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	
	Route Number or Location	Siparia	Point Fortin	Point Fortin	Siparia	
IT and Telecommunication equipment		0,00%	1,99%	0,00%	0,00%	
Consumer equipment and Photovoltaic Panels		0,00%	0,00%	0,00%	0,00%	
Lighting Equipment		0,00%	0,00%	0,00%	0,00%	
Electrical and Eletronic Tools		0,00%	0,00%	0,00%	0,00%	
Medical Devices		0,00%	0,00%	0,00%	0,00%	
Monitoring and Control Instruments		0,00%	0,00%	0,00%	0,00%	
Automatic Dispensers		0,00%	0,00%	0,00%	0,00%	
PLASTICS						
Non-Beverage Container Recyclables (1 to 7)		1,73%	2,49%	0,25%	0,00%	
Plastic packaging		10,15%	10,70%	5,53%	13,25%	
Mixed plastics		5,20%	5,22%	2,51%	3,25%	
TEXTILES						
Packaging Textiles		7,67%	5,72%	4,02%	6,75%	
SANITARY TEXTILES		5,20%	2,74%	2,01%	3,75%	
BEVERAGE CONTAINERS						
PET - Clear						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	

Dry Season Characterization Guapo Landfill		Communities	Siparia	Point Fortin	Point Fortin	Siparia
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	
	Route Number or Location	Siparia	Point Fortin	Point Fortin	Siparia	
	.> 250 ML until 700 ML	3,47%	4,73%	2,76%	3,50%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
	.> 1L until 2L	0,00%	1,74%	0,00%	0,00%	
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	
PET - Blue						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	
PET - Green						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	
PET - Black						

Dry Season Characterization Guapo Landfill		Communities	Siparia	Point Fortin	Point Fortin	Siparia
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	
	Route Number or Location	Siparia	Point Fortin	Point Fortin	Siparia	
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	
PET - Other colours						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	
HDPE - Natural						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	

Dry Season Characterization Guapo Landfill		Communities	Siparia	Point Fortin	Point Fortin	Siparia
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	
	Route Number or Location	Siparia	Point Fortin	Point Fortin	Siparia	
HDPE - Coloured						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
	.> 1L until 2L	0,00%	0,00%	0,00%	0,00%	
	.> 2 L until 3.78 L	0,00%	0,00%	0,00%	0,00%	
TETRA PACK						
	.<= 250 ML	1,49%	1,24%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
GLASS - Clear						
	.<= 250 ML	0,00%	1,24%	0,00%	0,75%	
	.> 250 ML until 700 ML	1,24%	2,49%	1,76%	2,75%	
	.> 700 ML until 1L	0,00%	0,00%	3,77%	0,00%	
GLASS - Blue						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	

Dry Season Characterization Guapo Landfill		Communities	Siparia	Point Fortin	Point Fortin	Siparia
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	
	Route Number or Location	Siparia	Point Fortin	Point Fortin	Siparia	
	.> 700 ML until 1L	0,00%	0,00%	2,76%	0,00%	
GLASS - Green						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	3,96%	0,00%	2,26%	1,75%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
GLASS - Brown						
	.<= 250 ML	0,00%	1,74%	1,26%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
GLASS - Other Colors						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
ALUMINIUM CANS						
	.<= 250 ML	0,25%	0,75%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	

Dry Season Characterization Guapo Landfill		Communities	Siparia	Point Fortin	Point Fortin	Siparia
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	
	Route Number or Location	Siparia	Point Fortin	Point Fortin	Siparia	
METAL CANS						
	.<= 250 ML	0,00%	0,00%	0,00%	0,00%	
	.> 250 ML until 700 ML	0,00%	0,00%	0,00%	0,00%	
	.> 700 ML until 1L	0,00%	0,00%	0,00%	0,00%	
CONSTRUCTION AND DEMOLITION WASTE		14,11%	9,95%	6,28%	5,75%	
GLASS						
Non-beverage Container Clear and Coloured (green, brown, other) recyclable glass bottles and containers		2,72%	2,74%	0,00%	2,50%	
Other non-recyclable glass e.g., flat, pressed and blown glass materials, mirrors, light bulbs etc.		0,00%	0,00%	0,00%	0,00%	
METALS						
Tin/steel cans - Non Beverage		0,00%	0,00%	0,00%	0,00%	
Aluminium cans - Non Beverage		0,00%	0,00%	3,02%	3,50%	
Ferrous Metals		0,00%	2,74%	0,00%	0,00%	
Other Non ferrous		0,00%	0,00%	0,00%	0,00%	
White Waste		0,00%	0,00%	0,00%	0,00%	
Remainder/composite/Bi-Metals		0,00%	0,00%	0,00%	0,00%	
HAZARDOUS WASTE						

Dry Season Characterization Guapo Landfill		Communities	Siparia	Point Fortin	Point Fortin	Siparia
CATEGORIES and SUB/CATEGORIES	Type of Load	Residential	Residential	Residential	Residential	
	Route Number or Location	Siparia	Point Fortin	Point Fortin	Siparia	
Batteries		0,00%	0,00%	0,00%	0,00%	
Paint/Solvent/Fuel		0,00%	0,00%	0,00%	0,00%	
Used Oil		0,00%	0,00%	0,00%	0,00%	
Remainder/ Composite Household Hazardous		0,00%	0,00%	0,00%	0,00%	
Healthcare Waste		0,00%	0,00%	0,00%	0,00%	
BULKY WASTE		0,00%	0,00%	0,00%	0,00%	
THIN ELEMENTS (<20mm)		0,00%	0,00%	0,00%	0,25%	



SWMCOL

Regarding the Chemical Characterization results, 17 samples were performed - 8 in the wet season and 9 in the dry season. Most of them were samples of residues with home origin.

Landfill	Communitie	Code of the sample	Bulletin Code sample	Weight of the sample	
Beetham	St. Anns	SB1	SB1	3 kg	Wet Season
Beetham	Tunapuna	SB2	SB2	3 kg	
Beetham	Valsayn/Curepe	SB3	SB3	3 kg	
Guanapo	Arima	SG1	SG1	3 kg	
Guanapo	Sangre Grande	SG2	SG2	3 kg	
Forres Park	Penal	SFP1	SFP1	3 kg	
Forres Park	San Fernando	SFP2	SFP2	3 kg	
Guapo	Point Fortin	SGUAPO (ANNEX VII 817319535642)	SGUAPO (ANNEX VII 817319535642)	3 kg	
Guanapo	Arima	SG1	Waste Sample 1	3 kg	Dry Season
Guanapo	Arouca	SG2	Waste Sample 2	3 kg	
Beetham	POS	SB1	Waste Sample 3	3 kg	
Beetham	St. Anns	SB2	Waste Sample 4	3 kg	
Beetham	Maracas, St. Joseph	SB3	Waste Sample 5	3 kg	
Forres Park	Claxton Bay	SFP1	Waste Sample 6	3 kg	
Forres Park	Gasparillo	SFP2	Waste Sample 7	3 kg	
Guapo	Point Fortin	Sguapo1	Waste Sample 8	3 kg	
Guapo	Point Fortin	Sguapo2	Waste Sample 9	3 kg	

Table 16 – Identification and number of chemically characterized samples

Analytical results for all samples (Wet and Dry Seasons) are shown in the following table.

Chemical Analysis

COMPONENT	Units	Wet Season									Dry Season								
		Landfill	Beetham	Beetham	Beetham	Guanapo	Guanapo	Forres Park	Forres Park	Guapo	Beetham	Beetham	Beetham	Guanapo	Guanapo	Forres Park	Forres Park	Guapo	Guapo
		Municipality	St. Anns	Tunapuna	Valsayn/Curepe	Arima	Sangre Grande	Penal	San Fernando	Point Fortin	POS	Tunapuna	Valsayn/Curepe	Arima	Sangre Grande	Penal	San Fernando	Point Fortin	Point Fortin
		Load type	Residential	Residential	Commercial	Commercial	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential
		Method	SB1	SB2	SB3	SG1	SG2	SFP1	SFP2	SGUAPO	SB1	SB2	SB3	SG1	SG2	SFP1	SFP2	SGUAPO1	SGUAPO2
Moisture (105°C)	%	Gravimetry	11,1	28,1	23,9	16,2	59,6	25,3	36,7	24,3	31,4	38,9	28,5	24,8	48,8	37,1	32,8	21,3	32,9
Ash (815°C)	%(db)	Gravimetry	6,6	6,5	5,5	6,2	7,7	6,2	8,4	5,2	4,9	6	6,4	3,2	7,5	9,8	8	2,2	6,8
Volatile solids	%(db)	Gravimetry	77,7	72,6	78,3	80,8	43,8	85,1	78,4	85,3	79,2	72,1	81,2	82,7	56,6	69,3	75,3	83,1	76,1
Total solids	%	Gravimetry	88,9	71,9	76,1	83,8	40,4	74,7	63,3	75,7	68,6	61,1	71,5	75,2	51,2	62,9	67,2	78,7	67,1
Gross calorific value	MJ/kg (db)	Calorimetry - isoperibol pump	23,85	18,67	20,15	23,94	22,32	26,13	19,87	21,36	26,45	29,72	24,22	30,05	25,17	19,25	24,96	31,39	21,05
Arsenic (As)	mg/kg (db)	DIN EN ISO 17294-2	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8
Lead (Pb)	mg/kg (db)	DIN EN ISO 17294-2	<2	15,0	3,0	7,0	19,0	5,0	<2	<2	<2	2,0	12,0	<2	2,0	8,0	3,0	3,0	3,0
Cadmium (Cd)	mg/kg (db)	DIN EN ISO 17294-2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	0,5	<0,2	<0,2	<0,2	<0,2
Chromium (Cr)	mg/kg (db)	DIN EN ISO 17294-2	348	17	35	49	296	11	15	20	12	11	41	5	4490	19	10	51	12

Copper (Cu)	mg/kg (db)	DIN EN ISO 17294-2	15	26	13	24	17	14	8	12	26	47	13	14	119	126	15	19	39
Nickel (Ni)	mg/kg (db)	DIN EN ISO 17294-2	182	8	4	27	135	6	9	8	7	5	17	2	1980	8	4	85	8
Mercury (Hg)	mg/kg (db)	DIN EN ISO 12846	<0,05	0,06	<0,05	<0,07	<0,07	<0,07	<0,07	<0,07	<0,07	<0,07	0,09	<0,07	<0,07	<0,07	<0,07	<0,07	<0,07
Zinc (Zn)	mg/kg (db)	DIN EN ISO 17294-2	616	87	45	148	114	27	38	40	58	22	42	305	44	42	30	26	26
Carbon	% (w/w)(db)	DIN EN 15407:2011-05	58,2	47,3	56,4	57	52	53	53	59	65	60	56	66	58	54	61	54	52
pH	% (w/w)(db)	DIN EN 15407:2011-05	6,64	6,25	6,72	7,5	7,1	7,4	6,9	8,1	6,7	9,2	7,8	7,5	6,6	8,2	7,5	6,5	6,9
Total nitrogen	% (w/w)(db)	DIN EN 15407:2011-05	0,96	0,37	1,31	0,95	0,38	0,42	0,99	0,55	0,25	0,43	0,63	0,28	0,62	1,23	0,75	1,34	0,55
Sulphur (S) Total	% (w/w)(db)	DIN EN 15408:2011-05	0,172	0,112	0,085	0,084	0,121	0,065	0,103	0,070	0,069	0,067	0,215	0,032	0,069	0,155	0,103	0,115	0,068
TOC (total organic carbon)	% (w/w)(db)	DIN EN 15936:2012-11	58,1	47,1	56,2	57	52	53	52	59	65	60	56	65	58	54	61	54	52

Db=Dry basis

Table 17 – Waste chemical composition

9 ANALYSIS OF THE RESULTS OF THE PHYSICAL AND CHEMICAL CHARACTERIZATION

The results achieved in each characterization exercise, allow to make analysis about:

- The percentage of the Recyclable waste;
- The waste composition of each communities;
- The distribution by type of beverage containers;
- Annual production of each waste stream in each landfill;
- The waste composition of the waste produced in Trinidad;
- Chemical composition of waste in each landfill

It is therefore a useful source of information to design support for the entities responsible for waste and landfill management in Trinidad, namely SWMCOL, Point Fortin Regional Corporation and for the Municipal Corporations of the Ministry of Local Government in Trinidad and Tobago House of Assembly, the Ministry of Public Utilities, Ministry of Finance, Ministry of Planning and Development. Based on this information, it is possible to define the waste management strategy for Trinidad and for each community.

The results presented were the outcomes of two characterization exercises that took place during the month of November 2022 -called the wet period -, and the months of March and early April - the dry period. By the characterization, it was possible to know the nature of the municipal waste present in the undifferentiated in the 4 existing landfills in Trinidad.

9.1 BEETHAM LANDFILL PHYSICAL RESULTS

Categories	Waste produced (tons)
Biowaste	115 678
Papers	58 643
Plastic	44 623
Beverage Containers	27 174
Glass	6 941
Composites	7 967
Textiles	22 192
Sanitary Textiles	17 610
Metals	6 873
Construction and Demolition	32 689
Hazardous Waste	352
Bulky waste	0
Thin Elements	1 197
Total	341 940

Table 18 – Results by categories of the characterization on Beetham Landfill (tons)

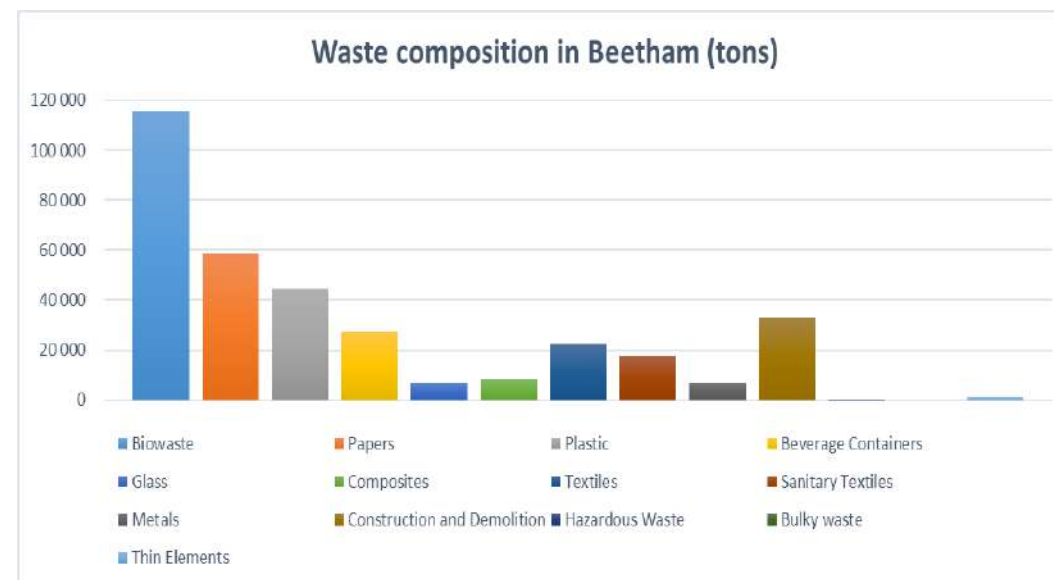


Figure 19– Waste composition in Beetham Landfill (tons)

Conclusions:

- A considerable amount of non-urban waste is disposed on the landfill;
- Biowaste is the stream with the most presence in the unsorted waste;
- High quantities of paper, plastic and beverage containers;
- 32 689 tons of Construction and demolition waste;
- Some hazardous waste, particular healthcare waste.
- 115 768 tons of biowaste

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	33,83%	76,01%
	Cardboard/Paper	17,15%	
	Plastics and Tetra pack	17,74%	
	Ferrous Metals	0,90%	
	Other Non Ferrous	1,72%	
	Glass	4,68%	
Non Recyclable Waste			23,99%
		100%	100%

Table 19 – Percentage of recyclable waste and non recyclable waste on Beetham Landfill

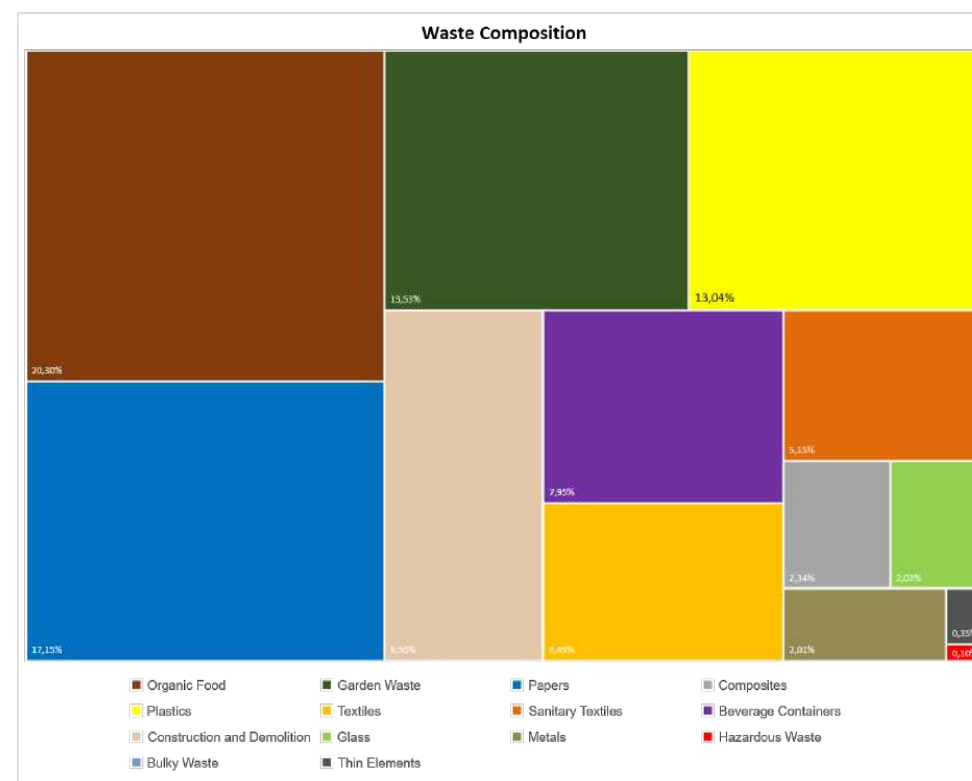


Figure 20 – Waste composition in Beetham Landfill

Conclusions:

- 76% of the unsorted waste, are recyclable waste;
- Biowaste, Plastics and Tetra pack, Cardboard/Paper are the ones with more presence in the unsorted waste;
- 20,3% food waste and 13,53% garden waste
- Only Cardboard/Paper, Plastic and Tetra pack represent 34,9%;
- 13,04% of Textile waste.

Type of Beverage Container	Total (tons)
PET Clear	14 177
PET Blue	0
PET Green	0
PET Black	0
PET Other Colours	0
HDPE - Natural	0
HDPE - Coloured	0
TETRA PACK	1 870
GLASS - Clear	4 520
GLASS - Blue	120
GLASS - Green	2 069
GLASS - Brown	2 339
GLASS - Other Colors	17
ALUMINIUM CANS	1 819
METAL CANS	243
Total	27 174

Table 20- Total of Beverage Containers in unsorted waste at the Beetham landfill

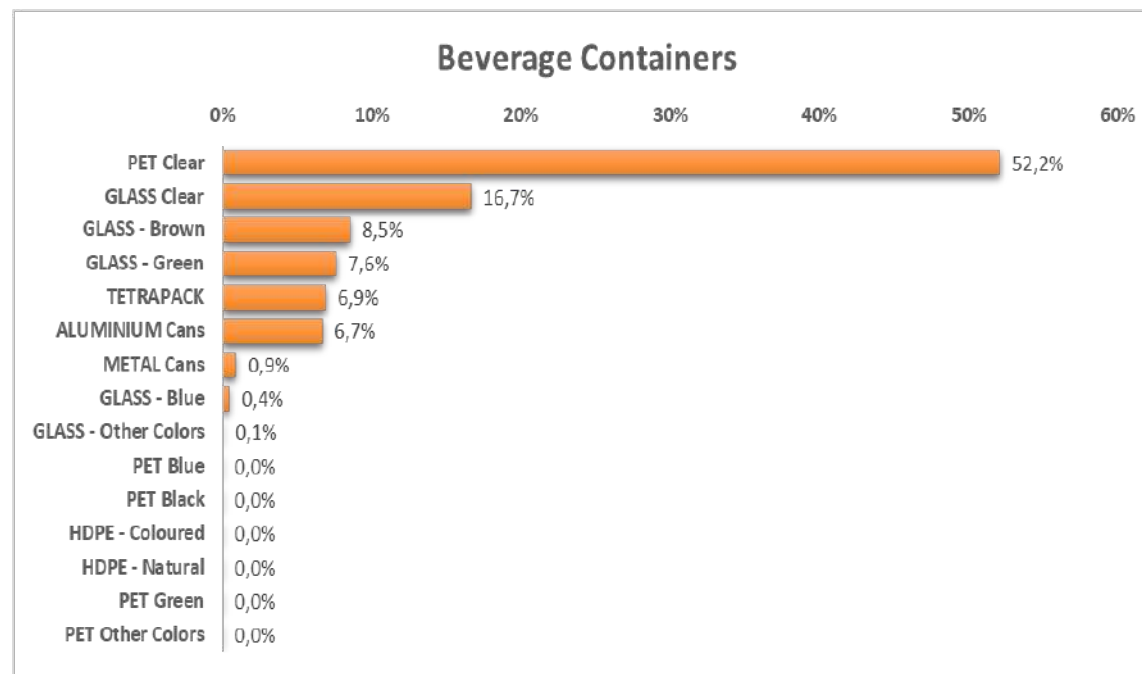


Figure 21 – Beverage Containers in Beetham Landfill

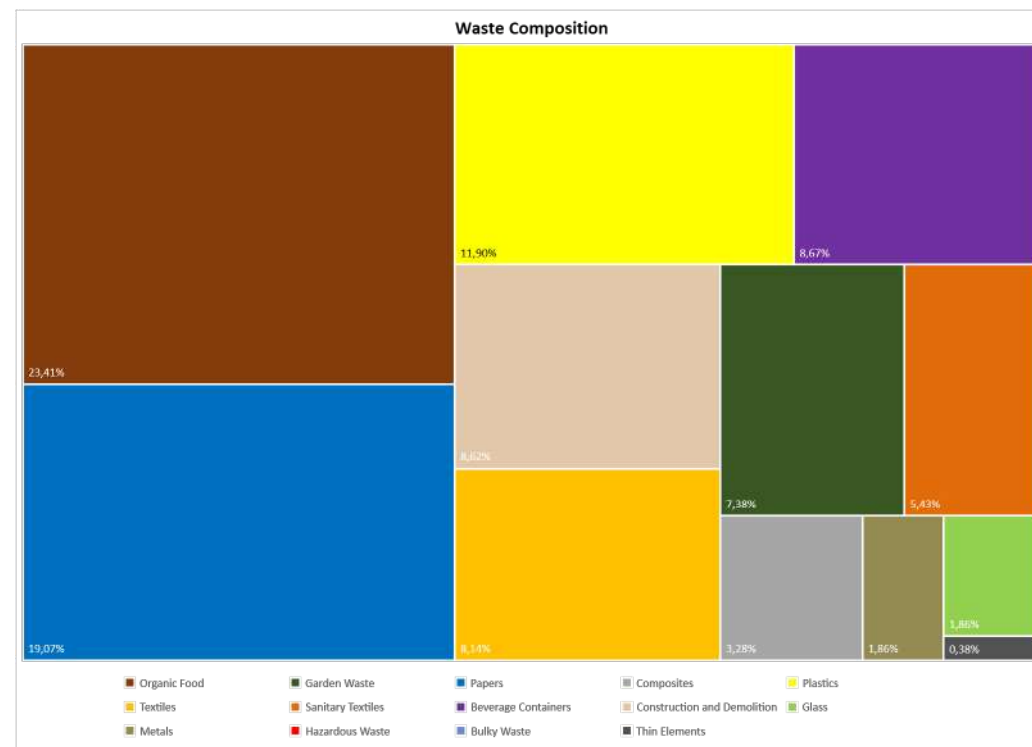
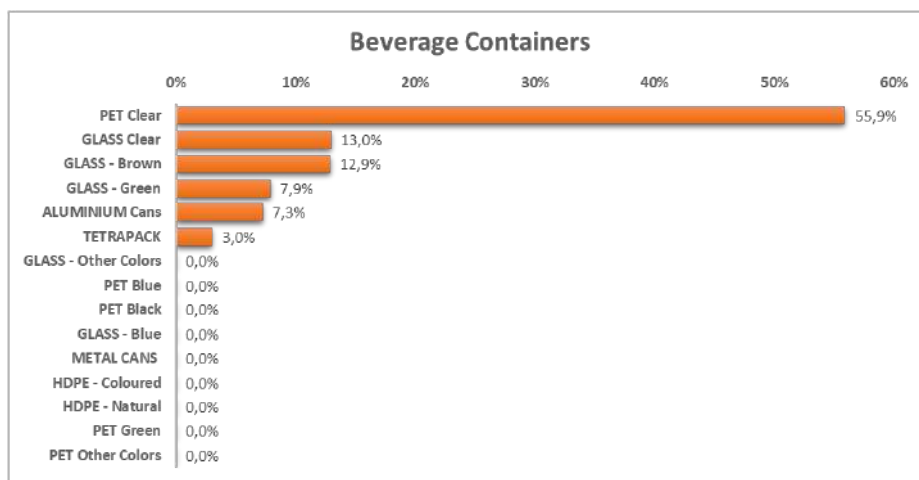
Conclusions:

- Of all the PET, the only one present in unsorted waste is the clear PET , and there is no HDPE present in the unsorted waste;
- Clear PET is the beverage container more present in the unsorted waste, followed by Clear and Brown glass;
- Almost 50% is Clear Glass, Green and Brown Glass also significant quantity.

9.1.1 RESULTS OF PHYSICAL CHARACTERIZATION BY MUNICIPALITY

9.1.1.1 CHAGUARAMAS

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	30,79%	74,15%
	Cardboard/Paper	19,07%	
	Plastics and Tetra pack	17,02%	
	Ferrous Metals	0,74%	
	Other Non Ferrous	1,75%	
Non Recyclable Waste	Glass	4,78%	25,85%
		100%	

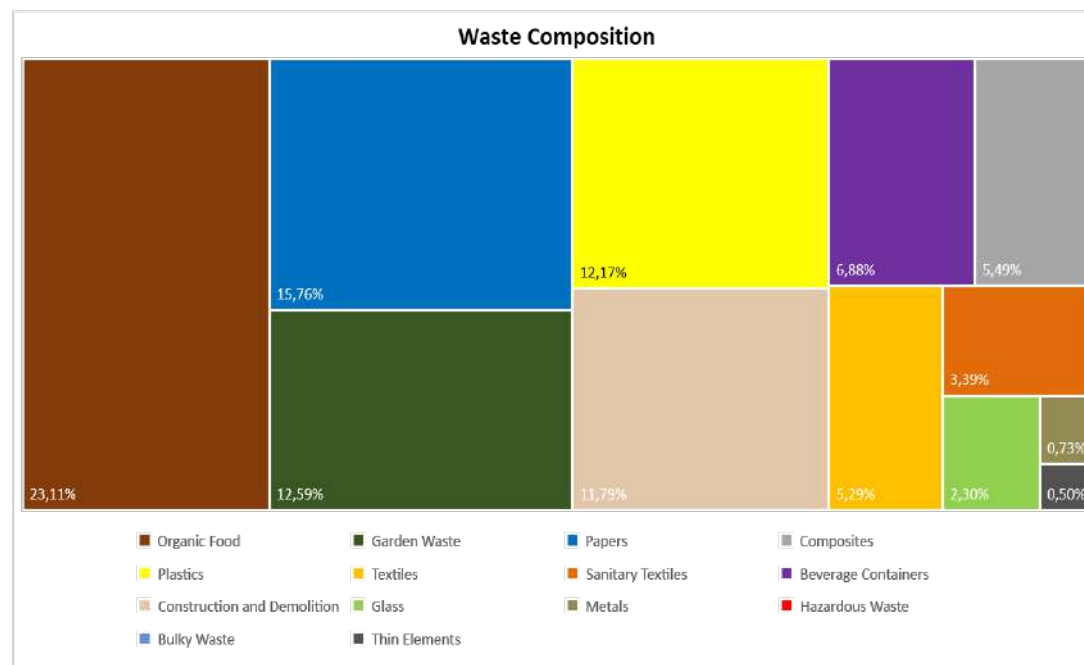
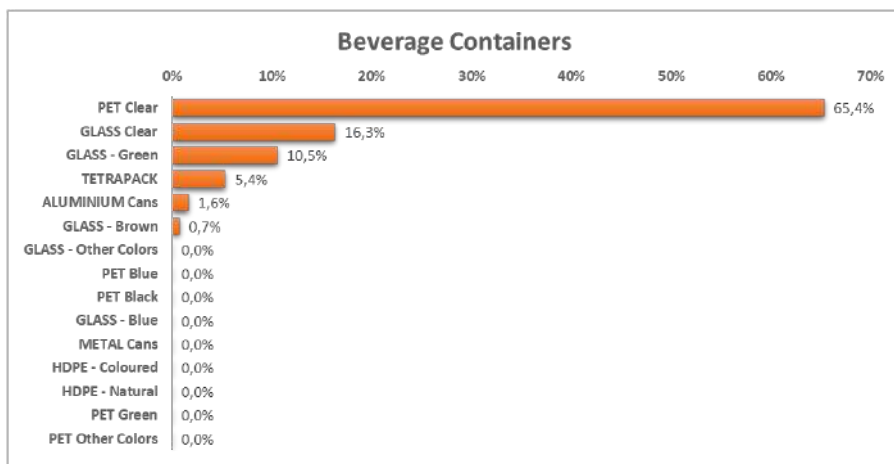


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper, and Plastics and Tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 8,67%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Glass Clear and Glass Brown.

9.1.1.2 CUREPE

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	35,70%	73,54%
	Cardboard/Paper	15,76%	
	Plastics and Tetra pack	17,03%	
	Ferrous Metals	0,19%	
	Other Non Ferrous	0,66%	
Non Recyclable Waste	Glass	4,20%	26,46%
		100%	
		100%	100%

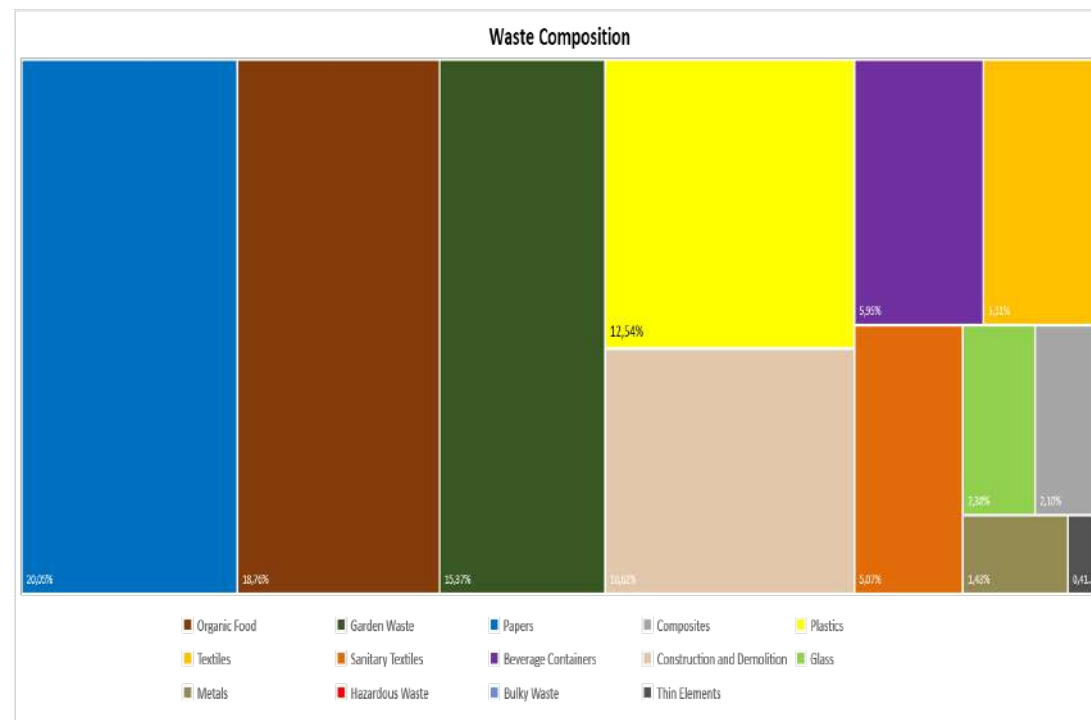
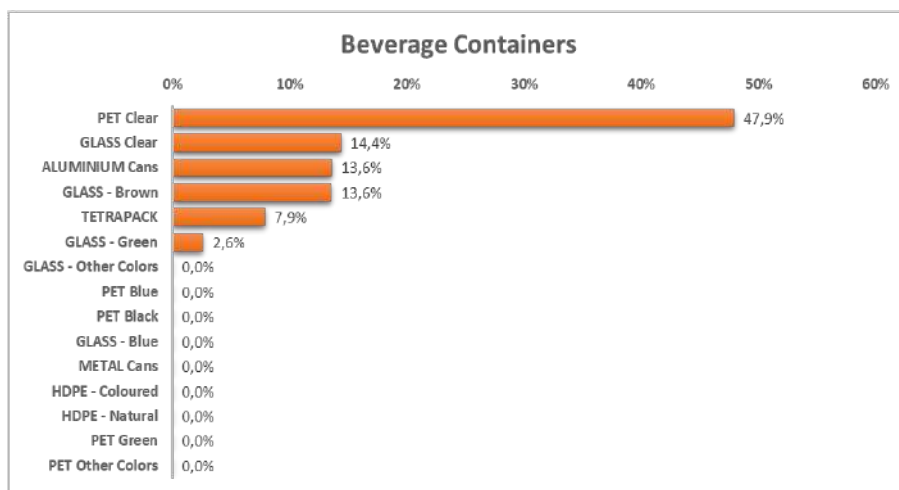


Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and Tetra pack and Cardboard/Paper;
- Beverage containers have a significant presence in the unsorted waste, with 6,88%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Glass Clear and Glass Green.

9.1.1.3 DIEGO MARTIN

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	34,14%	76,48%
	Cardboard/Paper	20,05%	
	Plastics and Tetra pack	15,85%	
	Ferrous Metals	0,54%	
	Other Non Ferrous	1,70%	
	Glass	4,20%	
Non Recyclable Waste			23,52%
		100%	100%

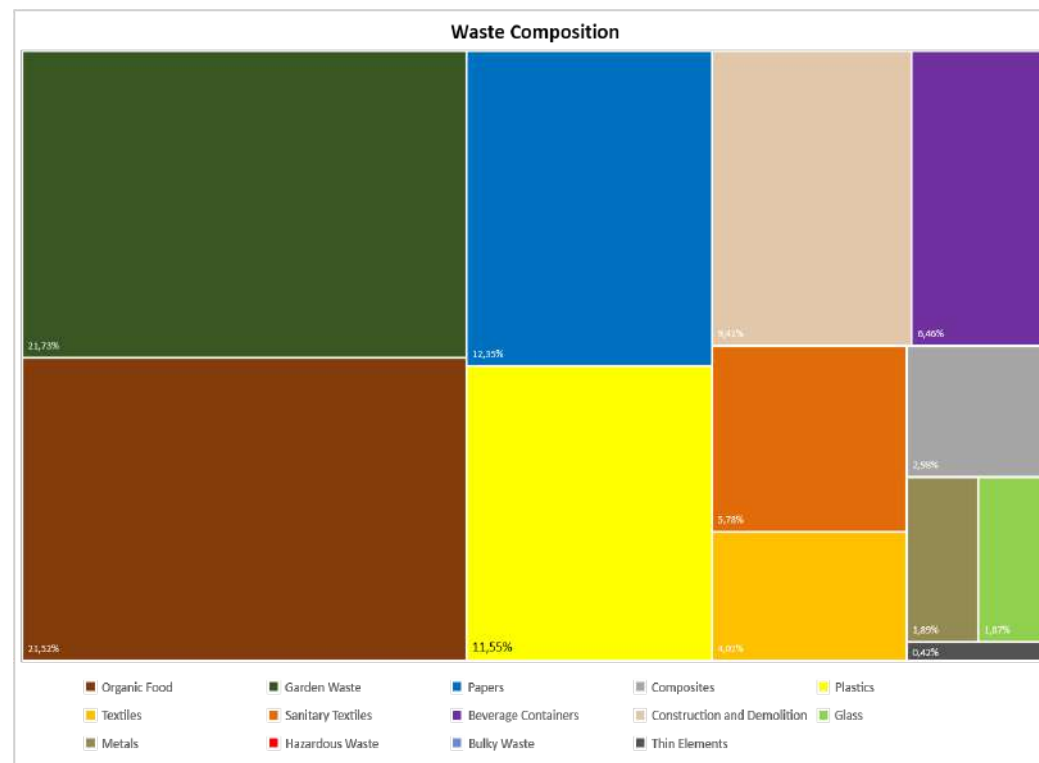
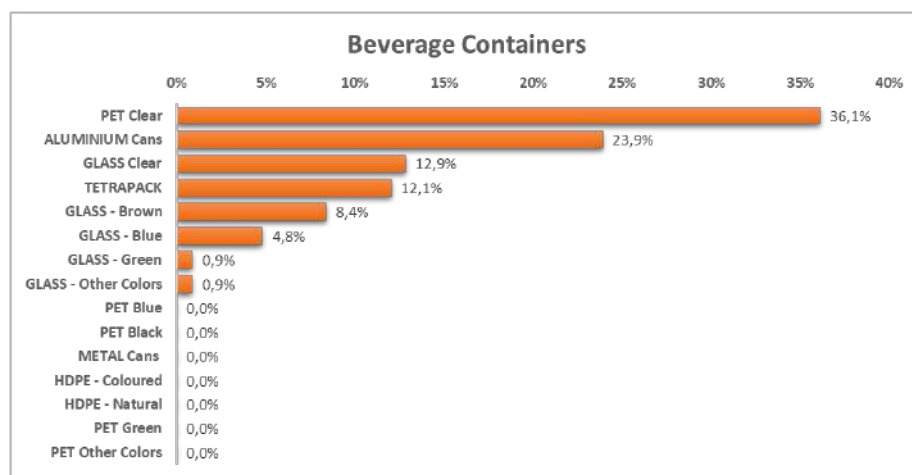


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper, and Plastics and Tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 5,95%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Glass Clear and then Aluminum Cans and Glass Brown.

9.1.1.4 MARACAS

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	43,26%	77,38%
	Cardboard/Paper	12,35%	
	Plastics and Tetra pack	14,67%	
	Ferrous Metals	0,00%	
	Other Non Ferrous	3,44%	
	Glass	3,67%	
Non Recyclable Waste			22,62%
		100%	100%

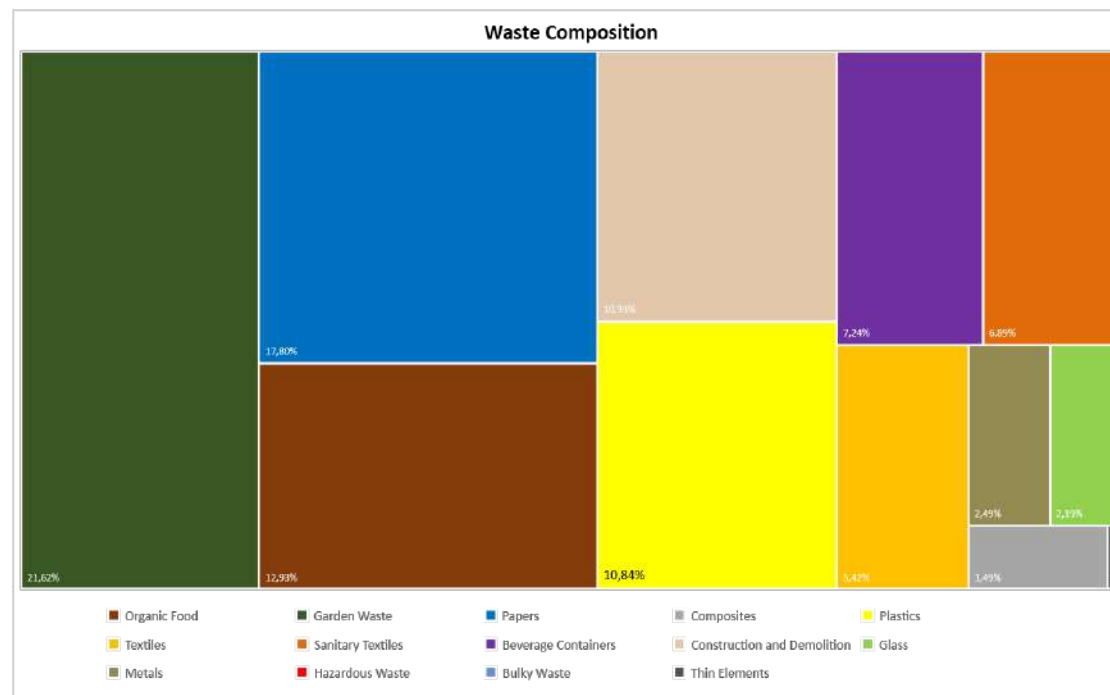
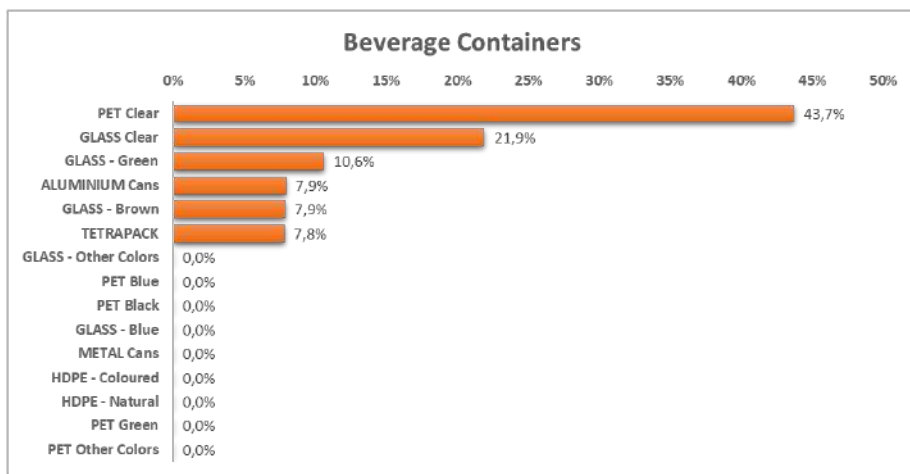


Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and Tetra pack, and Cardboard/Paper;
- 21,73% of Garden waste and 21,52% of Organic waste
- Beverage containers have a significant presence in the unsorted waste, with 6,46%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Aluminium Cans, and then Glass Clear Glass.

9.1.1.5 PORT OF SPAIN

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	34,55%	75,11%
	Cardboard/Paper	17,80%	
	Plastics and Tetra pack	14,57%	
	Ferrous Metals	1,36%	
	Other Non Ferrous	1,70%	
	Glass	5,12%	
Non Recyclable Waste			24,89%
		100%	100%

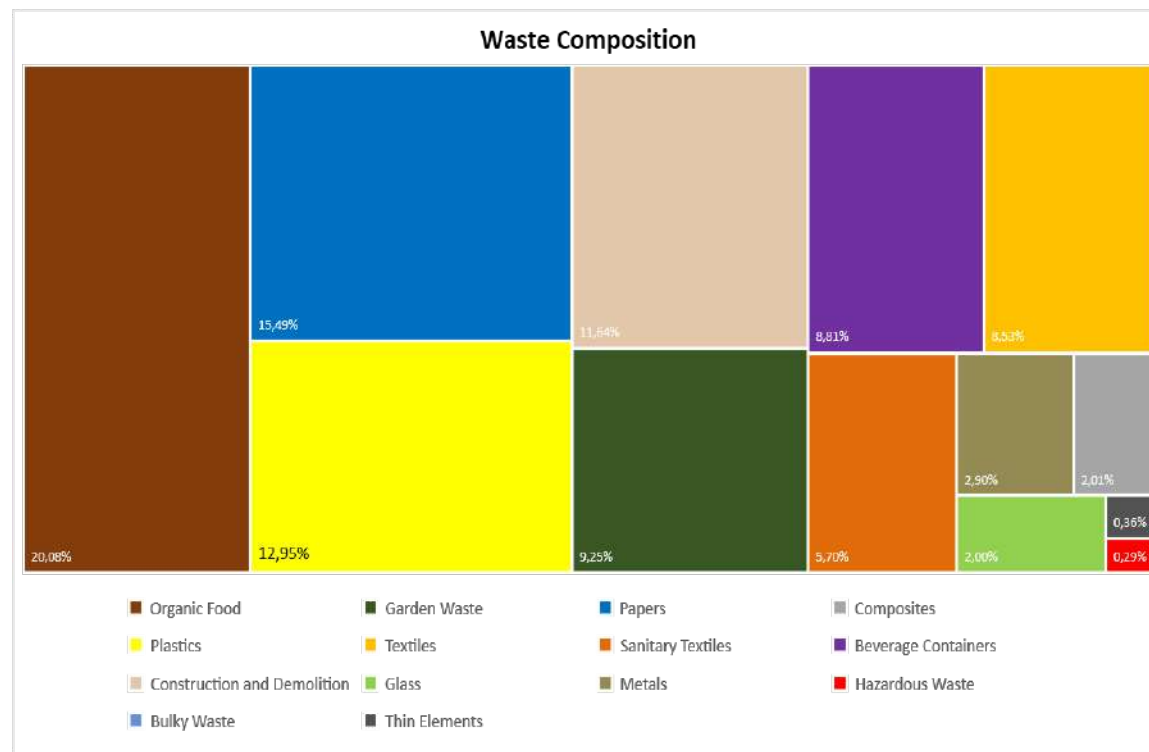


Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and Tetra pack, and Cardboard/Paper;
- 21,73% of Garden waste and 21,52% of Organic waste
- Beverage containers have a significant presence in the unsorted waste, with 6,46%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Aluminum Cans, and then Clear Glass.

9.1.1.6 SAN JUAN

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	29,33%	71,47%
	Cardboard/Paper	15,49%	
	Plastics and Tetra pack	18,77%	
	Ferrous Metals	1,82%	
	Other Non Ferrous	1,69%	
	Glass	4,38%	
Non Recyclable Waste			28,53%
		100%	100%

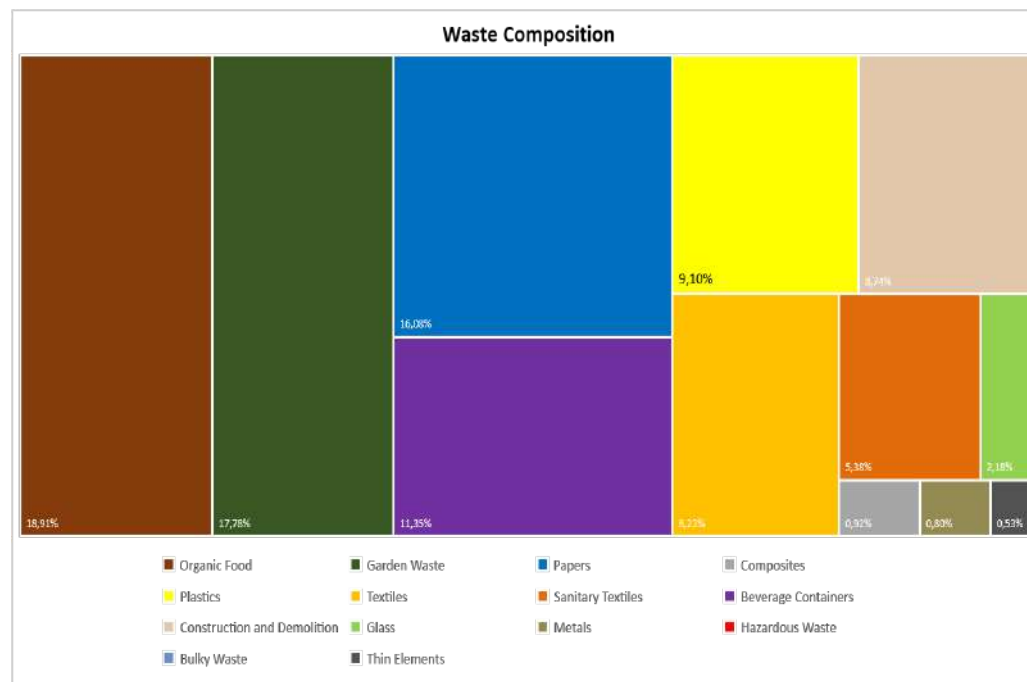
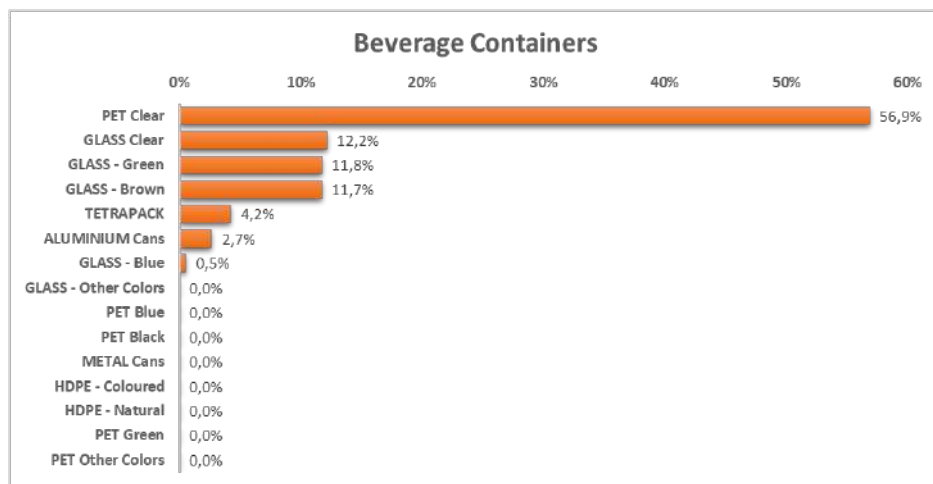


Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack, and Cardboard/Paper;
- Beverage containers have a significant presence in the unsorted waste, with 8,81%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear Glass, and then tetra pack.

9.1.1.7 ST. ANNS

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	36,69%	76,20%
	Cardboard/Paper	16,08%	
	Plastics and Tetra pack	16,03%	
	Ferrous Metals	0,00%	
	Other Non Ferrous	1,10%	
Non Recyclable Waste	Glass	6,29%	23,80%
		100%	100%

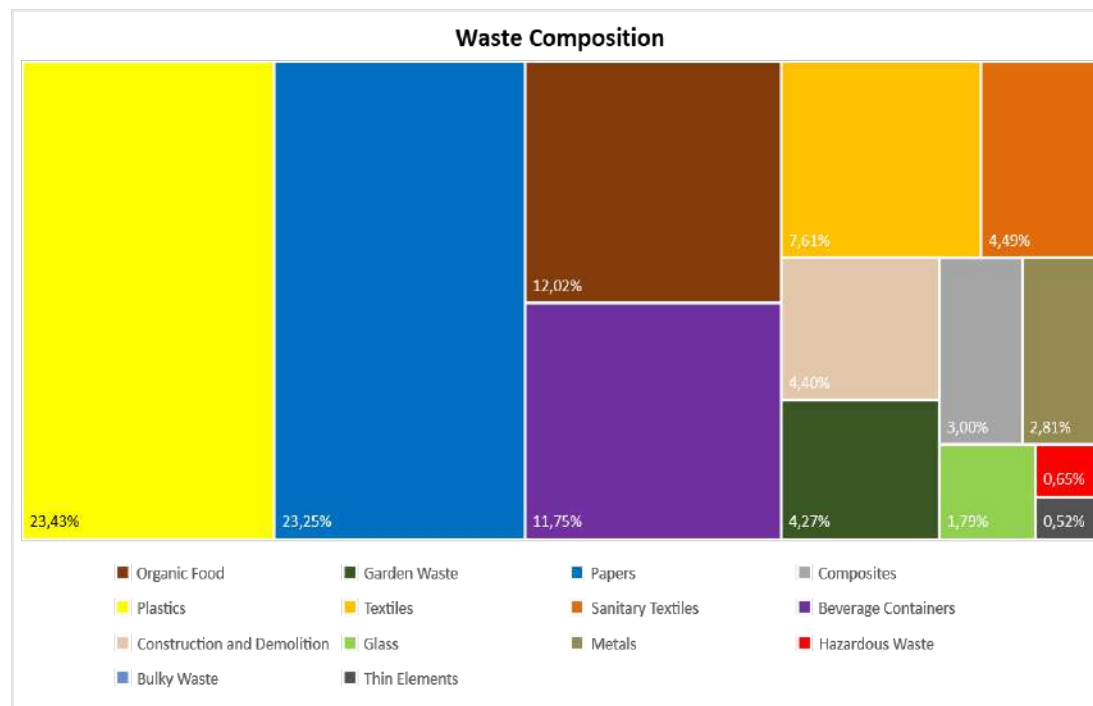


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- 18,91% of Organic Waste and 17,78% de Garden Waste;
- Beverage containers have a significant presence in the unsorted waste, with 11,35%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear glass, Green glass and Brown glass.

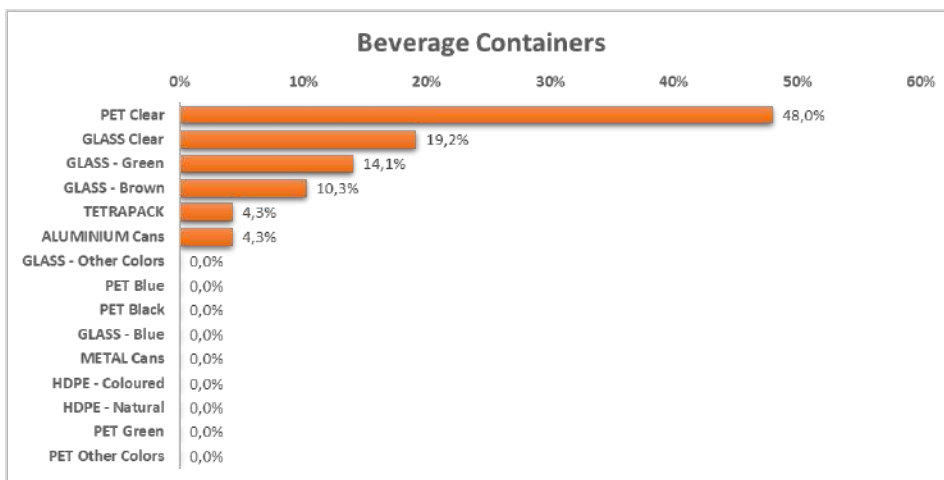
9.1.1.8 TUNAPUNA

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	16,29%	79,32%
	Cardboard/Paper	23,25%	
	Plastics and Tetra pack	29,57%	
	Ferrous Metals	1,85%	
	Other Non Ferrous	1,46%	
Non Recyclable Waste	Glass	6,90%	20,68%
		20,68%	
		100%	100%



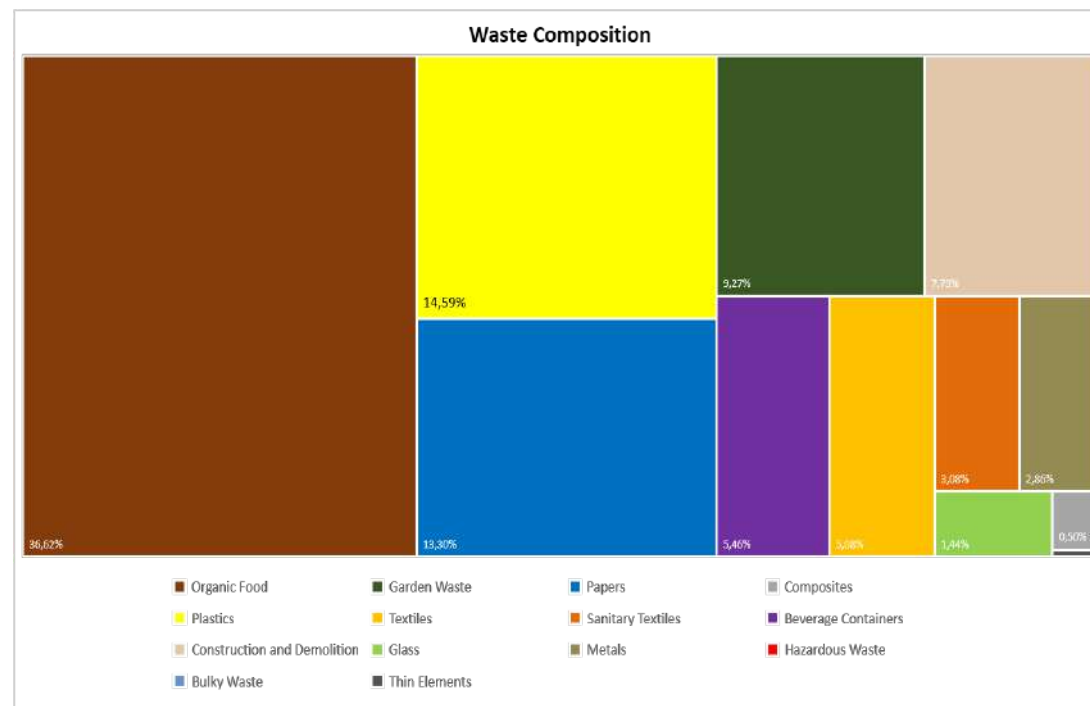
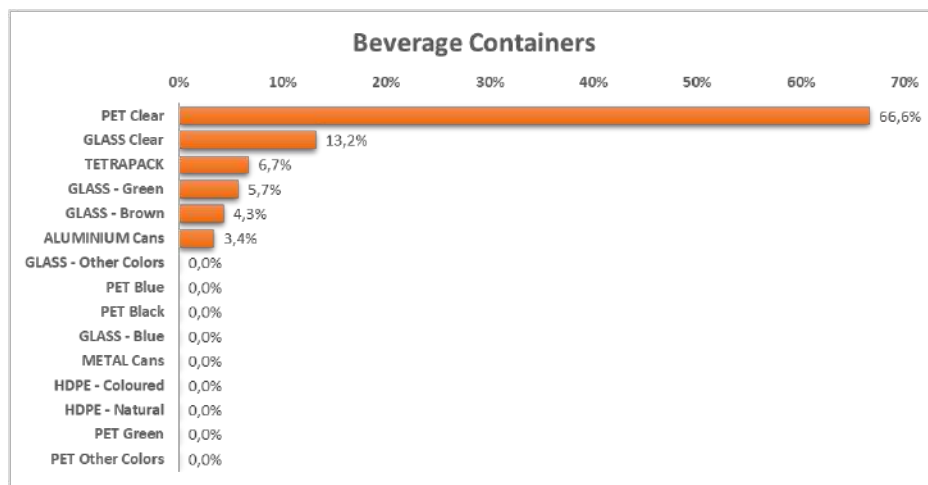
Conclusions:

- Plastics and tetra pack is the type of waste with more presence followed by Cardboard/Paper and Biowaste;
- Only 12,02% of Organic Waste and 4,27% of Garden waste;
- Beverage containers have a significant presence in the unsorted waste, with 11,75%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Green glass.



9.1.1.9 VALSAYN

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	45,90%	83,55%
	Cardboard/Paper	13,30%	
	Plastics and Tetra pack	18,60%	
	Ferrous Metals	1,06%	
	Other Non Ferrous	1,99%	
Non Recyclable Waste		16,45%	16,45%
		100%	100%

**Conclusions:**

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack, and Cardboard/Paper;
- 36,62% de Organic Waste and 9,27% of Garden Waste;
- Beverage containers have a significant presence in the unsorted waste, with 5.46%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear glass, and then tetra pack.

9.2 BEETHAM LANDFILL CHEMICAL RESULTS

BEETHAM			Wet Season			Dry Season		
			Landfill	Beetham	Beetham	Beetham	Beetham	Beetham
			Municipality	St. Anns	Tunapuna	Valsayn/Curepe	St. Anns	Tunapuna
				Residential	Residential	Commercial	Residential	Residential
COMPONENT	Units	Method	SB1w	SB2w	SB3w	SB1d	SB2d	SB3d
Moisture (105°C)	%	Gravimetry	11,1	28,1	23,9	31,4	38,9	28,5
Ash (815°C)	%(db)	Gravimetry	6,6	6,5	5,5	4,9	6	6,4
Volatile solids	%(db)	Gravimetry	77,7	72,6	78,3	79,2	72,1	81,2
Total solids	%	Gravimetry	88,9	71,9	76,1	68,6	61,1	71,5
Gross calorific value	MJ/kg (db)	Calorimetry - isoperibol pump	23,85	18,67	20,15	26,45	29,72	24,22
Arsenic (As)	mg/kg (db)	DIN EN ISO 17294-2	<0,8	<0,8	<0,8	<0,8	<0,8	<0,8
Lead (Pb)	mg/kg (db)	DIN EN ISO 17294-2	<2	15,0	3,0	<2	2,0	12,0
Cadmium (Cd)	mg/kg (db)	DIN EN ISO 17294-2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2
Chromium (Cr)	mg/kg (db)	DIN EN ISO 17294-2	-	17	35	12	11	41
Copper (Cu)	mg/kg (db)	DIN EN ISO 17294-2	15	26	13	26	47	13
Nickel (Ni)	mg/kg (db)	DIN EN ISO 17294-2	182	8	4	7	5	17
Mercury (Hg)	mg/kg (db)	DIN EN ISO 12846	<0,05	0,06	<0,05	<0,07	<0,07	0,09

Zinc (Zn)	mg/kg (db)	DIN EN ISO 17294-2	-	87	45	58	22	42
Carbon	% (w/w)(db)	DIN EN 15407:2011-05	58,2	47,3	56,4	65	60	56
pH	% (w/w)(db)	DIN EN 15407:2011-05	6,6	6,3	6,7	6,7	9,2	7,8
Total nitrogen	% (w/w)(db)	DIN EN 15407:2011-05	0,96	0,37	1,31	0,25	0,43	0,63
Sulphur (S) Total	% (w/w)(db)	DIN EN 15408:2011-05	0,172	0,112	0,0846	0,069	0,067	0,215
TOC (total organic carbon)	% (w/w)(db)	DIN EN 15936:2012-11	58,1	47,1	56,2	65	60	56

Db=Dry basis

Table 21 - Analytical results of chemical characterization at Beetham Landfill

General components	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Moisture (105°C)	%	6	38,9	11,1	27,0
Ash (815°C)	%(db)	6	6,6	4,9	6,0
Volátil solids	%(db)	6	81,2	72,1	76,9
Total solids	%	6	88,9	61,1	73,0
Gross calorific value	MJ/kg (db)	6	29,72	18,67	23,84
Carbon	% (w/w)(db)	6	65,0	47,3	57,2
pH	% (w/w)(db)	6	9,2	6,3	7,2
Total nitrogen	% (w/w)(db)	6	1,31	0,25	0,66
Sulphur (S) Total	% (w/w)(db)	6	0,215	0,067	0,120
TOC (total organic carbon)	% (w/w)(db)	6	65,0	47,1	57,1

Heavy metals	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Arsenic (As)	mg/kg (db)	6	<limit of quantification	<limit of quantification	<limit of quantification
Lead (Pb)	mg/kg (db)	6	15,0	<limit of quantification	8,0
Cadmium (Cd)	mg/kg (db)	6	<limit of quantification	<limit of quantification	<limit of quantification
Chromium (Cr)	mg/kg (db)	5	41	11	23
Copper (Cu)	mg/kg (db)	6	47	13	23
Nickel (Ni)	mg/kg (db)	6	182	4	37
Mercury (Hg)	mg/kg (db)	6	0,09	<limit of quantification	0,08
Zinc (Zn)	mg/kg (db)	5	87	22	51

Table 22 – Waste chemical composition of Beetham landfill

Conclusions:

- 2 determinations of heavy metals were excluded from the statistical calculations - 1 of chromium (348 mg/kg (db)) and 1 of zinc (616 mg/kg (db)) - because they presented values without representation in relation to the averages of the observed values. The discarded values concern the sample of a load of St. Anns (residential provenance).
- The low moisture value of the waste and the high gross calorific value stand out;
- With regard to heavy metals, the maximum value observed for nickel stands out, which may be related to the presence of batteries and their components.

9.3 FORRES PARK LANDFILL PHYSICAL RESULTS

Categories	Waste produced (tons)
Biowaste	86 137
Papers	47 743
Plastic	31 522
Beverage Containers	25 381
Glass	4 726
Composites	5 431
Textiles	15 403
Sanitary Textiles	14 093
Metals	4 133
Construction and Demolition	18 494
Hazardous Waste	1 745
Bulky waste	0
Thin Elements	639
Total	255 447

Table 23 – Results by categories of the characterization on Forres Park Landfill

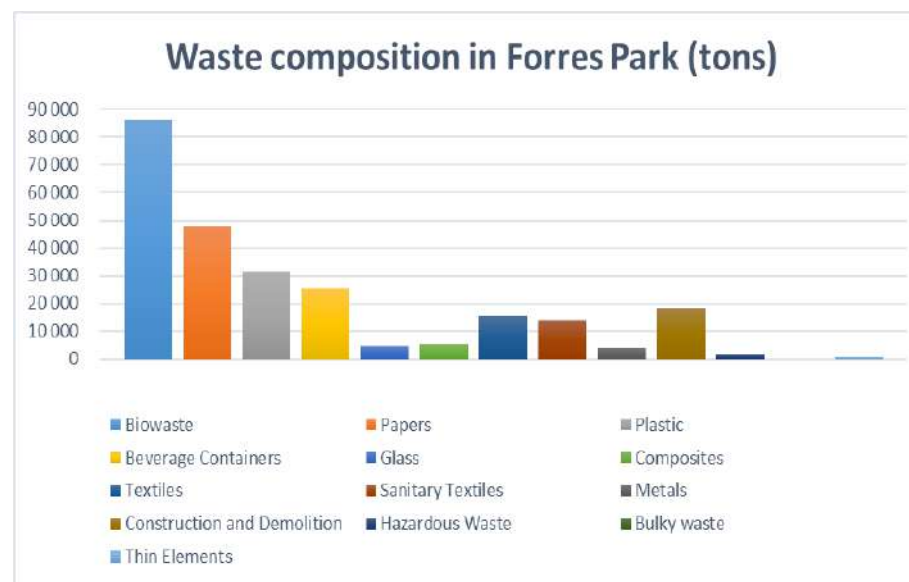


Figure 22– Waste composition in Forres Park Landfill (tons)

Conclusions:

- A considerable amount of non-urban waste is disposed on the landfill;
- Biowaste is the type of waste with the most presence in the unsorted waste, followed by Papers;
- Plastic and Beverage Containers almost 57 mil tons;
- Presence of hazardous waste, particular Used Oil, Paint/Solvent/Fuel and Batteries.

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	33,72%	78,03%
	Cardboard/Paper	18,69%	
	Plastics and Tetra pack	17,96%	
	Ferrous Metals	0,89%	
	Other Non Ferrous	1,17%	
Non Recyclable Waste	Glass	5,60%	21,84%
		21,84%	
		100%	100%

Table 24 - Percentage of recyclable waste and non recyclable waste on Forres Park Landfill

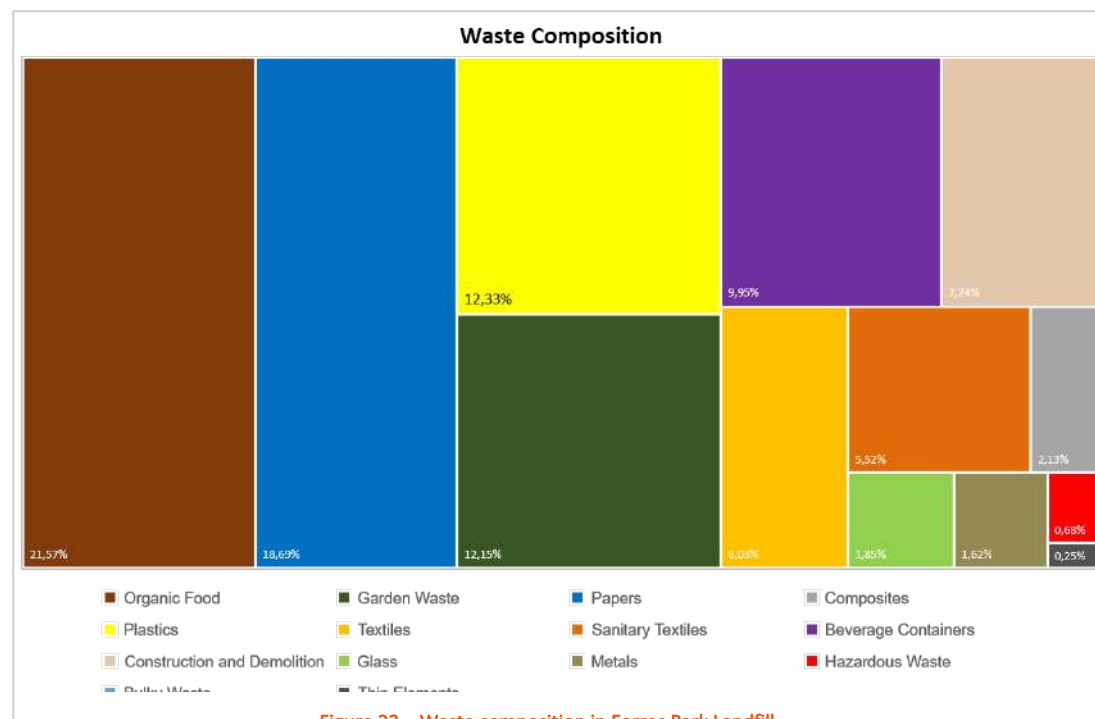


Figure 23 – Waste composition in Forres Park Landfill

Conclusions:

- 78% of the unsorted waste, are recyclable waste;
- Biowaste, Cardboard/Paper, Plastics and tetra pack are the ones with more presence in the unsorted waste;
- 21,57% the Organic Waste and 12,15% de Garden waste;
- 18,69% the Cardboard/Paper.

Type of Beverage Container	Total (tons)
PET Clear	12 325
PET Blue	0
PET Green	0
PET Black	0
PET Other Colours	0
HDPE - Natural	51
HDPE - Coloured	51
TETRA PACK	1 990
GLASS - Clear	4 271
GLASS - Blue	388
GLASS - Green	2 498
GLASS - Brown	2 401
GLASS - Other Colors	0
ALUMINIUM Cans	1 456
METAL Cans	0
Total	25 432

Table 25 - Total of Beverage Containers in unsorted waste at the Forres Park landfill

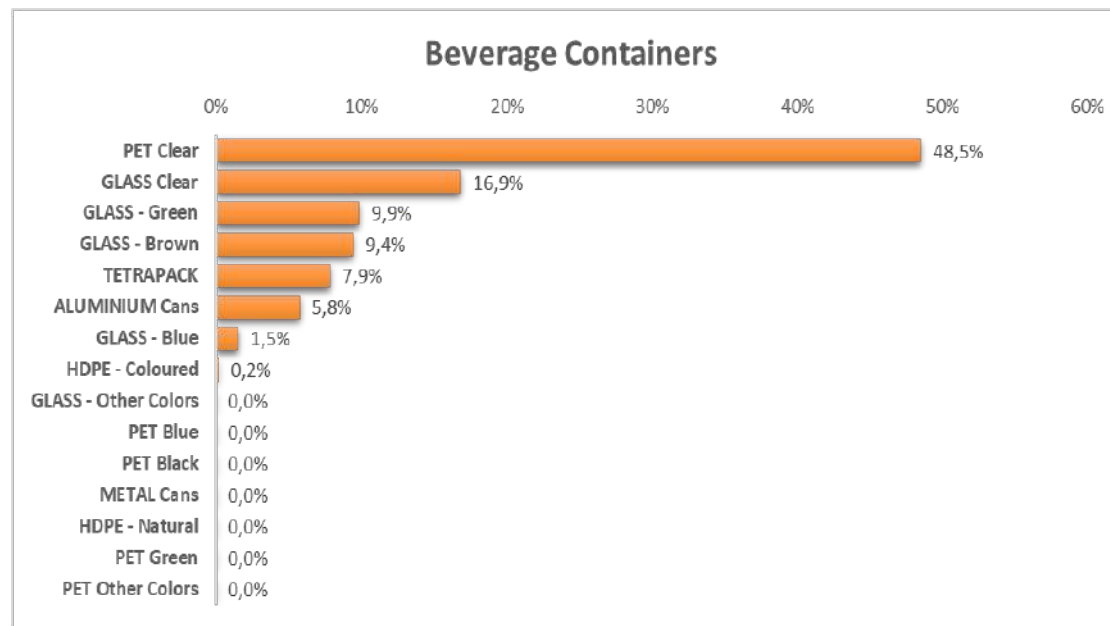


Figure 24 – Beverage Containers in Forres Park Landfill

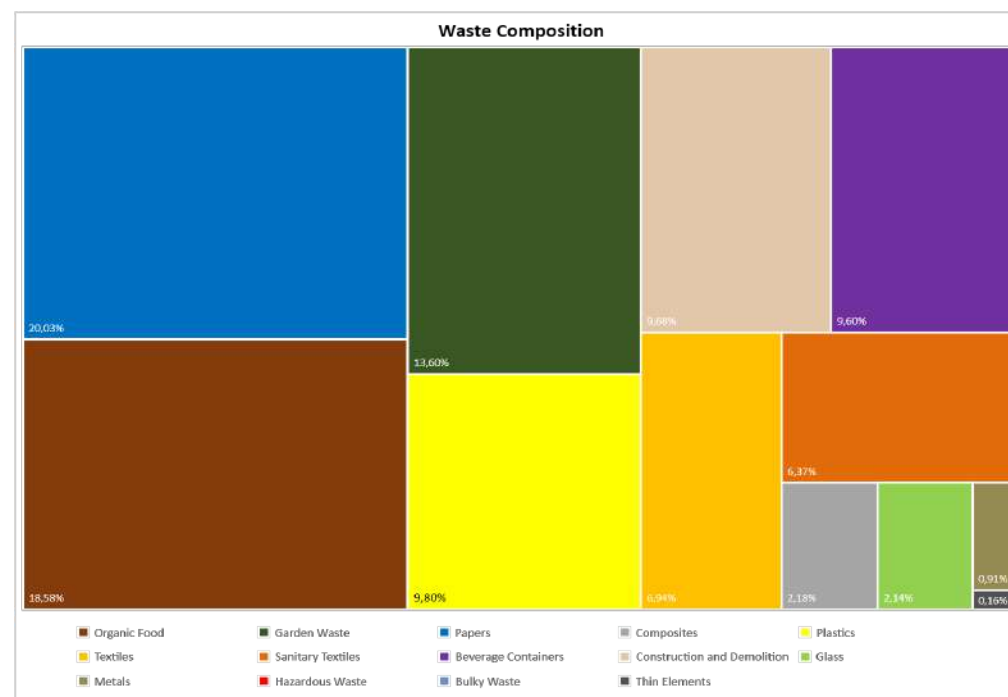
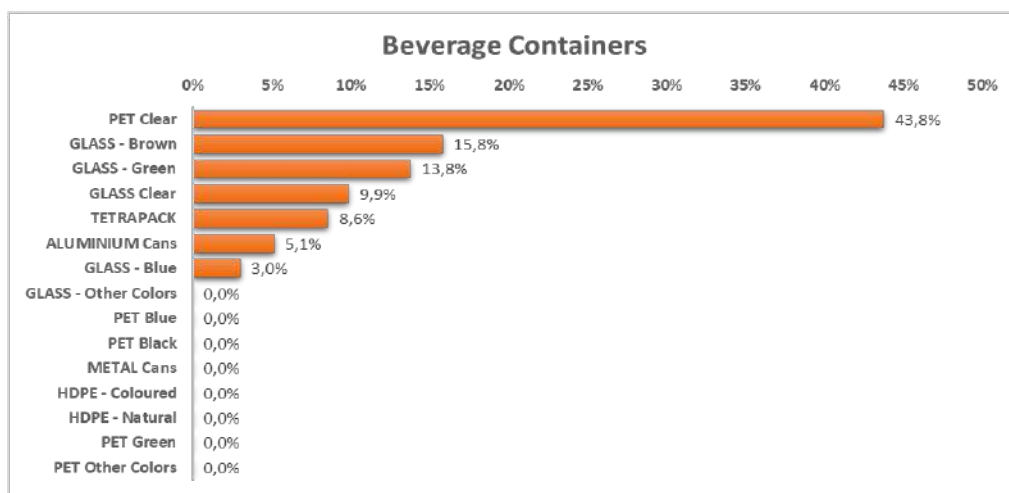
Conclusions:

- Of all the PET, the only one present in unsorted waste is the PET Clear, and there is no aluminum cans present in the unsorted waste;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Green glass;

9.3.1 RESULTS OF PHYSICAL CHARACTERIZATION BY MUNICIPALITY

9.3.1.1 CHAGUANAS

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	32,15%	74,69%
	Cardboard/Paper	19,99%	
	Plastics and Tetra pack	14,94%	
	Ferrous Metals	0,25%	
	Other Non Ferrous	1,15%	
	Glass	6,22%	
Non Recyclable Waste		25,31%	25,31%
		100%	100%

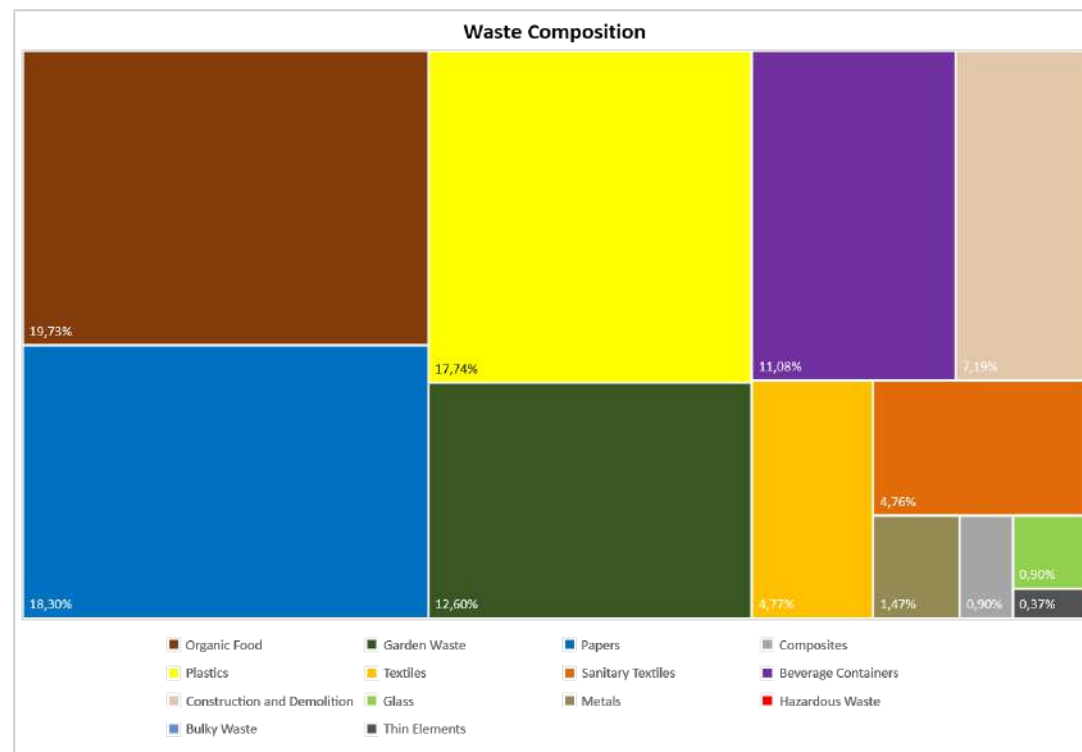
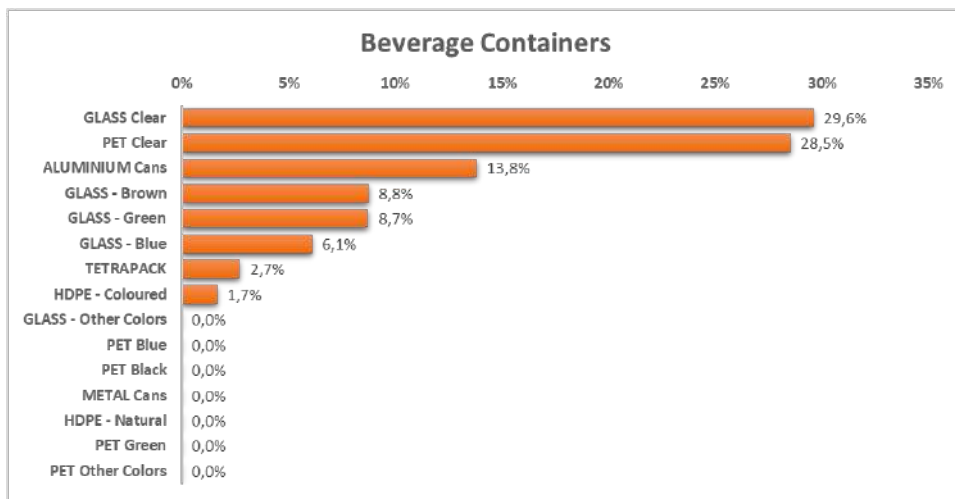


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 9,60%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Brown and Green glass.

9.3.1.2 CLAXTON BAY

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	32,32%	82,01%
	Cardboard/Paper	18,30%	
	Plastics and Tetra pack	21,45%	
	Ferrous Metals	0,50%	
	Other Non Ferrous	2,53%	
	Glass	6,90%	
Non Recyclable Waste		17,99%	17,99%
		100%	100%

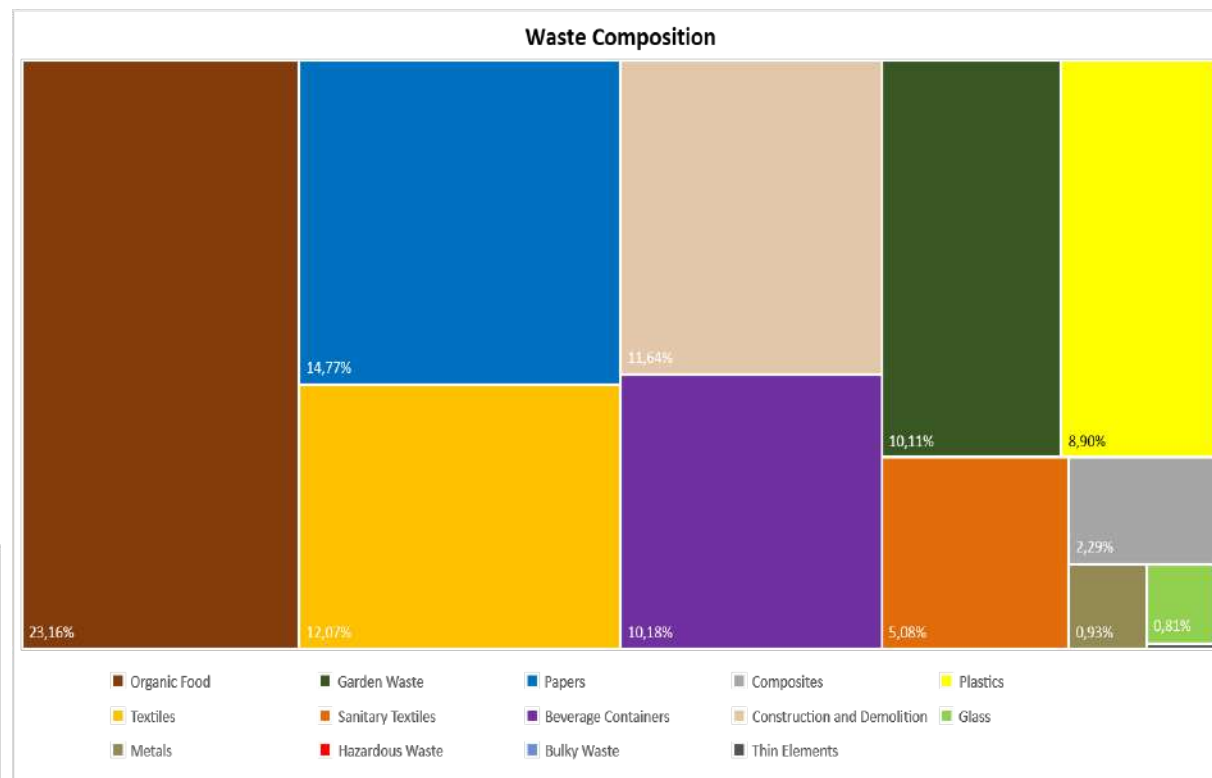
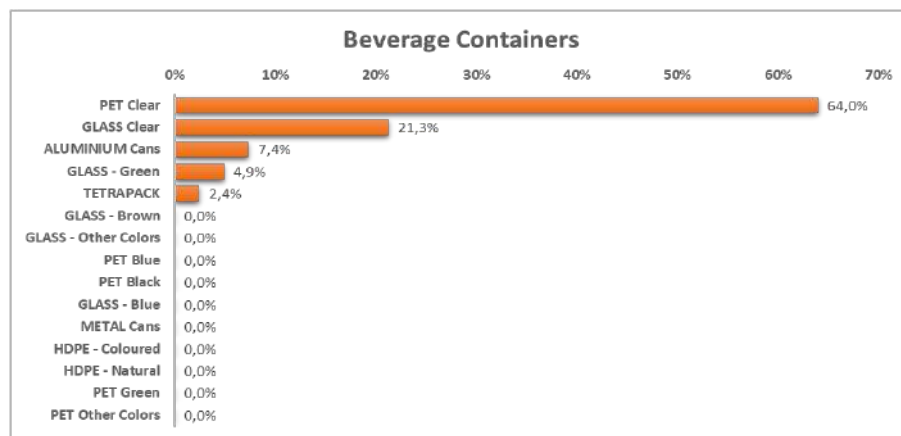


Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack, and Cardboard/Paper;
- Beverage containers have a significant presence in the unsorted waste, with 11,08%;
- Glass Clear is the beverage container more present in the unsorted waste, followed by PET Clear, and then Aluminum Cans.

9.3.1.3 COUVA

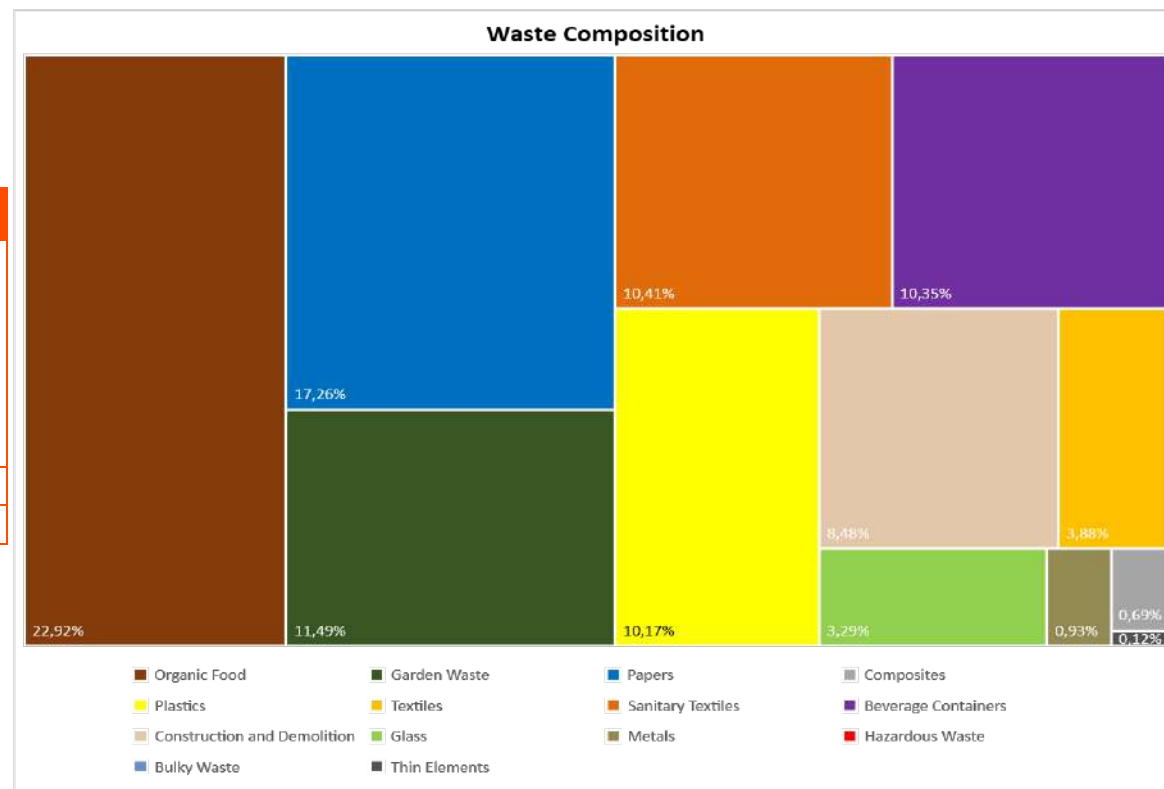
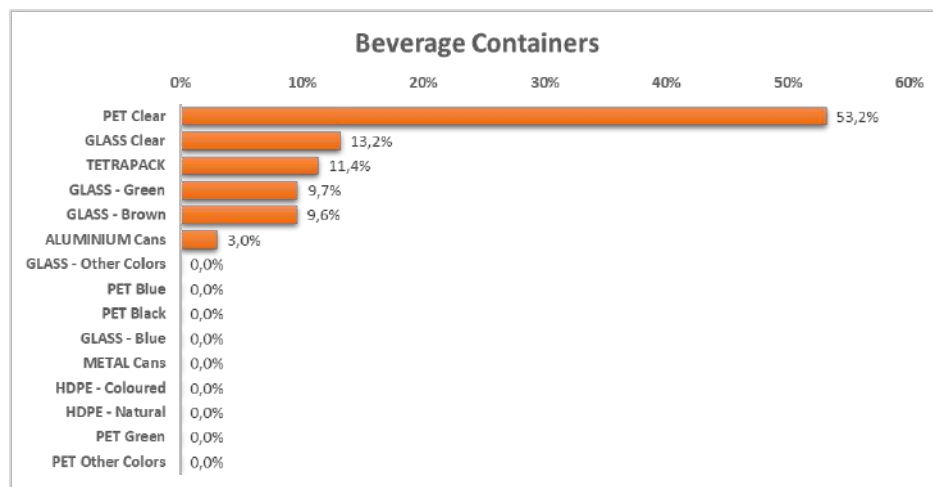
Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	33,26%	68,85%
	Cardboard/Paper	14,77%	
	Plastics and Tetra pack	15,66%	
	Ferrous Metals	0,81%	
	Other Non Ferrous	0,87%	
	Glass	3,48%	
Non Recyclable Waste		31,15%	31,15%
		100%	100%

**Conclusions:**

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack, and Cardboard/Paper;
- Beverage containers have a significant presence in the unsorted waste, with 10,18%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Glass Clear, and then Aluminum Cans

9.3.1.4 GASPARILLO

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	34,41%	76,42%
	Cardboard/Paper	17,26%	
	Plastics and Tetra pack	16,85%	
	Ferrous Metals	0,81%	
	Other Non Ferrous	0,43%	
	Glass	6,65%	
Non Recyclable Waste		23,58%	23,58%
		100%	100%

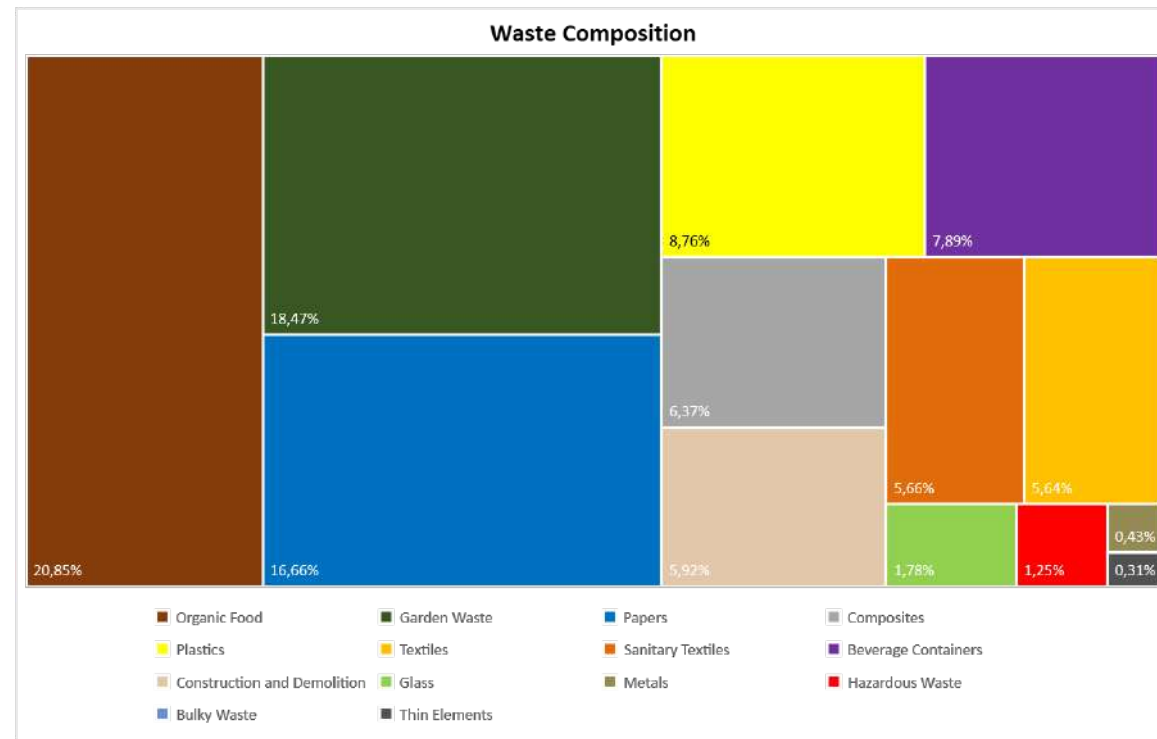
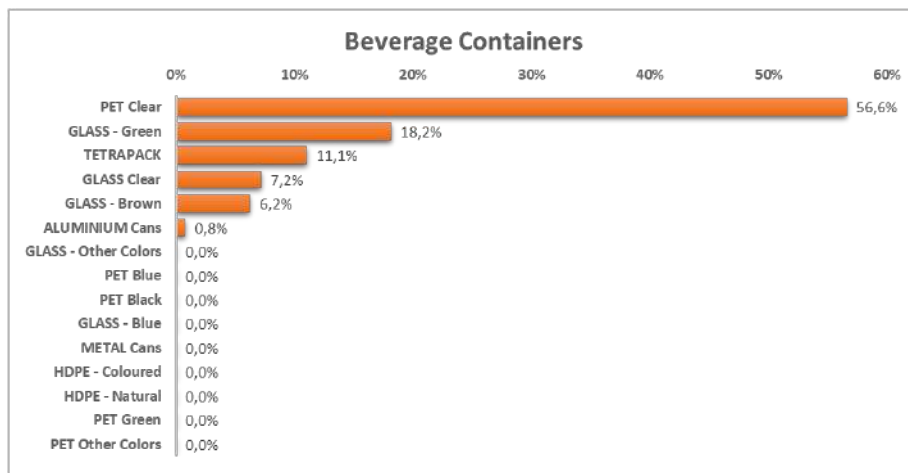


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 10,35%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear glass and tetra pack.

9.3.1.5 LA BREA

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	39,32%	74,85%
	Cardboard/Paper	16,66%	
	Plastics and Tetra pack	14,10%	
	Ferrous Metals	0,31%	
	Other Non Ferrous	0,18%	
	Glass	4,27%	
Non Recyclable Waste		25,15%	25,15%
		100%	100%

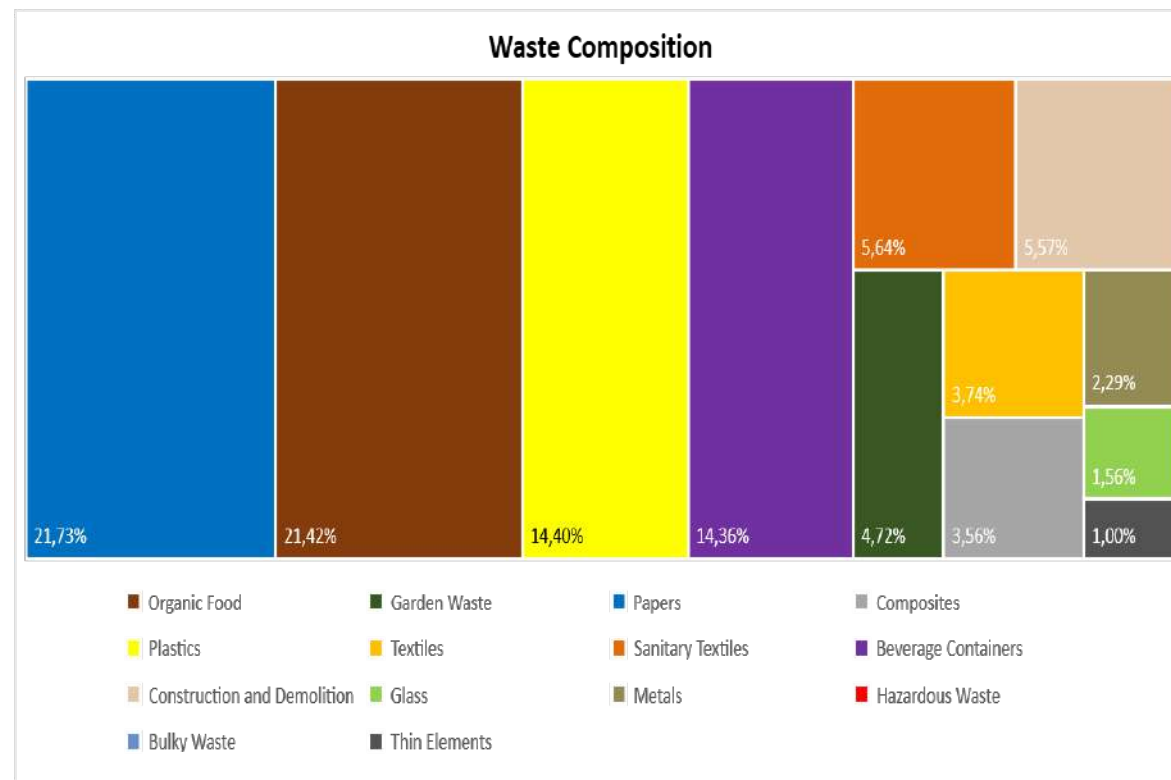


Conclusions:

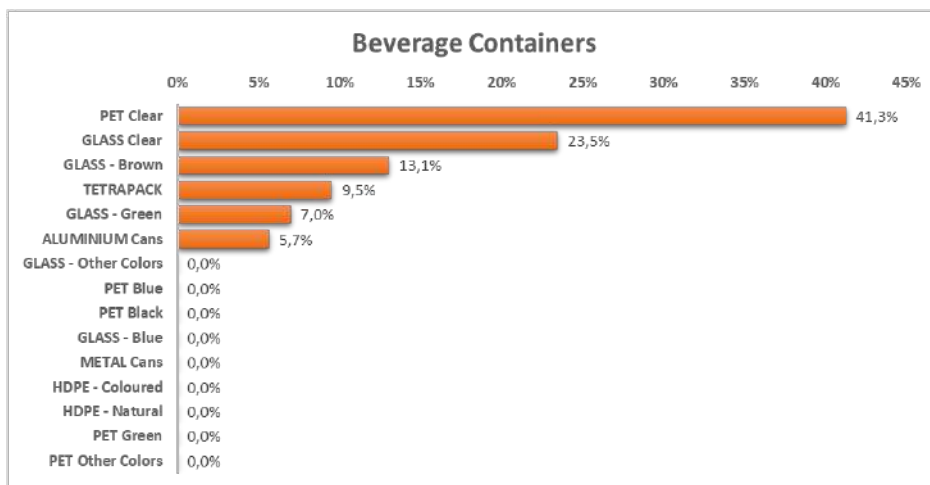
- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 7,89%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Green glass and tetra pack.

9.3.1.6 LA ROMAIN

Waste Composition		% in weight	% in weight
Recyclable Waste	o Waste	26,14%	80,49%
	ardboard/Paper	21,73%	
	astics and Tetra pack	21,70%	
	errous Metals	2,10%	
	ther Non Ferrous	1,00%	
	lass	7,81%	
Non Recyclable Waste		19,51%	19,51%
		100%	100%

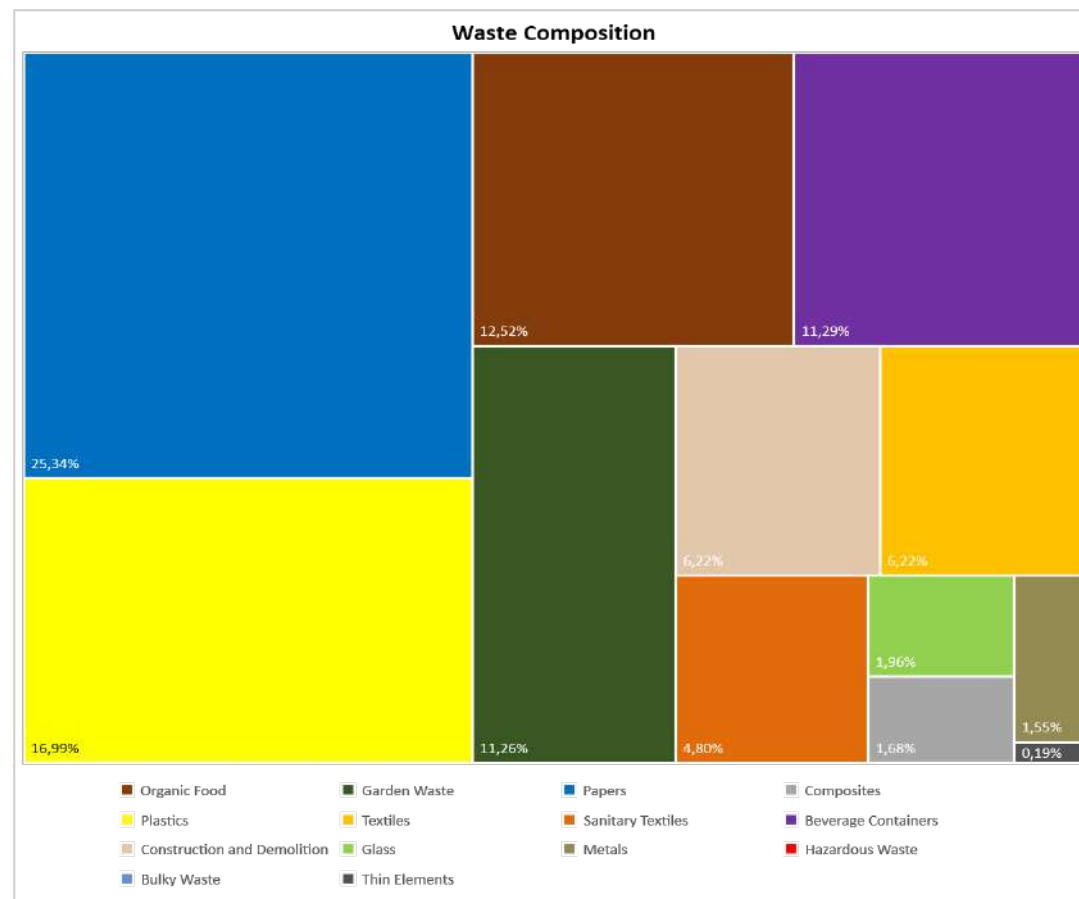
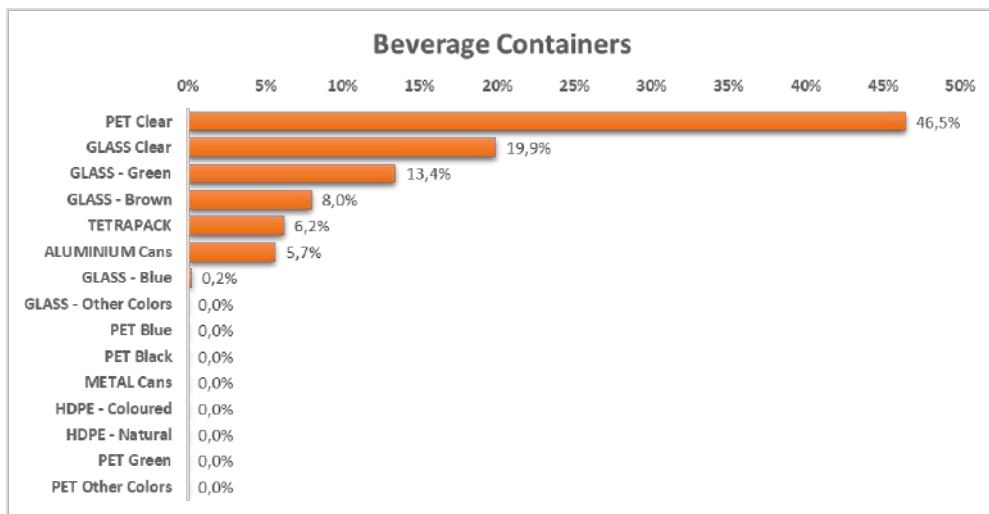
**Conclusions:**

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 14,36%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Brown glass.



9.3.1.7 MARABELLA

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	23,78%	80,90%
	Cardboard/Paper	25,34%	
	Plastics and Tetra pack	22,93%	
	Ferrous Metals	0,38%	
	Other Non Ferrous	1,81%	
	Glass	6,66%	
Non Recyclable Waste		19,10%	19,10%
		100%	100%

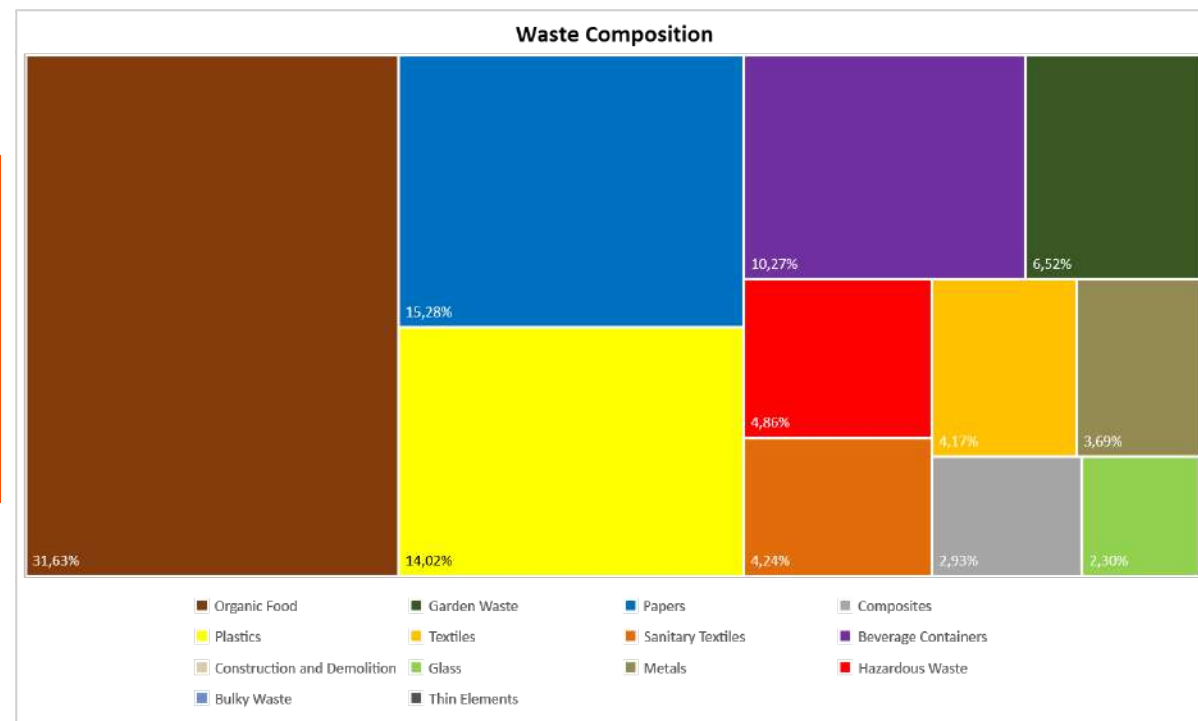
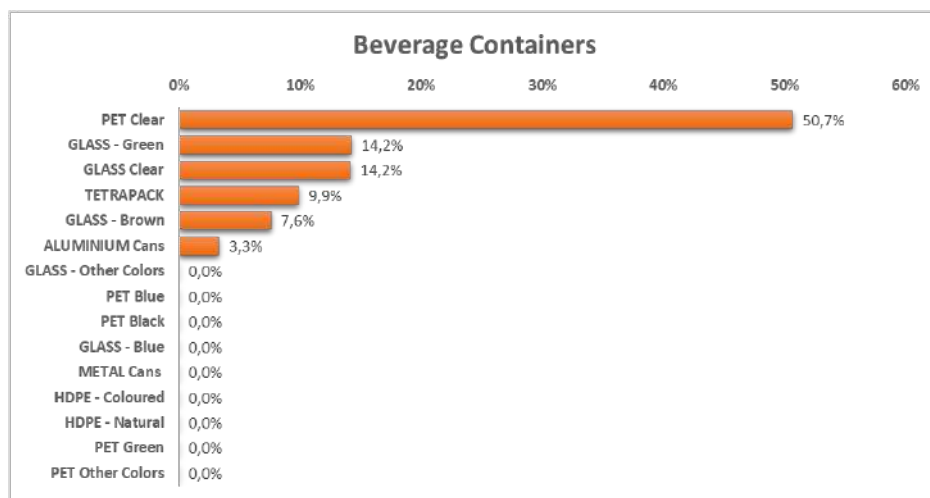


Conclusions:

- Cardboard/Paper is the type of waste with more presence followed by Biowaste and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 11,29%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Green glass.

9.3.1.8 PENAL

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	38,16%	83,71%
	Cardboard/Paper	15,28%	
	Plastics and Tetra pack	20,24%	
	Ferrous Metals	2,16%	
	Other Non Ferrous	1,87%	
	Glass	6,00%	
Non Recyclable Waste		16,29%	16,29%
		100%	100%

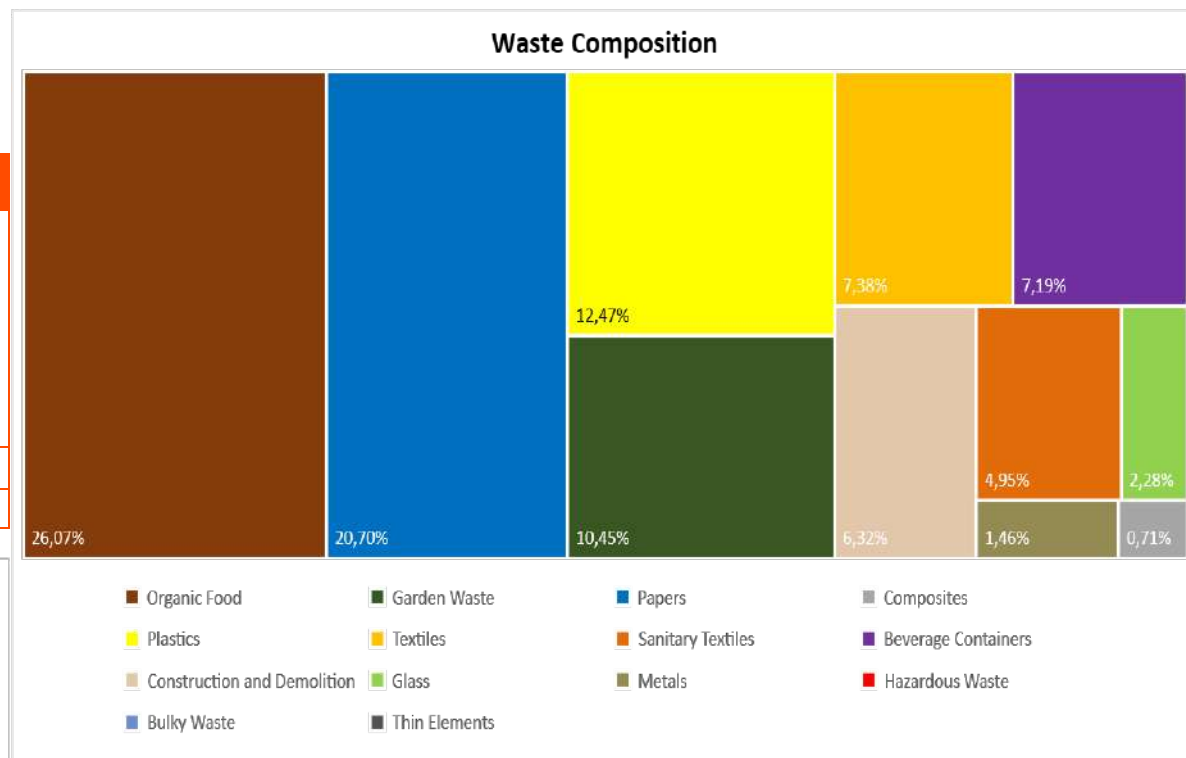
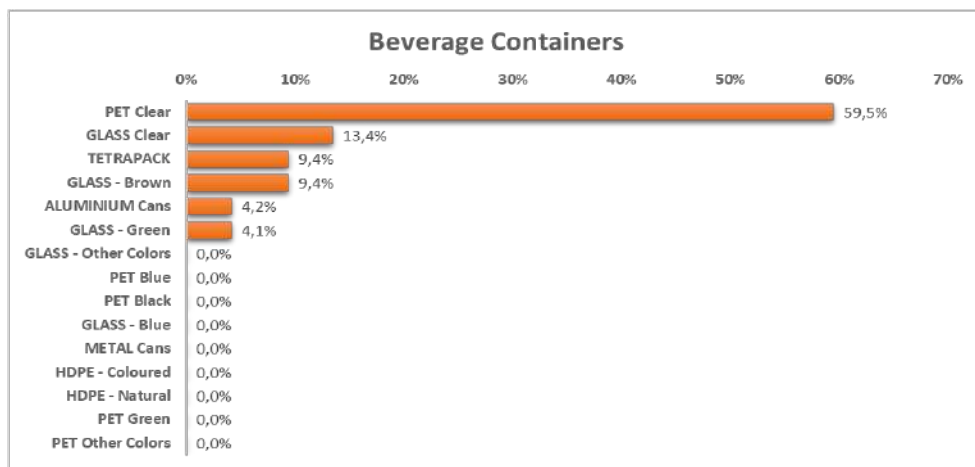


Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack and Cardboard/Paper;
- Beverage containers have a significant presence in the unsorted waste, with 10,27%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Green and Clear glass.

9.3.1.9 PRINCES TOWN

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	36,52%	80,63%
	Cardboard/Paper	20,70%	
	Plastics and Tetra pack	17,42%	
	Ferrous Metals	0,74%	
	Other Non Ferrous	1,01%	
	Glass	4,22%	
Non Recyclable Waste		19,37%	19,37%
		100%	100%

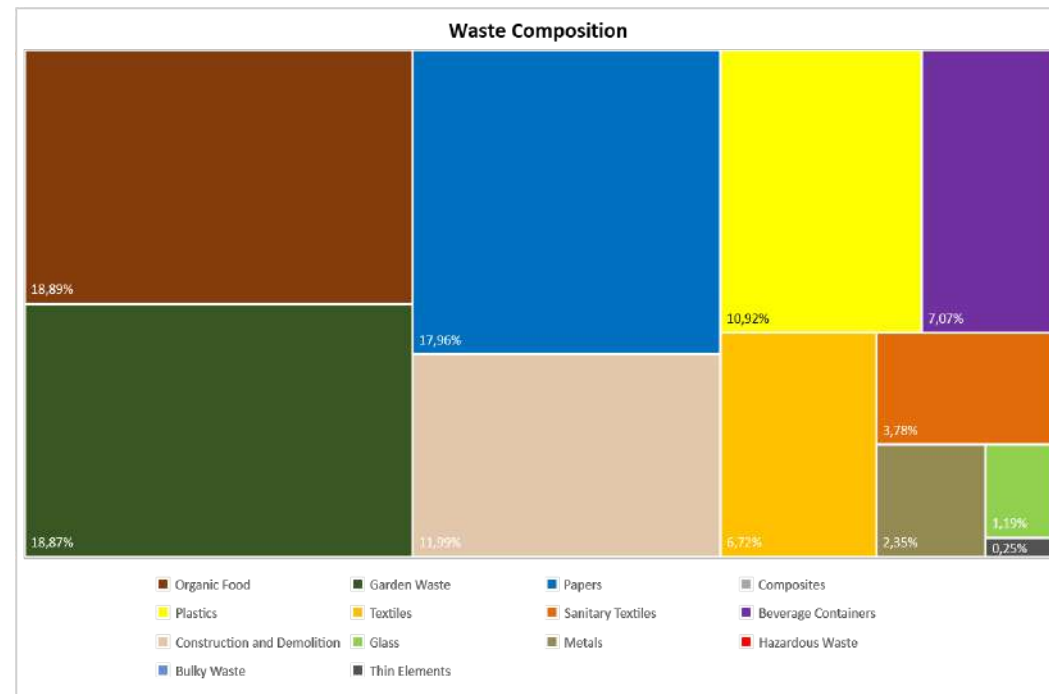
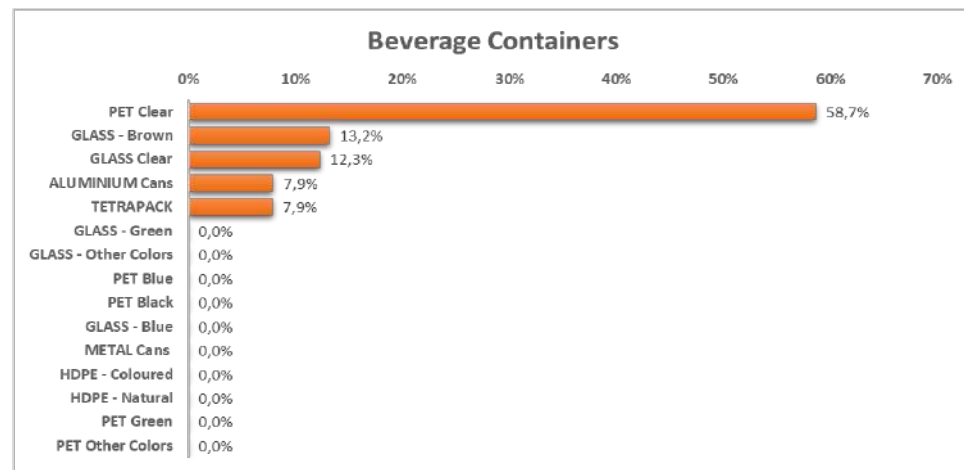


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 7,19%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear glass and then tetra pack and Brown glass.

9.3.1.10 SAN FERNANDO

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	37,76%	77,25%
	Cardboard/Paper	17,96%	
	Plastics and Tetra pack	15,63%	
	Ferrous Metals	0,81%	
	Other Non Ferrous	2,10%	
	Glass	2,99%	
Non Recyclable Waste		22,75%	22,75%
		100%	100%



Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 7,07%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Brown and Clear glass;

9.4 FORRES PARK LANDFILL CHEMICAL RESULTS

FORRES PARK			Wet Season		Dry Season	
			Landfill	Forres Park	Forres Park	Forres Park
			Municipality	Penal	San Fernando	Penal
				Residential	Residential	Residential
COMPONENT	Units	Method	SFP1w	SFP2w	SFP1d	SFP2d
Moisture (105°C)	%	Gravimetry	25,3	36,7	37,1	32,8
Ash (815°C)	%(db)	Gravimetry	6,2	8,4	9,8	8
Volatile solids	%(db)	Gravimetry	85,1	78,4	69,3	75,3
Total solids	%	Gravimetry	74,7	63,3	62,9	67,2
Gross calorific value	MJ/kg (db)	Calorimetry - isoperibol pump	26,13	19,87	19,25	24,96
Arsenic (As)	mg/kg (db)	DIN EN ISO 17294-2	<0,8	<0,8	<0,8	<0,8
Lead (Pb)	mg/kg (db)	DIN EN ISO 17294-2	5,0	<2	8,0	3,0
Cadmium (Cd)	mg/kg (db)	DIN EN ISO 17294-2	<0,2	<0,2	<0,2	<0,2
Chromium (Cr)	mg/kg (db)	DIN EN ISO 17294-2	11	15	19	10
Copper (Cu)	mg/kg (db)	DIN EN ISO 17294-2	14	8	126	15
Nickel (Ni)	mg/kg (db)	DIN EN ISO 17294-2	6	9	8	4
Mercury (Hg)	mg/kg (db)	DIN EN ISO 12846	<0,07	<0,07	<0,07	<0,07

Zinc (Zn)	mg/kg (db)	DIN EN ISO 17294-2	27	38	42	30
Carbon	% (w/w)(db)	DIN EN 15407:2011-05	53	53	54	61
pH	% (w/w)(db)	DIN EN 15407:2011-05	7,4	6,9	8,2	7,5
Total nitrogen	% (w/w)(db)	DIN EN 15407:2011-05	0,42	0,99	1,23	0,75
Sulphur (S) Total	% (w/w)(db)	DIN EN 15408:2011-05	0,065	0,103	0,155	0,103
TOC (total organic carbon)	% (w/w)(db)	DIN EN 15936:2012-11	53	52	54	61

Db=Dry basis

Table 26 - Analytical results of chemical characterization at Forres Park Landfill

General components	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Moisture (105°C)	%	4	37,1	25,3	33,0
Ash (815°C)	%(db)	4	9,8	6,2	8,1
Volatile solids	%(db)	4	85,1	69,3	77,0
Total solids	%	4	74,7	62,9	67,0
Gross calorific value	MJ/kg (db)	4	26,13	19,25	22,55
Carbon	% (w/w)(db)	4	61	53	55
pH	% (w/w)(db)	4	8,2	6,9	7,5
Total nitrogen	% (w/w)(db)	4	1,23	0,42	0,85
Sulphur (S) Total	% (w/w)(db)	4	0,155	0,065	0,107

TOC (total organic carbon)	% (w/w)(db)	4	61	52	55
Heavy metals	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Arsenic (As)	mg/kg (db)	4	<limit of quantification	<limit of quantification	<limit of quantification
Lead (Pb)	mg/kg (db)	4	8,0	<limit of quantification	5,3
Cadmium (Cd)	mg/kg (db)	4	<limit of quantification	<limit of quantification	<limit of quantification
Chromium (Cr)	mg/kg (db)	4	19	10	14
Copper (Cu)	mg/kg (db)	4	126	8	41
Nickel (Ni)	mg/kg (db)	4	9	4	7
Mercury (Hg)	mg/kg (db)	4	<limit of quantification	<limit of quantification	<limit of quantification
Zinc (Zn)	mg/kg (db)	4	42	27	34

Table 27 - Waste chemical composition of Forres Park landfill

Conclusions:

- The low moisture value of the waste and the high gross calorific value stand out;
- Regarding heavy metals, the maximum value observed for copper stands out, which may be related to waste from industry of electronic, copper polishing, paint, etc..

9.5 GUANAPO LANDFILL PHYSICAL RESULTS

Categories	Waste produced (tons)
Biowaste	40 390
Papers	24 540
Plastic	17 915
Beverage Containers	27 133
Glass	3 088
Composites	2 842
Textiles	9 065
Sanitary Textiles	5 806
Metals	4 279
Construction and Demolition	13 115
Hazardous Waste	1 606
Bulky waste	0
Thin Elements	1 197
Total	150 978

Table 28 – Results by categories of the characterization on Guanapo Landfill (tons)

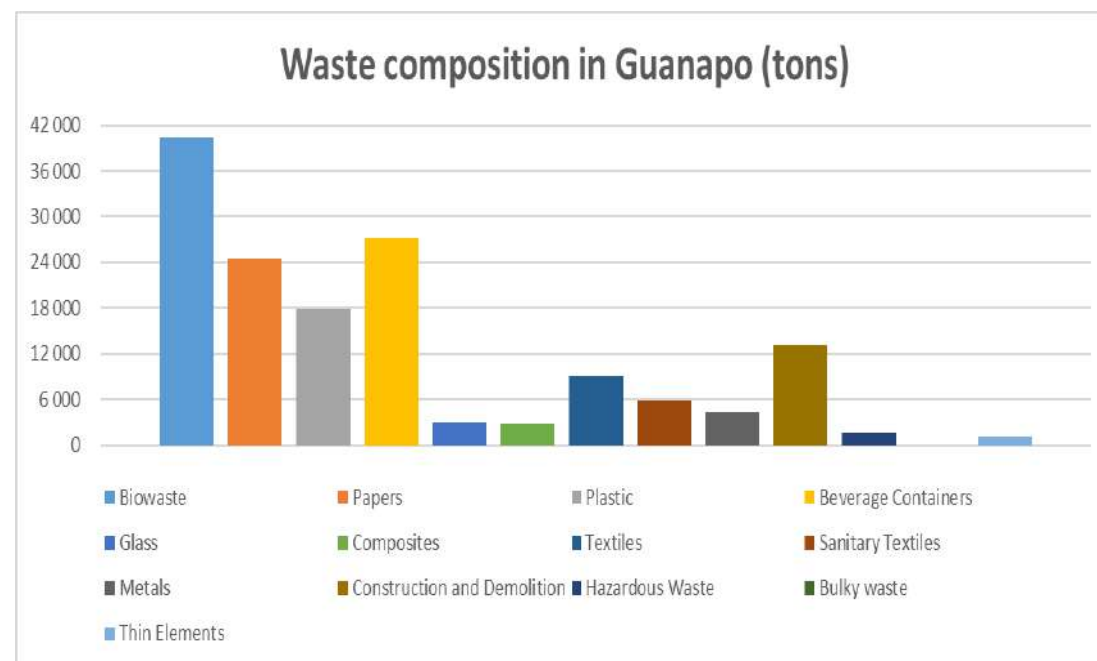


Figure 25 – Waste composition in Guanapo (tons)

Conclusions:

- A considerable amount of non-urban waste is disposed on the landfill;
- Biowaste is the type of waste with the most presence in the unsorted waste, followed by Beverage Containers;

Recyclable Waste	Waste Composition	% in weight	% in weight
	Bio Waste	29,65%	75,83%
	Cardboard/Paper	18,01%	
	Plastics and Tetra pack	18,53%	
	Ferrous Metals	1,87%	
	Other Non Ferrous	1,68%	
	Glass	6,10%	
Non Recyclable Waste		24,17%	24,17%
		100%	100%

Table 29 - Percentage of recyclable waste and non recyclable waste on Guanapo Landfill

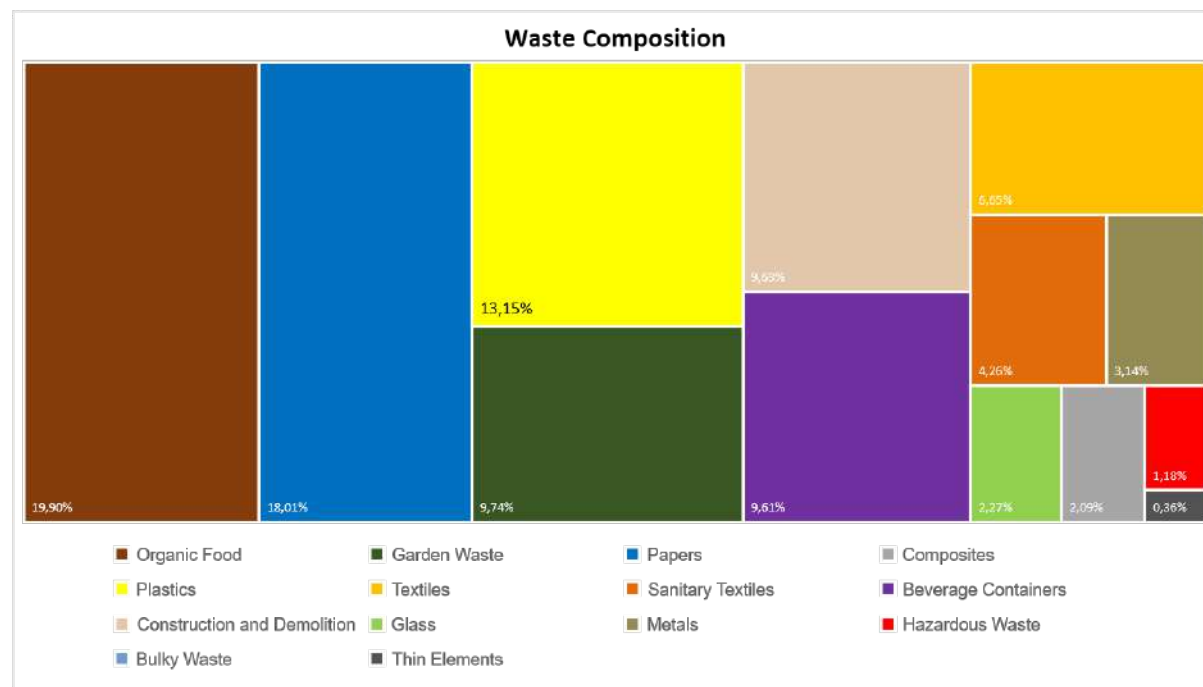


Figure 26 – Waste composition in Guanapo

Conclusions:

- 75% of the unsorted waste, are recyclable waste;
- Biowaste, Plastics and tetra pack and Cardboard/Paper are the ones with more presence in the unsorted waste;

Type of Beverage Container	Total (tons)
PET Clear	6 501
PET Blue	8
PET Green	0
PET Black	0
PET Other Colours	0
HDPE - Natural	0
HDPE - Coloured	0
TETRA PACK	815
GLASS - Clear	2 997
GLASS - Blue	113
GLASS - Green	1 332
GLASS - Brown	775
GLASS - Other Colors	0
ALUMINIUM CANS	550
METAL CANS	0
Total	13 092

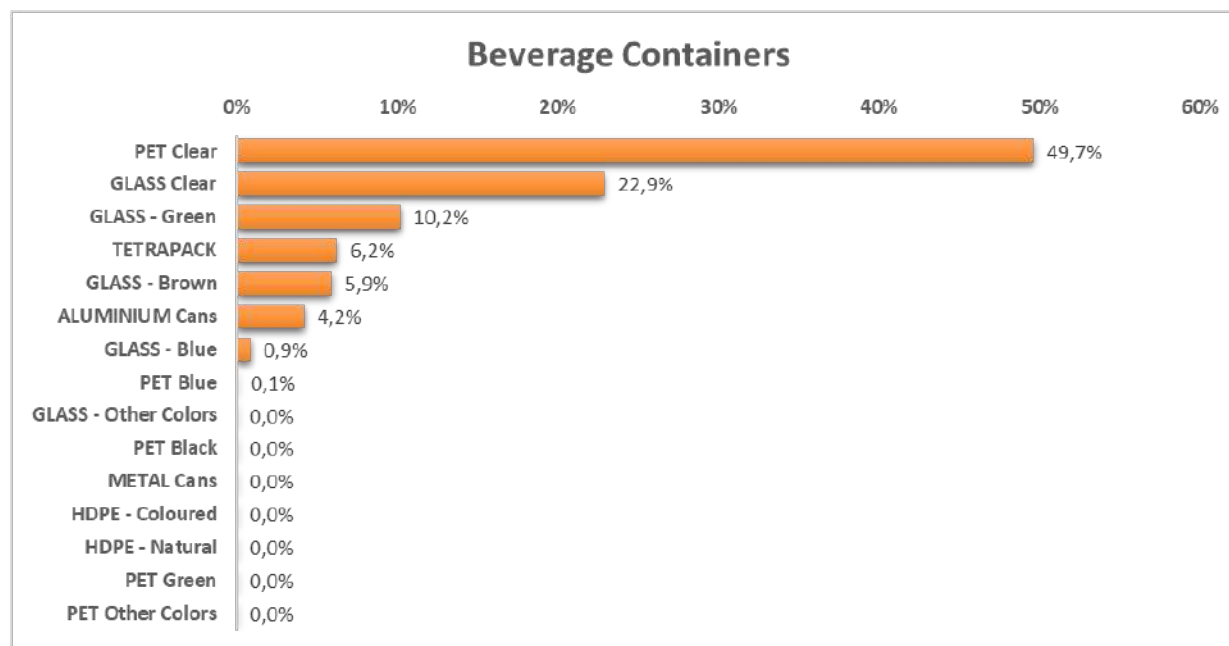


Figure 27 – Beverage Containers in Guanapo Landfill

Table 30 – Total of Beverage Containers in unsorted waste at the Guanapo landfill

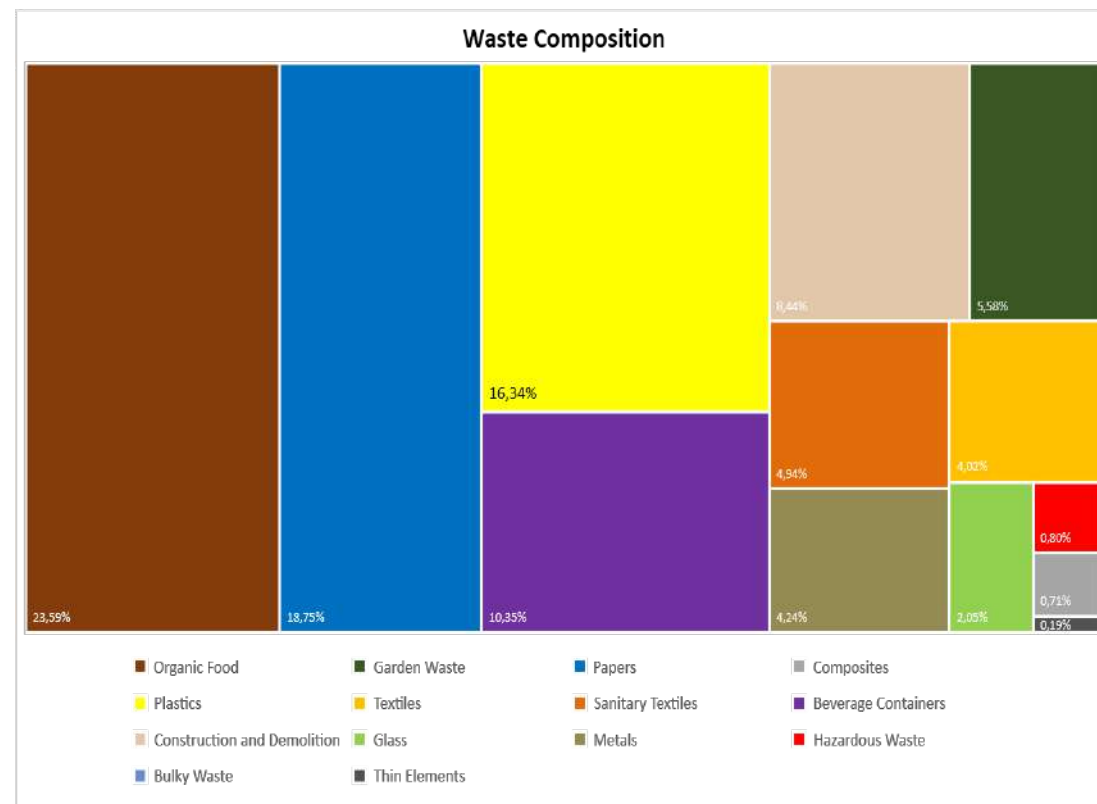
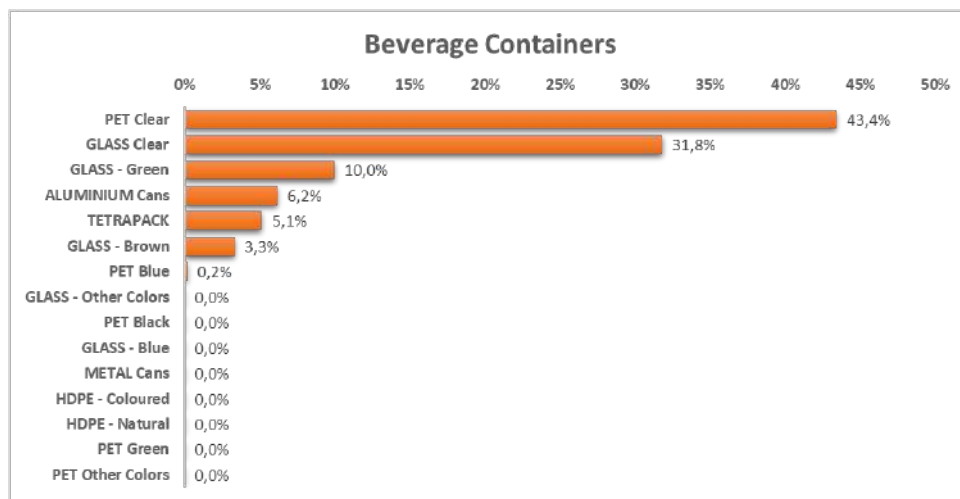
Conclusions:

- Of all the PET, the only one present in unsorted waste is the PET Clear, and there is no HDPE or aluminum Cans present in the unsorted waste;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Green glass;

9.5.1 RESULTS OF PHYSICAL CHARACTERIZATION BY MUNICIPALITY

9.5.1.1 ARIMA

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	29,17%	80,90%
	Cardboard/Paper	18,75%	
	Plastics and Tetra pack	21,38%	
	Ferrous Metals	2,32%	
	Other Non Ferrous	2,55%	
	Glass	6,72%	
Non Recyclable Waste		19,10%	19,10%
		100%	100%



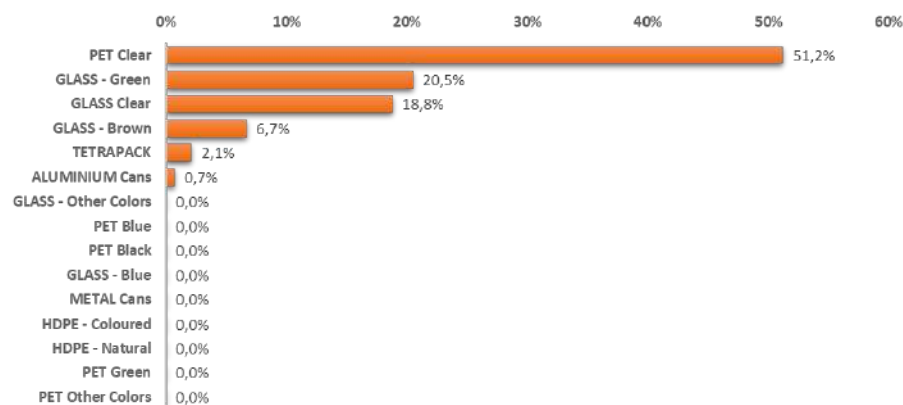
Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack and Cardboard/Paper;
- Beverage containers have a significant presence in the unsorted waste, with 10,35%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Green glass.

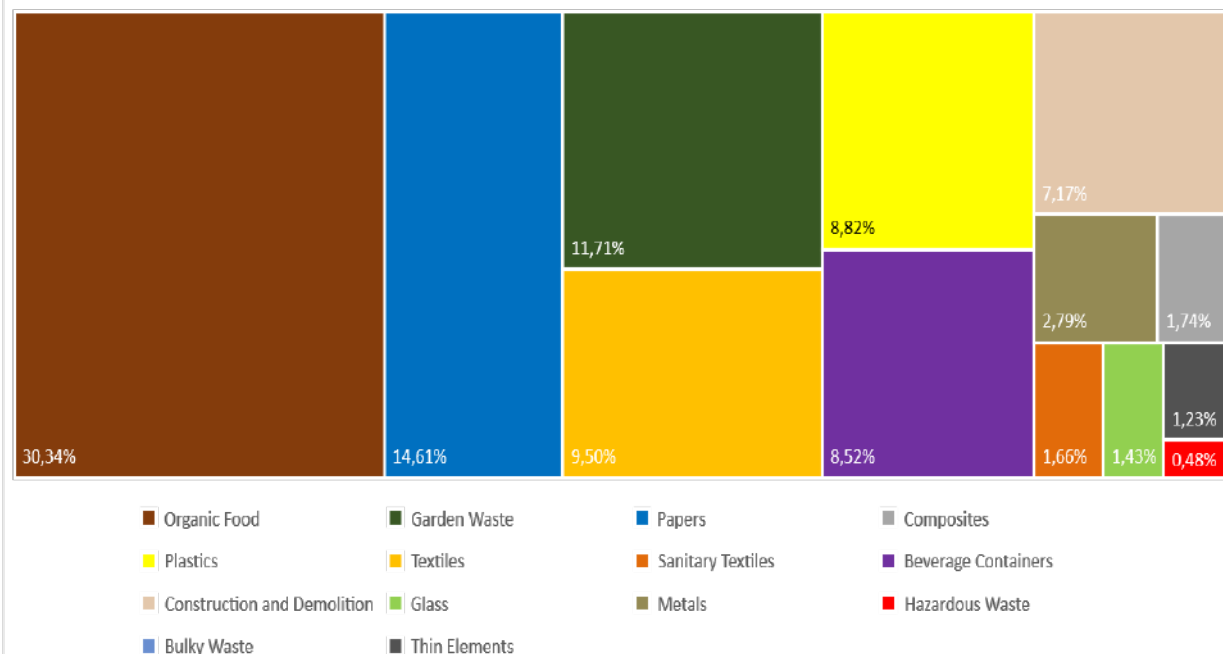
9.5.1.2 AROUCA

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	42,06%	78,23%
	Cardboard/Paper	14,61%	
	Plastics and Tetra pack	13,37%	
	Ferrous Metals	0,60%	
	Other Non Ferrous	2,25%	
	Glass	5,35%	
Non Recyclable Waste		21,77%	21,77%
		100%	100%

Beverage Containers



Waste Composition

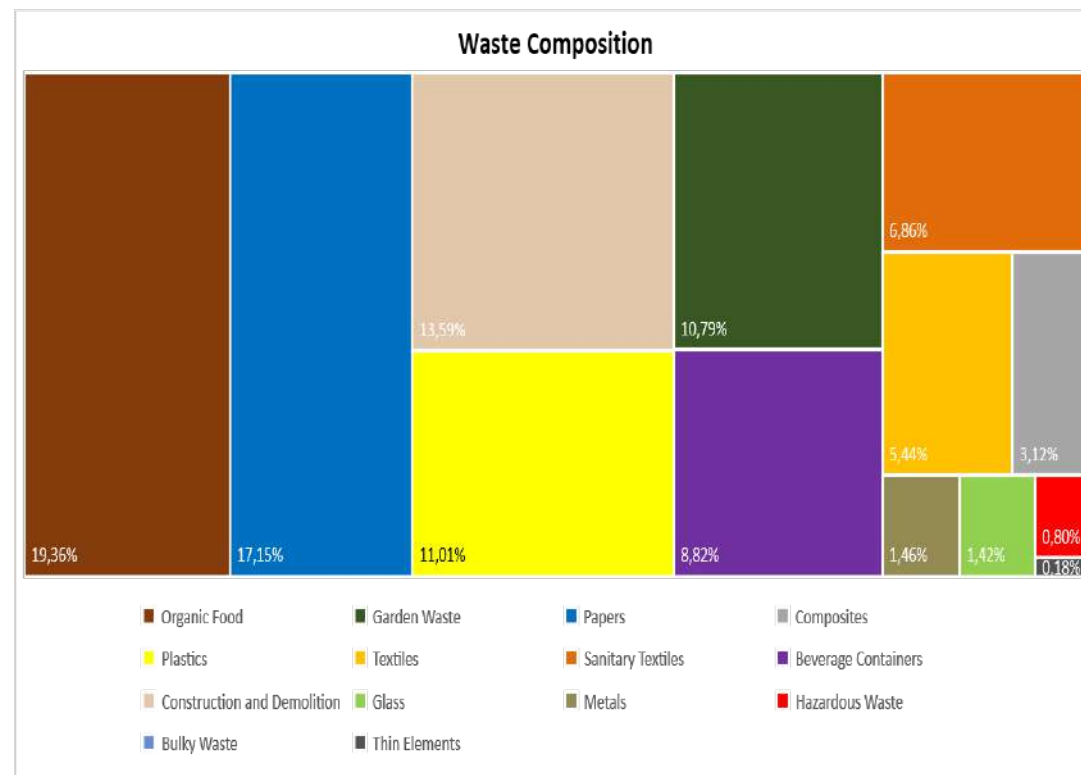
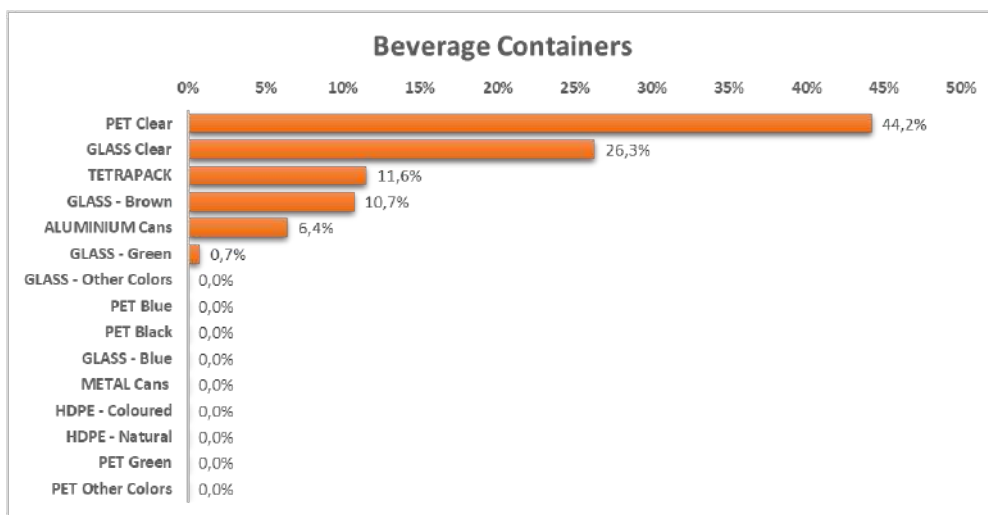


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- 30,34% of organic food, and, 11,71% of garden waste;
- Beverage containers have a significant presence in the unsorted waste, with 8,52%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Green and Clear glass.

9.5.1.3 MAYARO

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	30,15%	70,01%
	Cardboard/Paper	17,15%	
	Plastics and Tetra pack	15,93%	
	Ferrous Metals	0,89%	
	Other Non Ferrous	1,14%	
	Glass	4,76%	
Non Recyclable Waste		29,99%	29,99%
		100%	100%

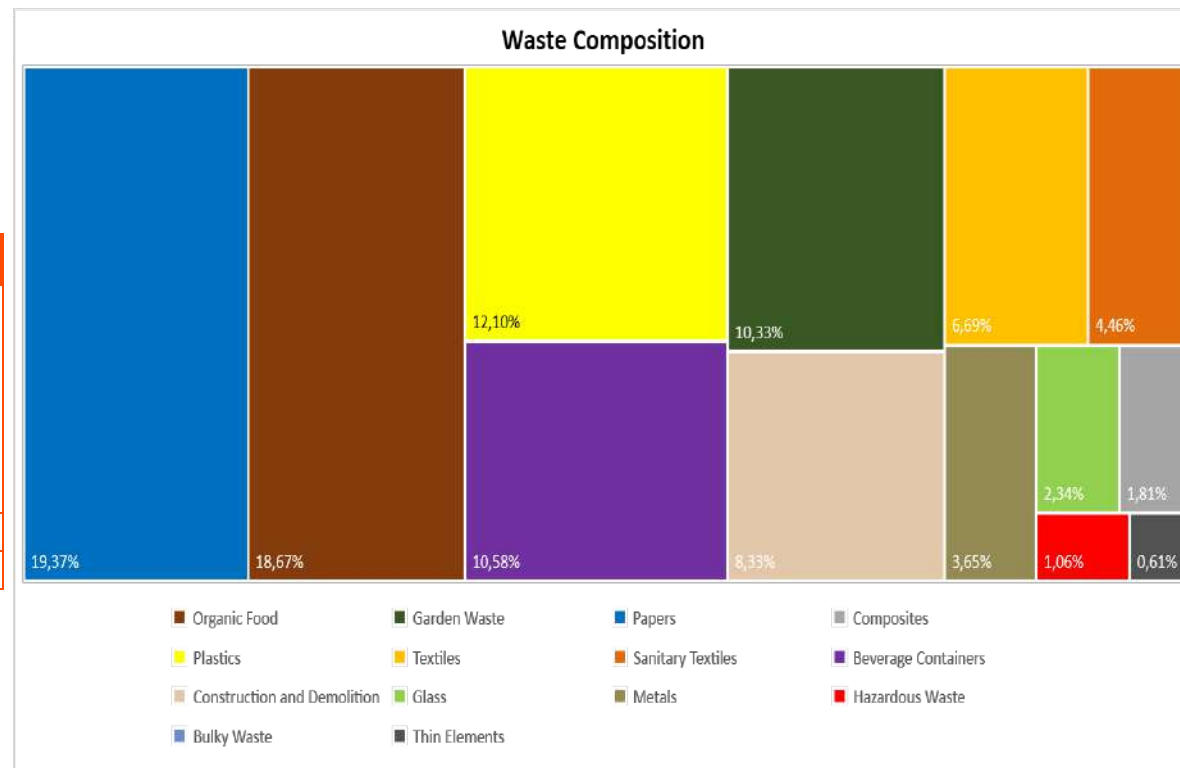
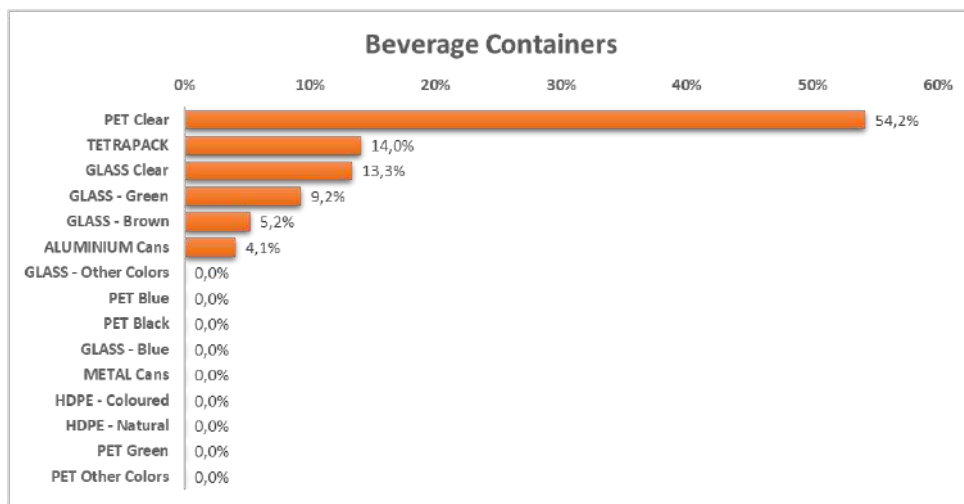


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 8,82%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear glass and tetra pack.

9.5.1.4 SANGRE GRANDE

Categories	Waste Composition	% in weight	% in weight
Recyclable Waste	Bio Waste	29,00%	77,04%
	Cardboard/Paper	19,37%	
	Plastics and Tetra pack	19,31%	
	Ferrous Metals	2,48%	
	Other Non Ferrous	1,60%	
	Glass	5,28%	
Non Recyclable Waste		22,96%	22,96%
		100%	100%

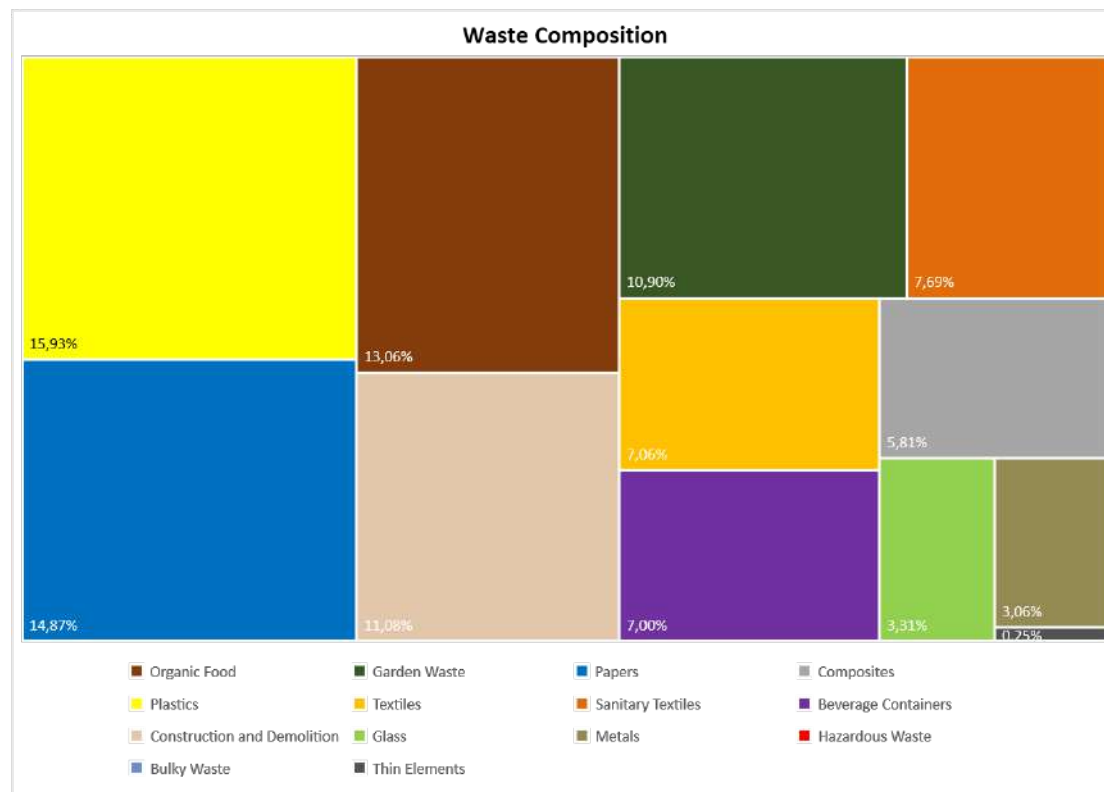
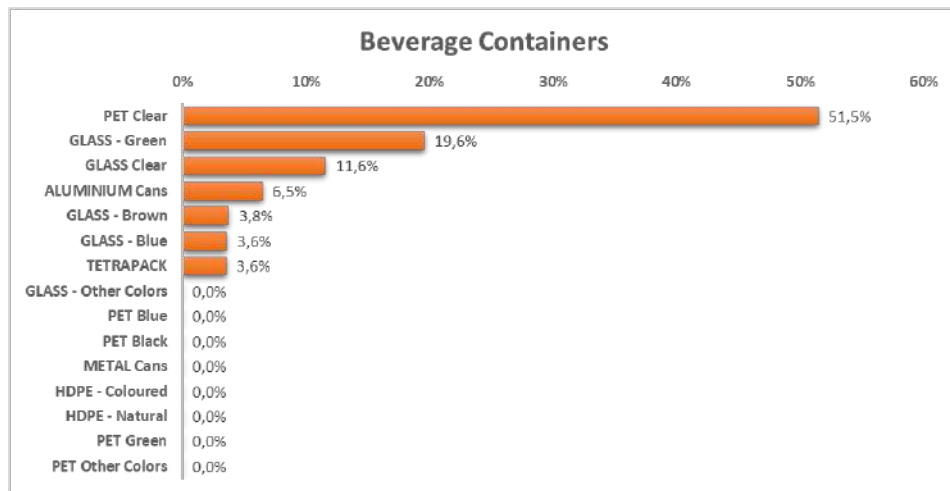


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- Beverage containers have a significant presence in the unsorted waste, with 10,58%;
- PET Clear is the beverage container more present in the unsorted waste, followed by tetra pack and Clear glass.

9.5.1.5 TALPARO

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	23,96%	68,12%
	Cardboard/Paper	14,87%	
	Plastics and Tetra pack	19,78%	
	Ferrous Metals	2,13%	
	Other Non Ferrous	1,38%	
	Glass	6,00%	
Non Recyclable Waste		31,88%	31,88%
		100%	100%

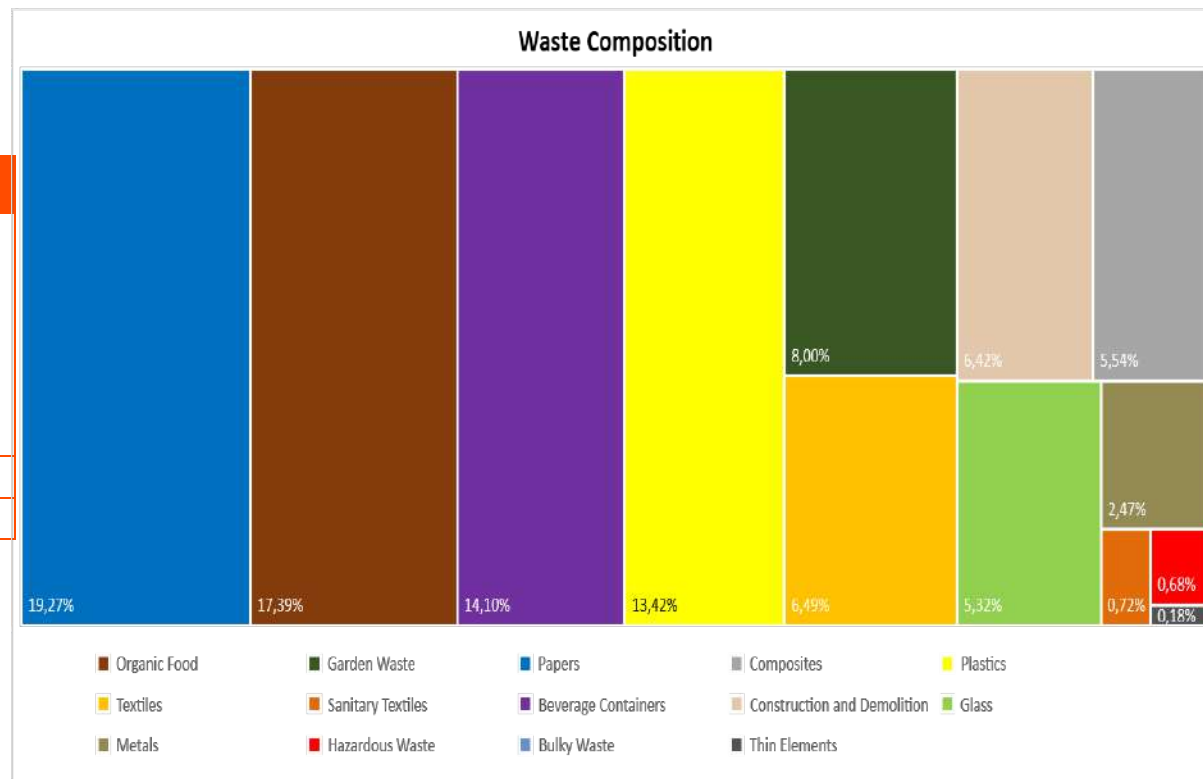
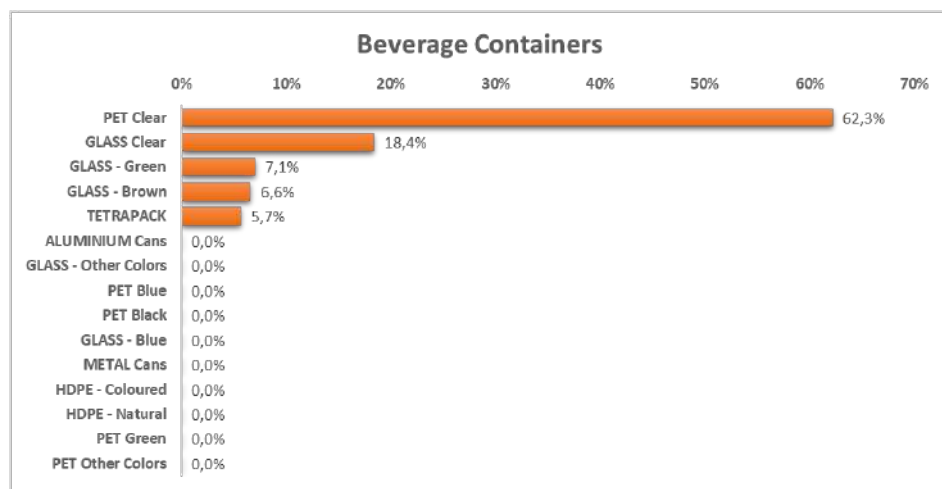


Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack and Cardboard/Paper;
- 15,93% is Plastics, and 14,87% Papers;
- Beverage containers have a significant presence in the unsorted waste, with 7%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Green and Clear glass.

9.5.1.6 TUNAPUNA

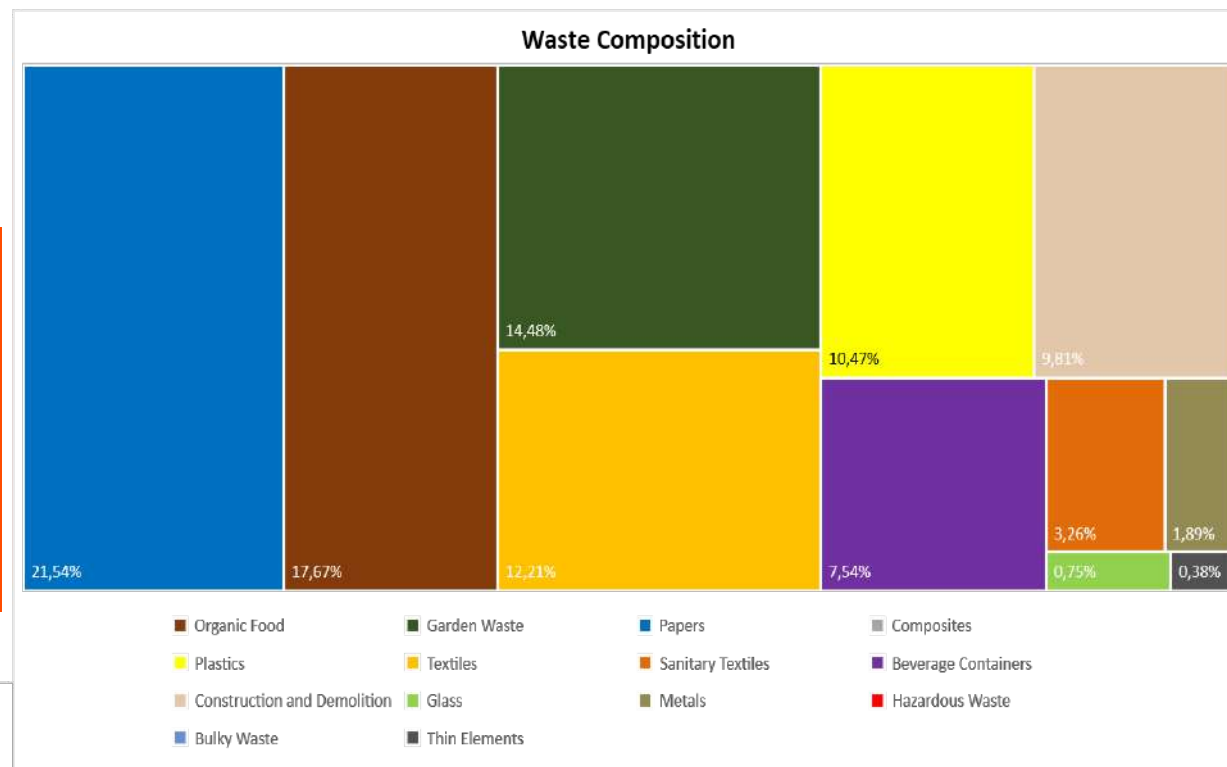
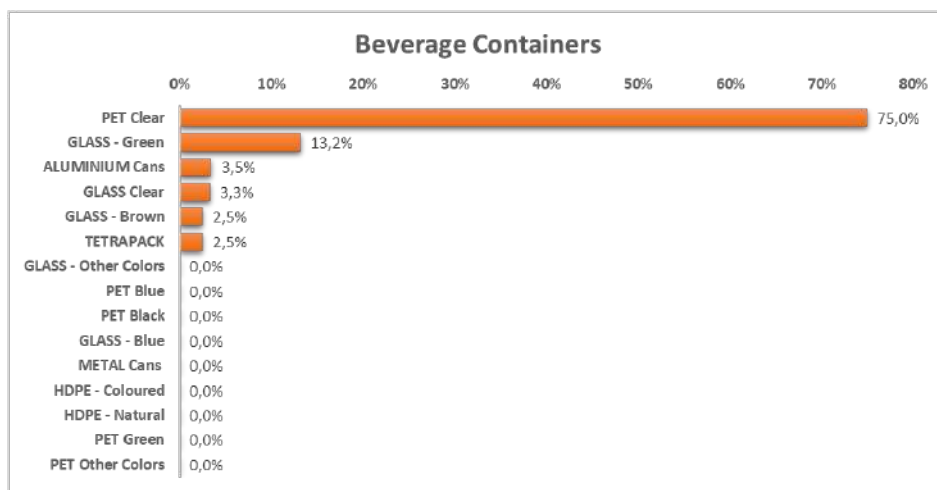
Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	25,39%	79,96%
	Cardboard/Paper	19,27%	
	Plastics and Tetra pack	22,99%	
	Ferrous Metals	1,99%	
	Other Non Ferrous	0,48%	
	Glass	9,84%	
Non Recyclable Waste		20,04%	20,04%
		100%	100%

**Conclusions:**

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack and Cardboard/Paper;
- 19,27% are Papers and 17,39% are organic food;
- Beverage containers have a significant presence in the unsorted waste, with 14,10%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Green glass.

9.5.1.7 VALENCIA

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	32,15%	74,35%
	Cardboard/Paper	21,54%	
	Plastics and Tetra pack	16,32%	
	Ferrous Metals	1,38%	
	Other Non Ferrous	0,77%	
	Glass	2,19%	
Non Recyclable Waste		25,65%	25,65%
		100%	100%

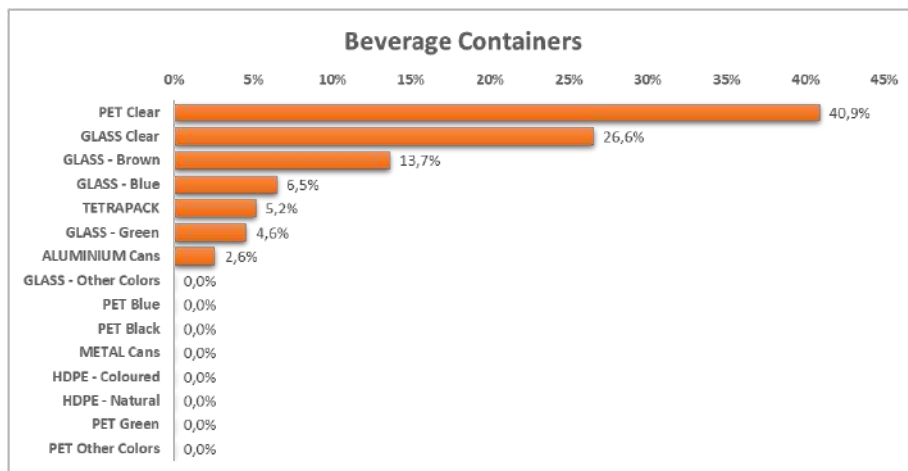
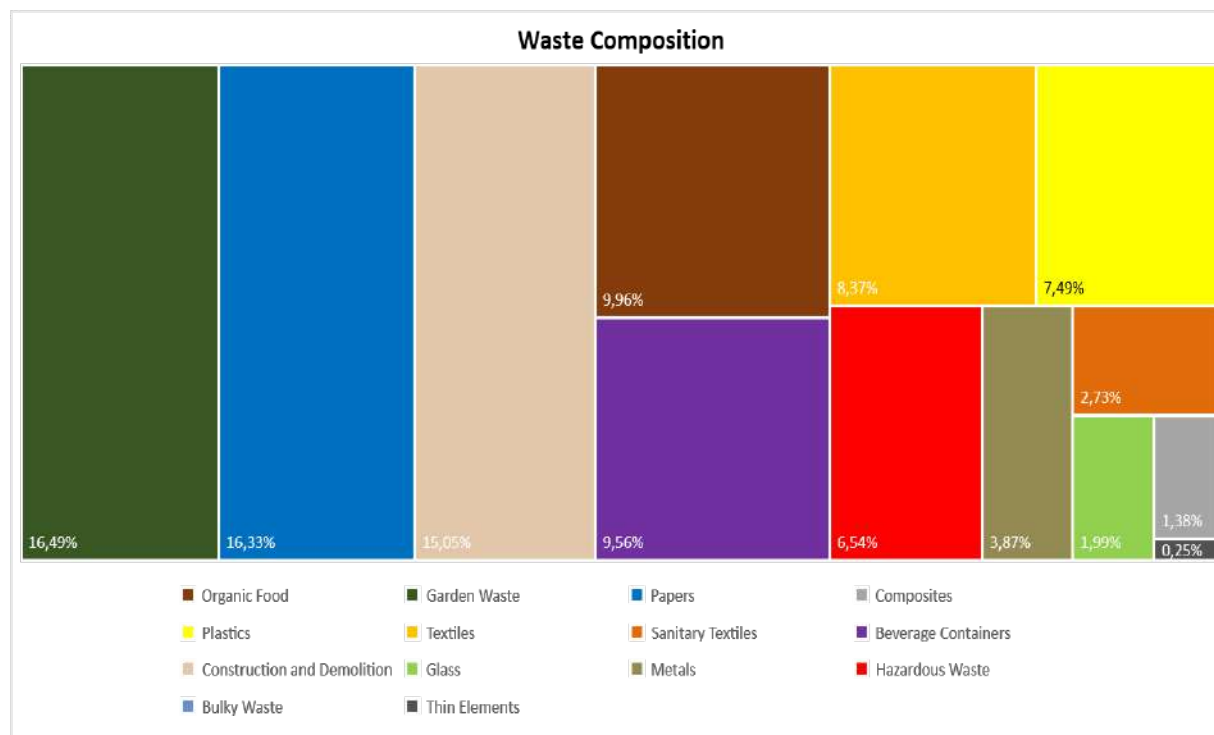


Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- 21,54% are Papers and 17,67% are Organic Food;
- Beverage containers have a significant presence in the unsorted waste, with 7,54%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Green glass and tetra pack.

9.5.1.8 WALLERFIELD

	Waste Composition	% in weight	% in weight
Recyclable Waste	Bio Waste	26,45%	65,69%
	Cardboard/Paper	16,33%	
	Plastics and Tetra pack	11,90%	
	Ferrous Metals	2,04%	
	Other Non Ferrous	2,08%	
	Glass	6,89%	
Non Recyclable Waste		34,31%	34,31%
		100%	100%



Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- 16,49% is Garden Waste and 16,33% is Papers;
- Beverage containers have a significant presence in the unsorted waste, with 9,56%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Brown glass.

9.6 GUANAPO LANDFILL CHEMICAL RESULTS

GUANAPO

Wet Season+Dry Season

			Wet Season		Dry Season	
			Landfill	Guanapo	Guanapo	Guanapo
			Municipality	Arima	Sangre Grande	Arima
				Commercial	Residential	Commercial
COMPONENT	Units	Method		SG1w	SG2w	SG1d
Moisture (105°C)	%	Gravimetry		16,2	59,6	24,8
Ash (815°C)	%(db)	Gravimetry		6,2	7,7	3,2
Volatile solids	%(db)	Gravimetry		80,8	43,8	82,7
Total solids	%	Gravimetry		83,8	40,4	75,2
Gross calorific value	MJ/kg (db)	Calorimetry - isoperibol pump		23,94	22,32	30,05
Arsenic (As)	mg/kg (db)	DIN EN ISO 17294-2		<0,8	<0,8	<0,8
Lead (Pb)	mg/kg (db)	DIN EN ISO 17294-2		7,0	19,0	<2
Cadmium (Cd)	mg/kg (db)	DIN EN ISO 17294-2		<0,2	<0,2	<0,2
Chromium (Cr)	mg/kg (db)	DIN EN ISO 17294-2		49	296	5
Copper (Cu)	mg/kg (db)	DIN EN ISO 17294-2		24	17	14
Nickel (Ni)	mg/kg (db)	DIN EN ISO 17294-2		27	135	2
Mercury (Hg)	mg/kg (db)	DIN EN ISO 12846		<0,07	<0,07	<0,07

Zinc (Zn)	mg/kg (db)	DIN EN ISO 17294-2	148	114	305	44
Carbon	% (w/w)(db)	DIN EN 15407:2011-05	57	52	66	58
pH	% (w/w)(db)	DIN EN 15407:2011-05	7,5	7,1	7,5	6,6
Total nitrogen	% (w/w)(db)	DIN EN 15407:2011-05	0,95	0,38	0,28	0,62
Sulphur (S) Total	% (w/w)(db)	DIN EN 15408:2011-05	0,084	0,121	0,032	0,069
TOC (total organic carbon)	% (w/w)(db)	DIN EN 15936:2012-11	57	52	65	58

Db=Dry basis

Table 31 - Analytical results of chemical characterization at Guanapo Landfill

General components	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Moisture (105°C)	%	4	59,6	16,2	37,4
Ash (815°C)	%(db)	4	7,7	3,2	6,2
Volatile solids	%(db)	4	82,7	43,8	66,0
Total solids	%	4	83,8	40,4	62,7
Gross calorific value	MJ/kg (db)	4	30,05	22,32	25,37
Carbon	% (w/w)(db)	4	66	52	58
pH	% (w/w)(db)	4	7,5	6,6	7,2
Total nitrogen	% (w/w)(db)	4	0,95	0,28	0,56
Sulphur (S) Total	% (w/w)(db)	4	0,121	0,032	0,077

TOC (total organic carbon)	% (w/w)(db)	4	65	52	58
Heavy metals	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Arsenic (As)	mg/kg (db)	4	<limit of quantification	<limit of quantification	<limit of quantification
Lead (Pb)	mg/kg (db)	4	19,0	<limit of quantification	9,3
Cadmium (Cd)	mg/kg (db)	4	0,5	<limit of quantification	0,5
Chromium (Cr)	mg/kg (db)	3	296	5	117
Copper (Cu)	mg/kg (db)	4	119	14	44
Nickel (Ni)	mg/kg (db)	3	135	2	55
Mercury (Hg)	mg/kg (db)	4	<limit of quantification	<limit of quantification	<limit of quantification
Zinc (Zn)	mg/kg (db)	4	305	44	153

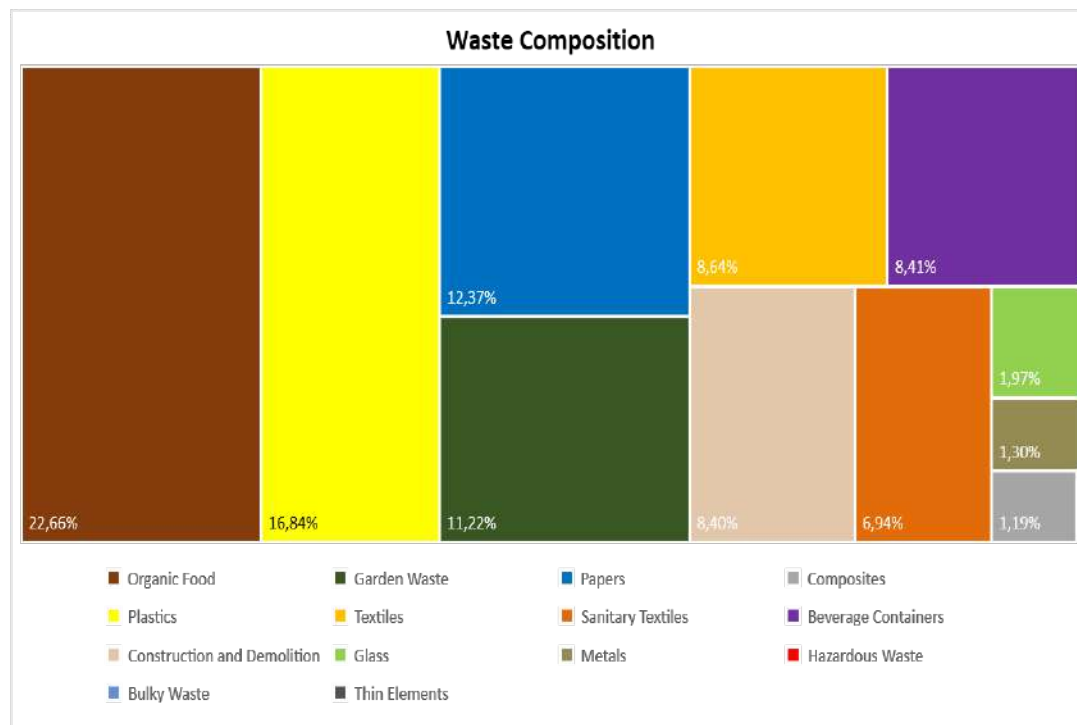
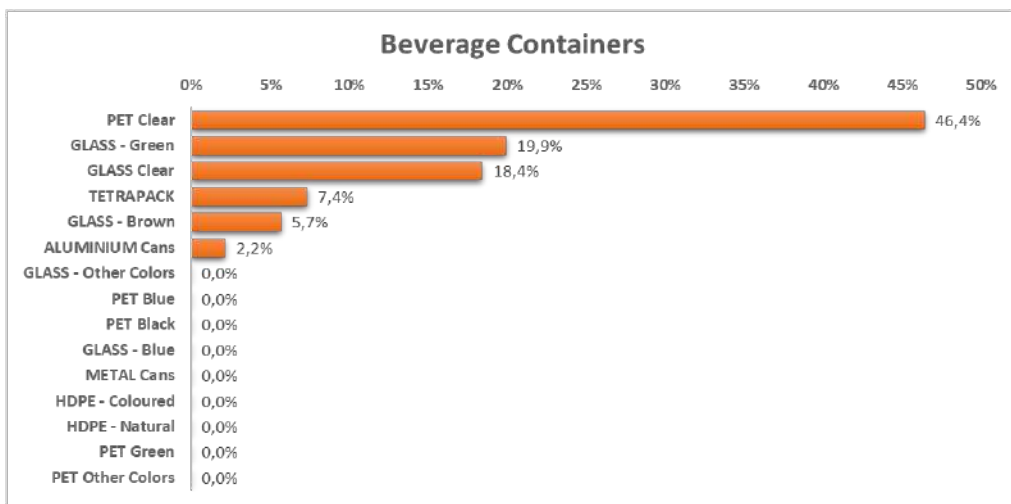
Table 32 - Waste chemical composition of Guanapo landfill

- 2 determinations of heavy metals were excluded from the statistical calculations - 1 of chromium (4490 mg/kg (db)) and 1 of nickel (1980 mg/kg (db)) - because they presented values without representation in relation to the averages of the observed values. The discarded values concern the sample of a load of Sangre Grande (residential provenance);
- The low moisture value of the waste and the high gross calorific value stand out;
- Regarding heavy metals, several high values were observed, with special focus on the chromium, zinc, copper, and nickel, which may be related to the presence of industrial waste (textile, leather, rubber and tires, batteries and other electrical and electronic equipment).

9.7 GUAPO RESULTS OF PHYSICAL CHARACTERIZATION BY MUNICIPALITY

9.7.1.1 SIPARIA

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	33,88%	74,77%
	Cardboard/Paper	12,37%	
	Plastics and Tetra pack	21,37%	
	Ferrous Metals	0,00%	
	Other Non Ferrous	1,48%	
	Glass	5,67%	
Non Recyclable Waste		25,23%	25,23%
		100%	100%

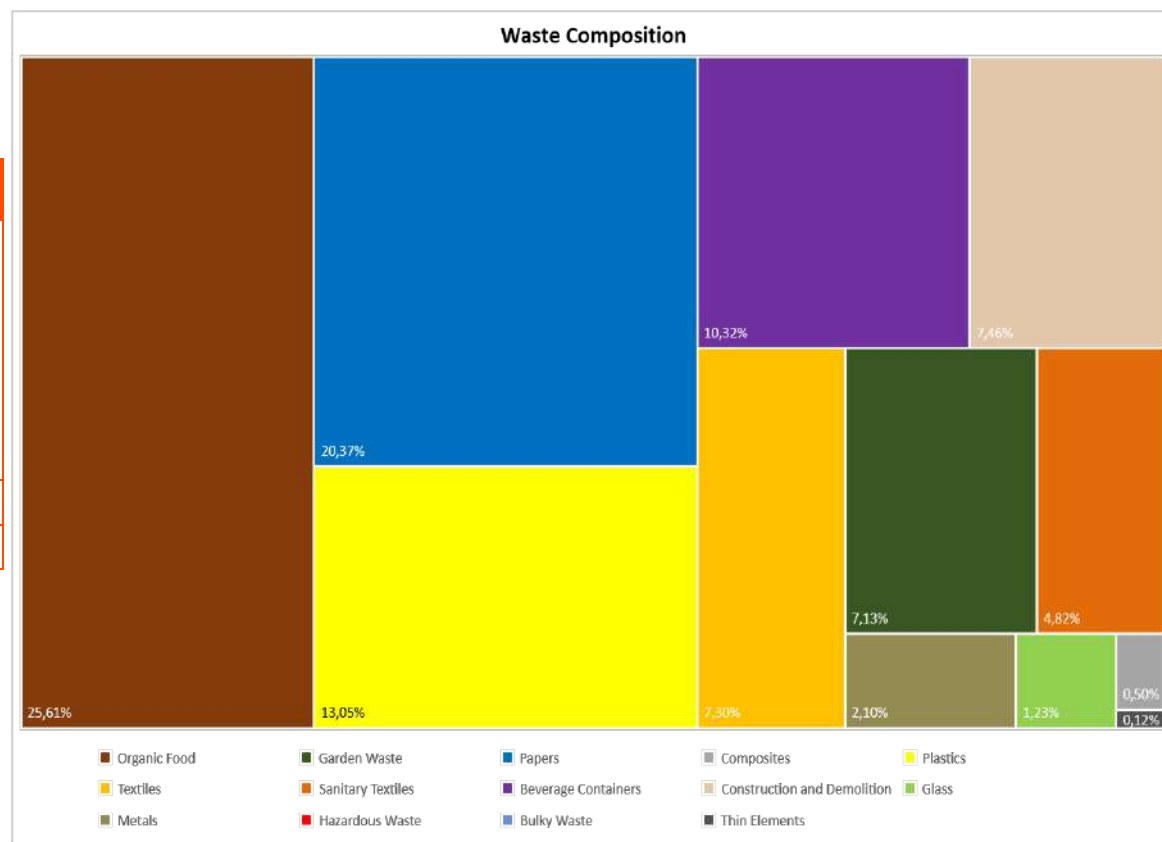
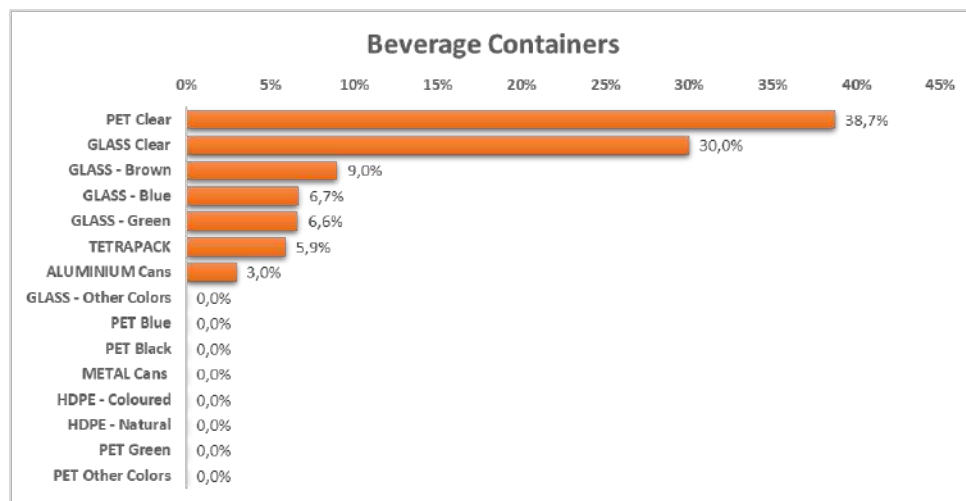


Conclusions:

- Biowaste is the type of waste with more presence followed by Plastics and tetra pack and Cardboard/Paper;
- Beverage containers have a significant presence in the unsorted waste, with 8,41%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Green and Clear glass.

9.7.1.2 POINT FORTIN

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	32,75%	79,81%
	Cardboard/Paper	20,37%	
	Plastics and Tetra pack	17,66%	
	Ferrous Metals	0,98%	
	Other Non Ferrous	1,42%	
	Glass	6,63%	
Non Recyclable Waste		20,19%	20,19%
		100%	100%



Conclusions:

- Biowaste is the type of waste with more presence followed by Cardboard/Paper and Plastics and tetra pack;
- 25,61% is Organic Food and 20,37% is Papers;
- Beverage containers have a significant presence in the unsorted waste, with 10,12%;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Brown glass

9.8 GUAPO LANDFILL CHEMICAL RESULTS

GUAPO

Wet Season+Dry Season

			Wet Season	Dry Season	
			Landfill	Guapo	Guapo
			Municipality	Point Fortin	Point Fortin
			Residential	Residential	Residential
COMPONENT	Units	Method	SGUAPOw	SGUAPO1d	SGUAPO2d
Moisture (105°C)	%	Gravimetry	24,3	21,3	32,9
Ash (815°C)	%(db)	Gravimetry	5,2	2,2	6,8
Volatile solids	%(db)	Gravimetry	85,3	83,1	76,1
Total solids	%	Gravimetry	75,7	78,7	67,1
Gross calorific value	MJ/kg (db)	Calorimetry - isoperibol pump	21,36	31,39	21,05
Arsenic (As)	mg/kg (db)	DIN EN ISO 17294-2	<0,8	<0,8	<0,8
Lead (Pb)	mg/kg (db)	DIN EN ISO 17294-2	<2	3,0	3,0
Cadmium (Cd)	mg/kg (db)	DIN EN ISO 17294-2	<0,2	<0,2	<0,2
Chromium (Cr)	mg/kg (db)	DIN EN ISO 17294-2	20	51	12
Copper (Cu)	mg/kg (db)	DIN EN ISO 17294-2	12	19	39
Nickel (Ni)	mg/kg (db)	DIN EN ISO 17294-2	8	85	8
Mercury (Hg)	mg/kg (db)	DIN EN ISO 12846	<0,07	<0,07	<0,07

Zinc (Zn)	mg/kg (db)	DIN EN ISO 17294-2	40	26	26
Carbon	% (w/w)(db)	DIN EN 15407:2011-05	59	54	52
pH	% (w/w)(db)	DIN EN 15407:2011-05	8,1	6,5	6,9
Total nitrogen	% (w/w)(db)	DIN EN 15407:2011-05	0,55	1,34	0,55
Sulphur (S) Total	% (w/w)(db)	DIN EN 15408:2011-05	0,07	0,115	0,068
TOC (total organic carbon)	% (w/w)(db)	DIN EN 15936:2012-11	59	54	52

Db=Dry basis

Table 33 - Analytical results of chemical characterization at Guapo Landfill

General components	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Moisture (105°C)	%	3	32,9	21,3	26,2
Ash (815°C)	%(db)	3	6,8	2,2	4,7
Volatile solids	%(db)	3	85,3	76,1	81,5
Total solids	%	3	78,7	67,1	73,8
Gross calorific value	MJ/kg (db)	3	31,39	21,05	24,60
Carbon	% (w/w)(db)	3	59	52	55
pH	% (w/w)(db)	3	8,1	6,5	7,2
Total nitrogen	% (w/w)(db)	3	1,34	0,55	0,81
Sulphur (S) Total	% (w/w)(db)	3	0,115	0,068	0,084

TOC (total organic carbon)	% (w/w)(db)	3	59	52	55
Heavy metals	Units	Number of determinations	Observed values		
			Max.	Min.	Ave.
Arsenic (As)	mg/kg (db)	3	<limit of quantification	<limit of quantification	<limit of quantification
Lead (Pb)	mg/kg (db)	3	3,0	<limit of quantification	3,0
Cadmium (Cd)	mg/kg (db)	3	<limit of quantification	<limit of quantification	<limit of quantification
Chromium (Cr)	mg/kg (db)	3	51	12	28
Copper (Cu)	mg/kg (db)	3	39	12	23
Nickel (Ni)	mg/kg (db)	3	85	8	34
Mercury (Hg)	mg/kg (db)	3	<limit of quantification	<limit of quantification	<limit of quantification
Zinc (Zn)	mg/kg (db)	3	40	26	31

Table 34 - Waste chemical composition of Guapo landfill

Conclusions:

- The low moisture value of the waste and the high gross calorific value stand out;
- Regarding heavy metals, nickel, stands out. This metal can be found in batteries.

9.9 TRINIDAD WASTE PHYSICAL AND CHEMICAL RESULTS

Categories	Waste produced (tons)
Biowaste	237 782
Papers	131 737
Plastic	94 168
Beverage Containers	67 325
Glass	15 003
Composites	16 022
Textiles	46 864
Sanitary Textiles	36 534
Metals	16 521
Construction and Demolition	64 515
Hazardous Waste	4 813
Bulky waste	0
Thin Elements	2 340
Total	733 623

Table 35 – Results by categories of the characterization of the waste produced

in Trinidad* on 2022



Figure 28 – Waste composition in Trinidad* on 2022

*(without Guapo values)

Conclusions:

- Around 168 000 tons of non-urban waste is disposed on the landfill;
- Biowaste is the waste stream with the most presence in the unsorted waste, followed by Papers;

	Waste Composition	% in weight	% in weight
Recyclable Waste	Bio Waste	32,41%	76,63%
	Cardboard/Paper	17,96%	
	Plastics and Tetra pack	18,07%	
	Ferrous Metals	1,21%	
	Other Non Ferrous	1,52%	
	Glass	5,46%	
Non Recyclable Waste		23,32%	23,32%
		100%	100%

Table 36 – Percentage of recyclable waste and non recyclable waste on the waste produced In Trinidad on 2022

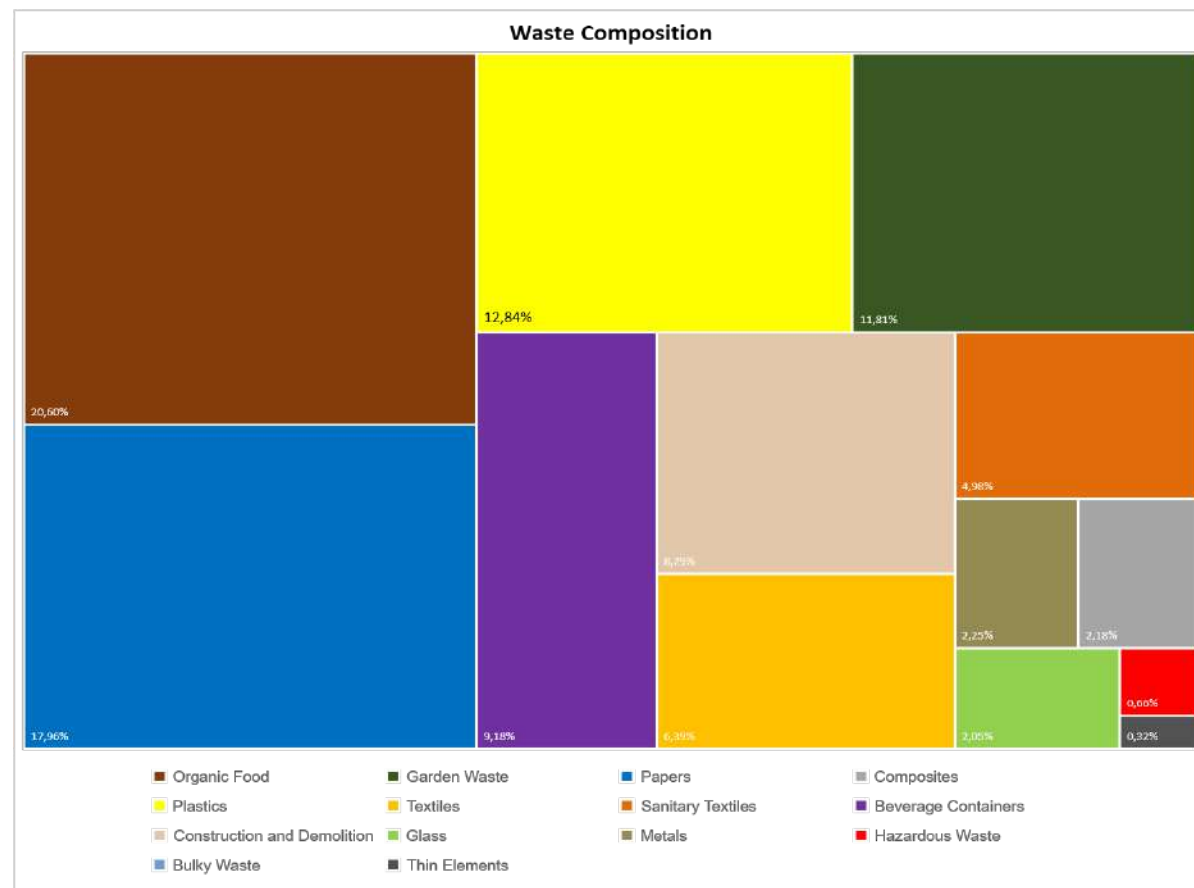


Figure 29 – Waste composition In Trinidad on 2022

Conclusions:

- 77% of the unsorted waste, are recyclable waste;
- Biowaste, Plastics and tetra pack and Cardboard/Paper are the ones with more presence in the unsorted waste;
- 20,60% is Organic Food and 17,96 is Papers.

Type of Beverage Container	Total (tons)
PET Clear	33 629
PET Blue	15
PET Green	0
PET Black	0
PET Other Colours	0
HDPE - Natural	0
HDPE - Coloured	44
TETRA PACK	4 725
GLASS - Clear	12 706
GLASS - Blue	675
GLASS - Green	6 280
GLASS - Brown	5 370
GLASS - Other Colors	15
ALUMINIUM Cans	3 690
METAL Cans	176
Total	67 325

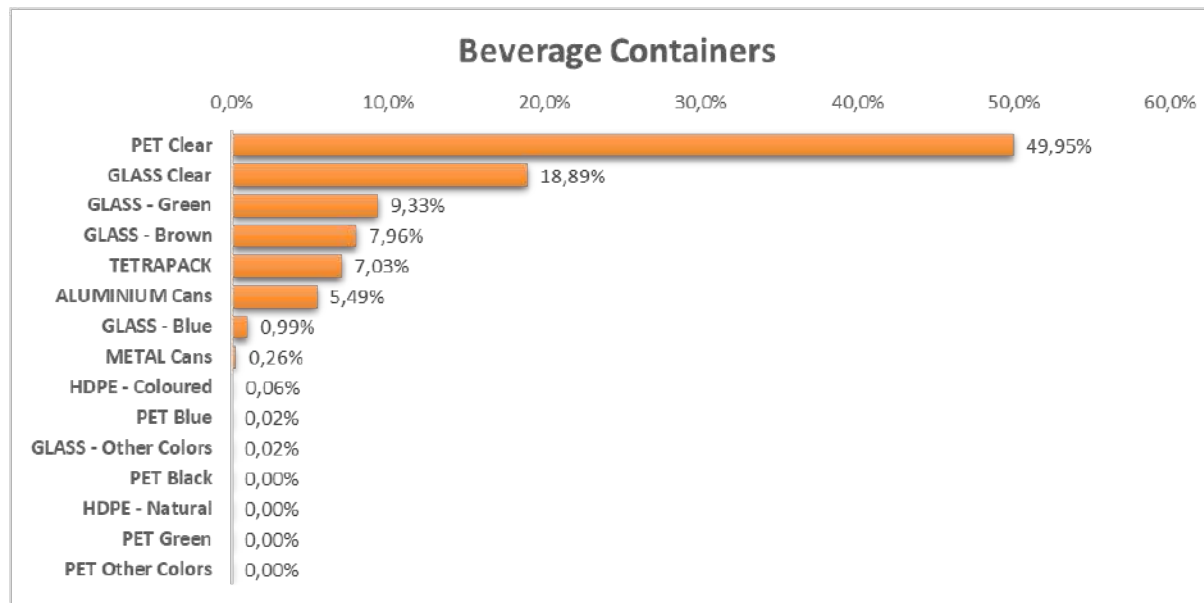


Figure 30 – Total of Beverage Containers in unsorted waste in Trinidad on 2022

Table 37– Total of Beverage Containers in unsorted waste in Trinidad* on 2022

Conclusions:

- Of all the PET, the most present in unsorted waste is the clear PET ;
- PET Clear is the beverage container more present in the unsorted waste, followed by Clear and Green glass;

9.10 SUMMARY

In order to evaluate the chemical characteristics of the residues in Trinidad, the results obtained in the two characterization campaigns, wet season and dry season, were taken as reference.

The preparation of waste samples to be sent to the external laboratory (3 kg samples) was carried out in accordance with the procedures described in chapter 5.3 The Summary of Chemical Sampling Plan.

The analyzed parameters and the results obtained in the two characterization campaigns are presented below and are organized by origin.

In Table 38. a summary of these results is presented, which were treated statistically, in terms of mean and standard deviation.

General components	Units	Number of determinations	Observed values			Standard Error
			Max.	Min.	Ave.	
Moisture (105°C)	%	17	59,6	11,1	30,7	2,82
Ash (815°C)	%(db)	17	9,8	2,2	6,3	0,44
Volatile solids	%(db)	17	85,3	43,8	75,2	2,58
Total solids	%	17	88,9	40,4	69,3	2,82
Gross calorific value	MJ/kg (db)	17	31,4	18,7	24,0	0,94
Carbon	%(w/w)(db)	17	66,0	47,3	56,6	1,16
pH	%(w/w)(db)	17	9,2	6,3	7,3	0,18
Total nitrogen	%(w/w)(db)	17	1,3	0,3	0,7	0,09
Sulphur (S) Total	%(w/w)(db)	17	0,2	0,0	0,1	0,01
TOC (total organic carbon)	%(w/w)(db)	17	65,0	47,1	56,4	1,15

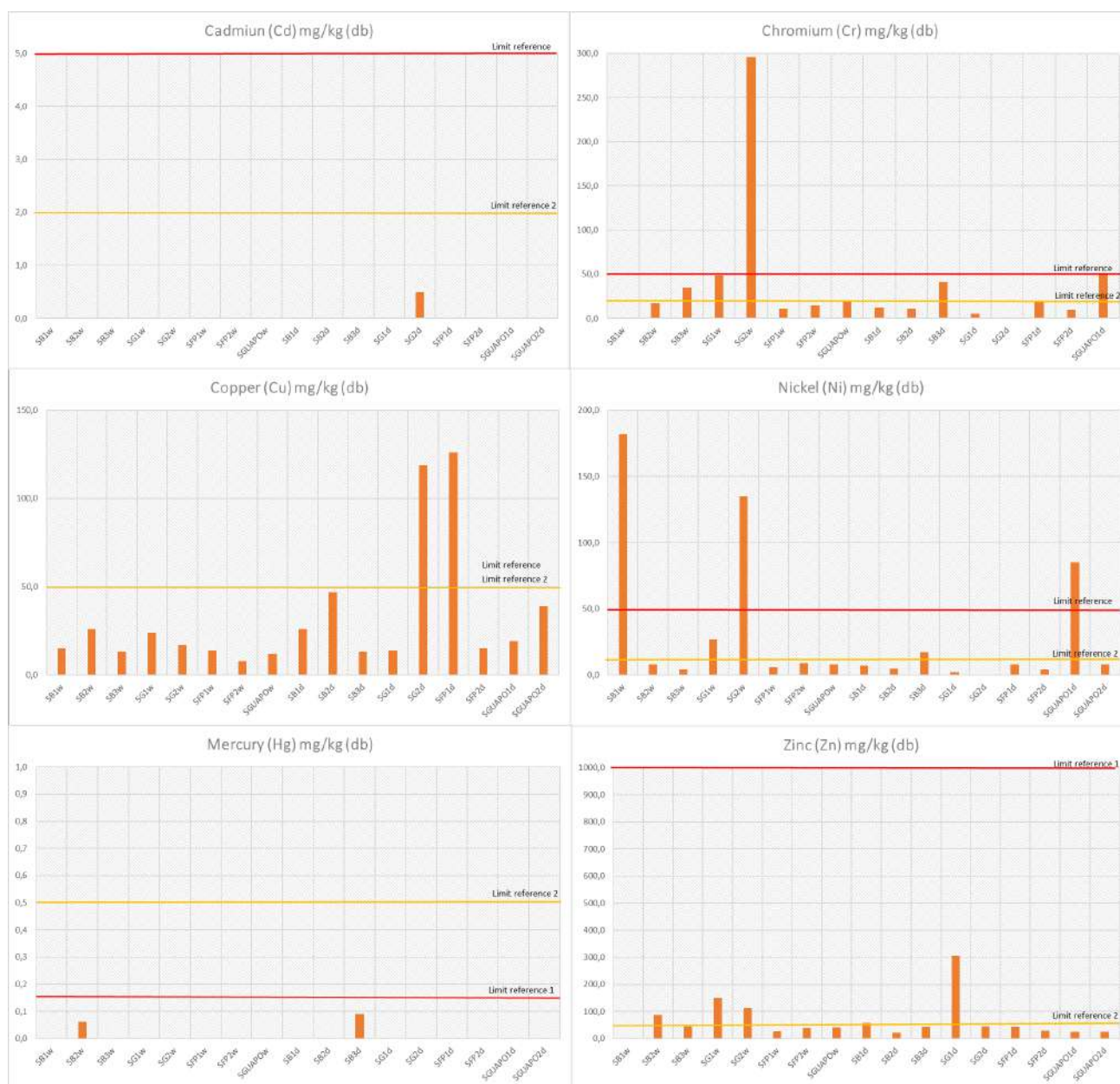
Table 38– Chemical composition of waste from Trinidad

Moisture values show a wide range, ranging from 59.6% to 11.1%, with an average value of 30.7%. This is slightly low when compared with the values observed in several studies of the characterization of European unsorted waste, where the moisture presents average values above 50%. This lower moisture value may be related to a not very high percentage of biowaste and to a considered high percentage of plastics present in unsorted waste.

Regarding PCI, values vary between 18.7 MJ/kg and 31.4 MJ/kg, high values when compared with unsorted waste produced in Europe (values in the order of 7 MJ/kg), which may be related to low moisture values (lower percentages biowaste) and large percentages of materials that are highly suitable for combustion, namely plastic, paper and cardboard.

The ash value at 815°C is also low when compared to European values (values in the order of 20%), again due to the high percentage of plastics.

The Solids results reveal that there is considerable degradability in the materials that constituted the samples.



Limit reference 1 - ECON Laboratory & Consultancy, Environmental Baseline Study of Municipal Solid Waste Dumpsite, Haridwar, Uttarakhand

Figure 31 – Waste chemical composition – Heavy Metals - in Trinidad

Regarding Heavy Metals, the results show a considerable variability of the samples.

Thus, 4 determinations were excluded from the statistical calculations - 2 of chromium, 1 of nickel and 1 of zinc - because they presented values without representation in relation to the averages of the observed values.

The results were compared with the limits established for each of these metals in 2 different references, as can be seen in the previous graphs.

No graph is shown for arsenic metal since all results obtained were below the limit of quantification.

So, chromium and zinc present higher values, followed by nickel and copper. Usually, the presence of these metals is related to the presence of textile materials, rubber, shoes, leather goods, lamps, batteries, among other materials.

9.11 LANDFILL'S WASTE RESULTS COMPARISON

Waste Composition - Trinidad

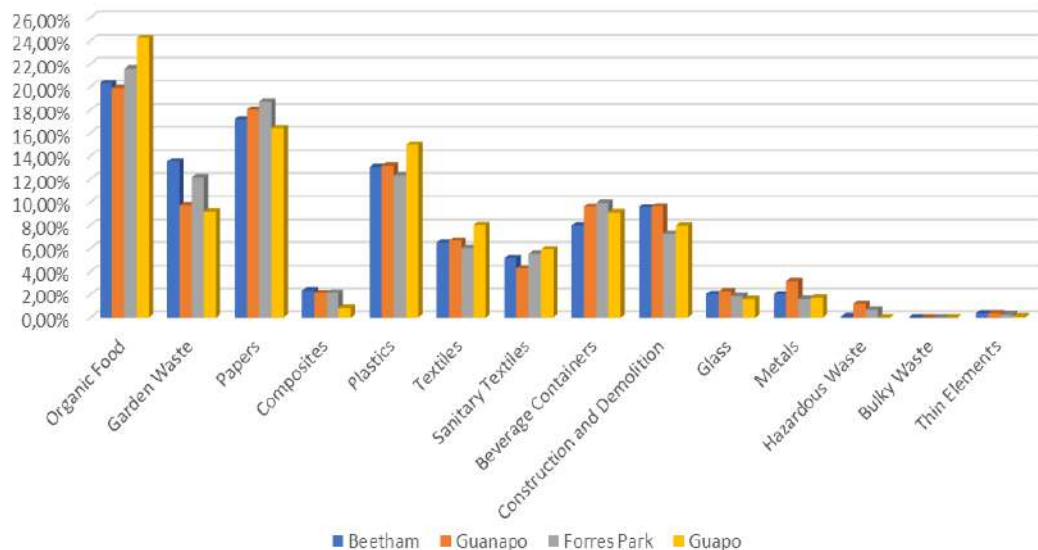


Figure 33 – Waste composition in Trinidad

Beverage Containers Trinidad

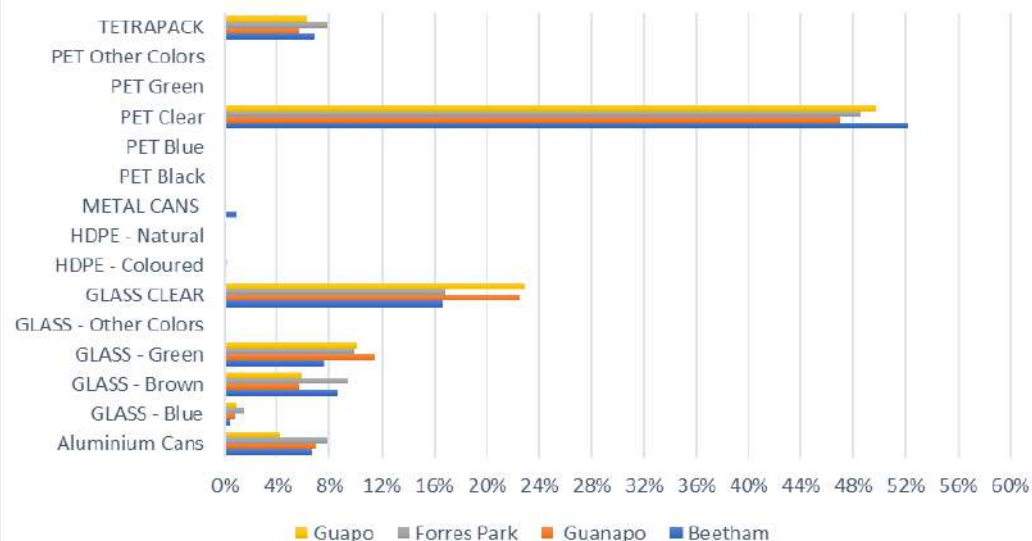


Figure 32 – Beverage Containers in Trinidad

When observing the figures, we can conclude that in the 4 landfills, there is a significant presence of organic food, followed by Papers and Plastics. It is important to refer to the existence of substantial quantities of non-urban waste (construction and demolition) in the 4 landfills.

In the case of the beverage containers, apart from the obvious conclusions that can be made, we can highlight the metal cans in Beetham landfill and the existence of HDPE – Coloured in the Forres Park Landfill.

9.12 2010 vs 2022 RESULTS

Even knowing that the methodology used was different from the one used in 2010, as so as the categories considered in the characterization in 2010, have in consideration some kinds of waste that we didn't included in our categories/subcategories, we think it would be an asset if you compared the values between 2010 and 2022.

2022		
Waste Composition	% in weight	% in weight
Recyclable		
Bio Waste	32,4%	76,6%
Cardboard/Paper	18,0%	
Plastics and Tetrapac	18,1%	
Ferrous Metals	1,2%	
Other Non Ferrous	1,5%	
Glass	5,5%	
Non Recyclable		
Composites	2,2%	23,3%
Sanitary Textiles	5,0%	
Textiles	6,4%	
Construction and	8,8%	
Hazardous Waste	0,7%	
Bulky Waste	0,0%	
Thin Elements	0,3%	

2011		
Waste Composition	Average Proportion	
Recyclable		
Organics	27,2%	83,7%
Plastics	19,2%	
Paper	18,8%	
Glass	10,2%	
Old Corrugated Cardb	3,8%	
Metal Ferrous	2,3%	
Metal, Non Ferrous	1,4%	
Beverage Containers	0,9%	
Non Recyclable		
Textiles and Clothing	7,8	16,3%
Household	5,2%	
Other	2,7%	
Construction and Demolition	0,5%	

Table 39 – Waste composition 2022 vs Waste composition 2010

Considering even so the difference of methodology used, looking to the tables is possible to conclude that there was more recyclable waste in the unsorted waste in 2010 in comparison with 2022.

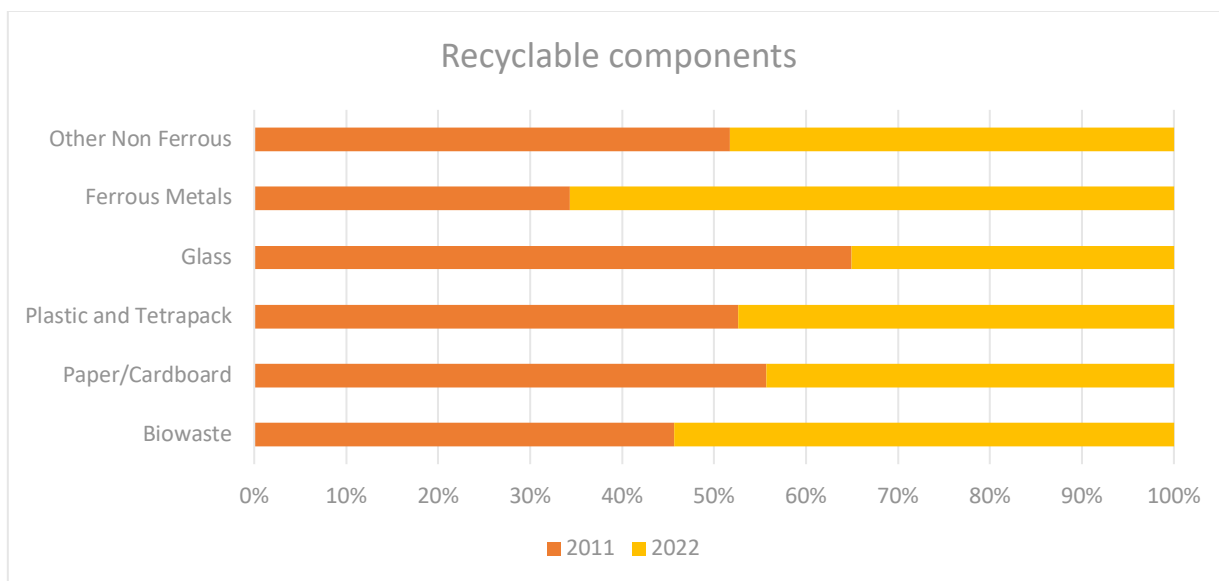


Figure 34 – Comparison of recyclable components present in waste in Trinidad, between the years 2010 and 2022

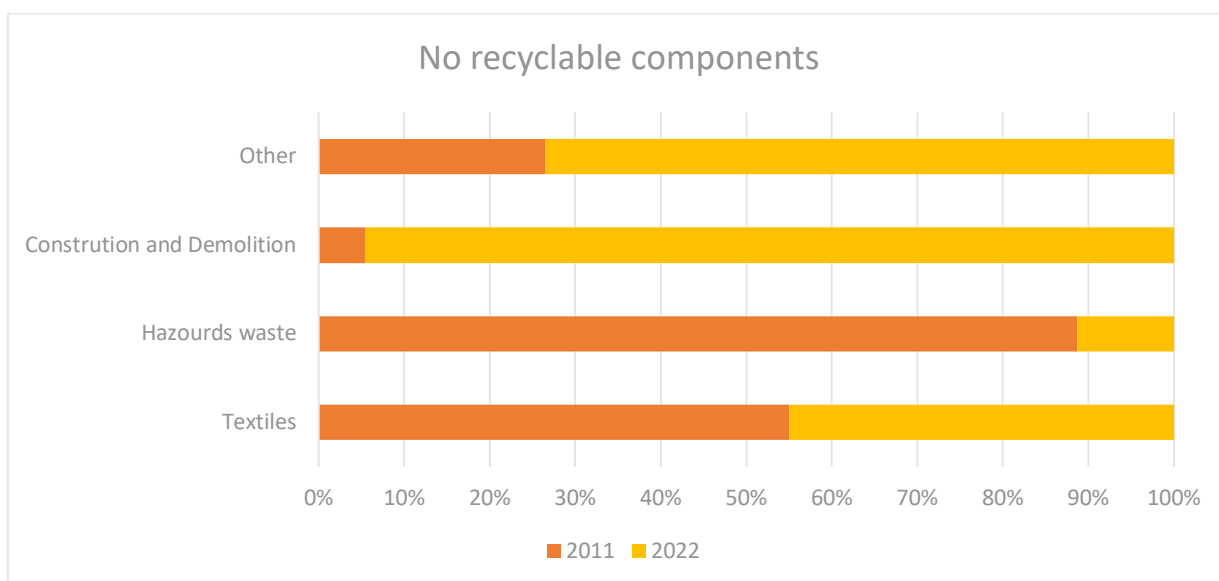


Figure 35 – Comparison of no recyclable components present in waste in Trinidad, between the years 2010 and 2022

10 ANALYSIS OF THE RESULTS FROM THE CENTROID STUDY

10.1 ANALYSIS OF THE RESULTS FROM THE CENTROID STUDY

This study aims to improve the integrated Municipal Waste Management (MSW) in Trinidad in several aspects:

- First, through the deep knowledge about the waste generated in Trinidad & Tobago (amount and typology) what subsequently, will allow the decision makers to have a big picture of the municipal waste sector in Trinidad & Tobago making easier the access to data and the decision making process
- Secondly, the data projection study in a medium- and long-term perspective, fundamental for strategic planning
- Not less important, to know the best location for the implementation of Transfer Stations.

In Trinidad and Tobago, MSW is collected by multiple companies using different types of vehicles across the country. The waste is disposed in the country's major landfills: (1) Beetham Landfill, on the outskirts of Port of Spain, posing an ecological threat, as it is located in a wetland environment; (2) Forres Park Landfill, in Claxton Bay, which is pointed out as the future engineered sanitary landfill, correctly located in the centre of the country, and (3) Guanapo Landfill in Arima, where the underlying aquifer and all the surface water downstream of the site is threatened.

Transfer Stations (TS) play a key role in reducing transportation costs and GHG emissions by consolidating waste from multiple collection vehicles into larger, high-volume transfer vehicles for more economical shipment to disposal sites.

The consultancy team considers transfer station has a flat piece of ground onto which waste is dumped by the primary collection vehicle and then loaded into the transport vehicle.

Transfer Stations provide the opportunity for storage of the waste collected during the day, so it can be transported to the disposal site at night, avoiding traffic congestion and saving time and fuel.

Different systems can be used to transfer waste from small collection vehicles to larger ones. The description of such systems is out of the scope of the present study and should be addressed carefully in a full study.

Integrating recycling activities within transfer stations is of advantage, both in economic and social terms. In this regard, the informal sector (waste pickers, currently working at Dumpsites) must be engaged in

the process, taking part of the definition, construction and operation phases or even in refurbishing the facilities process.

Transfer Station Size and Capacity

Capacity: 100 – 2000

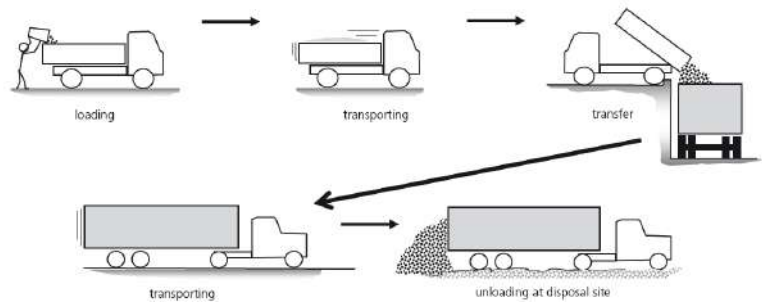


Figure 36- Circuit of the waste

10.2 METHODOLOGY OF THE CENTROID STUDY

The methodology used for the study of the centroid analysis can be seen in the next figure.

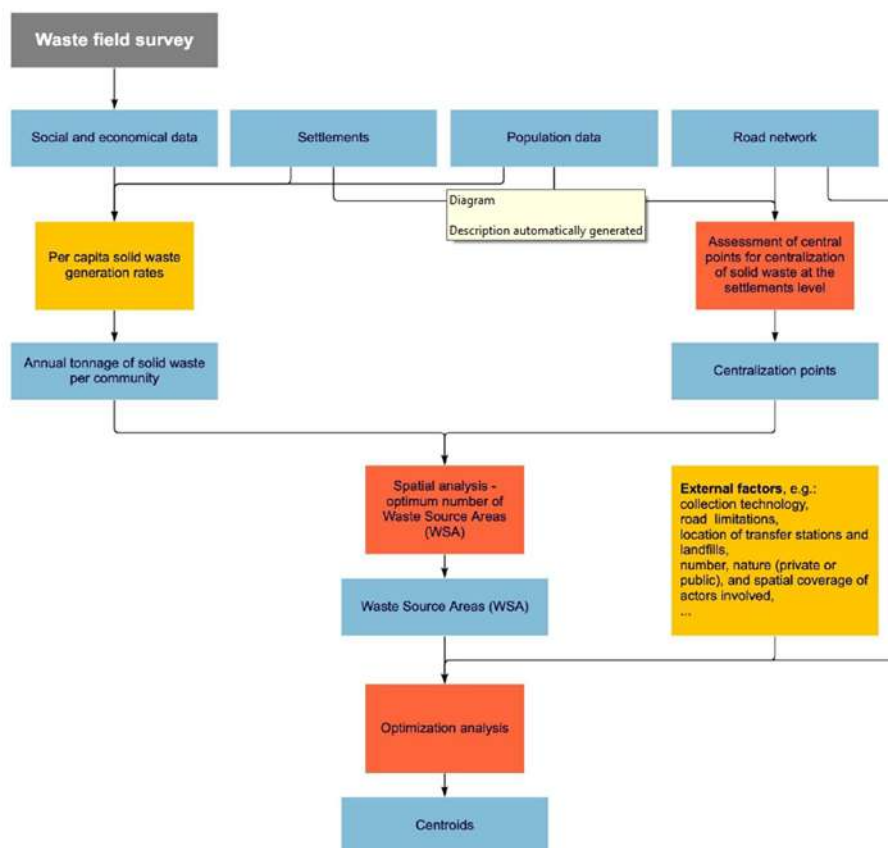


Figure 37– Methodology of the centroid study

The centroid development methodology is based on population values, per capita waste generation rates and other factors as road network characteristics and existing or to be built facilities. Population values at the settlement level is derived from Census 2011 data updated with current projections.

The calculation of the per capita waste generation rates is derived from social and economic data from the statistical analysis of the Central Statistics Office.

Waste production rates is dependent on the population's sociodemographic variables. Both the population-Beverage and per capita waste generation rate allow for the estimate of the annual tonnage of solid waste generated.

Expansion of current settlements is taken into consideration, according to their physical layout and road network accessibility, allowing for the definition of a central point for the generation/ centralization of solid waste, linked to the nearest road.

A GIS spatial analysis is performed to define an optimum number of Waste Source Areas (WSA) to ensure optimal coverage of the whole settlements and an optimal waste collection program.

The main objective is to find the best (economic and logistic) solution considering all these characteristics and limitations to place transfer stations, reducing overall waste management costs.

10.3 RESULTS AND ANALYSIS OF THE CENTROID STUDY

Issues and factors to consider when deciding where to locate a transfer station were evaluated, from current planning for the concentration of waste at Forres Park landfill and closure of the others in Trinidad, to existing facilities such as those operating in Beetham and Guanapo. These facilities, are a mix of drop-off centers and recovery/ sorting stations, including storage space, that can be easily upgraded to Transfer Stations with minimal investment compared to building TS from scratch.

Proceeding with detailed planning for the concentration of waste at Forres Park landfill and closure of the others in Trinidad, the Transfer Stations (TS) play a key role in reducing transportation costs and CO₂ GHG emissions.

The centroid study for Trinidad and Tobago defines a network of Transfer Stations, after a sitting analysis concerning distance, quantities, population growth, allow us to make some conclusions and recommendations:

- The waste centroid analysis shows that six locations for waste disposal are required in Trinidad: **(a)** a centralized Landfill in Forres Park; **(b)** a southern landfill/dumpsite in Guapo (outside SWMCOL control), **(c)** and four Transfer Stations (TS) across the Island.
- Forres Park coverage: 36% of the population within 25 km of road distance.
- All locations coverage: 94% of the population is within 25 km of one of the TS or landfill.
- Two of these Transfer Stations are the current Dumpsites (Beetham and Guanapo) after upgrading and improving the layout to accommodate the waste transfer. Beetham is an important investment, serving the great Port of Spain, requiring the sealing of the current Dumpsite.
- New Transfer Stations should be in Sangre Grande and Rio Claro. These TS should be modern and able to deal with the storage of bulky waste, biowaste (shredding and composting) and work as sorting centers for dry recyclables (plastic, metals, glass, paper) and finally to store Electric and Electronic Waste and other household problematic fractions.
- Waste production is expected to rise, making TS more economically feasible as well as more recycling centres.
- In the area to the south-east of Bakhen, a specific small-size TS might be necessary to accommodate the waste coming from outside the 25 km line.
- In economic terms a net saving of around 2.8 million \$US dollars is estimated (these values stem from considering the current quantities and using 4 stations), by building and operate Transfer Stations when compared to transport to a centralized site.

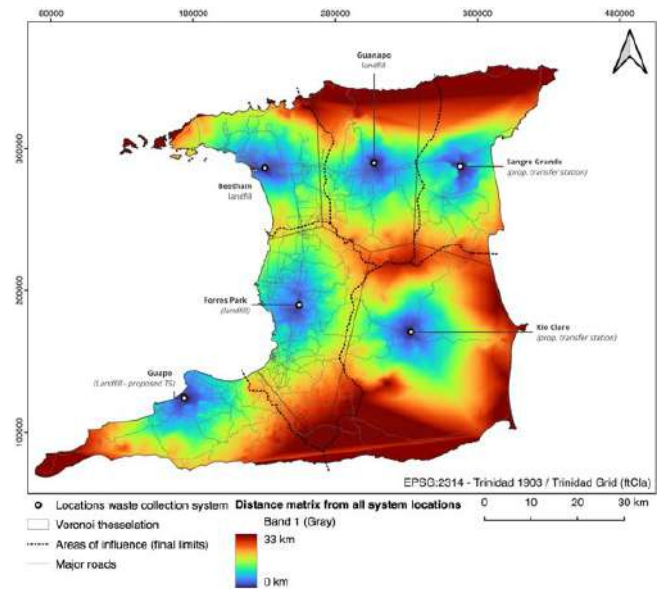


Figure 38– Representation of the scope of TS

Is important to refer that the team had some challenges to do the study because of some limitations in terms of the access to spatially disaggregated CENSUS data and the absence of no specific data on waste production and collection.

The entire Centroid study is available to read in another document that will follow with the report.

10.4 WASTE PRODUCTION PROJECTION FOR THE NEXT 20 YEARS

To calculate the waste production projection for the next 20 years, the following assumptions were made, and the following values were considered:

- The amount of waste since 2016 has peaked 780 000 tons/year, in 2021. Average waste production per capita was 1.58 kg/hab.day, with a 1.35 million population.
- Population in 2023 (estimate): **1 346 671** inhabitants.
- Population in 2043 (estimate): **1 438 867** inhabitants.⁹
- Waste production in 2023 (estimate): **801 202** tons

In this regard, considering all the variables it was estimated 2.5% annual growth rate in waste production applied for the period 2020-2043

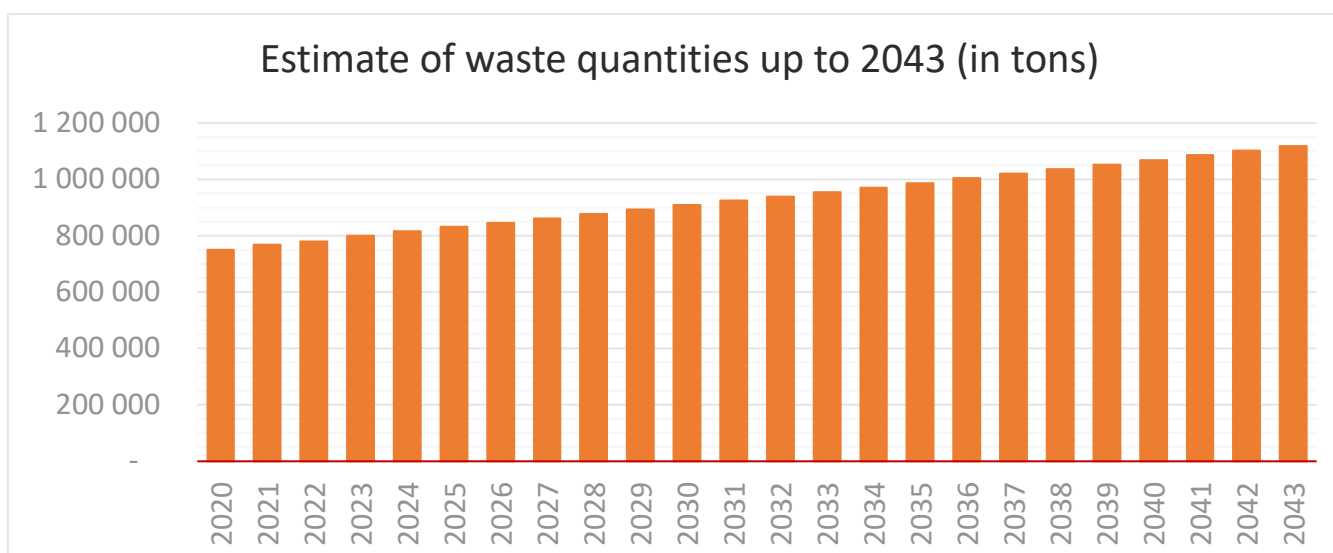


Figure 39– Estimation of the waste production until 2043

⁹ The population growth rates were calculated based on the official data from the "Provisional Mid-Year Estimates of Population by Age Group and Sex, 2005-2021". Growth rates were assessed for the 2005-2021 period, and the 'Trend' function (Excel) was used to calculate the evolution of the growth rate up to 2043. These growth rates were applied to the 2020 population data from WorldMap (gridded population data 100m) to estimate population growth up to 2043.

11 CASE STUDY – BEVERAGE PACKAGING DEPOSIT SYSTEM FOR PLASTIC, GLASS, FERROUS METALS AND ALUMINUM

Knowing that is in the plans of SWMCOL to implement a project of deposit system of beverage containers, the consultancy team has collected some examples of what is best done in Europe, with the intention of providing support and recommendations to SWMCOL on the design of the system to implement in Trinidad.

A study done in Portugal of deposit system of Beverage Containers concluded that:

- The best option would be a centralized system;
- Should be regulated by law;
- Voluntary and supervised by the Government;
- The central operator should be a non-profit organization, constituted by industry and retail;
- The central operator should be responsible for covering the costs of running the system by using nonrefunded deposits;
- The profit of the sale of returned material and fees imposed on packers and importers.

In the next 3 figures, it is possible to see a schematic of the existing material and money flows, from Norway, Lithuania, Netherlands, and Germany.

11.1 NORWAY AND LITHUANIA

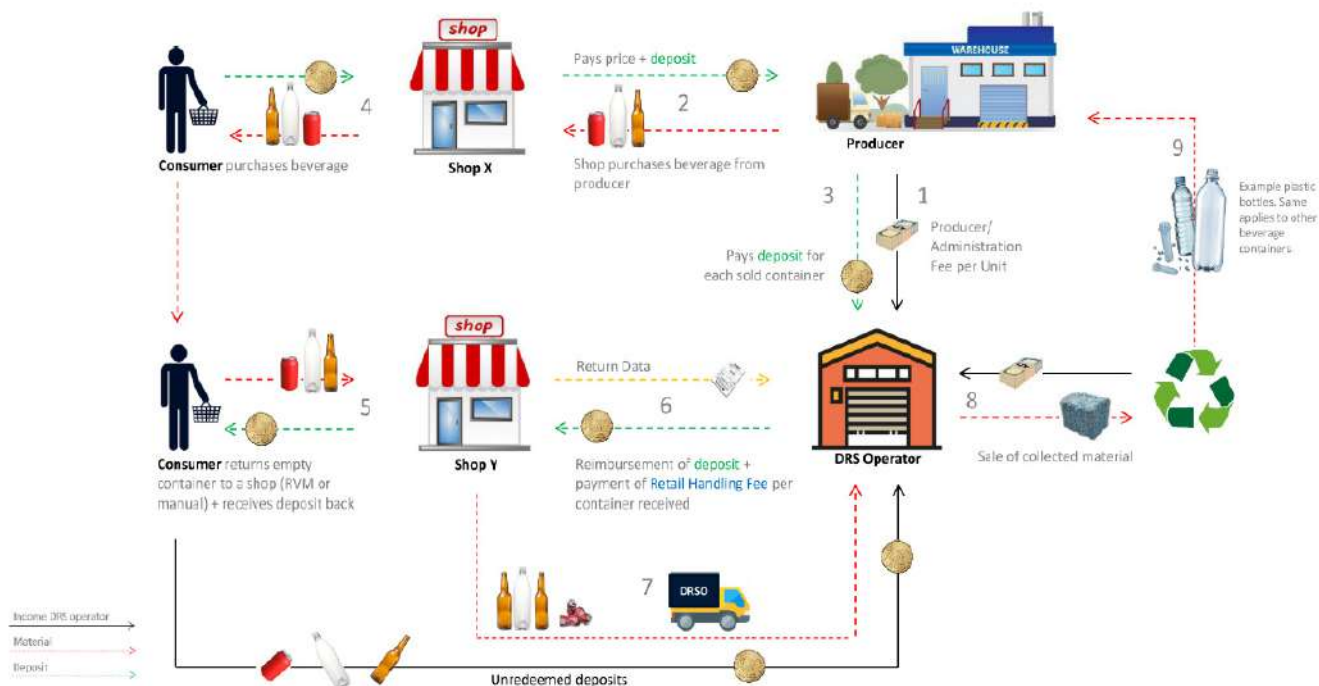


Figure 40– Representation of Norwegian and Lithuanian deposit system

In the image, the black arrows represent the central operator's revenues, the red arrows represent the material path, and the green arrows correspond to the warehouse. The system works as follows:

1. Packers and importers pay administrative fees and per-product fees to the central operator.
2. Retailer buys the beverages from the packer/importer, paying a deposit, an additional value to the price.
3. The importer transfers the deposit paid by the retailers to the central operator.
4. Consumer buys the beverages from the retailer, paying the same extra deposit, which is additional to the price of the product.
5. After use, the consumer returns the empty package to the to the retailer and receives a refund corresponding to the deposit he paid.
6. The deposits that were not refunded to the consumer go to the central operator.
7. Subsequently, the central operator pays the refund of the deposit on the packaging returned by the consumer to the retailer and pays the transaction fee. The retailer in turn provides the returned material and data about the returned bottles to the central operator.
8. The central operator then sends the returned material for recycling and sells it to the recyclers, which receives the corresponding revenues.

The recycled material goes to the packers and importers and a new cycle begins. The Lithuanian system also includes glass packaging while the Norwegian system does not (TOMRA, 2020)

11.2 THE NETHERLANDS

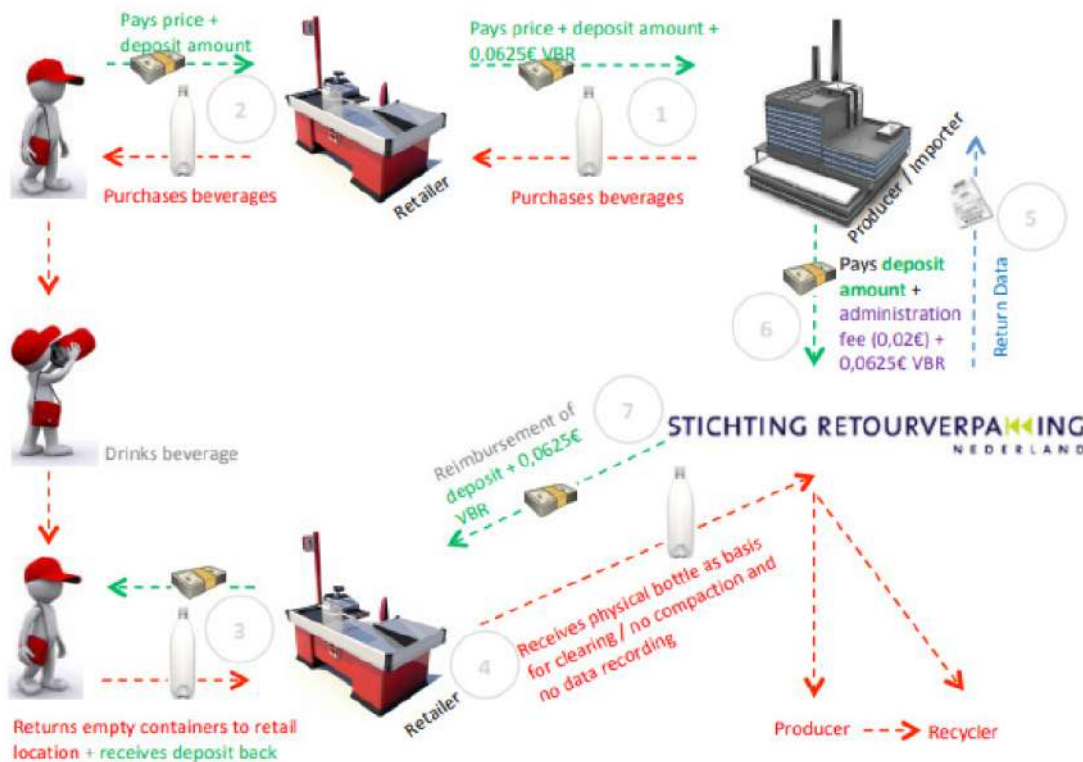


Figure 41 - Representation of Netherland deposit system

In the case of Netherlands, the system works as follows:

1. This cycle starts with the retailer buying the drinks from the beverages from the packer/importer, paying a deposit in addition to the price.
2. The packer/importer then transfers the deposit paid by the retailers to the central operator and pays administrative fees.
3. The consumer buys the drinks from the retailer, paying the same deposit, in addition to the price of the product.
4. After use, the consumer returns the empty container to the retailer and receives the value of the deposit.
5. The central operator pays the deposit of the packaging returned by the consumer to the retailer and pays the operating fee (depicted in the image as VBR).

6. The retailer, in turn, delivers the returned bottles to the central operator, who forwards them to the respective producers or for recycling if they wish (Reloop Platform and CM Consulting, 2018).

11.3 GERMANY

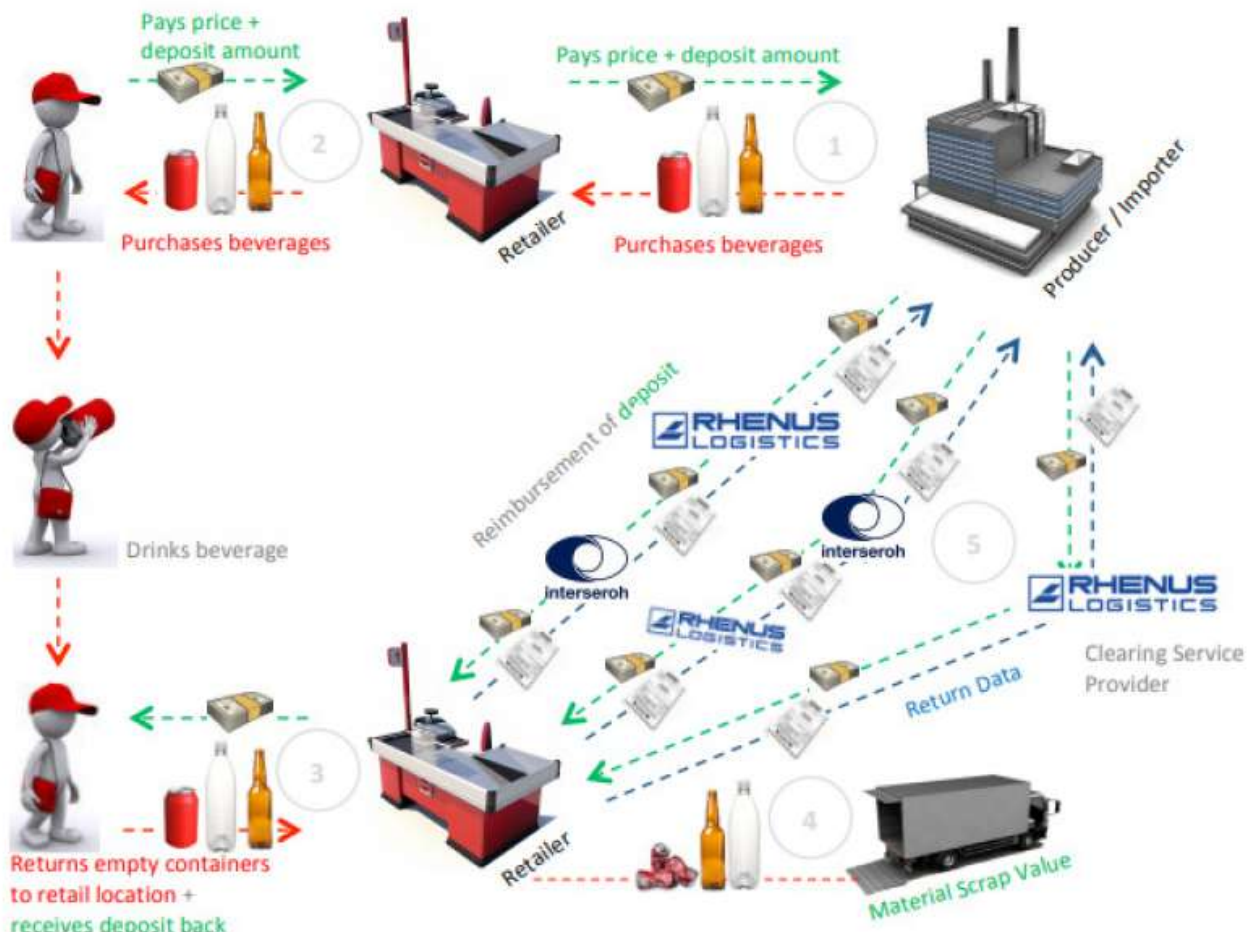


Figure 42 - Representation of German deposit system

In the case of Germany, the system works as follows

1. This cycle starts with the retailer buying the drinks from the packer/importer, paying a deposit in addition to the price.
2. The consumer buys the drinks from the retailer, paying the same deposit in addition to the price of the product.
3. After use, the consumer returns the empty packaging to the retailer and receives the value of the deposit.
4. The retailer gives the details of the returned bottles to the packer/importer, and the packer/importer refunds the deposit for these bottles to the retailer.

5. The reseller sends the returned material for recycling. In this image, interseroh and Rhenus Logistics are third-party companies hired by the reseller and the packer/importer to manage the system. (Reloop Platform and CM Consulting, 2018)

12 RECOMMENDATIONS

It is notorious the effort that the entities are doing with respect to environmental management; moving from the 90th position to the 59th position among 180 countries measured on the Yale Environmental Performance Index (EPI) over the period 2006 – 2022.

If an extensive analysis to the results is done, what can be seen is from the last EPI, in the area of waste management the country is in 147 positions, where the worst result is in the component solid waste that “refers to the percentage of household and commercial waste generated in a country that is collected and treated in a manner that controls environmental risks. This metric counts waste as “controlled” if it is treated through recycling, composting, anaerobic digestion, incineration, or disposed of in a sanitary landfill”.

COMPONENT	RANK	EPI SCORE	10-YEAR CHANGE
Waste Management	147	13.30	1.00
Solid waste	139	5.70	NA
Recycling	87	16.20	1.80
Ocean Plastics	96	25.60	2.00

Table 40 – Country Scorecard, of the component waste management

Even if the work that needs to be done in the waste management and the changes that must be made in Trinidad are significant, the first step has already been taken with the characterization of the waste in Trinidad 2022. The results of the 4 exercises of characterization carried out as part of this assignment show that the existence of a great potential of recyclable waste, waiting to be collected, recycled, re-used, composted, and therefore help the country, on its challenge of growth in the commitment on circular economy, based on the implementation of circular practices.

12.1 INSTITUTIONAL AND INFRASTRUCTURE RECOMMENDATIONS

Recommendation n°1 - Characterization campaign

Recommendation #1 would be the definition of a periodicity to promote the Waste Characterization on a regular basis because it gives a picture of waste production of the country, and where the entities have to focus, whether the goal is to reduce the unsorted waste, increase the recycle or composting of the waste.

After the results, new measures can be taken.

Recommendation n°2 - Cooperation between SWMCOL and the Corporations/General Population

Based on the answers obtained through the inquiry sent to the corporations it was possible to understand that the responsibilities for the collection of the waste in the municipalities is from the corporations and most of the cases they have private contractors that do the collection of the waste.

This kind of waste management strategy, and the institutional relationship between SWMCOL and Corporations, create some difficulties for the implementation of a national strategy. In this regard, it is important to build a strong relationship between every player with the responsibility on the waste management of the country.

It should be strategy of the country, to define targets for recycling and reuse of waste and to encourage the different corporations to participate in them through penalties or benefits, by analysing the projects implemented in the different municipalities and the amounts delivered to landfills, but also to the waste transfer station, as well to public or private companies that received recyclable waste.

This could be made, by defining different goals for each corporation, considering, the population served, as well the quantity of waste produced and deliver in the landfill, or, in the private sector.

Therefore, if everyone is not aligned, in the objectives outlined, it will be difficult for change to occur and reduce the amount of waste deposited in landfills and create value for the economy of the country.

A greater cooperation is also recommended with the general population, encouraging a more involvement between the technicians and the citizens, with a greater dissemination and sharing about the work that the organization does in the society.

Recommendation n°3- Improvement of management of the entrance in the landfill

Renovate the concierge with the installation of weight bridge and a barrier that encourages the truck driver to stop at the gate so that the truck can be weighed upon entry and then upon exit. In addition, the installation of a process of data recording at the entrance of every landfill, with electronic devices registering ID, that allows the electronic system or employee at the gate to register a set of data (origin, transporter's name, date and time of entry and exit, flow transported, route number,...).

This would allow the management of the landfill's useful space, to charge according to the amount of waste disposed at the landfill, to acknowledge the actual waste production of the island and to reduce the quantity of non-urban waste disposed in the landfill.

Recommendation n°4 – Recuperation of the Landfill

In terms of the landfill is essential to focus on the reduction of the impact in the environment, with the sealing of the 2 landfills (Beetham and Guanapo) that are the oldest, with the remediation of the landfill post-closure, taking advantage of the landfill gas for energy production and has an earning for carbon credits, and recovering the landfill area transforming it into a green space, "offering" the place, as a pleasure area, to the local community.

An example of this could be what was done in the Landfill in Ermesinde/Baguim do Monte¹⁰

In matter of the Forres Park Landfill, the access must be improved to reduce the travel time to the landfill and so that it is no longer impassable whenever it rains heavily. Prevent the illegal dumping along the way to the landfill, by increasing the number of lightning posts along the road to the landfill, as well increase the operating hours of the landfill.

Fencing the dumpsites/landfills is necessary to manage them more efficiently.

¹⁰ <https://www.lipor.pt/en/awareness/adventure-park-and-eco-trail/venture-out/>.

12.2 OPERATIONAL PROJECT TO INCREASE RECYCLABLE WASTE (PAPER AND CARDBOARD, PLASTIC, GLASS, BIOWASTE, AND OTHERS RECYCLABLE WASTE)

Trinidad, looking at the site of SWMCOL, currently has some recyclable waste collection projects, like WRAP office recycling initiative, the PSRP, or, MCRP, but looking at the country and where typically the urban waste is produced these are projects with small scale.

Another project that is well known is Carib Glassworks Ltd that have many collection depots in Trinidad for non-color and colored glass.

However, these are projects, that have little impact and aren't enough to divert most of the recyclable waste from unsorted waste, so for this to happen you have to make sure that you create the right conditions to the citizen separate at home and have the equipment to deposit the recyclable waste.

Municipal waste management requires a lot of planning and objective definitions of its operations, and the waste collection and transportation operations are two of the most important and costly stages during the process (Mishra et al. 2021).

Recommendation nº5 – Definition of colour code for each bin

As a proposal to start a project for the collection of recyclable waste, some basic principles should be defined that should be uniform throughout the island, such as, for example, each color for each waste stream, this way it simplifies in case of doubt which stream should be deposited in that bin.

Then define clearly what type of waste can or cannot be deposited in that same container, with this information placed visibly in these containers.

Ensure that this information is legible for everyone, that is, even if you are colorblind, or blind, the information in the container should ensure that everyone can participate.

Recommendation nº6 – Different strategies for residential sector and for non-residential sector

Next, plan the project for 2 major targets, residential clients, commercial clients, because each of these clients have particularities that demand, different strategies, and in this case the industrial clients are not considered because typically the waste produced is non-urban waste.

Recommendation n°7 – Characterization of the Residential Sector

The suggestion is start to promote an analysis of the typology of the municipality, where a different set of items should be analyzed:

1. Identify the areas with a majority of single- or two-story house, the areas with a mix of single- or two-story house and buildings, and the areas with a predominance of buildings.
2. The dimension of the road and sidewalks.

Recommendation n°8 – Selection of the containers type, in accordance the characterization made in the previous/recommendations

In the market it is possible to find a lot of different models of containers/ bins. The selection of the most appropriate containers model must follow the needs as well as the characteristics of the place. For the bins model selection to install in the municipalities, the consultants team advises to take into consideration the key criteriums that must be very well defined. For this, is important to know what type of garbage truck is used to collect the waste, and the space you have on the street to install the bins.

In matters of garbage trucks, you have, four main categories:

- Front loader garbage trucks – which are used primarily to empty commercial waste bins, i.e., “dumpsters.”
- Side loader garbage trucks – these are used primarily for residential waste collection and disposal.
- Rear loader garbage trucks – these are used for both residential and commercial waste hauling.
- Roll off trucks – these are used to transport dumpsters and other large commercial waste bins to and from local landfills.

And there are still the trucks with a crane system, that allow to collect the bins with bottom discharge.

Recommendation n°9 – Take in consideration that the distance between the household (where the urban waste is produced) to the container in the street (destination for the waste producer, citizen)

The distance the citizens have to walk to dispose the waste they produced, is important. In some countries like Portugal the distance considered suitable for dispose the recyclable waste is 100 meters, and, for the unsorted waste is 200 meters.



Figure 43 – Representation of ecopoint, with a buffer of 100m, intersecting some households.

Recommendation nº10 – Communication is the key for the success, measured by the citizen participation in the waste separation at source, in the household

The communication strategy must be adapted to different kind of ages group and social strata. It has to use a clear and simple vocabulary, diverse the channels of communication, like social media, television, radio, journal, sites of the corporation, and city halls. Allied to this a strong campaign of sensitization, near the citizen, going to the schools, knocking door to door, creating clarification sessions with the population in the city hall, schools.

Recommendation nº11 – Characterization of the Non-Residential or Commercial Sector

These clients are most of the time the biggest producers of urban waste, and because of their features, the solution given to these clients, must be a little different of the household sector.

First, they produce more waste and second, they have a working schedule.

The consultancy team suggest the creation of a customized solution for this specific target, to prevent the exaggerated used of the containers in the streets, that are for be used by the household sector as well.

For this, in order to provide a service of excellence, specific circuits could be created for the collection of each of the streams.

Recommendation nº12 –Alternative to the Construction and Demolition waste

According to the results of the characterizations, the presence of a large amount of construction and demolition waste was verified, for which two actions are suggested in order to take advantage of this material and reduce the volume occupied by this waste:

- Create a dedicated collection system for this flow, then forwarding to construction and demolition companies;
- Reducing the volume occupied by construction and demolition material by shredding this waste before it is disposed of in the landfill.

Recommendation nº13 – Public Education Program

To establish a good waste management program, it is also needed to work with the communities.

In a straight line with the citizens, creating a relationship of trust, where the citizens are considered first, always praised, and where the service is done to answer to the necessities showed by the citizens. It is important to hear them, working with them, more importantly with the younger ones, because they are more receptive to receive this kind of message, also acting as a means of transmitting new attitudes and ideas within the family.

Recommendation nº14 – Transform Home Composting as a solution, offering conditions to citizens in a way they want to take part of the process

This could be a solution for the biowaste, transforming organic matter into a soil-like called compost, and you could act in two ways:

- Promote the home composting, to reduce the impact of the biowaste in the landfill (promotes the creation of biowaste), don't need to have a centralized collection and treatment system and improve the quality of the soils and the life of the citizens.
- Creating dynamic and useful green spaces, promoting biodiversity and good agricultural practices. Additionally, it can improve the environment in several local, urban communities, through practices such as home composting and organic farming.

The consultancy team, has have experience in the promotion of these kind of Projects, could help SWMCOL in the development of a Strategy or a Masterplan on this topic – Masterplan to transform Trinidad & Tobago as a Champion on Home Composting and Urban Kitchen gardens.

Recommendation nº 15 – Collection in the festivities

Festivities are events where there is a concentration of people in a specific place and during the period of the festivities is produce an increase of localized waste, for which some measures must be taken to manage waste production and recover the maximum amount of recyclable waste, these are:

- -With the owners of the stalls during the festival, explain the rules for the separation of recyclables (paper/cardboard; plastic and glass packages), give them a kit of yellow bags (plastic packaging) and green bags (glass packaging), so that they can separate them and at the end of the day, of the fair place, they should put the bags next to the establishment so that collection can take place. Visitors to the festival should also be made aware of the need to encourage the correct separation of waste, in the selective collection containers located at the festivals

Recommendation nº 16 – Drop-off-site to Household Hazardous Waste

Looking to the results of the characterization, in the year 2022, there is a considerable amount of household hazardous waste (4.813 tons) in the unsorted waste.

For this waste, a solution could be an equipment, that could be moved with a truck with a roll off or a crane system, with capacity to collect some specific materials, which based on its characteristics would have to be watertight.



Figure 44 – Mobile ecocenter

Recommendation nº 17– Creation of an ecocenter near the population

The creation of a facility where citizens can place recyclable waste that should not be placed in common garbage cans or in recyclable containers. This is a space open to citizens, where they can place, free of charge, different types of waste in their own containers.

Recommendation nº 18– Have a reliable Data collection and monitoring

It is impossible to manage something that cannot be measured, the issue of the lack of scale in the entrance of the landfill is crucial for all the system to work.

Waste management is a vast, complex, and highly heterogeneous set of processes so that only with a thorough knowledge of all its stages is it possible to achieve the defined targets. To this end, detailed and sometimes automated analysis of the information generated in all operations is vital which is why the introduction of digital monitoring systems is extremely relevant.

For that the creation of an online platform that collects data from the various projects, using for example radio frequency identification (RFID) technology gives the possibility to generate data in real time, providing robust support for decision-making by managers.

A Data Center, where all the data could be collected and where it would be possible to automate the analysis of the data and be able to make some prediction about the results, would be extremely important and relevant for decision making.

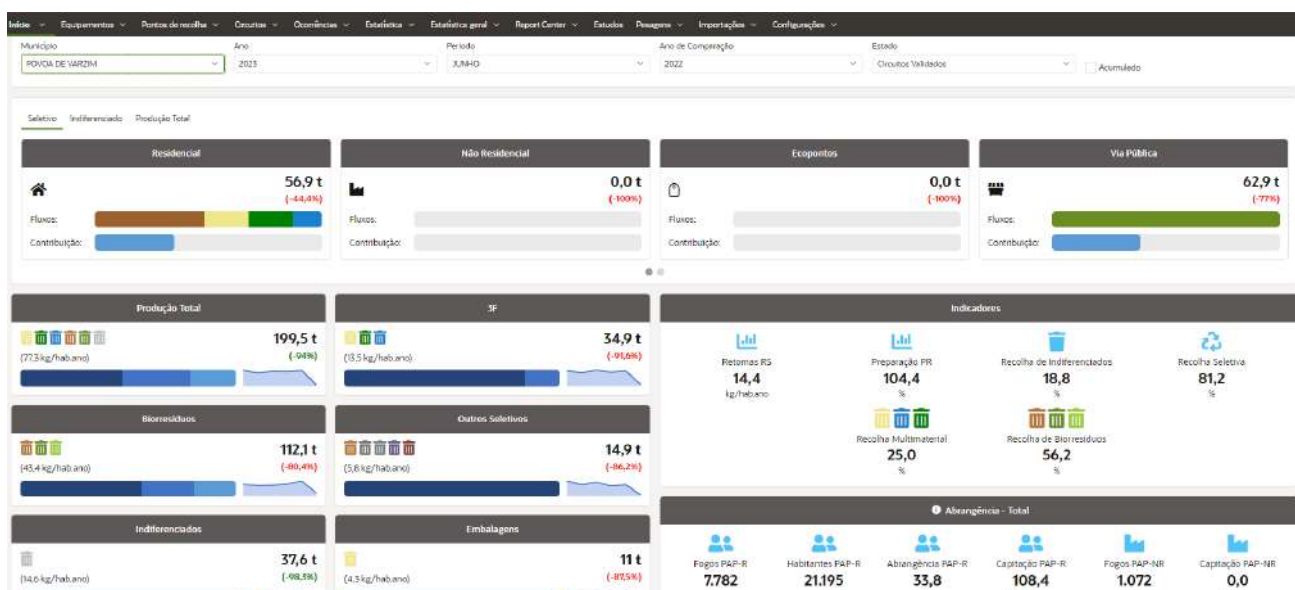


Figure 45 – Datacenter

13 CONCLUSIONS

“To waste, to destroy our natural resources, to skin and exhaust the land instead of using it so as to increase its usefulness, will result in undermining in the days of our children the very prosperity which we ought by right to hand down to them amplified and developed.” - Theodore Roosevelt, Seventh Annual Message, December 3, 1907

Until some decades ago, the only strategy for the waste was based on a throwaway mentality, with little regard for sustainability. But with the years passing by, and population growing at a pace of 2 new people every second, this year we have welcomed the citizen 8 billion to the world, the society have some major problems, like the scarcity of natural resources and the production of waste. As a response to these two challenges, many economies have promoted a shift from the linear economy model sometimes called the take-make-waste economy to a circular economy model, where the life span of waste is extended, often involving the creation of new business models, through sharing, renting, reusing, repairing, refurbishing and recycling existing materials and products, increasing the life span of waste and creating value for citizens and inherently for the economy of the country.

Trinidad and Tobago, nowadays, is in an initial phase of transition to a circular economy, with some small projects at the level of selective waste collection, but with a long way to go at all levels (recycling, reuse, prevention, waste treatment). However, the potential is there, and results show that approximately 77% of all material that goes to the landfill is recyclable waste.

Waste Composition		% in weight	% in weight
Recyclable Waste	Bio Waste	32,41%	76,63%
	Cardboard/Paper	17,96%	
	Plastics and Tetrapack	18,07%	
	Ferrous Metals	1,21%	
	Other Non Ferrous	1,52%	
	Glass	5,46%	
Non Recyclable Waste		23,32%	23,32%
		100%	100%

Table 41 – Percentage of recyclable waste and other waste on the waste produced

In Trinidad on 2022

Categories	Waste produced (tons)
Biowaste	237 731
Papers	131 942
Plastic	94 139
Beverage Containers	67 288
Glass	15 003
Composites	16 022
Textiles	46 842
Sanitary Textiles	36 520
Metals	16 521
Construction and Demolition	64 463
Hazardous Waste	4 813
Bulky waste	0
Thin Elements	2 340
Total	733 623

Table 42 – Results by categories of the characterization of the waste produced in Trinidad on 2022¹¹

¹¹ This values don't included the waste that went to the landfill of Guapo

The study carried out included the physical characterization of waste in four moments, two festivities - Carnival and Diwali and the realization of 2 campaigns, in 2 periods of the year, Wet Season and Dry Season. In total, 180 samples of unsorted waste were analysed.

An overall evaluation of the results of the physical characterizations indicates that the fractions with the highest representativeness in the unsorted waste are the biowaste (32,41%), with 20.6% of Organic Food and 11,8% of Garden Waste and, in second level, Plastic (18,07%) and Paper/Cardboard (17,96%). Collectively, these three fractions represented 68,4% of the municipal waste in Trinidad, highlighting their potential for recycling or organic recovery.

Furthermore, the study highlighted that construction and demolition waste, textiles, and sanitary textiles accounted for 21,1% of the waste composition, while hazardous waste only represented 0,66%.

The results of the physical characterization of the unsorted waste, allow the definition of priority levels in an efficient waste management in Trinidad, for this reason, it should be common practice to carry out a physical characterization of waste, to obtain data over time that allow the definition of the best strategy in terms of waste management. Ideally, campaigns should be carried out every year to monitor the evolution of the quantities produced and to adjust the guidelines for an efficient waste management.

It should be noted that the three landfills analysed in the study present similar waste characteristics, with biowaste being the predominant component, followed by plastic and paper. However, in a more detailed analysis per municipality, we note the predominance of other fractions:

- In certain municipalities like Diego Martin, Chaguanas, La Romain, Marabella, or Sangre Grande (Valencia), the predominant waste category is Paper/Cardboard.
- In municipalities such as Tunapuna and Talparo, the prenominating waste is Plastic/Tetra pack.
- Garden waste is the primary waste category in municipalities like Port of Spain, Maracas, and Wallerfield.

These variations in waste composition across different municipalities or regions can be influenced by factors such as local waste management practices, recycling infrastructure, consumer behaviour, and industrial activities specific to each area. It's important to note that waste generation and composition can change over time due to various socio-economic and environmental factors. Regular monitoring and analysis of waste composition are essential for effective waste management planning and decision-making in each municipality or region.

These findings underscore the importance of implementing appropriate waste management strategies to target the significant fractions and promote recycling, organic recovery, and effective disposal of non-

recyclable waste. By addressing these key waste streams, Trinidad can make significant progress towards achieving sustainable waste management practices and minimizing environmental impacts.

Data limitations waste characterization study

It is important to mention that the limitation of access to more precise data hindered the in-depth analysis of our study and impacted our work. This situation should be considered and addressed in future projects. Without reliable and up-to-date information, it is challenging to make informed decisions. Obtaining accurate and comprehensive data is crucial for conducting thorough waste characterizations and developing effective waste management strategies.

Therefore, it is recommended that future projects prioritize data collection and ensure the availability of reliable and recent information to enhance the accuracy and reliability of the findings. By addressing this limitation, we can improve the quality of waste characterization studies and facilitate better decision-making processes in waste management.

Transfer Stations Economic Value

In the absence of precise data, an average distance of 25 km for a round trip was considered, along with an assumption of equal distance for long-haul journeys, with an approximate cost factor of twice that of a regular trip. These values were applied to a 21-ton transport.

These estimations are empirical and require further study and research to validate their accuracy. Obtaining more precise information regarding the actual distances travelled, fuel consumption rates, and transportation efficiencies would significantly enhance the reliability and validity of the savings calculation. It is recommended to conduct a thorough analysis and gather more specific data to refine the estimations and ensure a more accurate assessment of the potential savings resulting from the implementation of Transfer Stations.

Centroid Study Conclusions and Recommendations

To project the waste generation of the population, several data sources and calculations were utilized due to limitations in accessing official spatially disaggregated Census data. The WorldPop Gridded population dataset (100m grid) based on UN data was employed, representing a population of 1,331,920 inhabitants in Trinidad for the year 2020.

Using growth rates derived from the official data of "Provisional Mid-Year Estimates of Population by Age Group and Sex, 2005-2021" (CSO-TT, 2023), the population was projected for subsequent years. The growth rates were calculated for the period 2005-2021, and the 'Trend' function in Excel was utilized to forecast the growth rate until 2043. These growth rates were applied to the 2020 population data from the WorldPop dataset to estimate population growth up to 2043.

In conclusion, the waste centroid analysis indicates the need for six waste disposal locations in Trinidad: a centralized landfill in Forres Park, a southern landfill/dumpsite in Guapo (outside SWMCOL control), and four Transfer Stations (TS) strategically located across the island. The Forres Park landfill has a coverage of 31,6% of the population within a 25 km road distance. Overall, 94% of the population is within 25 km of one of the TS or landfill, ensuring convenient access to waste disposal facilities.

The current dumpsites in Beetham and Guanapo can be upgraded and improved to serve as Transfer Stations, especially Beetham, which is a significant investment serving the Port of Spain area. The sealing of the current Beetham Dumpsite is necessary for its transformation into a functioning Transfer Station.

Additionally, new Transfer Stations should be established in Sangre Grande and Rio Claro. These TS should be modern and equipped to handle various waste streams, including bulky waste, biowaste (through shredding and composting), sorting centers for dry recyclables (plastic, metals, glass, paper), and storage facilities for Electric and Electronic Waste and other problematic household fractions.

Considering the expected rise in waste production, the construction and operation of Transfer Stations become economically feasible and essential for efficient waste management. Furthermore, the establishment of more recycling centers is recommended to promote recycling and waste diversion.

In terms of specific locations, a small-sized Transfer Station may be required in the southeastern area of Bakken to accommodate waste from beyond the 25 km coverage area.

It is crucial to note that the calculation of savings resulting from the implementation of Transfer Stations indicates a gain of approximately 2,8 million US dollars per year, equivalent to a net saving of around 6

US dollars per ton. These values were derived by considering the current quantities and assuming the presence of four Transfer Stations.

However, it is important to acknowledge certain limitations and uncertainties in the calculation. Firstly, the average distance travelled by waste vehicles from the source to disposal is unknown, as is the fuel consumption efficiency. The estimation of costs was made based on reference data from previous values and information obtained from the EPA Transfer Station Manual (EPA, 2002).

Centroid Study Data Limitations

The study faced several limitations that should be acknowledged:

- Lack of access to spatially disaggregated Census data: The unavailability of official spatially disaggregated Census data limited the ability to obtain precise population data for waste generation projections. As a substitute, the WorldPop Gridded population dataset based on UN data was used, which operates at a 100m grid resolution. While this dataset provides an estimation of population distribution, it may not capture localized variations accurately.
- Lack of specific data on waste production and collection: The study relied on average waste production values obtained from the Solid Waste Management Company Limited (SWMCOL) for the period 2016-2020. The absence of detailed and up-to-date data on waste generation rates, waste composition, and waste collection practices may introduce uncertainties in the calculations. These average values might not fully capture the variations in waste production across different regions or time periods.

It is important to recognize that these limitations could impact the accuracy and precision of the findings and conclusions drawn from the study. Future research and data collection efforts should aim to address these limitations by accessing more detailed and specific data on waste generation and collection practices. This would enhance the reliability and validity of waste management analyses and enable more informed decision-making processes.

Additional Recommendations

Overall, implementing these recommendations will enhance waste management infrastructure, improve accessibility to waste disposal facilities, promote recycling, and lead to significant cost savings in waste transportation and disposal operations.

In addition to the previous recommendations, there are several remarks regarding landfill management in Trinidad:

- **Weighing waste haulage vehicles:** Implementing a system to weigh waste haulage vehicles at all sites, including landfills and dumpsites, would provide more accurate data on waste disposal quantities. This step is crucial for obtaining reliable and comprehensive waste management data.
- **Improved data recording:** The process of data recording at the entrance of every landfill and dumpsite should be enhanced, utilizing electronic devices to register vehicle IDs. Implementing innovative tracking systems, such as RFID (Radio-Frequency Identification), can improve waste collection and disposal monitoring.
- **Fencing of dumpsites and landfills:** It is essential to fence off dumpsites and landfills to manage them more efficiently. Fencing helps control access, prevent unauthorized dumping, and ensure better waste containment and site security.
- **Integration of scavengers and waste pickers:** Scavengers and waste pickers should be integrated into formal waste management activities. Establishing designated unloading grounds can enhance waste picking activities while improving working conditions for waste pickers and ensuring their inclusion in the formal waste management system.
- **Ceasing the burning of electronic and electric waste:** Burning electronic and electric waste, particularly for the extraction of precious metals like copper, leads to pollution and environmental damage. It is necessary to put an end to this practice. Instead, SWMCOL should formalize activities related to electronic waste recycling within their control.
- **Timing of transfer station establishment:** Consideration should be given to establishing the transfer station system before closing the current dumpsites. This will prevent potential chaos, illegal dumping, and social upheaval. It is essential to address the livelihoods of waste pickers, who will lose their income source with the closure of the dumpsites, by providing alternative employment or income-generating opportunities.

Implementing these remarks and recommendations will contribute to more efficient landfill management, accurate data collection, improved working conditions, and sustainable waste management practices in Trinidad.

Based on the findings of the waste characterization study, and our recommendation in Chapter number 12., the following table summarizes all suggested recommendations:

Recommendations	
1	Characterization campaign
2	Cooperation between SWMCOL and the Corporations and General Population
3	Improvement of management of the entrance in the landfill
4	Sealing of the Landfill
5	Definition of colour code for each bin
6	Different strategies for residential sector and for non-residential sector
7	Characterization of the Residential Sector
8	Selection of the containers type, in accordance the characterization made in the previous/recommendations
9	Take in consideration that the distance between the household (where the urban waste is produced) to the container in the street (destination for the waste producer, citizen)
10	Communication is the key for the success, measured by the citizen participation in the waste separation at source, in the household
11	Characterization of the Non-Residential or Commercial Sector
12	Alternative to the Construction and Demolition waste
13	Public Education Program
14	Transform Home Composting as a solution, offering conditions to citizens in a way they want to take part of the process
15	Collection in the festivities
16	Drop-off-site to Household Hazardous Waste
17	Creation of an drop off center near the population
18	Have a reliable Data collection and monitoring

14 ACKNOWLEDGEMENTS

We extend our sincere gratitude to the SWMCOL team in Trinidad and Tobago for their invaluable support and assistance throughout the consultancy project. Their cooperation and provision of necessary information greatly contributed to the success of the study.

We would like to express our special appreciation to Nicole Vallie, Khary Campbell, Ayanna Gaspard-Clarke, and Abigail Whitehall for their guidance and assistance during the work. Their expertise and cooperation were instrumental in gaining insights into the local waste management practices and challenges.

Their dedication and willingness to collaborate were essential in gathering relevant data and ensuring a comprehensive understanding of the waste management landscape in Trinidad and Tobago. We are grateful for their time, support, and contributions to the project.

15 BIBLIOGRAPHY

1. Portaria nº851/2009 of 7 of August
2. Solid waste characterization in an integrated management context, Cruz, Maria Leonor Ferreira Rodrigues
3. 2015-2021 - Total Tonnage Processed at BCRF
4. Axle Load and Origin surveys
5. CARITRANS Data Collection Results- Divali 2020
6. CARITRANS Data Collection Results- August 2020
7. CARITRANS Data Collection Results- Christmas 2020
8. CARITRANS Data Collection Results Easter 2021
9. Engineered Sanitary Landfill FINAL – Concept Design Report, SWMCOL
10. Municipal Curbside Recycling Initiative (CTTRC) – Draft 1
11. EMA ANNUAL REPORT 2021
12. Environmental Management Act 3 of 2000, Ministry of the Attorney General and Legal Affairs
13. An Integrated solid waste/resource management policy for Trinidad and Tobago, EGGAR & Associates
14. *Litter Act Chapter 30:52*, Ministry of Attorney General and Legal Affairs
15. National Environmental Policy of Trinidad & Tobago 2018
16. National Waste Recycling Policy, February 2015
17. MSW Qty All Sites
18. Waste Characterization and Centroid Study – Final Report, CBCL
19. Vision_2030_The_National_Development_Strategy_TT
20. Benefits from real-time monitoring of door-to-door solid waste collection, J.Prata, C.L.Simões, R.Simões
21. Análise comparada das melhores práticas em sistemas de depósito de embalagens de bebidas na União Europeia, Iceland Liechtenstein Norway grants, December 2020
22. Amostragem de Resíduos – Casos Estudados, Carla Cristina Ameixa Fernandes Vaz de Carvalho
23. Environmental Report Index, 2016 - <https://epi.yale.edu/epi-results/2022/component/epi>
24. Municipal solid waste management in the Caribbean, Willard Phillips, Elizabeth Thorne
25. <https://swmcol.co.tt/Recycling/Recycling-Programmes>

26. <https://swmcol.co.tt/Landfills/Landfill-Management>
27. “Documento Técnico Nº1: Resíduos Sólidos Urbanos – Quantificação e Caraterização / Metodologia”, DGQA, Junho 1989
28. “Waste Analysis Procedure”, ERRA, March 1993
29. Solid Waste Characterization Report for Environmental Baseline Study of Municipal Solid Waste Dumpsite Haridwar, Uttarakhand, TATA Consulting Engineers Limited, August 2019
30. Documento de orientação nº5 sobre o RMC, 5 de outubro de 2012
31. Assessment of physicochemical parameters in Municipal Solid Waste (MSW) Degradation of different ages and their relationship with biogas generation, Hioná Valéria Dal Magro FOLLMANN; Waldir Nagel SCHIRMER ; Alexandre Rodrigues CABRAL; Maria Isabel Coltro CROVADOR; David Cardoso DOURADO; Eriélton César STROPARO
32. A caraterização dos resíduos sólidos - Caderno Técnicos nº1, Lipor

16 ANNEXES

16.1 ANNEX A - CALENDAR OF THE CHARACTERIZATION

16.1.1 DIWALI CALENDAR

	Characterization in Forres Park		Charaterization in Guanapo		Characterization in Beetham	
	21/October	22/October	25/October	26/October	27/October	28/October
1 st Load	San Fernando	Gasparilo	Arima	Trincity	Tunapuna	San Juan
2 nd Load	Claxton Bay	Chaguana	Arima	Arima	Diego Martin	Morvant
3 rd Load	Couva		Sangre Grande		Port of Spain	

16.1.2 WET CALENDAR

Characterization in Beetham Landfill							
	31/October	01/November	02/November	03/November	04/November	07/November	08/November
1 st Load	San Juan	Diego Martin	Diego Martin	San Juan	Maracas St. Joseph	St Anns	St Anns
2 nd Load	Diego Martin	Port of Spain	San Juan	Chaguaramas	Curepe	Tanapuna	Valsayn
3 rd Load	Port of Spain	Chaguaramas	Maracas St. Joseph	Port of Spain		Curepe	Valsayn
4 th Load							Tunapuna

Characterization in Guanapo Landfill					
	10/November	11/November	14/November	16/November	17/November
1 st Load	Arouca	Sangre Grande	Arima	Tunapuna	Mayaro
2 nd Load	Arima	Valencia	Sangre Grande	Valencia	Mayaro
3 rd Load		Arima	Arouca	Tunapuna	Arima
4 th Load		Arima		Wallerfield	Wallerfield
5 th Load		Arima		Talparo	Arima
6 th Load				Talparo	

Characterization in Forres Park Landfill					
	21/November	22/November	23/November	24/November	25/November
1 st Load	Penal	Chaguanas	Claxton Bay	La Brea	Claxton Bay
2 nd Load	Penal	Couva	Gasparillo	Marabella	
3 rd Load	San Fernando	Couva	La Romain	Chaguanas	
4 th Load	Chaguanas	San Fernando	Princes Town	Marabella	
5 th Load		La Romain	La Brea	Penal	
6 th Load			Princes Town	Gasparillo	

Characterization in Forres Park Landfill (for Guapo Landfill)			
	25/November	28/November	30/November
1 st Load	Siparia	Point Fortin	Point Fortin
2 nd Load	Siparia		

16.1.3 CARNIVAL CALENDAR

	Characterization in Forres Park			Characterization in Guanapo			Characterization in Beetham		
	15/February	16/February	17/February	18/February	19/February	20/February	21/February	22/February	23/February
1 st Load	Chaguana	Couva	La Romain	Diego Martin	San Juan	Maraval	Arima	Arima	Arima
2 nd Load	Chaguana	Couva	San Fernando	Port of Spain	Diego Martin	Laventille	Arima	Arima	Arima
3 rd Load	Chaguana	San Fernando	Princes Town	Port of Spain	San Juan	Tunapuna	La Horquetta	Arima	Sangre Grande
4 th Load			Claxton Bay		Maraval			Arima	

16.1.4 DRY CALENDAR

Characterization in Guanapo Landfill				
	27/fev	28/fev	01/mar	02/mar
1 st Load	Arima	Arima	Talparo	Wallerfield
2 nd Load	Arouca	Talparo	Sangre Grande	Valencia
3 rd Load	Arouca	Tunapuna	Arima	Arima
4 th Load	Arima		Mayaro	Arima
5 th Load	Sangre Grande		Mayaro	Arima
6 th Load			Tunapuna	
7 th Load			Valencia	
8 th Load			Wallerfield	

Characterization in Beetham Landfill				
	08/mar	09/mar	10/mar	13/mar
1 st Load	Port of Spain	Chaguaramas	Valsayn	Port of Spain
2 nd Load	Diego Martin	San Juan	Curepe	St. Anns
3 rd Load	Diego Martin	St. Anns	Maracas St. Joseph	Maracas St. Joseph
4 th Load	Tunapuna	San Juan	Curepe	Chaguaramas
5 th Load	Port of Spain	San Juan	Valsayn	Diego Martin
6 th Load	Tunapuna			

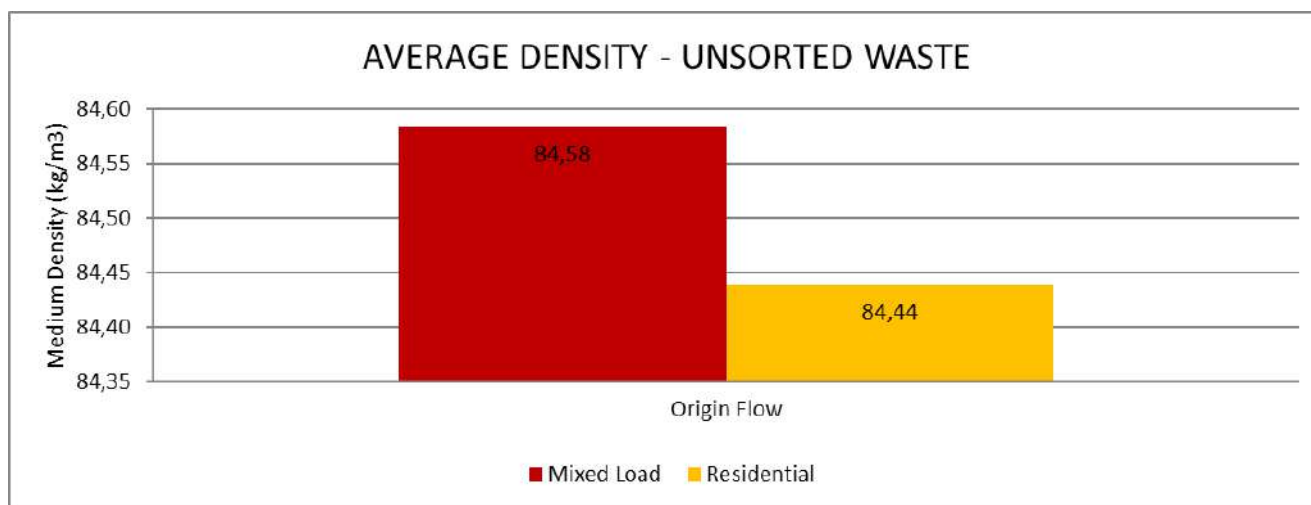
Characterization in Forbes Park Landfill					
	21/mar	22/mar	23/mar	24/mar	27/mar
1 st Load	Gasparillo	Princes Town	San Fernando	Chaguanas	Claxton Bay
2 nd Load	Claxton Bay	Chaguanas	Penal	Couva	Gasparillo
3 rd Load	Couva	Penal	La Brea	La Romain	
4 th Load	Princes Town	San Fernando		Chaguanas	
5 th Load	La Brea	La Romain		Marabella	
6 th Load				Marabella	

Characterization in Forbes Park Landfill (for Guapo Landfill)			
	23/mar	27/mar	4/april
1 st Load	Siparia	Point fortin	Siparia
2 nd Load		Point fortin	

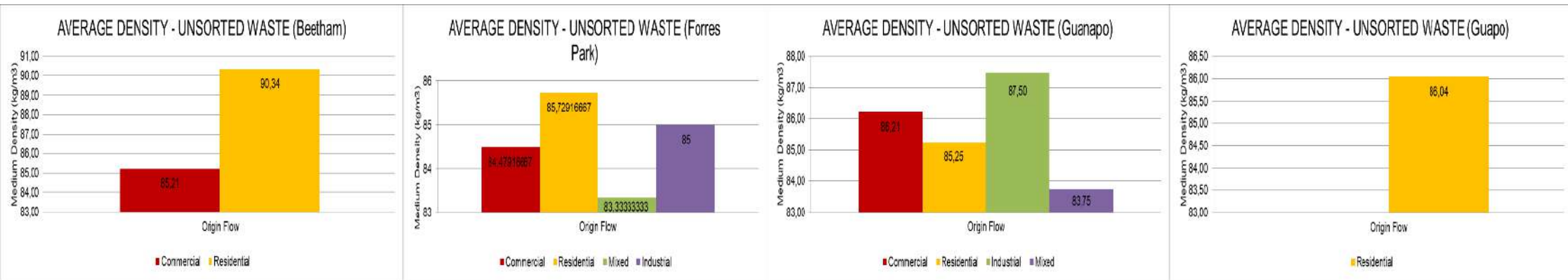
16.2 ANNEX B -PHOTOGRAPHIC RECORD



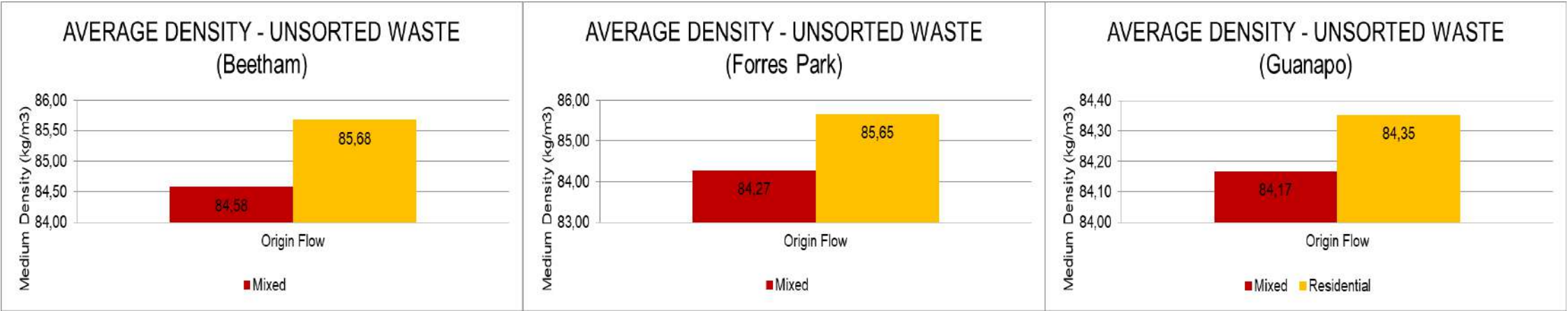
16.3 ANNEX C: BULLETINS AND DENSITIES FROM DIWALI



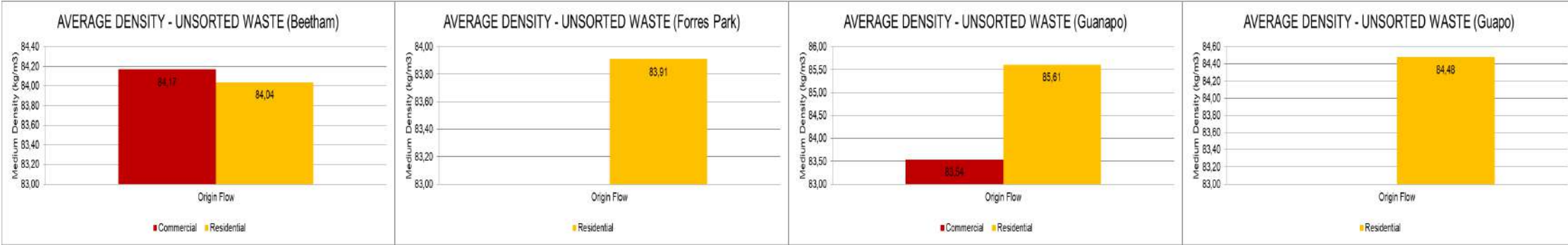
16.4 ANNEX D: BULLETINS AND DENSITIES FROM WET SEASON



16.5 ANNEX E: BULLETINS AND DENSITIES FROM CARNIVAL



16.6 ANNEX F: BULLETINS AND DENSITIES FROM DRY SEASON



16.7 ANNEX G: SUMMARY OF RESPONSES OBTAINED FROM THE SURVEY CARRIED OUT

Who is responsible for municipal waste collection in your area?												
Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
Point Fortin	Has specific collection - Yes Official or non-official responsible for the collection - Regional Corporation Final destination - Guapo Landfill Site Quant-	Has specific collection - No	Has specific collection - No	Has specific collection - Yes Official or non-official responsible for the collection - Private Company Final destination - SWMCOL Quant-	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - Yes Official or non-official responsible for the collection - Private Company Final destination - SWMCOL Quant-	Has specific collection - No	Has specific collection - Yes Official or non-official responsible for the collection - Private Company Final destination - SWMCOL Quant-	Has specific collection - No
Rio Claro/ Mayaro	Has specific collection - Yes Official or non-official responsible for the collection - Private Company Final destination - Forres Park Landfill Site, Claxton Bay Quant-	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No

Who is responsible for municipal waste collection in your area?

Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
SGRC	Has specific collection - Yes Official or non-official responsible for the collection - Private Company Final destination - Guanapo Landfill Site Quant-	Has specific collection - Yes Final destination - Guanapo Landfill Site Quant-	Has specific collection - Yes Final destination - Guanapo Landfill Site Quant-	Has specific collection - Yes Final destination - Guanapo Landfill Site Quant-	Has specific collection - Official or non-official responsible for the collection - Scavengers	Has specific collection - No	Has specific collection - No Official or non-official responsible for the collection - Other Final destination - Services of SWMCOL Tire Shredder were requested. Quant-	Has specific collection - No	Has specific collection - Yes Final destination - Guanapo Landfill Site Quant-	Has specific collection - Yes Final destination - Guanapo Landfill Site Quant-	Has specific collection - Yes Official or non-official responsible for the collection - Private Company Final destination - Guanapo Landfill Site Quant-	Has specific collection - Yes Official or non-official responsible for the collection - Private Company Final destination - Guanapo Landfill Site Quant-
Diego Martin	Has specific collection - Yes Official or non-official responsible for the collection - Private Company Final destination - Beetham Landfill Quant- Not available	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - yes Official or non-official responsible for the collection - Regional Corporation Final destination - SWMCOL Quant- +1000 tons	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No
POS	Has specific collection - No Official or non-official responsible for the collection - Private Company, Regional	Has specific collection - No Official or non-official responsible for the collection - Private Company, Regional	Has specific collection - No Official or non-official responsible for the collection - Private	Has specific collection - No Official or non-official responsible for the collection - Private	Has specific collection - No Official or non-official responsible for the collection - Private	Has specific collection - No Official or non-official responsible for the collection - Private	Has specific collection - No Official or non-official responsible for the collection - Private Company, Regional	Has specific collection - No Official or non-official responsible for the collection - Private	Has specific collection - No Official or non-official responsible for the collection - Private	Has specific collection - No Official or non-official responsible for the collection - Private	Has specific collection - No Official or non-official responsible for the collection - Private	Has specific collection - No Official or non-official responsible for the collection - Private

Who is responsible for municipal waste collection in your area?

Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
	Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Company, Regional Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Company, Regional Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Company, Regional Corporation Final destination - Sold as scrap metal by workers Quant- Not available	Company, Regional Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Corporation Final destination - Processed by S.W.M.C.O.L. in Beetham Landfill Quant- Not available	Company, Regional Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Company, Regional Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Company, Regional Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Company, Regional Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available	Company, Regional Corporation Final destination - Beetham Landfill, S.W.M.C.O.L. Quant- Not available
Princes Town	Has specific collection - Yes Official or non-official responsible for the collection - Final destination - Forres Park Landfill Quant-	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No
Arima	Has specific collection - No Official or non-official responsible for the collection - Final destination - Guanapo Landfill Quant-	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No Official or non-official responsible for the collection - Final destination - Collected, Sizes, divided. Quotation sort from SWMCOL for payment. Quant- Not available	Has specific collection - No	Has specific collection - No	Has specific collection - No	Has specific collection - No Official or non-official responsible for the collection - Final destination - Guanapo Lanfill Quant- Not available	Has specific collection - No

What kind of disposal equipment is available or is used, by the citizens, for unsorted waste and for recyclable waste?

Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
Point Fortin	Bags	Bags	Box	Bags	---	---	---	---	Bags	Bags	Bags	---
Rio Claro/ Mayaro	Bags	---	---	---	---	---	---	---	---	---	---	---
SGRC	Bags	Bags	Bags	Bags	No Specific disposal method	N.A	Other: Services of SWMCOL Tire Shredder were requested	Bags	Bags	Bags	Bags	Bags
Diego Martin	Bags	---	---	---	---	---	Other: Tire are thrown on the roadway	---	---	---	---	---
POS	Bags	Bags Other - Openly disposed	Other - Openly disposed	Bags Other - Openly disposed	Other - Openly disposed	Other - Openly disposed	Other - Openly disposed	Other - Openly disposed	Container Bags Bottle shape containers for recyclable waste	Container Bags Bottle shape containers for recyclable waste	Bags	Bags - Openly disposed
Princes Town	Bags	---	---	---	---	---	---	---	---	---	---	---
Arima	Bags	Bags	Bags	Bags	Bags	Bags	Bags	Bags	Bags	Bags	Bags	Bags

What kind of disposal equipment is available or is used, by the institutional, for unsorted waste and for recyclable waste?												
Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
Point Fortin	N.A.	Bags	N.A.	Bags	N.A.	N.A.	N.A.	N.A.	Bags	Bags	Bags	N.A.
Rio Claro/ Mayaro	Bags											
SGRC	Bags	Bags	Bags	Bags	No specified method	N.A.	N.A.	N.A.	Bags	Bags	Bags	Bags
Diego Martin	Bags						Collected on open tray trucks					
POS	Other - Nil		Other - Nil									
Princes Town	Bags	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Arima	Bags	Bags	Bags	Bags	Bags	Bags	Bags Loose	Bags	Bags	Bags	Bags	Bags

What kind of projects exist in your corporation for the collection of recyclable waste, in the residential and commerce and services?

Corporations	
Point Fortin	The Point Fortin Borough Corporation in partnership with Solid Waste Management Company Limited (SWMCOL) has been conducting a Curbside Recycling Programme since it was launched in the year 2019. The project aims at collecting materials such as glass bottles and jars, plastic bottles, beverage cans and tetra pak cartons. The target population is approximately fifteen hundred (1,500) households, primary and secondary schools within the community. The Point Fortin Borough Corporation, Public Health Department in collaboration with SWMCOL, through its Curbside Recycling Programme also aims at sensitizing the public through training programmes, handouts or pamphlets in the respective six (6) electoral districts. Curbside recyclables are dropped off at the Guapo Landfill Site to be picked up by SWMCOL on a regular basis. To date, the project has been very successful.
Rio Claro/ Mayaro	No project currently exists in the Mayaro Rio Claro Regional Corporation for the collection of recyclable waste, in the residential and commerce and services.
SGRC	•ICare Project in schools. •Historically the curb-side recycling project was successfully completed in 2019.
Diego Martin	Currently, there are no existing projects for the collection of recyclable waste.
POS	At present, bottle shape plastic containers are used at City Hall and some Divisions, they are also placed within the confines of the City, E.g. the Central Business areas and the Woodbrook area along the pavements.
Princes Town	Presently the Princes Town Regional Corporation is not engaged in any projects for the collection of recyclable waste.
Arima	NONE

Are there specific days to collect each flow? In the case of unsorted waste, is it possible to make the unsorted waste discharge time available?

Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
Point Fortin	5 Days Monday - Friday			1 day - Friday					1 day - Friday	1 day - Friday	1 day - Friday	
Rio Claro/ Mayaro	3 days Mondays, Wednesdays, and Fridays											
SGRC	•seven (7) days – 6, 10, 11 and 13. - Sundays to Saturdays •five (5) days – 1, 2, 3, 4, 5, 7, 8, 9, 12 and 14. -Mondays to Fridays	•seven (7) days – 6, 10, 11 and 13. - Sundays to Saturdays •five (5) days – 1, 2, 3, 4, 5, 7, 8, 9, 12 and 14. -Mondays to Fridays	•seven (7) days – 6, 10, 11 and 13. - Sundays to Saturdays •five (5) days – 1, 2, 3, 4, 5, 7, 8, 9, 12 and 14. - Mondays to Fridays	•seven (7) days – 6, 10, 11 and 13. - Sundays to Saturdays •five (5) days – 1, 2, 3, 4, 5, 7, 8, 9, 12 and 14. - Mondays to Fridays					•seven (7) days – 6, 10, 11 and 13. - Sundays to Saturdays •five (5) days – 1, 2, 3, 4, 5, 7, 8, 9, 12 and 14. - Mondays to Fridays	•seven (7) days – 6, 10, 11 and 13. - Sundays to Saturdays •five (5) days – 1, 2, 3, 4, 5, 7, 8, 9, 12 and 14. - Mondays to Fridays	•seven (7) days – 6, 10, 11 and 13. - Sundays to Saturdays •five (5) days – 1, 2, 3, 4, 5, 7, 8, 9, 12 and 14. - Mondays to Fridays	•seven (7) days – 6, 10, 11 and 13. - Sundays to Saturdays •five (5) days – 1, 2, 3, 4, 5, 7, 8, 9, 12 and 14. - Mondays to Fridays
Diego Martin	3 days per week - Mondays, Wednesdays and Fridays						Scheduled monthly					
POS	7 Days - Every day of the week in some areas	As required - From 2:00 a.m. to 4:00 p.m. Monday to Friday	As required - Saturday to Sunday, Public Holidays from 5:00	As required - Does not apply to days	As required - Does not apply to days	As required - Does not apply to days	As required - Does not apply to days	As required - Does not apply to days	As required - Does not apply to days	As required - Does not apply to days	As required - Does not apply to days	As required - Does not apply to days

Are there specific days to collect each flow? In the case of unsorted waste, is it possible to make the unsorted waste discharge time available?

Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
			a.m. to 12:00 Noon									
Princes Town	3 days per week - Mondays, Wednesdays and Fridays Either on Mondays, Wednesdays and Fridays OR Tuesdays, Thursdays and Saturdays. The Town Centre and Poultry Waste is collected Sunday to Sunday											
Arima	3 Days - Monday, Wednesday, Friday											

Do you have specific circuits for institutional waste collection? If yes, which flows are collected and how many customers do they have?

Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
Point Fortin	No	No	No	No	No	No	No	No	No	No	No	No
Rio Claro/ Mayaro	No	No	No	No	No	No	No	No	No	No	No	No
SGRC	No. We have specific days	No. We have specific days	No. We have specific days	No. We have specific days	No	No	No	No	No. We have specific days	No. We have specific days	No. We have specific days	No. We have specific days
Diego Martin	No	No	No	No	No	No	No	No	No	No	No	No
POS	No	No	No	No	No	No	No	No	No	No	No	No
Princes Town	No	No	No	No	No	No	No	No	No	No	No	No
Arima	No	No	No	No - N/A	No	No	No	No	No	No	No	No

We would like to know if there is a lot of informal collection? If yes, which flows are diverted?

Corporations	Unsorted waste	Paper/Cardboard	Glass	Plastic	Metal	Electronic waste	Tires	Lamps	Aluminum cans	Non-aluminum cans	Tetra pack	Biowaste (food and green waste)
Point Fortin	No	No	No	No	No	No	No	No	No	No	No	No
Rio Claro/ Mayaro	No	No	No	No	No	No	No	No	No	No	No	No
SGRC	No	No	NO DIVERSION OF FLOW	ISSUE OF SCAVENGERS (SCRAP IRON/METAL)								On-going bulky waste collection was successful with the inputs of the Ministry of Rural Development and Local Government.
Diego Martin	No	No	No	No	No	No	No	No	No	No	No	No
POS	Not Applicable				Yes							
Princes Town	No	No	No	No	No	No	No	No	No	No	No	No
Arima	No	No	No	Yes	No	No	No	No	No	No	No	No