



5th Report

JOINT SELECT COMMITTEE ON

FINANCE AND LEGAL AFFAIRS

on a

a critical assessment of the Waste Management policies and initiatives of the State (with specific focus on solid waste)

FOURTH SESSION (2018/2019) OF THE 11TH PARLIAMENT

An electronic copy of this report can be found on the Parliament website:

http://www.ttparliament.org/committee_business.php?mid=19&id=239&pid=28

The Joint Select Committee on Finance and Legal Affairs

Contact the Committee's Secretariat

Telephone: 624-7275 Extensions 2277/2284/2283, **Fax:** 625-4672

Email: jscfla@ttparliament.org

5th REPORT

OF THE

**JOINT SELECT COMMITTEE ON
FINANCE AND LEGAL AFFAIRS**

ON

**A CRITICAL ASSESSMENT OF THE WASTE
MANAGEMENT POLICIES AND INITIATIVES OF THE
STATE
(WITH SPECIFIC FOCUS ON SOLID WASTE)**

Date Laid: HoR:

Senate:

CONTENTS

CONTENTS	4
ACRONYMS AND ABBREVIATIONS.....	6
LIST OF TABLES/DIAGRAMS.....	6
LIST OF APPENDICES	6
THE COMMITTEE	9
COMMITTEE MANDATE AND ESTABLISHMENT	9
SPECIFIC AREAS OF RESPONSIBILITY	10
POWERS OF THE COMMITTEE.....	10
MEMBERSHIP.....	10
FORMER MEMBERS.....	11
SECRETARIAT SUPPORT.....	11
EXECUTIVE SUMMARY	12
SUMMARY OF WRITTEN EVIDENCE.....	14
SUMMARY OF RECOMMENDATIONS	16
INTRODUCTION	19
BACKGROUND.....	19
OBJECTIVES.....	21
CONDUCT OF THE INQUIRY	21
SUMMARY OF EVIDENCE, FINDINGS AND RECOMMENDATIONS	23
OBJECTIVE 1: TO EXAMINE THE LEVEL OF WASTE PRODUCTION IN TRINIDAD AND TOBAGO	23
FINDINGS.....	26
OBJECTIVE 2: TO ASSESS THE EFFECTIVENESS OF REGULATIONS AND POLICIES DIRECTED AT WASTE MANAGEMENT	29
Current Policies Directed at Waste Management	29
Revision of the National Environment Policy and its Improved Strategies for Waste Management .	32
Short-term Policy Initiatives.....	33
Medium-term to Long-term Policy Initiatives.....	34
FINDINGS.....	35
RECOMMENDATIONS.....	36
OBJECTIVE 3: TO ASSESS THE ADEQUACY OF RESOURCES AND INSTITUTIONS ASSOCIATED WITH THE MANAGEMENT OF WASTE	38
Operational Deficiencies Affecting SWMCOL	39
Biomedical Waste	39
At the Local Government Level.....	39

At the Private Sector Level.....	41
Waste Management in Tobago.....	44
FINDINGS.....	48
RECOMMENDATIONS.....	49
APPENDICES	52
APPENDIX I	53
Minutes of Proceedings.....	53
APPENDIX II	78
Written Submissions Received.....	78
APPENDIX III	79
World Bank 2012 Waste Generated Per Capita by Region.....	79
APPENDIX IV	80
APPENDIX V	83
Verbatim Notes.....	83

ACRONYMS AND ABBREVIATIONS

Abbreviation	Term
SWMCOL	Trinidad and Tobago Solid Waste Management Company Limited
DIQE	Division of Infrastructure, Quarries and the Environment
DHWFD	Division of Health, Wellness and Family Development
EMA	Environmental Management Authority
NEP	National Environment Policy
MSW	Municipal Solid Waste
NAMDEVO	National Agricultural Marketing and Development Corporation
THA	Tobago House of Assembly

LIST OF TABLES/DIAGRAMS

Table/Diagram	Page
Table 1: <ul style="list-style-type: none"> Waste Characterisation of Municipal Solid Waste in Trinidad 	24
Table 2: <ul style="list-style-type: none"> Projected Waste Generation Volumes 	26
Table 3: <ul style="list-style-type: none"> Summary of Recommendations from Private Companies 	43
Table 4: <ul style="list-style-type: none"> Table of Statistical Data Derived from Sample of 7 Municipal Corporations 	81
Figure 1 <ul style="list-style-type: none"> Landfill Site with Engineered Cell 	44

LIST OF APPENDICES

Appendix	Page
Appendix I: <ul style="list-style-type: none"> Minutes of Proceedings 	53
Appendix II: <ul style="list-style-type: none"> Entities from which written responses were received 	78

Appendix III: • World Bank 2012 Waste Generated Per Capita by Region	79
Appendix IV : • Table of Statistical Data Derived from Sample of 7 Municipal Corporations	80
Appendix IV: • Verbatim Notes	83

MEMBERS OF THE COMMITTEE



**Ms. Sophia Chote, SC
Chairman**



**Mr. Clarence Rambharat
Vice Chairman**



Dr. Lovell Francis, MP



Mrs. Vidia Gayadeen-Gopeesingh, MP



Mr. Taharqa Obika



Dr. Lester Henry



Mr. Terrence Deyalsingh, MP



Mrs. Cherrie-Ann Crichlow-Cockburn, MP

THE COMMITTEE

COMMITTEE MANDATE AND ESTABLISHMENT

1. Section 66A of the Constitution of the Republic of Trinidad and Tobago declares, that not later than three months after the first meeting of the House of Representatives, the Parliament shall appoint Joint Select Committees to inquire into and report to both Houses in respect of Government Ministries, Municipal Corporations, Statutory Authorities, State Enterprises and Service Commissions, in relation to their administration, the manner of exercise of their powers, their methods of functioning and any criteria adopted by them in the exercise of their powers and functions.
2. Pursuant to the foregoing provision, motions approved in the House of Representatives and Senate on November 13, 2015 and November 17, 2015, respectively, the **Joint Select Committee on Finance and Legal Affairs** was established.
3. Standing Order 91 of the Senate and 101 of the House of Representatives outline the general functions of a Committee of this nature. They are as follows:
 - a. to examine Bills and review all legislation relating to the relevant Ministries, Departments or Bodies or as may be referred to it by the House;
 - b. to investigate, inquire into, and report on all matters relating to the mandate, management, activities, administration and operations of the assigned Ministries, Departments or Bodies;
 - c. to study the programme and policy objectives of Ministries, departments or bodies and the effectiveness of the implementation;
 - d. to assess and monitor the performance of Ministries, Departments and Bodies and the manner of the exercise of their powers;
 - e. to investigate and inquire into all matters relating to the assigned Ministries, Departments and Bodies as they may deem necessary, or as may be referred to them by the House or a Minister; and

- f. to make reports and recommendations to the House as often as possible, including recommendations of proposed legislation.

SPECIFIC AREAS OF RESPONSIBILITY

4. The Joint Select Committee on Finance and Legal Affairs is mandated to inquire into areas related to Finance, Planning, Trade, Tobago Affairs, Office of the Prime Minister, Attorney General, Justice and Legal Affairs as listed in Appendix IV and V of the Standing Orders of the House of Representatives and Senate respectively.

POWERS OF THE COMMITTEE

5. Standing Orders 101 of the Senate and 111 of the House of Representatives delineate the general powers of the Committee which include:
 - a. to send for persons, papers and records;
 - b. to sit notwithstanding any adjournment of the House;
 - c. to adjourn from place to place;
 - d. to report from time to time;
 - e. to appoint specialist advisers either to supply information which is not otherwise readily available, or to elucidate matters of complexity within the Committee's order of reference;
 - f. to communicate with any other Committee on matters of common interest; and;
 - g. to meet concurrently with any other Committee for the purpose of deliberating, taking evidence or considering draft reports.

MEMBERSHIP

6. The Committee comprises the following members:
 - i. Ms. Sophia Chote, SC - Chairman
 - ii. Mr. Clarence Rambharat - Vice-Chairman
 - iii. Dr. Lovell Francis, MP
 - iv. Mrs. Vidya Gayadeen-Gopeesingh, MP

- v. Mrs. Cherrie-Ann Crichlow-Cockburn, MP
- vi. Mr. Terrence Deyalsingh, MP
- vii. Dr. Lester Henry
- viii. Mr. Taharqa Obika

FORMER MEMBERS

- 7. The following persons served on the Committee during the course of this inquiry:
 - i. Mr. Prakash Ramadhar, MP - Member

SECRETARIAT SUPPORT

- 8. The following officers were assigned to assist the Committee:
 - i. Mr. Julien Ogilvie - Secretary
 - ii. Mr. Brian Lucio - Assistant Secretary
 - iii. Ms. Terriann Baker - Research Assistant
 - iv. Ms. Ria Rampersad - Research Assistant

EXECUTIVE SUMMARY

1. At its 16th Meeting held on September 15, 2017, the Committee resolved to pursue an inquiry into the Waste Management Policies and initiatives of the State (with specific focus on solid waste).

2. The inquiry process involved gathering and collating oral and written evidence from primary and secondary stakeholders as well as from the public. As far as possible, the Committee ensured that oral and written evidence received were relevant to the terms of reference in the inquiry. In this regard the Committee received evidence from several government and non-governmental stakeholders, listed as follows:
 - i. The Ministry of Planning and Development;
 - ii. The Ministry of Rural Development and Local Government;
 - iii. The Ministry of Public Utilities;
 - iv. The Ministry of Health;
 - v. Environmental Management Authority (EMA);
 - vi. Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL);
 - vii. Tobago House of Assembly (THA);
 - viii. The Port of Spain City Corporation;
 - ix. The San Fernando City Corporation;
 - x. The Chaguanas Borough Corporation;
 - xi. The Point Fortin Borough Corporation;
 - xii. The Siparia Regional Corporation;
 - xiii. The San Juan/Laventille Regional Corporation;
 - xiv. The Tunapuna/Piarco Regional Corporation;
 - xv. The Mayaro/Rio Claro Regional Corporation;
 - xvi. Ace Recycling Limited;
 - xvii. Caribbean Batteries Recycling Limited;

- xviii. Council of Presidents of the Environment;
 - xix. Green Engineering;
 - xx. Enviro Care Limited; and
 - xxi. Environment Tobago.
3. Based on the evidence received from the stakeholders listed above, the Committee was able to acquire some useful insights into the shortcomings of the waste management policies and initiatives of the State and some of the critical prerequisites for its sustainable development.
4. Some of the issues which the Committee took into account were as follows:
- i. The fragmented responsibility for waste management among the Ministry of Planning and Development, the Ministry of Rural Development and Local Government, the Ministry of Public Utilities, the Environmental Management Authority (EMA), the Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL) and the Municipal Corporations
 - ii. The need for a Central Waste Management Authority to inter alia, coordinate or consolidate;
 - iii. There appeared to be a significant implementation deficit as it concerns the waste management policies and initiatives of the State;
 - iv. In contrast with item (i) above, there appears to be an increasing level of commercial activities in the area of waste processing and treatment;
 - v. The need for the State to partner with private companies. This may include introducing incentives for private companies and for citizens vis-à-vis waste management and more so, recycling and re-using;
 - vi. The high levels of waste generated per capita in Trinidad and Tobago;
 - vii. The unsanitary and indiscriminate disposal of waste at the nation's landfills;
 - viii. The disposal of bio-medical waste at the nation's landfills; and
 - ix. The non-recycling of plastics and other recyclables;

- x. The impact of existing solid waste management programmes and initiatives?

SUMMARY OF WRITTEN EVIDENCE

STAKEHOLDER	MAIN POINTS ARISING FROM EVIDENCE
The Ministry of Planning and Development	<ul style="list-style-type: none"> • The Ministry was in the process of engaging other Ministries and state agencies re: waste management; • Current strategies for waste management were contained within the overarching Government development policy for Trinidad and Tobago - <i>Vision 2030</i>; • Trinidad and Tobago still operated under the 2006 National Environment Policy; and • The Ministry was in the process of reviewing the Draft National Environment Policy (2018).
The Ministry of Rural Development and Local Government	<ul style="list-style-type: none"> • Municipal Corporations faced a host of weaknesses in relation to waste management such as: <ul style="list-style-type: none"> ○ Absence of a proper system of Performance Management of Contractors; ○ Improper management and administration of waste collection contracts; ○ Absence of stringent management and monitoring; ○ Absence of a vehicle maintenance and management schedule. • Shortcomings attributed to : <ul style="list-style-type: none"> ○ the absence of a robust waste collection management system; ○ the absence of a comprehensive and efficient performance management system; and ○ limited technical capacity and human resources.
The Ministry of Public Utilities	<ul style="list-style-type: none"> • Data collection and characterization of waste was dependent upon SWMCOL conducting physical onsite checks at landfills • The laws governing waste management reflects the multitude of agencies involved • The Ministry undertook several initiatives to revise existing legislation and policies • Regions serviced by the Beetham Landfill generated the most Municipal Solid Waste • Beetham Landfill receives more than 45% of the MSW generated annually; and

	<ul style="list-style-type: none"> • SWMCOL’s “Get into Green” initiative sought to promote waste reduction, reuse and recycling.
The Ministry of Health	<ul style="list-style-type: none"> • The Ministry of Health investigated all reports on inappropriate dumping of waste material; • The assessment tool was revised to capture the operations and management of Private Hospitals in relation to the management and disposal of biomedical waste.
Tobago House of Assembly (THA)	<ul style="list-style-type: none"> • In Tobago, solid waste was delivered and disposed of at the Studley Park Waste Integrated Facility; • Waste is weighed by the use of a Weigh Bridge; • Waste is disposed of using Engineered Cells; • Waste is not separated at source; • Recycling is not being done at the Studley Park Facility; • The Assembly undertook several initiatives in an attempt to eradicate single-use Styrofoam; • Challenges in enforcing Section 9 (2) of the Litter Act; • The equipment used to remove and dispose of derelict vehicles were inadequately maintained; and • Overdue delay in the appointment of Litter Wardens.
Private Companies	<ul style="list-style-type: none"> • Enviro Care Limited was satisfied with the current legal framework which governs waste management; • Green Engineering indicated that the framework was inadequate and that it failed to address the lack of monitoring and enforcement of laws; • Enviro Care Limited recommended that the government needed to give local companies incentives to invest in new and improved technology; • Green Engineering recommended that an Integrated Waste Management Park should be developed; and • Ace Recycling Limited recommended that a database of recycling companies operational in Trinidad and Tobago should be accessible to the public.

SUMMARY OF RECOMMENDATIONS

The following are key recommendations proffered by the Committee:

- A. the Ministry of Public Utilities must engage the technical assistance of the relevant regional or international organisations to conduct another waste characterisation study for this country. Funding for this initiative may be sourced through private sector engagement and the Green Fund.**

- B. Legislation or a policy document should prescribe a fixed period for the execution of national waste management studies in Trinidad and Tobago;**

- C. The Ministry of Public Utilities in collaboration with SWMCOL and other stakeholders must institute permanent arrangements to more effectively collect data on waste generated on an ongoing basis. In this regard, the Committee suggests that this benchmark may be achieved in the short to medium-term through the implementation of policies to facilitate:
 - a. The segregation of solid waste at the domestic and commercial level;**
 - b. The accurate measuring of solid waste entering landfills;**
 - c. Mandating manufacturers and industrial producers to provide data on the amount of products sold and their estimated waste generation potential¹.****

- D. We recommend that the objective of “Improving national environmental data / information management” as set out in the Draft NEP (2018) be given priority as policy formulation and implementation must be driven by credible data.**

- E. In addition to the Green Fund Levy, the state should explore other arrangements to ensure that commercial entities whose products generate significant amounts of solid waste (such as food and beverage companies) contribute to offsetting the costs incurred by the State in managing such waste.**

¹ The Draft National Environmental Policy 2018 (p16) underscores that one of the major drivers of solid waste generation is “inefficient use of resources in the production of goods and services”

- F. the Ministry of Public Utilities must engage the technical assistance of the relevant regional or international organisations to conduct another waste characterisation study for this country. Funding for this initiative may be sourced through private sector engagement and the Green Fund.**
- G. The Ministry of Public Utilities shall, no later than sixty days (60) after this report is first laid, submit a status report on the following:**
- a. Drafting of appropriate legislation to support waste recycling regulations as a critical component to the waste management strategy;**
 - b. Establishment and staffing of a Waste Recycling Management Unit within SWMCOL to undertake some of the functions of the proposed Waste Recycling Management Authority;**
 - c. Establishment and implementation of a deposit-refund system for beverage containers;**
 - d. Establishment of the Waste Recycling Management Authority;**
 - e. The successes and limitations observed in the implementation of the Public Sector Recycling Programme (PSRP);**
 - f. The Workplace Waste Reduction and Recycling Programme (WRAP); and**
 - g. Partnerships between SWMCOL and other Municipal Corporations subsequent to the pilot curb-side recycling campaign partnership with the Tunapuna/ Piarco Regional Corporation.**
- H. We endorse the Proposed Policy Objective set out in the Draft NEP 2018 which aims to “Enhance the existing coordination and collaboration framework with the establishment of a multi-sectoral oversight committee”²;**
- I. The Ministry of Planning and Development shall, no later than sixty days (60) after this report is first laid, submit a status report on its consultations with Ministries on the following:**

² The Draft National Environmental Policy 2018 (p41) underscores that one of the major drivers of solid waste generation is “inefficient use of resources in the production of goods and services”

- a. Reduction by 50% of the quantity of waste requiring final disposal;
 - b. Establishment of one (1) landfill meeting internationally recognized standards; and
 - c. Reduction by 35% of the quantity of persistent organic pollutants (POPs) released.
- J. A Draft Policy for the segregation of solid waste at the domestic or residential level be formulated within the next 6 months by SWMCOL in collaboration with the line Ministries;
- K. In keeping with the 2020 targets (relative to Vision 2030) to “Establish one (1) landfill meeting internationally recognized standards”, arrangements should be made to procure and install weighing scales at at least one landfill in Trinidad.
- L. The State should seek to establish partnerships with existing solid waste processors in the Private Sector with a view to:
- i. developing a more effective system for the recovery of recyclables;
 - ii. expanding the range of recyclables that is recovered for processing;
 - iii. achieving knowledge transfer to the State sector;
 - iv. expanding access to foreign markets.
- M. Consideration should be given to developing a robust and reliable mechanism to acquire feedback from commercial waste management entities.

INTRODUCTION

BACKGROUND

- 1.1. Appropriate waste management is critical for the safety of citizens, the environment and to improve overall public health. Globally, a considerable increase in waste generation has been observed, largely due to rapidly expanding populations and greater urbanization³. As a result, countries have been forced to find creative ways to address the proliferation of waste. Many countries have existing recycling policies, however, the steady increase in waste has prompted a greater response and has warranted the rigorous implementation of same.
- 1.2. A shift in the type of waste generation has occurred in Trinidad and Tobago over the past 25 years, as a result of a higher standard of living, commercialization, residential development and industrialization within the country.⁴ Moreover, small developing island states (SIDS) like Trinidad and Tobago generally have limited land resources and fragile ecosystems, which exacerbate the impact of improperly disposed waste. States have further recognised the virtue of effective waste management because of its impacts on the optimal functioning of tourism, agriculture and fisheries industries.
- 1.3. Nevertheless, **national emphasis has been allocated to the final disposal of waste rather than strategies for waste minimization and diversion**, resulting in an accumulation of comingled waste. As such, waste management represents a prominent environmental challenge.
- 1.4. At the Ministerial level, the responsibility for waste management is currently shared among various Ministries including the Ministry of Rural Development and Local

³ The Risks of Rapid and Unplanned Urbanization in Developing Countries. <http://reports.weforum.org/global-risks-2015/part-2-risks-in-focus/2-3-city-limits-the-risks-of-rapid-and-unplanned-urbanization-in-developing-countries/>

⁴ EMA State of the Environment Report 2011, p. 6. <http://www.ema.co.tt/new/images/publications/reports/soer-11.pdf>

Government⁵, Ministry Public Utilities and Ministry of Planning and Development (Environmental Policies). At the institutional level, the Solid Waste Management Company Limited (SWMCOL)⁶, a wholly owned company established in 1983 was assigned the duty of managing three (3) major waste disposal sites, the Beetham Landfill, Guanapo Landfill and Forres Park Landfill in Trinidad. The company falls under the Ministry of Public Utilities.

1.5. In Tobago, however, the Tobago House of Assembly (THA) through the Public Health Authority is responsible for the collection and disposal of waste. SWMCOL's mandate further expanded in 2003 to include the preservation and upgrade of the environment.⁷

1.6. Municipal corporations are governed by the Municipal Corporation Act of 1990. The Act designates the responsibility of garbage collection and disposal to municipal corporations in addition to the development and maintenance of landfills and the diminution of public nuisances.⁸ The provisions of the Litter Act, Chap. 30:52 are also enforced through the deployment of Litter Wardens who are employed with the various municipal corporations

1.7. Notably, environmental management (which is inextricably linked to waste management) is the responsibility of the Ministry of Planning and Development. The Environmental Management Authority, which was established under the Environmental Management Act, is the main statutory body responsible to formulating and regulating environmental policy.

⁵ Gazette No. 126, Vol. 55, 31st October 2016

⁶ Gazette No. 94, Vol. 56, 11th September, 2017

⁷ Ninth Report of the JSC on Ministries, Statutory Authorities and State Enterprises (Group 2) on Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL), p. 12. <http://www.ttparliament.org/reports/p10-s3-j-20130313-JSC2-R9.pdf>

⁸ Government of the Republic of Trinidad and Tobago National Waste Recycling Policy (2015), p. 5. <http://www.planning.gov.tt/sites/default/files/WASTE%20RECYCLING%20POLICY%202015%20Final.pdf>

OBJECTIVES

1.8. In view of the above, the Committee agreed that its inquiry will be guided by the following objectives:

- 1. To examine the level of solid waste production in Trinidad and Tobago;**
- 2. To assess the effectiveness of regulations and policies directed at Waste management; and**
- 3. To assess the adequacy of resources and institutions associated with the management of solid waste.**

CONDUCT OF THE INQUIRY

1.9. At its Meeting held on March 23, 2018, the Committee convened its *first Public Hearing* with the following entities:

- The Ministry of Planning and Development;
- The Ministry of Public Utilities;
- Environmental Management Authority (EMA); and
- Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL).

1.10. At its Meeting held on April 27, 2018, the Committee convened its *second Public Hearing* with the following entities:

- The Ministry of Rural Development and Local Government;
- The Ministry of Health;
- The Port of Spain City Corporation;
- The Tunapuna/Piarco Regional Corporation;
- The Chaguanas Borough Corporation; and
- The San Fernando City Corporation.

1.11. At its Meeting held on May 18, 2018, the Committee convened its *third Public Hearing* with the following entities:

- Tobago House of Assembly (THA);
- Ace Recycling Limited / Caribbean Batteries Recycling Limited; and

- Council of Presidents of the Environment and Green Engineering National Union of Domestic Employees.

1.12. The Minutes of the Meetings during which the public hearings were held are attached as Appendix I and the Verbatim Notes as Appendix V.

Data Limitations

Although the Committee's evidence gathering strategy aims to obtain the most recent data available from entities and stakeholders, there were instances where the information obtained was relatively dated and therefore was not reflective of the current situation. This issue is indicative of the general inconsistency and limitations in research and data collection within the State sector.

SUMMARY OF EVIDENCE, FINDINGS AND RECOMMENDATIONS

OBJECTIVE 1: TO EXAMINE THE LEVEL OF WASTE PRODUCTION IN TRINIDAD AND TOBAGO

1. The Committee learnt that waste characterisation studies were among the recommended methods used to determine the quantity and type of waste produced in Trinidad and Tobago. However, the last study of this nature was conducted in 2010 by CBCL Limited, a Canadian engineering consultancy firm, on behalf of the Government of Trinidad and Tobago⁹. The scope of the study included data collection on waste quantities and types received at the landfills in Trinidad and generated within the various districts.
2. The 2010 Waste Characterisation and Centroid Study reported that Municipal Solid Waste was the greatest source of waste in Trinidad. The Study identified the predominant waste types as identified in Table 1 below.

Table 1- Waste Characterisation of Municipal Solid Waste in Trinidad (2010)

MATERIAL	AVERAGE PROPORTION IN HOUSEHOLD WASTE	ESTIMATED WEIGHT IN 2010 (TONNES)
HOUSEHOLD SOURCE		
RECYCLABLE		
ORGANIC FOOD WASTE	18.98%	88,574
ORGANIC OTHER	8.17%	38,127
PLASTICS EXCLUDING BEVERAGE CONTAINERS	19.17%	89,461
PAPER, ALL CLASSES	18.77%	87,594
GLASS	10.15%	47,367
OLD CORRUGATED CARDBOARD	3.83%	17,874
METALS, FERROUS	2.33%	10,873
METALS, NON-FERROUS	1.41%	6,579
BEVERAGE CONTAINERS	0.92%	4,293
SUBTOTAL RECYCLABLE	83.73%	390,742
NON-RECYCLABLE		
TEXTILES AND CLOTHING	7.82%	36,494
HOUSEHOLD HAZARDOUS	5.24%	24,453
OTHER	2.71%	12,646
CONSTRUCTION AND DEMOLITION	0.50%	2,333
SUBTOTAL NON-RECYCLABLE	16.27%	75,926
GRAND TOTAL HOUSEHOLD SOURCE	100.00%	466,668
INSTITUTIONAL, COMMERCIAL AND INDUSTRIAL (ICI)		
TOTAL ICI		233,333
TOTAL WASTE DISPOSED AT ALL FOUR LANDFILLS IN 2010		700,000

⁹ Submission of the Ministry of Public Utilities dated March 21 2018 p 1

3. The 2010 Study also reported that the Waste Generation per Capita of Trinidad and Tobago was estimated at 1.5 kg/capita/day. This ranked the country higher than the estimated average of 1.1 kg/capita/day for Latin America and Caribbean Region as estimated by the World Bank.¹⁰

4. Written and oral evidence received from the Ministry of Public Utilities indicated that ongoing data collection and characterization of waste was entirely dependent on the Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL) conducting physical onsite checks of vehicular loads entering the Beetham, Guanapo and Forres Park Landfills to estimate daily waste disposal quantities. This method contained several shortcomings, such as:
 - a) the estimates were based on the average weight of the haulage truck as oppose to actual volume;
 - b) human errors from omissions and incorrect recording; and
 - c) waste types were not recorded.

5. Notwithstanding the limitations in collecting data, the Ministry of Public Utilities was able to submit that based on population, economic drivers and consumption patterns, waste generation volumes have been increasing and are further projected to consistently increase in the absence of the implementation of appropriate waste minimisation policies. Table 2 outlines the projected waste volumes to 2040.

¹⁰ See Appendix II

Table 2– Projected Waste Generation Volumes

Year	Waste Generation in Trinidad (tonnes/day)	Year	Waste Generation in Trinidad (tonnes/day)	Year	Waste Generation in Trinidad (tonnes/day)
2015	1,911	2024	1,992	2033	2,070
2016	1,921	2025	2,001	2034	2,078
2017	1,930	2026	2,010	2035	2,086
2018	1,939	2027	2,019	2036	2,094
2019	1,948	2028	2,028	2037	2,103
2020	1,957	2029	2,036	2038	2,111
2021	1,966	2030	2,045	2039	2,119
2022	1,975	2031	2,053	2040	2,127
2023	1,984	2032	2,062		

Source: Inter-American Development Bank, *Solid Waste Management Strategic Plan for Trinidad and Tobago, 2016*.

6. Furthermore, written evidence received from the Ministry of Public Utilities indicated that the regions serviced by the Beetham Landfill generated the most Municipal Solid Waste (MSW). These Municipal regions serviced by the Beetham Landfill include:
 - a) Port-of-Spain;
 - b) Diego Martin;
 - c) San Juan/ Laventille; and
 - d) Some parts of Tunapuna/ Piarco

7. The Beetham Landfill is the largest of the three landfills managed by SWMCOL and receives more than 45% of the MSW generated annually. The 2010 Waste Characterisation and Centroid Study estimated that 700,000 tonnes of MSW is generated annually and approximately 95% of that waste is disposed at the three (3) landfills managed by SWMCOL.

8. The Committee learnt that in Tobago, solid waste was delivered and disposed of at the Studley Park Waste Integrated Facility. The Committee noted the following statistics derived from the Tobago House of Assembly’s written submission (for the period October 2015 - October 2016):

- a) Total Vehicles entering the facility- 21,664 vehicles;
 - b) Total Weight of garbage entering – 34, 172 tons of garbage;
 - i. Derelict- 5,066 tons of garbage
 - ii. Domestic- 11,000 tons of garbage
 - iii. Liquid waste- 2,926 tons of Liquid waste
 - iv. Remaining 15,180 tons are attributed to other categories of waste such as agriculture, carcasses and tyres.
9. The Committee noted that THA was unable to provide data for 2017 due to a number of technical issues regarding the software of the Weigh Bridge. Notwithstanding this limitation, the THA submitted that for the first quarter of 2018 (January 2018- March 2018) approximately 9000 tons of waste entered the facility.

FINDINGS

Based on the forgoing evidence, the Committee has made the following findings:

- i. The amount of household waste generated per capita in Trinidad and Tobago exceeds the average for Latin America and Caribbean Region;
- ii. The last Waste Characterization Study of waste generated in Trinidad and Tobago was conducted approximately 8 years ago;
- iii. The Beetham Landfill receives more than 45% of the Municipal Solid Waste generated annually;
- iv. The nation's three landfills, Beetham Estate, Forres Park and Guanapo received approximately ninety-five percent (95%) of the country's solid waste;
- v. A singular national data collection system for waste generation was non-existent; and

- vi. Creating a reliable mechanism for national data collection system for waste generation at the nation's landfill sites would require significant improvements in the:
 - a. segregation of solid waste at the domestic and commercial level;
 - b. current methods used to measure solid waste entering landfills

RECOMMENDATIONS

10. Based on the foregoing, the committee submits the following recommendations:

- A. the Ministry of Public Utilities must engage the technical assistance of the relevant regional or international organisations to conduct another waste characterisation study for this country. Funding for this initiative may be sourced through private sector engagement and the Green Fund.**

- B. Legislation or a policy document should prescribe a fixed period for the execution of national waste management studies in Trinidad and Tobago;**

- C. The Ministry of Public Utilities in collaboration with SWMCOL and other stakeholders must institute permanent arrangements to more effectively collect data on waste generated on an ongoing basis. In this regard, the Committee suggests that this benchmark may be achieved in the short to medium-term through the implementation of policies to facilitate:**
 - a. The segregation of solid waste at the domestic and commercial level;**
 - b. The accurate measuring of solid waste entering landfills;**
 - c. Mandating manufacturers and industrial producers to provide data on the amount of products sold and their estimated waste generation potential¹¹.**

¹¹ The Draft National Environmental Policy 2018 (p16) underscores that one of the major drivers of solid waste generation is "inefficient use of resources in the production of goods and services"

D. We recommend that the objective of “Improving national environmental data / information management” as set out in the Draft NEP (2018) be given priority as policy formulation and implementation must be driven by credible data.

E. In addition to the Green Fund Levy, the state should explore other arrangements to ensure that commercial entities whose products generate a significant amounts of solid waste (such as food and beverage companies) contribute to offsetting the costs incurred by the State in managing such waste.

OBJECTIVE 2: TO ASSESS THE EFFECTIVENESS OF REGULATIONS AND POLICIES DIRECTED AT WASTE MANAGEMENT

Current Policies Directed at Waste Management

11. According to the Ministry of Public Utilities' written submission, the legislative framework governing solid waste management was reflective of the multiplicity of agencies involved in the management of solid waste in Trinidad and Tobago. The key laws governing the Ministry's involvement through SWMCOL in solid waste management are:
 - a. Municipal Corporations Act, Chapter 25:04;
 - b. Litter Act, Chapter 30:52; and
 - c. Public Health Ordinance, Chapter 12 No. 4.

12. However, the administration of these laws fall outside the purview of the Ministry of Public Utilities and SWMCOL. Their administration rests with the Ministry of Rural Development and Local Government and the Ministry of Health, respectively.

13. Furthermore, the current waste management laws did not include provisions for the licensing of waste disposal companies, waste haulage companies and generators of hazardous and biomedical wastes. The *Draft Waste Management Rules: Solid Waste (Collection and Disposal), 2000*, was intended to address the issues of waste generation, trans-boundary movement and disposal of waste which fall outside the remit of the *Draft Waste Management Rules: Hazardous Waste, 2014*. However, these fall outside the purview of the Ministry of Public Utilities and SWMCOL, as they are to be administered by the Environmental Management Authority (EMA).

14. Written evidence submitted by the Ministry of Planning and Development indicates that the current strategies for waste management were aligned and contained within the overarching Government development policy for Trinidad and Tobago - Vision 2030. The main sector policy for guiding the management of the environment, the

National Environmental Policy (NEP) as well as sub sector policies, namely the Waste Recycling Policy and the Integrated Solid Waste/Resource Management Policy are consistent with Vision 2030.

15. As at March 28, 2018 the Ministry of Planning and Development was in the process of meeting with Ministries to refine and agree on a selection of targets and indicators from Vision 2030, which would be measured through the National Performance Framework. Some of the major targets to be achieved by 2020 are:

- a. Reduction by 50% of the quantity of waste requiring final disposal;
- b. Establishment of one (1) landfill meeting internationally recognized standards; and
- c. Reduction by 35% of the quantity of persistent organic pollutants (POPs) released.

16. The Committee learnt that Trinidad and Tobago still operated under the 2006 National Environment Policy since the 2018 Draft Revised Policy is awaiting Ministerial approval. Within the 2006 NEP, waste management is addressed in the following three (3) Sections:

- d. 4.7 – Waste;
- e. 4.8 – Hazardous Waste; and
- f. 4.9 – Hazardous Substances and Spills.

17. These three (3) Sections, contain thirteen (13) policy statements that call for:

- i. Prevention and reduction of waste through technological, planning and market-based interventions;
- ii. Recovery of waste, including recycling, reuse, reclamation and use of waste as a source of energy;
- iii. Responsible Disposal of Waste;
- iv. Expansion of waste disposal infrastructure; and

- v. Implementation of the provisions of two multilateral environmental agreements (MEAs) related to waste: the Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal and Stockholm Convention on Persistent Organic Pollutants.

18. The Committee noted SWMCOL's "Get into Green" initiative sought to promote waste reduction, reuse and recycling through:

- a. Community & Youth Outreach Programme (CYOP) that facilitates educational fora at primary and secondary schools as well as at business organizations;
- b. "Island Eco-Trip" board game (for all ages) that was launched in 2015;
- c. Eco-activity/colouring book geared towards children at the primary school level;
- d. Three (3) "Earth Defender" 30 seconds videos that bring awareness to such environmental issues as excessive waste generation, pervasive littering, beach and marine pollution.
- e. Litter song, "Pick It Up";
- f. Social and digital media campaigns that sought to reach new demographics;
- g. The recently launched Public Sector Recycling Programme (PSRP);
- h. The proposed Workplace Waste Reduction and Recycling Programme (WRAP); and
- i. The successful pilot curb-side recycling campaign in partnership with the Tunapuna/ Piarco Regional Corporation that has been the basis for a short film and should serve the template for similar partnerships with Municipal Corporations across the country.

Revision of the National Environment Policy and its Improved Strategies for Waste Management

19. Given the outdatedness of the 2006 NEP, the Committee noted the efforts being made to revise the policy. To this end, the Environmental Management Authority (EMA) undertook the revision of the 2006 NEP in September 2016. Written evidence submitted by the Ministry of Planning and Development indicated that the need to amend the 2006 NEP was based on feedback gained through the EMA's 2016 Legislative and Policy Gap Analysis Report as well as stakeholder and public feedback received over the period June 2016 – December 2017.¹² Subsequent to the Committee's hearings, the National Environmental Policy 2018 was laid in the House of Representatives and in the Senate on November 02, 2018 and November 20, 2018 respectively.
20. The Ministry of Public Utilities highlighted the following initiatives which were pursued over the last two years to revise existing legislation and policies:
- a) outline of a vision for a coherent, comprehensive national framework for Waste Management, in the form of the *National Integrated Solid Waste/Resource Management Policy for Trinidad and Tobago* which was prepared in 2012, revised in 2013 and approved by Cabinet on August 28, 2014 via Minute No. 2433;
 - b) development and approval of the *National Waste Recycling Policy (WRP), 2014* by Cabinet on February 19, 2015 via Minute No. 435;
 - c) Cabinet by Minute No. 518 dated March 23, 2017, agreed inter alia, that:
 - i. SWMCOL will undertake the functions envisioned by the proposed Waste Recycling Management Authority;
 - ii. The Ministry of Public Utilities examine the proposed organisational structure of the Waste Recycling Management Authority and the

¹² See Appendix I for a list of required amendments to the 2006 NEP

structure of the SWMCOL to undertake the role of the proposed WRMA;

- iii. the Attorney General to determine the legislative amendments required to the by-laws of SWMCOL in order for it to undertake the functions of the proposed WRMA.

21. In addition, Cabinet by Minute No. 464 dated March 22, 2018 approved *inter alia* the establishment of a Waste Recycling Management Unit in SWMCOL, comprising two (2) functional areas, namely, Policy, Planning and Strategy Services, and Programme and Technical Services, to facilitate the Company's expanded mandate as agreed to by Cabinet in Minute No. 518 dated March 23 2018. Further, discussions have been held with the Attorney General and the Chief Parliamentary Counsel as it pertains to revising/ modifying the enabling legislation.

Short-term Policy Initiatives

22. The Ministry of Public Utilities indicated via written response that it planned to implement the following short-term initiatives over the period 2018 to 2020:

- a. Establishment of appropriate legislation to support waste recycling regulations as a critical component to the waste management strategy, commencing with beverage containers through the Beverage Containers Bill;
- b. Establishment and staffing of a Waste Recycling Management Unit (as previously mentioned) within SWMCOL to undertake some of the functions of the Waste Recycling Management Authority. A major function being, the efficient implementation of an Integrated Waste Recycling Management System, consistent with the Waste Recycling Policy, 2014;
- c. Establishment and implementation of a deposit-refund system for beverage containers;

- d. Implementation of a sustained Public Sector Recycling Programme to recover and divert recyclable wastes such as paper, e-waste and beverage containers from Government Ministries and State Enterprises¹³; and
- e. Partnership with the fourteen (14) Municipal Corporations to implement and promote curb-side recycling, as part of the regular Municipal Solid Waste (MSW) Collection System.

23. The Committee also took note of the introduction of an Environmental tyre tax of TTD 20 on every tyre imported into Trinidad and Tobago with effect from December 02, 2017.¹⁴

Medium-term to Long-term Policy Initiatives

24. The Ministry of Public Utilities further submitted via written response that it planned to implement the following medium-term initiatives over the period 2021 to 2022:

- a) Establishment of a sanitary engineered landfill at Forres Park and a network of transfer stations and material recovery facilities at the Beetham, Guanapo landfill sites as well as Point Fortin and Rio Claro; and
- b) Development of remediation plans for the Guanapo Landfill site which was identified as a priority site for remediation under the Global Environment Facility (GEF) and the United Nation Industrial Development Organisation (UNIDO).

25. The Ministry's long-term policy initiatives include the:

- d) Establishment of appropriate regulatory legislation for other recyclable waste streams such as tyres, e-waste and organic waste;
- e) Establishment of a composting facility to process organic waste which comprise 27% of the municipal solid waste generated in Trinidad; and

¹³ On January 30, 2018, the Ministry of Public Utilities and SWMCOL in collaboration with the EMA launched the Public Sector Recycling Programme (PSRP) which sought to encourage workplace recycling at all Ministries and Departments.

¹⁴ 2018 Budget Statement; page 34 <http://www.finance.gov.tt/wp-content/uploads/2017/10/revised-BUDGET-STATEMENT-2018-BOOKLET-faw1.pdf>

- f) Exploration of the feasibility of waste to energy technology for the management of the residual solid waste, in collaboration with the Ministry of Energy and Energy Industries.

FINDINGS

- i. A basic policy framework has been incrementally developed to treat with the collection and disposal of solid waste. The main components of this policy framework are: (1) National Waste Recycling Policy (2015), (2) Municipal Waste Policy (2008) and (3) the Integrated Solid Waste/Resource Management Policy (2012). It was evident that there has been some effort to translate these policies into commensurate programmes and initiatives. However, the rate of policy implementation has been relatively slow due to a number of hindrances including resource constraints, institutional weaknesses and Executive action.
- ii. It appears that delays in the enforcement of the regulatory powers is negatively impacted by the segmentation of responsibilities among the Ministries and State agencies and this inhibits integration and synchronisation of efforts. This segmentation is counter-productive.
- iii. In relation to the short-term policy initiatives, the Committee noted that the Beverage Containers Bill continues to be in abeyance. It is noted that the Ministry of Planning and Development may be seeking to build on the merits of this piece of legislation to propose a more comprehensive waste diversion strategy.
- iv. The establishment of a Waste Recycling Management Unit in SWMCOL is expected to provide some impetus to the implementation of recycling initiatives. Given that the EMA is currently coordinating the leading solid waste recycling programme *icare*, consideration should be given to reassigning such programmes to SMWMCOL. Thus, relinquishing such responsibilities from the EMA, whose statutory responsibilities seemed to be aimed at fulfilling its regulatory and policy formulation functions.

- v. With respect to medium-term and long-term plans, the Committee noted that these plans did not include:
- a) Strategies for incentivizing commercial activity in the area of solid waste management; and
 - b) Expanding this country's capacity to conduct research and to innovate in the area of waste management.

RECOMMENDATIONS

26. The Committee recommends that:

A. The Ministry of Public Utilities shall, no later than sixty days (60) after this report is first laid, submit a status report on the following:

- i. Drafting of appropriate legislation to support waste recycling regulations as a critical component to the waste management strategy;**
- ii. Establishment and staffing of a Waste Recycling Management Unit within SWMCOL to undertake some of the functions of the proposed Waste Recycling Management Authority;**
- iii. Establishment and implementation of a deposit-refund system for beverage containers;**
- iv. Establishment of the Waste Recycling Management Authority;**
- v. The successes and limitations observed in the implementation of the Public Sector Recycling Programme (PSRP);**
- vi. The Workplace Waste Reduction and Recycling Programme (WRAP); and**
- vii. Partnerships between SWMCOL and other Municipal Corporations subsequent to the pilot curb-side recycling campaign partnership with the Tunapuna/ Piarco Regional Corporation.**

B. We endorse the Proposed Policy Objective set out in the Draft NEP 2018 which aims to "Enhance the existing coordination and collaboration

framework with the establishment of a multi-sectoral oversight committee”¹⁵;

- C. The Ministry of Planning and Development shall, no later than sixty days (60) after this report is first laid, submit a status report on its consultations with Ministries on the following:
- i. Reduction by 50% of the quantity of waste requiring final disposal;
 - ii. Establishment of one (1) landfill meeting internationally recognized standards; and
 - iii. Reduction by 35% of the quantity of persistent organic pollutants (POPs) released.

¹⁵ The Draft National Environmental Policy 2018 (p41) underscores that one of the major drivers of solid waste generation is “inefficient use of resources in the production of goods and services”

OBJECTIVE 3: TO ASSESS THE ADEQUACY OF RESOURCES AND INSTITUTIONS ASSOCIATED WITH THE MANAGEMENT OF WASTE

27. Written and oral evidence received from various stakeholders all identified a major shortcoming that has hindered the country from developing and implementing an effective waste diversion system and that is, the lack of an overarching authority with responsibility for waste management.
28. The Committee learnt that the 1980 Solid Waste Master Plan recommended the establishment of one entity with responsibility for waste management. The establishment of a single authority would allow for the streamlining of regulation and the management of MSW. This recommendation has not been implemented to-date.
29. Oral evidence submitted by SWMCOL reinforced that in 1996, 2000 and 2014, similar studies recommended the establishment of a central waste management authority.
30. Written evidence submitted by the Ministry of Planning and Development indicated that Trinidad and Tobago does not conform to an integrated waste system and lack modern technologies for processing recyclables. MSW is collected at the curb-side of households in a comingled state and the main method of waste disposal remains that of landfilling, which is currently done at unsanitary and semi-controlled sites that have surpassed their disposal capacity and require remediation and closure.
31. Notwithstanding that the 2010 Waste Characterization Study highlighted that approximately 84% of MSW is recyclable, there is currently minimal recovery of recyclables through SWMCOL and other Non-Governmental Organisations (NGOs). However, in an effort to achieve the target of 50% of the waste being diverted from the landfill over a period of ten (10) years, as articulated in the National Integrated Solid Waste Management Policy, 2014, SWMCOL had also begun the shift to focus more on recovering recyclables from the waste stream by establishing resource recovery facilities at its Guanapo, Forres Park and NAMDEVCO locations.

Operational Deficiencies Affecting SWMCOL

32. Oral evidence submitted by SWMCOL indicated that the company would require an additional one hundred and twenty million dollars (\$120 M) per annum to ensure that waste is disposed in a sanitary manner at the nation's three landfill sites. With the adequate financial resources, waste at the landfill sites would be covered with six inches of dirt as is good practice and thereafter, compressed. Due to the lack of resources, waste is not adequately covered and compressed. As such, fires and leakages result from the exposed waste.

Biomedical Waste

33. Oral evidence submitted by SWMCOL indicated that the disposal of biomedical waste is an important matter. While biomedical waste should be disposed via incineration at the nation's hospitals¹⁶, in actuality, due to the lack of checks and balances to monitor medical institutions, medical waste was disposed of at landfill sites.

34. However, in its written response, the Ministry of Health indicated that in order to facilitate the issuance of a Private Hospital Licence, the assessment tool was recently revised to capture with greater detail the various facets of the operations and management of a Private Hospital, inclusive of the management and disposal of biomedical waste.

At the Local Government Level¹⁷

35. The Committee noted that Municipal Corporations face a host of weaknesses/shortcomings in relation to waste management. According to the Ministry of Rural Development and Local Government, these shortcomings include:

- a. Inadequate use of Personal Protective Equipment (PPE) by Contractors for their workers;

¹⁶ Port of Spain General Hospital, Eric Williams Medical Sciences Complex and San Fernando General Hospital

¹⁷ Please see Appendix III for a Table of Statistical Data derived from a sample of 7 Municipal Corporations

- b. Improper coordination of bulk and household waste collection by some contractors;
- c. Absence of stringent management and monitoring of the waste collection processes;
- d. Improper management and administration of waste collection contracts due to staff shortages and technical capacity limitations at the Municipal Corporations;
- e. Absence of a proper system of Performance Management of Contractors by the Corporation;
- f. Inflexibility of current contractual arrangements to adapt to changing contract requirements such as modification to the manner and/or frequency in which any services are to be conducted or performance of additional services;
- g. Absence of or inadequate penalties for breach of contractual obligations. For instance, contracts do not include a penalty for non-use of recommended dump sites; and
- h. Absence of a vehicle maintenance management schedule. As a result in some cases an ageing fleet of vehicles is used for waste collection. Some of the vehicles are over thirty-five (35) years old and are physically and mechanically incapable of consistent and reliable performance.

36. The Committee was cognizant that these weaknesses/shortcomings did not exist in a vacuum. As such, the Committee noted that the following were the main contributors to the shortcomings of the Municipal Corporations:

- a. Absence of a robust waste collection management system across all Municipal Corporations;
- b. Absence of a comprehensive and efficient performance management system across all Municipal Corporations;
- c. Limited technical capacity and human resources at the Municipal Corporations; and
- d. Limitations in the existing waste collection services contractual agreement.

37. A written submission from the Ministry of Rural Development and Local Government indicated that some mechanisms were implemented to assist the Municipal Corporations such as:
- a. The development of modified/improved Municipal Solid Waste Collection contract schedules for the new three-year contract period commencing April 2018, which provided for easier, more convenient and timely waste collection.
 - b. The proposed contractual agreements took into consideration the many and varied issues encountered under the present waste collection arrangements. Thus, clauses may be amended where applicable or created to address issues such as variation of collection days depending on time of year; code of conduct for contractors; and
 - c. Improvement in operating efficiency by the Municipal Corporation. For instance, in an effort to maximize the removal of bulk waste collected within the Municipality a 'Transfer Site' is utilized by the Mayaro Rio Claro Regional Corporation where waste is tipped and compacted.

At the Private Sector Level

38. The Committee noted that there were notable strides being made by Private Sector companies to supplement the shortcomings of the State vis-à-vis waste management.
39. At a public hearing held on May 18, 2018, the Committee noted that Ace Recycling Limited recycled approximately fourteen million pounds (14 M lbs) of paper annually. Paper was collected at various locations throughout Trinidad and thereafter sorted at Ace Recycling's Facility into different grades, baled into half tonne bales, loaded into containers and shipped to various mills over the world (mostly India and Latin America) to be used as feedstock for making recycled products. Ace Recycling Limited was established in 1996 and dubbed itself "the largest of its kind in Trinidad and Tobago".

40. The Committee noted that as of July 04, 2018, Massy Stores commenced an initiative whereby customers were charged 50 cents for each shopping bag utilised. The measure was undertaken in an attempt to reduce reliance on the use of plastic bags.¹⁸ This initiative was praised by SWMCOL's Chief Executive Officer, who added that SWMCOL processed thirty (30) tonnes of plastic every month, which is less than one per cent (1%) of the plastic generated by Trinidad and Tobago. The CEO added that seven hundred thousand (700,000) tonnes of garbage were thrown away every year, and seventy per cent (70%) of the paper, cardboard, tetra packs, plastic, glass, and aluminum were recyclable.¹⁹
41. The Committee learned that in February, 2019, SWMCOL and the Green Market Santa Cruz partnered to create an instant incentive to recycle beverage containers by waiving the parking fee for the Saturday market for those patrons who bring at least ten (10) recyclable beverage containers (glass, plastic bottles, tetrapak containers, and aluminium cans). The trial project was launched on Saturday February 16, 2019 during the Green Market Citrus Festival and will run until further notice.²⁰
42. Written and oral evidence indicated that there were opposing views among a sample of private agencies who operated in the field of waste management concerning the current legal framework which governs waste management. Enviro Care Limited registered their satisfaction with the current legal framework whereas Green Engineering indicated that the framework was inadequate. Green Engineering further submitted that the framework fails to address the lack of monitoring and enforcement of laws, site audits and the length of time it takes to promulgate new laws and regulations additionally, the framework required a modernized approach to take into consideration industrial and ecological thinking.

¹⁸ LOOP TT, Accessed on Friday March 08, 2019: <http://www.looptt.com/content/massy-stores-charge-50c-plastic-bags-july-4>

¹⁹ Newsday Website, Accessed on Friday March 08, 2019: <https://newsday.co.tt/2018/05/19/rethink-garbage-disposal/>

²⁰ LOOP TT, Accessed on Friday March 08, 2019: <http://www.looptt.com/content/swmcol-and-green-market-create-incentive-recycle>

43. The following table 3 summarises the recommendations proffered by Private Companies.

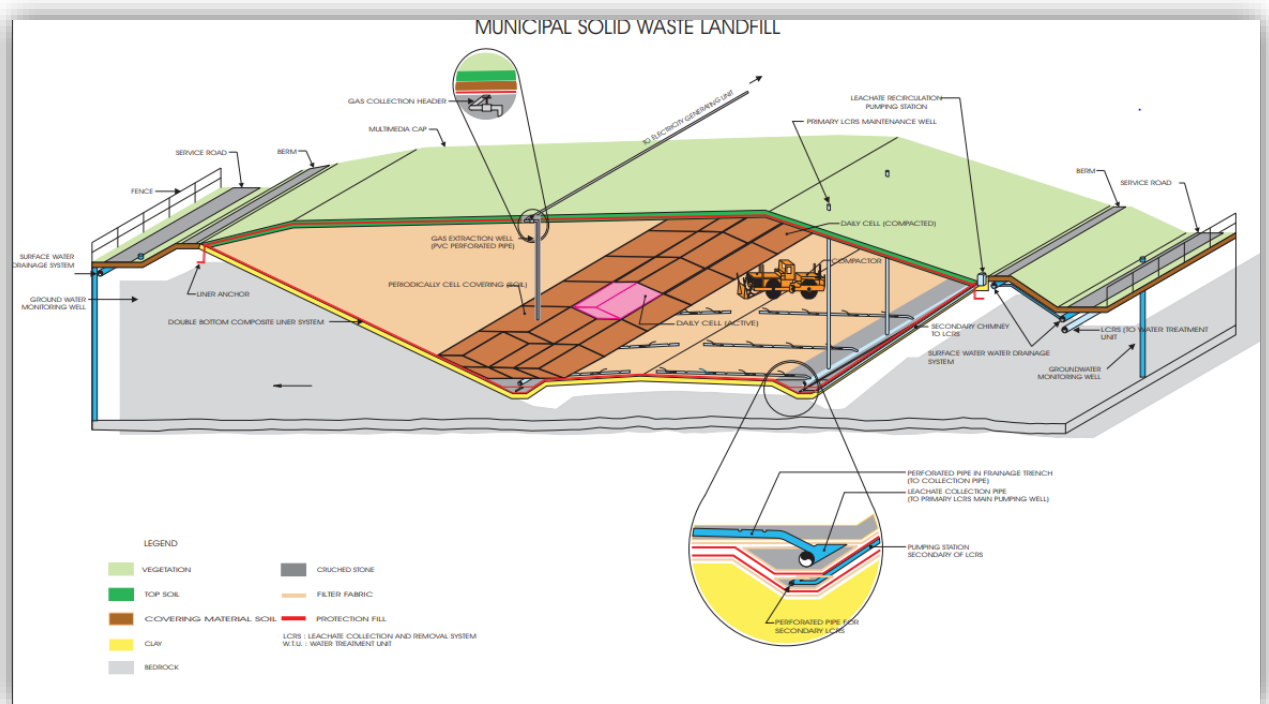
Table 3 - Summary of Recommendations from Private Companies

Ace Recycling Limited	Green Engineering	Enviro Care Limited
Each company should conduct an audit and waste characterization to determine the different waste streams and what can be improved to prevent material loss. A waste audit would also determine what areas can be improved to prevent material loss.	Centralized waste management facility should be established for Point Lisas	The government needs to give local companies incentives to invest in new and improved technology.
Creating and strengthening partnerships between the Energy Sector and recycling entities.	Industrial Ecological approach to managing wastes from existing industries and new projects	Greater State support should be granted to waste management companies. This can take the form of tax break, reduction in duties and taxes on material imported to treat the waste.
Create a database of recycling companies in Trinidad and Tobago that is accessible to the public.	Development of an Integrated Waste Management Park	
	Control/Limit of import of materials which we cannot dispose of easily	

Waste Management in Tobago

44. The Committee learnt that the Public Health Department of the Division of Health, Wellness and Family Development was given the responsibility for the collection and disposal of solid and liquid waste on the island of Tobago. However, notwithstanding the mandate of the Public Health Department, the act of waste collection for Tobago's eighteen (18) districts was outsourced and delivered to the Studley Park Waste Integrated Facility where it was disposed of using Engineered Cells. Liquid waste however, was collected by the Department's cesspool tanker and disposed of via stabilization ponds.

Figure 1 - Landfill Site with Engineered Cell



45. The Committee noted that at the Studley Park Waste Integrated Facility, waste is weighed by the use of a Weigh Bridge that records all vehicles and their weight coming into the facility. This is stored on the computer database and a ticket printed. This ticket contained the time, date, customer information, vehicle number, material, inbound and outbound weight and unloaded weight. After the vehicle is weighed and its contents determined, it was then directed to its assigned drop off point. The

solid waste was then deposited into Cells. These Cells were created to accommodate the waste and were lined with polythene and fitted with pipes to facilitate the collection of leachate at the Liquid Waste facility and pipes were also inserted for the venting of methane gas. Sensitive material and medical waste (incinerated ash) are placed in a hole which is immediately covered. Garbage was covered once per day with material used from excavation or soil that has been dropped off at the landfill.

46. Notwithstanding the relative advancement in relation to the Studley Park Waste Integrated Facility in comparison to the three landfills in Trinidad, the Committee noted several shortcomings mainly:

- a. Despite the weighting of trucks and the printed ticket, the sorting of waste was still unsatisfactory; and
- b. Methane was released into the atmosphere. This is environmentally hazardous. However, methane is capable of being converted into energy²¹.

47. Written evidence submitted by the Tobago House of Assembly stated that the Studley Park Facility was designed to accommodate two thousand six hundred (2,600) cubic meters of fecal waste per year and occupies 0.5 hectares.

48. Written and oral evidence submitted by the THA indicated that the Assembly's intent to phase out the use of single-use Styrofoam products in the Food and Beverage Sector on the island through the adoption of a motion indicating same. The THA added that the Assembly was able to significantly reduce and in some cases eradicate single-use Styrofoam at THA-hosted events such as the Heritage Festival, workshops and meetings. Moreover, the THA continued to support the Castara Tourism Development Association to implement a UNDP-funded project to make Castara the

²¹ Methane is a very powerful greenhouse gas. One pound of methane traps 25 times more heat in the atmosphere than a pound of carbon dioxide. Methane is also the main ingredient in natural gas. Because methane can be captured from landfills, it can be burned to produce electricity, heat buildings, or power garbage trucks. Capturing methane before it gets into the atmosphere also helps reduce the effects of climate change. Adapted from EPA Website; Accessed on Friday March 08, 2019:
<https://archive.epa.gov/climatechange/kids/solutions/technologies/methane.html>

first Styrofoam-free village in Trinidad and Tobago. Further, arrangements were being made to host “No Styrofoam Days/Weeks” in Charlotteville and Crown Point in collaboration with the respective local business communities and Non-Governmental Organisations.

49. The Committee noted that subsequent to the public hearing with the THA, at which the Assembly registered their position and called for legislation to mitigate the importation of Styrofoam-based products, the Government of Trinidad and Tobago signaled its intent to introduce legislation for the proposed Styrofoam ban²²²³.

50. The Committee noted the THA’s following initiatives:

a. Clean Schools Programme

Primary Schools were engaged in waste management training and education programmes subsequent to which they were expected to implement projects and their performance graded accordingly.

b. Trash to Treasure

This initiative targeted art and craft students at Secondary schools. The aim of the project was to introduce students to the intrinsic and added value potential of materials within Tobago’s solid waste streams and monetize these “assets” while being good environmental stewards. The project also included a competition where the students used the training they received to make marketable products. A special fair was hosted at which the products the students made were exhibited and auctioned.

c. Litter Warden System

²² Ministry of Planning and Development Website; Accessed on Saturday March 09, 2019:

<https://www.planning.gov.tt/content/government-approves-ban-styrofoam-tt-2019>

²³ LOOP TT; Accessed on Saturday March 09, 2019: <http://www.looptt.com/content/styrofoam-ban-legislation-coming-soon>

A litter warden system was introduced into schools with a view to monitoring and managing student behaviour with regard to waste disposal. Students selected the wardens from the wider student body and established graduated sanctions for themselves. Twenty one (21) Primary schools and five (5) high schools were involved.

51. Notwithstanding the various initiatives of the THA, the Assembly indicated via written submission the following shortcomings in the current processes and systems utilized by the Assembly to manage waste:

- i. Limited enforcement of Section 9 (2) of the Litter Act;
- ii. No recovery of expenses incurred during the removal and disposal process when conducted by the Tobago House of Assembly under Section 9(2) and Section 11(2-4) of Litter Act;
- iii. The equipment/vehicles used to remove and dispose of derelict vehicles were inadequately maintained and therefore regularly out of service;
- iv. Limited transportation for conducting patrols;
- v. Lack of sustained public awareness and educational campaigns targeting the adult population;
- vi. Overdue delay in the appointment of Litter Wardens;
- vii. Environmental Officers not assigned as Litter Wardens to aid enforcement efforts;
- viii. Inadequate collaboration between DIQE and DHWFD sometimes leading to duplication of effort and inefficient use of limited resources;
- ix. Waste is not separated at source – making data collection and waste minimization very difficult;
- x. Recycling is not being done at the Studley Park Facility;
- xi. Availability of data;
- xii. Monitoring and evaluation challenges;
- xiii. No collection of user fees from private sector users at the facility;
- xiv. Inadequate space at the landfill; and

- xv. Shortfall in funding to procure equipment or initiate projects that can greatly assist in waste minimization.

FINDINGS

In relation to the evidence received in this section, the Committee made the following observations:

- i. A more robust system is required to assess the performance of the private contractors who are responsible for transporting the majority of solid waste to the three landfills in Trinidad. We noted with concern that there are no arrangements for the weighing of trucks entering the three landfills located in Trinidad. This is in contrast with the Studley Park Waste Integrated Facility in Tobago.
- ii. In the absence of modern waste disposal facilities, the segregation of solid waste at landfills in Trinidad is virtually impossible. The Committee noted the efforts that are being made in relation to plastics and vehicle tyres. Notwithstanding, it is somewhat alarming that in 2019, the basic segregation of waste and recovery of recyclables is in its embryonic phase in Trinidad.
- iii. The evidence received regarding arrangements at the Local Government level cited the need to establish 'Transfer Sites' or processing points within the various municipalities to facilitate the preliminary segregation or compacting of solid waste.
- iv. The Committee noted with concern that Municipal Corporations were expected to play a greater role in managing waste in keeping with the proposed local government reform initiatives but the Corporations seem unable to adequately manage the current volume and categories of waste being generated.
- v. With respect to private sector activities, the Committee was encouraged to learn that there are several commercial entities engaged in the processing and treatment of various types of waste. In relation to solid waste, there are companies engaged in the

export of waste for further processing. The Committee considers this as a potential area for further growth and development through private-public partnerships.

- vi. It was interesting to learn that at least four of the private sector enterprises engaged in the 'business of waste' were satisfied with the current legal framework. Perhaps a comprehensive survey of commercial waste operators may assist State agencies in their efforts to develop and implement timely and adequate policy initiatives.
- vii. The Committee was pleased with the efforts that are being made by the THA to promote environment awareness and to encourage the application of the three Rs amongst the youth population of Tobago. Proper systems for waste disposal are integral to marketing Tobago's "eco-tourism" thrust.
- viii. The need for a central waste management authority was first recommended in 1980 and again in 2014. It is inconceivable that almost 40 years later the State appears to be still conceptualizing the framework for such an authority.

RECOMMENDATIONS

47. The Committee recommends that the following:

- A. A Draft Policy for the segregation of solid waste at the domestic or residential level be formulated within the next 6 months by SWMCOL in collaboration with the line Ministries;**
- B. In keeping with the 2020 targets (relative to Vision 2030) to "Establish one (1) landfill meeting internationally recognized standards", arrangements should be made to procure and install weighing scales at at least one landfill in Trinidad.**
- C. The State should seek to establish partnerships with existing solid waste processors in the Private Sector with a view to:**
 - i. developing a more effective system for the recovery of recyclables;**
 - ii. expanding the range of recyclables that is recovered for processing;**

- iii. achieving knowledge transfer to the State sector;
- iv. expanding access to foreign markets.

D. Consideration should be given to developing a robust and reliable mechanism to acquire feedback from commercial waste management entities.

The Committee respectfully submits the foregoing for the consideration of the Parliament.

Mrs. Sophia Chote, SC
Chairman

Mr. Clarence Rambharat
Vice-Chairman

Mrs. Vidia Gayadeen-Gopeesingh, MP
Member

Dr. Lovell Francis, MP
Member

Mr. Taharqa Obika
Member

Mr. Terrence Deyalsingh, MP
Member

Dr. Lester Henry
Member

Mrs. Cherrie- Ann Crichlow-Cockburn, MP
Member

April 5th, 2019

APPENDICES

APPENDIX I

Minutes of Proceedings

MINUTES OF THE TWENTIETH MEETING OF THE JOINT SELECT COMMITTEE ON FINANCE AND LEGAL AFFAIRS, HELD IN CAMERA IN THE ARNOLD THOMAS MEETING ROOM (EAST), LEVEL 6 AND IN PUBLIC IN THE J. HAMILTON MAURICE ROOM, MEZZANINE FLOOR, OFFICE OF THE PARLIAMENT, TOWER D, THE PORT OF SPAIN INTERNATIONAL WATERFRONT CENTRE, 1A WRIGHTSON ROAD PORT OF SPAIN ON MARCH 23, 2018

PRESENT

Ms. Sophia Chote, S.C.	Chairman
Mr. Clarence Rambharat	Vice-Chairman
Mrs. Cherrie-Ann Crichlow-Cockburn, MP	Member
Mr. Taharqa Obika	Member

Secretariat

Mr. Julien Ogilvie	Secretary
Ms. Terriann Baker	Graduate Research Assistant
Mr. Brian Lucio	Graduate Research Assistant
Ms. Simone Yallery	Legal Officer I

ABSENT

Mr. Prakash Ramadhar, MP	Member (Excused)
Mr. Terrence Deyalsingh, MP	Member (Excused)
Dr. Lester Henry	Member (Excused)
Dr. Lovell Francis, MP	Member

REPRESENTATIVES OF THE MINISTRY OF PLANNING AND DEVELOPMENT (MPD)

Ms. Marie Hinds	Permanent Secretary (Ag.)
Ms. Andrea Julien	Senior State Council

REPRESENTATIVES OF THE ENVIRONMENTAL MANAGEMENT AUTHORITY (EMA)

Mr. Hayden Romano	Managing Director
Dr. David Persaud	Environmental Manager
Dr. Marissa Gowrie	Deputy Environmental Manager

**REPRESENTATIVES OF THE TRINIDAD AND TOBAGO SOLID WASTE MANAGEMENT
COMPANY LIMITED (SWMCOL)**

Mr. Ronald Roach	Chief Executive Officer
Mr. David Manswell	General Manager, Communication Sales and Marketing
Ms. Sylvia Derby	General Manager, Finance and Corporate Services
Ms. Maria Allong	General Manager, Projects and Support Services
Ms. Abigail Whitehall	Corporate Project Administrator

REPRESENTATIVES OF MINISTRY OF PUBLIC UTILITIES (MPU)

Mr. Gary Joseph	Permanent Secretary
Ms. Beverly Khan	Deputy Permanent Secretary
Ms. Melanie Phillip	Senior Planning Specialist
Ms. Arlene Johnson-Lawrence	Senior Project Manager

COMMENCEMENT

1.1 The Chairman called the meeting to order at 10:06 a.m.

CONFIRMATION OF MINUTES OF THE NINETEENTH MEETING HELD ON January 19, 2018

- 2.1 The Chairman invited Members to consider the Minutes of the 19th Meeting held on January 19, 2018 and enquired whether there were any amendments.
- 2.2 There being no amendments, a motion for the confirmation of the Minutes was moved by Mrs. Crichlow-Cockburn and seconded by Mr. Obika.

MATTERS ARISING FROM THE MINUTES OF THE NINETEENTH MEETING

- 3.1 The Chairman highlighted the following matters arising from the Minutes:
- **Page 3, item 6.5** – The Chairman indicated that the Secretariat was in the final phase of negotiating a contract with Bacon, Woodrow & de Souza Limited (Actuarial Firm) for the provision of expert advice to the Committee in relation to the inquiry into the National Insurance System.

PRE-HEARING DISCUSSION RE: INQUIRY INTO THE WASTE MANAGEMENT POLICIES AND INITIATIVES OF THE STATE

- 4.1 The Chairman advised that representatives from the Ministry of Public Utilities, the Ministry of Planning and Development, the Trinidad and Tobago Solid Waste

Management Company Limited and the Environmental Management Authority were invited to appear before the Committee.

- 4.2 A discussion ensued regarding the stakeholders for the inquiry.
- 4.3 The Chairman enquired whether Members were in receipt of the written submission received from the Ministry of Public Utilities and the Ministry of Planning and Development. The Members confirmed receipt of the submissions.

OTHER BUSINESS

- 5.1 The Committee agreed that the next meetings of the Committee would be held on Friday April 13, 2018 and Friday April 27, 2018 when the Committee would convene public hearings pursuant to the enquiries into the National Insurance System and the Waste Management Policies of the state respectively.

SUSPENSION

- 6.1 The meeting was suspended at 10:13 a.m.

[Members proceeded to the J. Hamilton Maurice Room, Mezzanine Floor]

PUBLIC HEARING WITH OFFICIALS OF MPD, MPU, SWMCOL AND EMA

- 7.1 The meeting resumed (*in public*) at 10:20 a.m. in the J. Hamilton Maurice Room.
- 7.2 The Chairman welcomed officials of the Ministry of Public Utilities, the Ministry of Planning and Development, the Trinidad and Tobago Solid Waste Management Company Limited and the Environmental Management Authority. Introductions were exchanged.
- 7.3 The Chairman outlined the inquiry objectives.

MINISTRY OF PLANNING AND DEVELOPMENT

- 8.1 An opening statement was made by the Permanent Secretary, MPD.
- 8.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the MPD:

(i) Study conducted into solid waste disposal methods

- (a) The Committee learnt that the last study into the country's solid waste disposal methods was conducted in 2010.
- (b) Officials indicated that the Ministry in partnership with SWMCOL was engaged in a project which would assess the levels of contamination at the Guanapo Landfill.

The initiative was a global environmental facility project which was being implemented through the Basel Regional Centre in Trinidad and Tobago.

(ii) Waste-to-Energy Initiative

The Committee was informed that the Ministry of Energy and Energy Industries issued a request for Expressions of Interest asking companies if they were willing to be involved in the initiative.

(iii) Coordination among entities responsible for waste management

Officials of the MPD indicated that greater communication was needed among the entities responsible for waste management.

THE MINISTRY OF PUBLIC UTILITIES

9.1 An opening statement was made by the Permanent Secretary, MPU.

9.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the MPU:

(i) Separation of Waste

- a) Officials from the MPU indicated that the Ministry in collaboration with the Ministry of Planning and Development, SWMCOL and EMA was encouraging separation of waste in the workplace through the public sector recycling programme.
- b) The programme was in phase one of its implementation whereby seven (7) Ministries headquartered in Port of Spain were identified as pilot projects for the programme.
- c) The programme would eventually be extended to the private sector starting with the commercial banking sector.

TRINIDAD AND TOBAGO SOLID WASTE MANAGEMENT COMPANY LIMITED

10.1 An opening statement was made by the Chief Executive Officer, SWMCOL.

10.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the SWMCOL:

(i) A Central Authority for Waste Management

- a) SWMCOL's officials indicated that as far back as the 1979, a study by Planning Associates and Stanley Associates recommended that there should be a single, central authority with responsibility for waste management. Subsequent reports in 1996, 2000 and 2014 made similar recommendations.
- b) SWMCOL was created in 1980 based on a recommendation to create a Central Waste Management Authority and has struggled since to carry out functions for which it does not have the authority.

(ii) Vacancies in Recycling and Recovery department at SWMCOL

- a) SWMCOL clarified that the forty-one (41%) percent of vacancies within the areas of recycling and recovery were as a result of the iCARE project and assured that vacancies would be filled by April, 2018. SWMCOL is responsible the second phase of the iCARE project.

(iii) Waste Management Hierarchy

- a) SWMCOL outlined the waste management hierarchy as follows:
 - first tier - not to generate waste;
 - second tier – reuse;
 - third tier – recycle;
 - fourth tier - waste to energy; and
 - fifth tier - disposal of waste.

(iv) Fire at Landfills

- a) SWMCOL indicated that ideally, waste at landfill sites is compressed and covered by six inches of dirt. The cost to maintain this activity at all three landfills was approximately \$120 million annually. Due to the relatively high cost involved, SWMCOL was unable to provide soil coverage for all waste items at landfills and as a result of exposure, some of the waste would ignite.
- b) Additionally, the operation of salvagers at landfills increased the chances of fires.
- c) The last major fire at a landfill was in 2014. Since then, SWMCOL has initiated measures to reduce incidences of fires.

(v) Disposal of Biomedical Waste

- a) SWMCOL stated that while the three major hospitals do in fact have proper systems to dispose of biomedical waste via incinerators and via private companies, there still existed numerous small medical institutions who may not be handling this form of waste effectively. Consequently, SWMCOL reported that biomedical waste has been observed at landfills where it is compressed and buried with other waste.

- b) SWMCOL indicated that it was unable to ascribe liability to a person or entity as it is difficult to trace the origin of type of waste.

(vi) Waste Generation according to World Bank

- a) SWMCOL officials clarified that the information contained in the World Bank's report which suggested that Trinidad and Tobago ranked first in the world in terms of waste generation per capita was false.
- b) The World Bank calculated the nation's waste generation by dividing the population of Port of Spain by the waste generated by the entire nation.
- c) SWMCOL highlighted the issue to the World Bank and the organisation subsequently corrected the error and retracted the publication.

(vii) Recycling of Tyres

- a) Officials indicated that the organisation has initiated the processing of used tyres via shredding machinery. Additionally, SWMCOL reported that thus far it was only able to resize the used tyres. The company does not have the technical capacity to de-wire tyres due to the lack of revenue to purchase appropriate machinery.

(viii) Public Participation

- a) SWMCOL's officials stated that citizens could e-mail SWMCOL if they required guidance on the proper way to dispose of certain types of waste and other materials such as motor vehicle oil after an oil change or motor vehicle tyres.

(ix) Separation of Waste

- a) SWMCOL's officials indicated that a pilot project was being conducted with the Tunapuna/Piarco Regional Corporation. The project involved educating the public on the separation of waste at source and thereafter placing it at the curb for collection.

ENVIRONMENTAL MANAGEMENT AUTHORITY

11.1 An opening statement was made by the Environmental Manager, EMA.

11.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the EMA:

(i) iCARE Project

- a) The Committee was informed that the EMA was spearheading the iCARE project in partnership with the Ministry of Planning and Development, the Ministry of Public Utilities, the Ministry of Rural Development and Local Government and SWMCOL.
- b) The project is intended to prepare the country for the enactment of the EMA Waste Rules which is expected to be operationalised in 2019. iCARE programme is centred on the notions of recycle, re-use and reduce. The aim of the programme is to foster a culture of recycling.
- c) The EMA clarified that the rationale for its leading role in the execution of the iCARE project instead of SWMCOL was due to the sourcing of funds for the project from Green Fund. The Committee was advised that SWMCOL does not have the statutory authorisation to access funds from the Green Fund.

(ii) Role of the EMA

- a. The EMA stated that its roles included that of regulator, protector of the environment and facilitator.

(iii) The placement of Recycling Bins at Schools and Communities

- a. In relation to schools, the EMA indicated that it must obtain the necessary approvals before recycling bins could be placed on a school's compound.
- b. The EMA wrote to a number of schools seeking approval for the placement of recycling bins on the school's compound. The EMA indicated that it was hoping for greater participation by the education sector with respect to recycling bins.
- c. In relation to recycling bins in communities, the EMA faced a challenge as there were no monitoring mechanisms to ensure that appropriate 'recyclable items' were placed into the bins. As a result, bins were usually filled with all types of garbage.

(iv) Waste Disposal Hazard in Carlsen Field

- a. The Committee sought an explanation for the apparent lack of action on the part of the EMA regarding the inappropriate disposal of waste in Carlsen Field. The EMA indicated that it was aware of the breach in environmental requirements at Carlsen Field and the Authority was following the appropriate channels in attending to the matter.
- b. More specifically, the EMA submitted that the organisation was in the process of preparing a Notice of Violation which will be issued to the infringing company.

- c. Due to the size of the infringing party in Carlsen Field and the land on which the infringement was taking place, the EMA was required to liaise with several organisations. These factors have protracted the EMA course of action on this matter.

(v) Entity Responsible for Oil Spills

- a. The Committee learnt that there was a National Oil Spill Contingency Plan which was managed by the Ministry of Energy and Energy Industries. However, the contingency plan only spoke to large oil spills, as such there was a gap in terms of responsibility for smaller oil spills.
- b. The EMA indicated that Section 61 of the EMA Act made reference to spills and the Authority was working on implementing the section.

(vi) Disposal of Biomedical Waste

- a) The EMA indicated that ideally, the major hospitals such as the San Fernando General Hospital would have its own incineration facilities, therefore biomedical waste should be properly disposed of.

(vii) Importation of Potentially Toxic Chemicals

- a) The EMA highlighted that it was collaborating with the Ministry of the Attorney General and Legal Affairs to create a legislative framework to ensure that proper guidelines are adhered to in the importation of potentially toxic chemicals.

(viii) Public Participation

- a) The EMA indicated that citizens can access its website for enquiries into:
 - how to handle waste;
 - recommended/best waste-handling methodologies;
 - location of EMA facilities and bins for the delivery of recyclables; and
 - what recyclables should be placed in bags.

11.3 The Chairman thanked the officials for their attendance.

ADJOURNMENT

12.1 The meeting was adjourned at 12:14 p.m.

I certify that these Minutes are true and correct.

Chairman

Secretary

April 12, 2018

MINUTES OF THE TWENTY-SECOND MEETING OF THE JOINT SELECT COMMITTEE ON FINANCE AND LEGAL AFFAIRS, HELD IN CAMERA IN THE ARNOLD THOMAS MEETING ROOM (EAST), LEVEL 6 AND IN PUBLIC IN THE J. HAMILTON MAURICE ROOM, MEZZANINE FLOOR, OFFICE OF THE PARLIAMENT, TOWER D, THE PORT OF SPAIN INTERNATIONAL WATERFRONT CENTRE, 1A WRIGHTSON ROAD PORT OF SPAIN ON APRIL 27, 2018

PRESENT

Ms. Sophia Chote, S.C.	Chairman
Mr. Clarence Rambharat	Vice-Chairman
Mrs. Vidia Gayadeen-Gopeesingh, MP	Member
Dr. Lester Henry	Member
Dr. Lovell Francis, MP	Member
Mr. Taharqa Obika	Member

Secretariat

Mr. Julien Ogilvie	Secretary
Mr. Brian Lucio	Graduate Research Assistant

ABSENT

Mrs. Cherrie-Ann Crichlow-Cockburn, MP	Member (Excused)
Mr. Terrence Deyalsingh, MP	Member (Excused)

REPRESENTATIVES OF THE MINISTRY OF RURAL DEVELOPMENT AND LOCAL GOVERNMENT (MRDLG)

Ms. Stara Ramlogan	Deputy Permanent Secretary (Ag.)
Ms. Julia Ramirez-Modeste	Planning Officer I

REPRESENTATIVES OF THE MINISTRY OF HEALTH (MOH)

Dr. Vishwanath Partapsingh	Chief Medical Officer
Mr. Brian Armour	County Medical Officer of Health
Mr. Mark Mahadeo-Dookeran	Public Health Inspector IV
Mr. Beesham Seetaram	Programme Administrator, External Patient Programme

REPRESENTATIVES OF THE PORT OF SPAIN CITY CORPORATION (PSCC)

Mrs. Annette Stapleton Seaforth	Chief Executive Officer
Ms. Lystra Parke	Deputy Chief Executive Officer

Mr. Mitra Sooklal
Mr. Dale Agarrat

Public Health Inspector IV
Transport Foreman II

REPRESENTATIVES OF THE TUNAPUNA/PIARCO REGIONAL CORPORATION (TPRC)

Mr. Paul Leacock
Mrs. Betty Ramdass-Ali
Ms. Nadine Ribeiro

Chairman
Chief Executive Officer
Public Health Officer

REPRESENTATIVES OF THE CHAGUANAS BOROUGH CORPORATION (CBC)

Mr. Gopaul Boodhan
Mr. Raymond Seepaul
Dr. Neevan Sampson

His Worship the Mayor
Chief Executive Officer
Principal Medical Health Officer

REPRESENTATIVES OF THE SAN FERNANDO CITY CORPORATION (SFCC)

Mr. Junia Regrello
Mr. Indarjit Singh
Mr. Gerard Ramarack

His Worship the Mayor
Chief Executive Officer
Sanitation Foreman III

COMMENCEMENT

1.2 The Chairman called the meeting to order at 9:30 a.m.

ANNOUNCEMENTS

2.1 The Chairman announced that Mrs. Cherrie-Ann Crichlow-Cockburn and Mr. Terrence Deyalsingh, requested to be excused.

CONFIRMATION OF MINUTES OF THE TWENTY-FIRST MEETING HELD ON April 13, 2018

3.1 The Chairman invited Members to consider the Minutes of the 21st Meeting held on April 13, 2018 and enquired whether there were any amendments.

3.2 The Committee agreed that the following amendments be made:

- i. Page 5, roman numeral vii, the word “misused” to be replaced with the word “misuse”;
- ii. Page 7, roman numeral xv, the word “report” to be replaced with the word “reported”.

3.3 There being no further amendments, a motion for the confirmation of the Minutes was moved by Mr. Rambharat and seconded by Mr. Obika.

MATTERS ARISING FROM THE MINUTES OF THE TWENTY-FIRST MEETING

4.1 The Chairman highlighted the following matters arising from the Minutes:

- **Page 3, item 5.3** – The Chairman indicated that Mr. Tim Kimpton of Bacon, Woodrow & de Souza Limited, submitted a post-hearing memo for the Committee’s consideration.
- **Page 8, item 8.1** – The Secretariat was instructed to communicate the Committee’s request for additional information along with Mr. Kimpton’s suggested questions to the National Insurance Board of Trinidad and Tobago.
- Members discussed whether the Trade Unions can impact the implementation of the Committee’s recommendations.

PRE-HEARING DISCUSSION RE: INQUIRY INTO THE WASTE MANAGEMENT POLICIES AND INITIATIVES OF THE STATE

5.1 The Chairman advised that the Committee would convene its second public hearing pursuant to its inquiry into the Waste Management policies and initiatives of the state.

5.2 The Chairman indicated that the Committee received apologies from the Arima and Point Fortin Borough Corporations for their inability to attend the hearing due to certain exigencies.

5.3 The Chairman also drew Members’ attention to written submissions received from the Regional Corporations, the Ministry of Health and the Ministry of Rural Development and Local Government.

5.4 Members requested an opportunity to review the written submissions along with the Issues Papers.

5.5 Members identified the following stakeholders to be invited to the Committee’s next public hearing:

- Ace Recycling Limited;
- Enviro Care Limited;
- Council of Presidents of the Environment;
- Environment Tobago; and
- Tobago House of Assembly.

SUSPENSION

6.1 The meeting was suspended at 10:15 a.m.

[Members proceeded to the J. Hamilton Maurice Room, Mezzanine Floor]

PUBLIC HEARING WITH OFFICIALS OF THE MRDLG, MOH, PSCC, TPRC, CBC and SFCC

- 7.1 The meeting resumed (*in public*) at 10:25 a.m. in the J. Hamilton Maurice Room.
- 7.2 The Chairman welcomed officials of the Ministry of Rural Development and Local Government, Ministry of Health, Port of Spain City Corporation, Tunapuna/Piarco Regional Corporation, Chaguanas Borough Corporation and the San Fernando City Corporation. Introductions were exchanged.
- 7.3 The Chairman outlined the inquiry objectives.

MINISTRY OF HEALTH

- 8.1 An opening statement was made by the County Medical Officer, MOH.
- 8.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the MOH:

(iv) Disposal of Expired Medicine

Expired medicine is incinerated by the nation's major Public Hospitals.

MINISTRY OF RURAL DEVELOPMENT AND LOCAL GOVERNMENT

- 9.1 An opening statement was made by the Deputy Permanent Secretary, MRDLG.
- 9.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the MRDLG:

(i) Role of the MRDLG in Waste Management

- (a) The role of the MRDLG is to facilitate the collection of waste by the Regional Corporations through the overseeing of contracts between the Regional Corporations and scavenging companies.
- (b) The Ministry evaluates the contracts between the Regional Corporations and scavenging companies by analysing all feedback received from the public and Regional Corporations.

(ii) Procurement of Waste Collection Vehicles

Each Regional Corporation is responsible for the procurement of its garbage collection vehicles.

(iii) Local Government Reform

- (a) The Ministry held consultation sessions with the Regional Corporations regarding the institutional and administrative structures that need to be implemented to facilitate the Corporation's devolved responsibilities. A Cabinet Note seeking the establishment of several positions within the Regional Corporations was at the time of the hearing before the Ministry of Public Administration and Communications.
- (b) Additionally, the Ministry is in the process of formulating policies with a view to establishing standard operating procedures across the Regional Corporations.

(iv) Waste Collection Arrangements

- (a) The Ministry is nearing the completion of its review of the contracts between Regional Corporations and scavenging companies. This review included consultations with the Corporations, service providers and the Solid Waste Management Company. It is expected that following the completion of the Ministry's review, Regional Corporations will have the authority to manage all contracts with service providers.
- (b) The Ministry has asked SWMCOL to include performance appraisals in its evaluation to consider and select service providers.

PORT OF SPAIN CITY CORPORATION

10.1 An opening statement was made by the Deputy Chief Executive Officer, PSCC.

10.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the PSCC:

(i) Authority to Remove Litter

In accordance with the Litter Act Chapter 30:52 and the Public Health Ordinance, Corporations have the authority to initiate the removal of waste from private, public and institutional premises.

(ii) Litter Prevention Wardens

The Corporation was not operating at maximum capacity with respect to their employment of Litter Prevention Wardens. The Corporation is able to hire a maximum of 11 warders, of which 6 are currently employed.

(iii) Jurisdiction for Waste Management at the Queens Park Savannah

- (a) The Ministry of Agriculture, Land and Fisheries is responsible for waste management within the Queens Park Savannah.
- (b) The Corporation has responsibility for waste management along the pavement, drains and road surrounding the Queens Park Savannah. The Corporation is therefore responsible for the collection and removal of waste generated within the aforementioned areas.
- (c) In relation to waste generated by Coconut Vendors, the Corporation has held consultations with the vendors and the Public Health Department is currently monitoring the vendors to ensure that they adhere to the Corporation's directives.

(iv) Safety of scavengers operating in the East Port of Spain district

The Corporation lacked any power to prevent drivers of waste collection vehicles from being intimidated by persons within East Port of Spain community.

TUNAPUNA/PIARCO REGIONAL CORPORATION

11.1 An opening statement was made by the Chairman, TPRC.

11.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the TPRC:

(i) The involvement of the Housing Development Corporation (HDC) in Waste Management

The HDC is involved in solid waste collection in some settlements such as East Grove, Greenvale, Maloney and Cleaver Heights and on private estates such as the University of the West Indies.

(ii) Waste Collection Arrangements

- (a) The Corporation does not own any garbage collection vehicles but instead (similar to most Corporations) has contracted the garbage collection service to scavenging companies.
- (b) The TPRC expressed dissatisfaction with the contractual arrangements with scavenging companies

(iii) Waste Management Initiatives

- (a) The TPRC attempted a waste segregation initiative in 2016. The initiative was rolled out to several communities with Trincity finding the most success. The

project involved distributing special-made bags for waste collection. Through the project, the TPRC was able to collect over 10,000 tetra packs and single use plastic. However, the initiative was not sustainable.

- (b) The TPRC has partnered with the University of the West Indies on the use of crumb rubber²⁴ to pave roads in Trinidad and Tobago. Research is being conducted into an internationally used solution. It is envisioned that two (2) roads will be paved in fiscal year 2018 using this method.
- (c) The Corporation has been liaising with a cement company as a means of exploring the possibility of combining plastic and cement to pave roads in rural areas.
- (d) The Corporation is considering establishing another contract with scavenging companies to allow for one day dedicated to collecting plastics and grass. This would facilitate another initiative of the Corporation where they have partnered with the University of the West Indies to explore composting.

CHAGUANAS BOROUGH CORPORATION

12.1 An opening statement was made by His Worship the Mayor, CBC.

12.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the CBC:

(i) Waste Collection Arrangements

- (a) The Corporation does not own any garbage collection vehicles but instead, has outsourced the garbage collection service to scavenging companies.
- (b) CBC has 13 scavenging areas and contracts are awarded by SWMCOL for those areas.
- (c) The Corporation received complaints from the public concerning the scavenging companies.
- (d) There is a need for greater oversight to ensure that contacted firms operate within their contracted hours and by extension, the terms and conditions of their contracts.
- (e) While the Corporation is of the view that owning their own fleet of waste collection vehicles would eliminate the problems experienced with the contractors, barring an efficient mechanical maintenance facility, the CBC advises that Corporations outsource this service due to the high maintenance cost.

²⁴ Crumb rubber is recycled rubber produced from automotive and truck scrap tyres.

(ii) Collection of Waste from Pluck Shops

The Corporation developed a policy to treat with the issue of waste generated from pluck shops whereby it charges \$5 per bag and it is collected from the pluck shops.

SAN FERNANDO CITY CORPORATION

13.1 An opening statement was made by His Worship the Mayor, SFCC.

13.2 Detailed hereunder are the issues/concerns/queries raised and the responses proffered by the SFCC:

(i) The Need for a Holistic Approach to Waste Management

There is a need for a national and holistic approach to recycling where the focus can be placed on culture, education and the advantages of recycling.

(ii) 2017 National Clean-up Campaign

The 2017 National Clean-up Campaign resulted in approximately 10,700 tyres being collected and thereafter shredded by the Solid Waste Company Limited (SWMCOL).

(iii) Waste Management Arrangements

- a) The Corporation was pleased with the performance of scavenger companies operating within the city.
- b) The SFCC mandated that the staff of its Public Health Department closely monitor scavenging companies to ensure that they deliver on their contractual obligations.
- c) There is a need for all Regional Corporations to have proper schedules for the collection of waste by scavenging companies.
- d) As far as possible, the SFCC, through its Public Health Department ensures that proper protective wear is provided to persons involved in waste collection.
- e) The contract between the Corporation and scavenger companies expired in 2016. Since then, all corresponding contracts have been on a month-to-month basis.

(iv) Derelict Vehicles

- a) The Corporation faces significant challenges in the disposal of derelict vehicles.
- b) The low price of steel does not provide an incentive to encourage salvagers to take the derelict vehicles.

- c) Provided that the TPRC serves a notice to the owners of the vehicles, there is no facility available to store the vehicles.
- d) Notwithstanding these challenges, the TPRC has endeavoured to source firms that will accept the vehicles. It was also suggested that a solution to the issue may lie in monetizing the compaction and disposal of derelict vehicles.

13.3 The Chairman thanked the officials for their attendance.

Requested Information

14.1 The Committee requested that the Ministry of Health provide the following:

- i. A status report on the establishment of the Board of Survey.

14.2 The Committee requested that the Ministry of Rural Development and Local Government provide the following:

- i. The deficiencies in the existing contractual arrangements between Regional Corporations and scavenging companies.

14.3 The Committee requested that the Chaguanas Borough Corporation provide the following:

- i. Clarification on proposals for the reuse and recycling of waste.

ADJOURNMENT

15.1 The meeting was adjourned at 12:06 p.m.

I certify that these Minutes are true and correct.

Chairman

Secretary

May 15 2018

MINUTES OF THE TWENTY-THIRD MEETING OF THE JOINT SELECT COMMITTEE ON FINANCE AND LEGAL AFFAIRS, HELD IN CAMERA IN THE ANR MEETING ROOM (WEST), LEVEL 9 AND IN PUBLIC IN THE J. HAMILTON MAURICE ROOM, MEZZANINE FLOOR, OFFICE OF THE PARLIAMENT, TOWER D, THE PORT OF SPAIN INTERNATIONAL WATERFRONT CENTRE, 1A WRIGHTSON ROAD PORT OF SPAIN ON MAY 18, 2018

PRESENT

Ms. Sophia Chote, S.C.	Chairman
Mr. Clarence Rambharat	Vice-Chairman
Dr. Lester Henry	Member
Mrs. Vidia Gayadeen-Gopeesingh, MP	Member
Mr. Taharqa Obika	Member

Secretariat

Ms. Sheranne Samuel	Assistant Secretary
Mr. Brian Lucio	Graduate Research Assistant
Ms. Terriann Baker	Graduate Research Assistant

ABSENT

Mrs. Cherrie-Ann Crichlow-Cockburn, MP	Member (Excused)
Mr. Terrence Deyalsingh, MP Dr. Lovell Francis, MP	Member (Excused)
	Member (Excused)

COMMENCEMENT

1.1 The Chairman called the meeting to order at 9:35 a.m.

ANNOUNCEMENTS

2.1 The Chairman announced that Dr. Lovell Francis, Mr. Terrence Deyalsingh and Mrs. Cherrie-Ann Crichlow-Cockburn requested to be excused.

CONFIRMATION OF MINUTES OF THE TWENTY-SECOND MEETING HELD ON APRIL 27, 2018

3.1 The Chairman invited Members to consider the Minutes of the 22nd Meeting held on April 27, 2018 and enquired whether there were any amendments.

3.2 The Committee agreed that the following amendments be made: **Page 1**, heading: "Representatives from the Ministry of Health", "Mr." before the name Brian Armour" to be replaced with the word "Dr.";

- i. Page 6, 10.2 (ii), the word "warders" to be replaced with the word "wardens";
- ii. **Page 6**, capital "C" and "V" in the words Coconut Venders, to be replaced with "c" and "v";
- iii. **Page 8, 12.2 (i)(d)**, the word "contacted" to be replaced with the word "contracted";
- iv. **Page 10, 14.1(i)**, the word "Survey" to be replaced with the word "Surveys".

3.3 There being no further amendments, a motion for the confirmation of the Minutes was moved by Mr. Obika and seconded by Mrs. Gayadeen-Gopeesingh.

MATTERS ARISING FROM THE MINUTES OF THE TWENTY-SECOND MEETING

4.1 The Chairman enquired whether there were any matters arising from the Minutes:

Page 3, item 4.1, third bullet point – A member referenced the views made by some trade unions in the public domain regarding national insurance and a potential increase in the retirement age.

The Secretariat was directed to collect the public statements of the trade unions regarding the issue of the retirement with a view of having same included in the Committee's Report.

PRE-HEARING DISCUSSION RE: INQUIRY INTO THE WASTE MANAGEMENT POLICIES AND INITIATIVES OF THE STATE

5.1 The Chairman indicated that representatives from the following entities would be appearing before the Committee:

Tobago House of Assembly
Council of Presidents of the Environment (represented by Green
Engineering) Ace Recycling Limited

The Chairman advised Members that the Council of Presidents of the Environment indicated that it was just an overarching body and as such would be better represented by Green Engineering a member of the Council.

- 5.2 The Chairman advised that submissions were received from entities appearing and Issues Papers were prepared based on these submissions. Members confirmed receipt of the submissions and the Issues Papers.
- 5.3 A discussion ensued on the approach to be adopted for the hearing.
- 5.4 The Chairman sought Members' views on the possibility of a site visit to the Tyre Shredding Facility and Forres Park Landfill. These were mixed views on this proposal. As a consequence no clear decision was recorded.

OTHER BUSINESS

Date and agenda of next meeting

- 6.1 Members agreed that the next meeting of the Committee would be held on Friday June 08, 2018.

Next topic of inquiry

- 6.2 The Committee also agreed that the next topic of inquiry would be an examination of the potential impact of the decriminalisation of marijuana in Trinidad and Tobago.

SUSPENSION

- 7.1 The meeting was suspended at 10:28 a.m.

[Members proceeded to the J. Hamilton Maurice Room, Mezzanine Floor]

PUBLIC HEARING WITH STAKEHOLDERS RE WASTE MANAGEMENT POLICIES AND INITIATIVES OF THE STATE

- 8.1 The meeting resumed (*in public*) at 10:36 a.m. in the J. Hamilton Maurice Room.
- 8.2 The following officials joined the meeting:

TOBAGO HOUSE OF ASSEMBLY (THA)

Mr. Raye Sandy	Chief Administrator
Mr. Linford Beckles	Director, Environment
Ms. Damika Marshall	Environmental Officer II
Mrs. Dianne Baker-Henry	Administrator
Mr. Ricardo Bobb	Public Health Inspector III
Ms. Jasiyah Ibrahim	Project Engineer

GREEN ENGINEERING REPRESENTING COUNCIL OF PRESIDENTS OF THE ENVIRONMENT

Ms. Kelli Danglad	Technical Manager
Mr. David Jacob	Technical Manager

ACE RECYCLING/CARIBBEAN BATTERY RECYCLING

Mr. Kevin Clarke	Director/Operations
Mrs. Tricia Clarke-De Freitas	Manager Director, Finance

8.3 The Chairman welcomed the officials and introductions were exchanged.

8.4 The Chairman outlined the objectives of the inquiry.

Key Issues Discussed

8.5 The following were the key subject areas/issues discussed during the hearing:

(a) Issues discussed with Tobago House of Assembly

- i. The relationship between THA and the Solid Waste Management Company Limited (SWMCOL);
- ii. The THA is partnering with SWMCOL on a tyre shredding initiative;
- iii. The relationship between the THA's Division of Infrastructure, Quarries and the Environment and the Environmental Management Authority (EMA);
- iv. Environment and the Environmental Management Authority (EMA);
- v. The disposal of derelict vehicles at the Studley Park Waste Integrated Facility (SPWIF);
- vi. Initiatives being taken to phase out styro-foam products in Tobago;
- vii. Biodegradable products being subject to taxation whereas styro-foam products are not under the present tariff structure;
- viii. The need for central government to review the tariff structure to address the price differential between biodegradable products and styro-foam products;
- ix. Alternatives to styro-foam products;
- x. The relationship between the SPWIF and the Studley Park Quarry which allows for the adequate covering of compacted waste with at least 6 inches of dirt;
- xi. SPWIF's utilisation of engineered cells to allow for the proper ventilation of methane gas;
- xii. Methane gas emissions are not being measured;
- xiii. Consideration of storing and monetising the methane gas;
- xiv. Challenges faced by the THA in curbing coastal pollution
- xv. THA's consideration of initiatives geared towards the separation of waste at source;
- xvi. The disposal of car batteries at the SPWIF;
- xvii. Informal scavenging of car batteries;
- xviii. The THA's ability to use agricultural waste for compost provided that the waste was not contaminated; and
- xix. Roving checkers are being used to ensure that scavenger companies adhere to the agreed terms and conditions;
- xx. Measures taken by the THA to prevent habitation of the SPWIF;
- xxi. The disposal of bio-medical waste via incineration at the Scarborough General Hospital;

- xxi. Research is being conducted into the use of carbonisation to dispose of bio-medical waste; and
- xxii. The initiatives being taken by the THA to raise public awareness regarding proper waste management at Primary and Secondary Schools levels;
- xxiii. The need for a more structured approach to waste collection.

(b) Issues discussed with Green Engineering representing the Council of Presidents of the Environment

- i. The role and functions of the Council of Presidents of the Environment;
- ii. The lack of proper waste disposal in Trinidad;
- iii. Hazardous and non-hazardous waste being disposed of at the same location in Trinidad;
- iv. Lead being the main contaminant of soil in Trinidad due to the improper and informal disposal of vehicle batteries;
- v. The cost to treat contaminated land ranges from \$500 per cubic yard (non-hazardous) to \$5000 per cubic yard (hazardous eg. lead)
- vi. A preliminary study on contaminated land was completed in 2015;
- vii. The process by which Green Engineering remediate contaminated land;
- viii. Recommendation for a dismantling facility for end of life vehicles to provide a formal and controlled process for disposing of derelict vehicles;
- ix. Proposal for a centralised waste management facility;
- x. The manner in which waste is managed in the paint industry;
- xi. The means by which infectious bio-medical waste should be disposed; and
- xii. The need for institutional strengthening, upgrading of facilities and proper legislation/regulations to allow for adequate waste management.

(c) Issues discussed with Ace Recycling Limited/Caribbean Batteries Recycling Limited

- i. The company recycles approximately 14 million pounds of paper annually;
- ii. Recycled paper is shipped to Latin America and some Asian countries with India being the main importer of recycled paper;
- iii. The cost per metric ton of recycled paper ranges from \$50 to \$300 USD depending on the grade of paper;
- iv. The proper means for the disposal of car batteries;
- v. Used car batteries are bought for \$25 to \$80 whereas in bulk, they may cost between \$4000 to \$5000 per metric ton of the used car batteries;
- vi. The types of batteries which are recycled;
- vii. Funding is being sourced to establish a first world recycling facility.

Recommendations proffered during the Public Hearing

8.6 The following recommendations emanated from the discussions:

- i. Establishment of a dismantling facility for end of life vehicles to provide a formal and controlled process for disposing of derelict vehicles;
- ii. Establishment of a centralised waste management facility.

Requested information

8.7 The Committee requested the following information in writing:

Green Engineering

- i. A list of offending parties identified in the Blood Lead Study;
- ii. Details on the results of the Blood Lead Study; and
- iii. A copy of the preliminary contaminated land inventory.

Ace Recycling/Caribbean Batteries Recycling Limited

- i. A list of yards that do not treat with batteries in an environmentally sound manner.

8.8 Closing remarks were made by the chief officials present.

8.9 The Chairman thanked the officials for their attendance.

ADJOURNMENT

9.1 The meeting was adjourned at 12:11 p.m.

I certify that these Minutes are true and correct.

Chairman

Secretary

June 18, 2018

APPENDIX II

Written Submissions Received

The Committee received written submissions from the following entities/stakeholders:

- i. The Ministry of Planning and Development;
- ii. The Ministry of Rural Development and Local Government
- iii. The Ministry of Public Utilities;
- iv. The Ministry of Health;
- v. Environmental Management Authority (EMA);
- vi. Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL);
- vii. Tobago House of Assembly (THA);
- viii. The Port of Spain City Corporation;
- ix. The San Fernando City Corporation;
- x. The Chaguanas Borough Corporation;
- xi. The Point Fortin Borough Corporation;
- xii. The Siparia Regional Corporation;
- xiii. The San Juan/Laventille Regional Corporation;
- xiv. The Tunapuna/Piarco Regional Corporation;
- xv. The Mayaro/Rio Claro Regional Corporation;
- xvi. Ace Recycling Limited;
- xvii. Caribbean Batteries Recycling Limited;
- xviii. Council of Presidents of the Environment;
- xix. Green Engineering;
- xx. Enviro Care Limited; and
- xxi. Environment Tobago.

APPENDIX III

World Bank 2012 Waste Generated Per Capita by Region

REGION	Waste Generation Per Capita (kg/capita/day)		
	Lower Boundary	Upper Boundary	Average
Africa	0.09	3.0	0.65
East Asia and Pacific	0.44	4.3	0.95
Europe and Central Asia region	0.29	2.1	1.1
Latin America and the Caribbean region	0.11	5.5	1.1
Middle East and North Africa region	0.16	5.7	1.1
Organisation for Economic Co-operation and Development	1.10	3.7	2.2
South Asia region	0.12	5.1	0.45
Trinidad and Tobago			1.50*

Source: World Bank, 2012, *What is Waste, A Global Review of Solid Waste Management*

* CBCL 2010 Waste

APPENDIX IV

Table 4: Table of Statistical Data derived from a sample of 7 Municipal Corporations

Corporation	Garbage trucks owned by the Corporation	Written Notices issued in the past three years ²⁵	How many of these Notices resulted in the initiation of court proceedings?	Derelict Vehicles removed by the Corporation	Litter Prevention Wardens currently operating at the Corporation.	“Clean-up Orders” that were issued during the past three years ²⁶ .	Number of Litter Receptacles	Receptacles that facilitate the segregation of garbage.	Waste collected during the last National Clean-up campaign?
Mayaro - Rio Claro Regional Corporation	0	42 Notices	1 Notice	9 derelict vehicles	7 Litter Prevention Wardens	91 Clean-up Orders.	Approximately 60 litter receptacles.	Not Applicable	Not Applicable
Port of Spain City Corporation	26 5 are operational.	0 Notices were issued.	N/A	67 derelict vehicles were removed.	There are 6 Litter Prevention Wardens.	6 Clean-up Orders.	Approximately 45 litter receptacles.	18 litter receptacles	4786 cubic metres
Chaguanas Borough Regional Corporation	There are no existing fleets and garbage trucks.	4358 notices were served	12 Notices.	32 derelict vehicles were removed.	There are 7 Litter Prevention Wardens.	1649 Clean-up Orders were issued.	There are 30 Guppy bins.	No receptacles exist.	1263 truckloads of bulk waste was removed.

²⁵ Litter Notices in accordance with Section 6 and 7 of the Litter Act Chap. 30:52

²⁶ Clean Up Orders in accordance with Section 16 of the Litter Act Chap. 30:52

Corporation	Garbage trucks owned by the Corporation	Written Notices issued in the past three years ²⁵	How many of these Notices resulted in the initiation of court proceedings?	Derelict Vehicles removed by the Corporation	Litter Prevention Wardens currently operating at the Corporation.	“Clean-up Orders” that were issued during the past three years ²⁶ .	Number of Litter Receptacles	Receptacles that facilitate the segregation of garbage.	Waste collected during the last National Clean-up campaign?
Tunapuna Regional Corporation	0 existing fleets and garbage trucks.	8653 notices were issued.	No Notices were issued.	199 derelict vehicles were removed.	There are 14 Litter Prevention Wardens.	1125 Clean-up Orders were issued.	40 Litter Receptacles.	4 litter receptacles.	6740 cubic metres of bulk waste 3500 tyres were shredded
Point Fortin Corporation	0 existing fleets and garbage trucks.	No Notices were issued.	Not Applicable	0 derelict vehicles were removed.	Not Applicable	No Clean-up Orders were issued.	30 Litter Receptacles.	Not Applicable	214 loads of waste.
San Fernando Regional Corporation	3. 1 is under routine maintenance.	413 notices were served.	9 Notices	16 derelict vehicles were removed.	There are 6 Litter Prevention Wardens.	132 Clean-up Orders were issued.	70 Litter Receptacles.	Not Applicable	1350 truck loads
San Juan/Laventille Regional Corporation	0 existing fleets and garbage trucks.	4109 notices were served.	1 Notice	137 derelict vehicles were removed.	There are 9 Litter Prevention Wardens	73 Clean up Orders	25 Litter Receptacles	Not Applicable	1355 loads
TOTAL	29	17,575	29	460.	49	3076	300	22	4182 (Truck loads)



Corporation	Garbage trucks owned by the Corporation	Written Notices issued in the past three years ²⁵	How many of these Notices resulted in the initiation of court proceedings?	Derelict Vehicles removed by the Corporation	Litter Prevention Wardens currently operating at the Corporation.	“Clean-up Orders” that were issued during the past three years ²⁶ .	Number of Litter Receptacles	Receptacles that facilitate the segregation of garbage.	Waste collected during the last National Clean-up campaign?
									11526 (cubic metres of bulk waste)

APPENDIX V

Verbatim Notes

VERBATIM NOTES OF THE TWENTIETH MEETING OF THE JOINT SELECT COMMITTEE ON FINANCE AND LEGAL AFFAIRS HELD IN THE ARNOLD THOMASOS MEETING ROOM (EAST), SIXTH FLOOR, (IN CAMERA), AND THE J. HAMILTON MAURICE ROOM (MEZZANINE FLOOR) (IN PUBLIC), OFFICE OF THE PARLIAMENT, PORT OF SPAIN INTERNATIONAL WATERFRONT CENTRE, #1A WRIGHTSON ROAD, PORT OF SPAIN, ON FRIDAY, MARCH 23, 2018, AT 10.06 A.M.

PRESENT

Ms. Sophia Chote SC	Chairman
Mr. Clarence Rambharat	Vice-Chairman
Mr. Taharqa Obika	Member
Mrs. Cherrie-Ann Crichlow-Cockburn	Member
Mr. Julien Ogilvie	Secretary
Ms. Simone Yallery	Legal Officer I
Ms. Terriann Baker	Research Assistant
Mr. Brian Lucio	Research Assistant

ABSENT

Mr. Terrence Deyalsingh	Member
Dr. Lovell Francis	Member
Mr. Prakash Ramadhar	Member
Dr. Lester Henry	Member

Madam Chairman: Okay. So perhaps we could jot back to the Minutes and just get that out of the way. What we did before you entered is, we went through the Minutes, but we did not ask that they be confirmed or seconded. We found that there were no amendments to be made, and I imagine that you have looked at the Minutes already.

Mrs. Crichlow-Cockburn: Yes.

Madam Chairman: So unless there is any matter that you wish to raise.

Mrs. Crichlow-Cockburn: No, not at this time.

Madam Chairman: All right. So can I ask that the Minutes be confirmed, please?

[Confirmed by Mrs. C. Crichlow-Cockburn]

[Seconded by Mr. T. Obika]

Madam Chairman: Thank you. I had just given an update with respect to the other enquiry that

we are engaged in and, that is to say, a firm has been hired by the Secretariat to provide us with assistance, and they have already begun work because they used the material sent to us by the NIB and formulated some questions which were sent to the NIB, and the NIB has a deadline date to reply to us, which is April the 3rd. So we will await that response.

I think there was also some material sent to us. I do not know if we could find it in our emails. I mean, Parliament really sends a lot of emails. [Laughter] But if you have any questions or if you have anything that you wish to ask of the expert who has been hired, based on the material that we have in hand, I think what you should do is just forward it to Mr. Ogilvie, who will put it in the appropriate form and send it off to the firm.

Mrs. Crichlow-Cockburn: This is in terms of all of the organizations we are engaging or just the entity?

Madam Chairman: All of the organizations. Yes. Right. So, very briefly, we began this enquiry and we had to take a break to allow the expert advice to inform us before we continue and before we prepare a quality report. So instead of wasting time, what the Secretariat did—and I am very grateful to them for that—is they put things in place so that we could begin our enquiry into the waste management policies, and that is going to be a live national issue, so we did not want to put a hold on that.

Today we have representatives from the Ministry of Public Utilities, the Ministry of Planning and the Development, the Trinidad and Tobago Solid Waste Management Company Limited and the EMA. We also received written submissions from the Ministry of Public Utilities and the Ministry of Planning and Development. That was sent out yesterday. You all got it?

Mr. Rambharat: Yes.

Madam Chairman: Okay. Excellent. Is there any particular approach that you all would prefer that we take in this enquiry?

[Discussion with Madam Chairman]

Mr. Rambharat: Chair, in another committee that I sit in—this is a lot of volume—we normally would identify a lead, a lead on each area or ask members if they have an interest in leading off on a particular area, and then give the opportunity to the other members to follow with questions. I do not know if that is an approach we could use in this one today.

Madam Chairman: If we had had some sort of opportunity to prepare, because I know Minister had not even thought that she was going to be able to make this meeting. So I think to put her as

the point person for any topic would be a little unfair. So I would suggest that for today's—it is an excellent idea and going forward it is certainly one that we would want to consider using—purposes and due to the fact that we are down to four, perhaps, we should continue as we have in the past, that is to say, ask them to make their opening statements and so on, and arising from that we can take turns at asking questions. Okay? Minister, are you able to be with us for the session?

Mrs. Crichlow-Cockburn: Not the entire session. Is it that we cannot go forward if I am not here for the entire session?

Madam Chairman: We can, yes.

Mrs. Crichlow-Cockburn: Okay.

Madam Chairman: What time were you looking to leave, though?

Mrs. Crichlow-Cockburn: Actually, my meeting has started.

Madam Chairman: Okay. All right. Well, just briefly, we are thinking of meeting twice in the month of April, 13th and 27th. The first one will be with respect to the enquiry into the NIB and the second will be the second meeting on waste management. Please inform Mr. Ogilvie afterwards if any of you may have a difficulty with either or both of those dates.

I am assuming that there is no other matter that we wish to discuss at this stage, so I am suspending this meeting and asking us all to reconvene downstairs so that we may begin the public aspect of the hearing.

10.13 a.m.: *Meeting suspended.*

10.20 a.m.: *Meeting resumed.*

TRINIDAD AND TOBAGO SOLID WASTE MANAGEMENT COMPANY LIMITED

Mr. Ronald Roach	Chief Executive Officer
Mr. David Manswell	General Manager, Communication Sales and Marketing
Ms. Maria Allong	General Manager, Projects and Support Services
Ms. Abigail Whitehall	Corporate Project Administrator

MINISTRY OF PLANNING AND DEVELOPMENT

Ms. Marie Hinds	Permanent Secretary (Ag.)
Dr. David Persaud	Environmental Manager
Dr. Marissa Gowrie	Deputy Environmental Manager

Ms. Andrea Julien	Senior State Counsel
Mr. Hayden Romano	Managing Director, EMA

MINISTRY OF PUBLIC UTILITIES

Mr. Gary Joseph	Permanent Secretary (Ag.)
Ms. Beverly Khan	Deputy Permanent Secretary (Ag.)
Ms. Melaine Phillip	Senior Planning Specialist
Ms. Arlene Johnson-Lawrence	Senior Project Manager

Madam Chairman: Good morning, ladies and gentlemen. I must apologize for the late start. We need a quorum in order to be able to come down to meet with you, and we also have to make sure that things are in place, because this hearing is being televised. So, perhaps, you would have noticed members looking anxiously at the clock while we waited, because we cannot start until we are given that indicator.

I want to welcome you today to this enquiry. I also want to welcome our viewing and listening audience to the Twentieth Meeting of the Joint Select Committee on Finance and Legal Affairs. Today we begin a very important enquiry. It is the first public hearing into waste management policies and initiatives of the State.

The hearing is being broadcast live on Parliament Channel 11, Parliament Radio 105.5 FM and the Parliament's YouTube Channel, *ParlView*. Members of the viewing and listening audience may send comments or questions via email at parl101@tpparliament.org, on our Facebook page at facebook.com/tpparliament or on twitter@tpparliament.

Now, having got that out of the way to notify members of the viewing and listening public of how they can access us during the enquiry as well as afterwards, I want to welcome the officials and representatives of the Ministry of Public Utilities, and I believe from the Ministry we have the PS, the Deputy PS, the Senior Planning Specialist and the Senior Project Manager. I would ask you all later on to introduce yourselves.

We have representatives from the Ministry of Planning and Development: the Acting PS, the Environmental Manager, the Deputy Environmental Manager, Senior State Counsel, Managing Director of the EMA; and from the Trinidad and Tobago Solid Waste Management Company Limited, we have the CEO, General Manager Communication Sales and Marketing, General Manager Finance and Corporate Services, General Manager Projects and Support Services and the Corporate Project Administrator.

Now, it is a lot of you, but I think it is important for members of the listening and viewing public to know which persons—which human beings fill which positions in the various public agencies which come before us. So if we may start with the Ministry of Public Utilities, would you all be kind enough to introduce yourselves? Just give your names.

[Introductions made]

Madam Chairman: Thank you. May I ask the members of the Solid Waste Management Company Limited to introduce themselves?

[Introductions made]

Madam Chairman: Thank you all. I got a bit confused because normally groups sit together, but I see that you all have been split up, I suppose because of the number of persons attending. After I introduce myself to you, I will ask other members of the Committee to introduce themselves to you. My name is Sophia Chote, I am an Independent Senator. I chair this Committee as an Independent Senator.

[Introductions made]

Madam Chairman: Now, I believe you all have been advised as to what the three objectives of the enquiry are, but I am going to read them out again, because we have a listening and viewing public.

1. To examine the level of waste production in Trinidad and Tobago.
2. To assess the effectiveness of regulations and policies directed at waste management.
3. To assess the adequacy of resources and institutions associated with the management of waste.

Now, we try to make our enquiry objectives as simple as possible so that listeners and viewers will be able to follow what we are talking about, which for some may be a complicated and complex process, especially since the whole process is in a system of flux as I understand it at this time.

So the next stage of the enquiry is where I ask three persons to make opening statements. So I would start with the Acting Permanent Secretary, Ministry of Planning and the Development, Ms. Marie Hinds. I would ask you to make an opening statement of about two minutes.

Ms. Hinds: Thank you, Chair. Chair, let me first say that on behalf of the Ministry of Planning and Development, we are truly pleased to participate and to support this process, and we look

forward to the recommendations and the outcomes, because we believe it will take us further along on the pathway to sustainable waste management.

Having said that, we would like all listening to appreciate the fact that the administrative framework for waste management in Trinidad and Tobago is complex. It is shared amongst many Ministries: the Ministry of Rural Development and Local Government, Public Utilities and our Ministry of Planning and Development. It is also shared amongst a state limited liability company, SWMCOL, who is here, as well as a statutory authority, the Environmental Management Authority, then we have THA for Tobago. It is even important to note that the IMA has an interesting role. It may not be so much waste management, but in terms of monitoring of what happens in terms of the coastal environment, the LBS Protocol, they manage the extent to which pollution from on land is affecting what is happening in our marine environment.

The Ministry of Planning and Development is responsible for the establishment of the country's overarching development policy framework which you would know as Vision 2030, as well as the National Environmental Policy, the NEP framework, which is currently being revised by the Environmental Management Authority. Both the Vision 2030 and the NEP provide specific policy directives as it relates to waste management and we would have shared some of those in the submission to you.

The EMA was established to regulate and coordinate sustainable environmental management in the country, including the management of waste. In this regard, the EMA, through its Environmental Police Unit, enforces provisions under the EMA Act, the Litter Act and Public Health Act and has issued clean up orders and other notices of violations to persons contradicting these Acts.

It is also important to note that we are in the process of developing the Waste Management Rules, through which it intends to establish requirements for handling and disposal of waste, including, standards and design criteria for disposal facilities and to enforce these requirements through a licensing and permitting system.

Domestic waste collection in Trinidad and Tobago is also the responsibility of municipal corporations and you can appreciate that the Ministry of Rural Development and Local Government has coordinating responsibility of 14 municipal corporations. SWMCOL, who is here, they have their specific mandate, and I am sure they would share more as to what that is and, as we mentioned, there is also a role for the THA in Tobago.

So we thought it was important just to set the context so that you can appreciate the breadth and the number of agencies that all have a part to play. As far as the Ministry of Planning and the Environment is concerned, we continue to work to strive to ensure that, at least, the policies are as sound as they can be. So thank you.

Madam Chairman: Thank you very much. That was extremely informative and, indeed, fortifies my opinion that this is a very complex area with overlapping possibly responsibilities and so on, and I suppose now we will learn how these systems operate or whether there are things which can be fixed in the systems to make them operate more smoothly.

I will now ask the Permanent Secretary in the Ministry of Public Utilities, Mr. Joseph, Gary Joseph, to make a brief statement of about two minutes.

Mr. Joseph: Good morning, Madam Chair and members of the Committee. Thank you for the opportunity to deliver brief opening remarks to this enquiry into the waste management policies and initiatives of the State. As you are aware, as was just indicated by my colleague from planning, there is a multiplicity of agencies involved in the management of waste in Trinidad and Tobago, and most would be represented here this morning, including the Ministry of Planning and Development, the EMA, the Ministry of Public Utilities and the Solid Waste Management Company Limited.

Given the scenario, I would hasten to add that the lack of one centralized body for all aspects of waste management has constrained the development of an integrated waste management strategy. Further, the legislative framework governing solid waste management in Trinidad and Tobago, which includes legislation such as the Municipal Corporations Act, the Litter Act and Public Health Ordinance, is indicative of the many entities involving solid waste management. SWMCOL is one of the major players in the management of waste in Trinidad and Tobago and the Ministry of Public Utilities has oversight responsibility for this agency.

The key priority areas identified for development and which the Ministry has an obligation to facilitate SWMCOL in achieving are: waste diversion and resource recovery, modern collection treatment and disposal infrastructure, waste information management and security systems, cost recovery and revenue generation and education and public awareness.

Despite the challenges experienced during these turbulent times, SWMCOL has been able to successfully meet the objectives of its strategic framework which is identifiable through major achievements of operational improvements on landfill sites leading to a reduction of landfill fires;

establishment of a full-scale material recovery facility at its Guanapo Landfill site; establishment of a pilot biological engineered wetland system for the treatment of landfill leachate at the Guanapo Landfill; establishment of a pilot curbside recycling project undertaken with the Tunapuna/Piarco Regional Corporation; roll out of the fleet modernization programme aimed at replacing the existing fleet of the company on a phased basis; acquisition and commissioning of a mobile tyre shredder and a multi-purpose shredder; establishment of a beverage containers recycling facility to treat beverage containers such as plastic bottles and Tetra Paks; a launch of the “Get into Green” with SWMCOL public awareness and education programme and the launch of the Public Sector Recycling Programme.

The Ministry of Public Utilities will continue to support and facilitate SWMCOL in meeting its mandate and delivering on its intended initiatives so that the agency can continue to contribute to the development of Trinidad and Tobago. Madam Chair, I thank you for the opportunity.

Madam Chairman: Thank you very much, Mr. Joseph. May I now invite the CEO of the Solid Waste Management Company Limited, Mr. Roach, Ronald Roach, to make a brief statement of about two minutes?

Mr. Roach: Good morning again, Chair and members of the Committee. SWMCOL, we are really delighted to be here in what we consider to be a very important issue, the issue of waste management in Trinidad and Tobago. SWMCOL was established in 1980 pursuant to a Cabinet decision to implement the Solid Waste Master Plan for Trinidad and Tobago prepared by Planning and Stanley Associates Engineering Limited. Prior to 1980, what existed was the regional corporations themselves had the full responsibility for waste management.

We were mandated with the responsibility for the management, collection, treatment and disposal of solid waste in Trinidad and Tobago. However, that full mandate has never been materialized because of concerns raised by the regional corporations about their loss of that responsibility. So, currently, SWMCOL manages three landfill sites in Trinidad for which it receives a subvention, and those three sites are: Beetham Estate, Forres Park and the Guanapo Landfill sites and they received about 90 per cent of the country’s waste.

In addition to landfill management, SWMCOL is involved in commercial solid waste collection and disposal, including general waste collection, special waste, liquid waste collection and disposal, rental of portable sanitation units and resource recovery services. We also have a

role to play in public education.

We as the company responsible for the disposal of the majority of the country's waste, we do recognize and painfully aware of the challenges associated with waste management in the country. However, we believe those challenges can easily be overcome, and it requires arrangement between all the parties involved, including those who are here as well as the Ministry of Rural Development and Local Government, and we look forward to being part of the solutions to those problems.

Madam Chairman: Thank you. Having heard the opening statements, I suspect that even with your input here today and your written input, that we will have further questions for you before we write our report because it does seem to be quite a complex area. Perhaps, I could just get us rolling by posing a question to the PS in the Ministry of Planning and Development, Ms. Hinds. In one of the papers presented to us, I saw that you had referred to studies being conducted in relation to the most efficient manner of solid waste disposal. What was the most recent study and can we access that as members of the public?

Ms. Hinds: That was referenced to—you are referencing statements made in the Vision 2030 document that said, those are things that are to be done and will be done.

Madam Chairman: Oh, I see.

Ms. Hinds: Yes? To determine policy regarding solid waste disposal. One of the things we would do is conduct studies to determine the most efficient way. I could only speak to, I know there was a 2010 study, but as to even more specifics, I think I will defer to my Environmental Manager, if he could recall any additional studies that may have been done.

10.40 a.m.

Mr. Persaud: We currently are engaged in a project at the Guanapo Landfill site with SWMCOL doing an assessment on the levels of contamination. It is a global environmental facility project that is being implemented through the Basel Regional Centre in Trinidad and Tobago. I believe they have already done testing during the wet season, and they are currently conducting dry season testing on contaminations on that which would lead towards developing a plan for remediation for the site.

Madam Chairman: I do not know if what I am going to ask will make sense at all, but it seems to me that if there are reports which are proposed, then the institutional memory of the Ministry will want to be informed by earlier reports in order to determine whether what was set out in those

reports have been accomplished, and if so, why not, and whether things have been accomplished and what benefits have accrued as a result of those things. So that is the purpose really of my question of enquiring when was the last report in the Ministry with respect to—or has there been any report in the Ministry with respect to the most deficient manner of solid waste disposal, let us say?

Ms. Hinds: Chair, I understand what you are trying to get to and it makes absolute sense. So what we could supply you with—I said I am aware of the 2010 study. It was not necessarily authored by the Ministry of Planning and Development, but I believe it was conducted by the Ministry of Rural Development and Local Government. At the point in time they may not have been named that. But we can definitely supply you with any information and studies after this.

Madam Chairman: Absolutely, that would be extremely helpful because it would give us the historical context and help us with any recommendations we may want to make. We also read about a waste energy initiative. Could you tell us a little more about that, or someone from your team?

Ms. Hinds: Chair, I will begin and I will defer as necessary. It is really a project under the Ministry of Energy and Energy Industries, so they are the one. So we left that Ministry out in our little introduction, but they are the one who has actually put out an expression of interest asking companies if they are willing to be involved in such an activity as waste to energy. I believe the request went out in 2017. I believe that bids have been received and they are possibly at the point of evaluation of same, but I would not want to cross the boundaries here, it is really a Ministry of Energy and Energy Industries initiative.

Madam Chairman: Well then I should ask, the next question that occurs to me is, how do you all coordinate currently?

Ms. Hinds: You hit the nail on the head so early in the game, Chair, so early in the game. I think this is what my colleague was alluding to as well, the PS of Public Utilities in his opening statement, the issue is one of coordination. However, I think it is fairly clear who is supposed to do what, but still there is no one body, to my knowledge, that says, yes, we have oversight of the entire picture. From the perspective of the Ministry of Planning and Development and our development of the national performance framework, our job is to track it, to see if the indicators, if the targets are being met, and we are in constant dialogue with the agencies and the Ministries which are responsible for various parts of the process. But then that is one responsibility, but you

hit the nail on the head. To my knowledge we can improve on coordination, and I will stop there for now.

Madam Chairman: I understand. Mrs. Crichlow-Cockburn, you had a question?

Mrs. Crichlow-Cockburn: Thank you, Madam Chair. In the submissions provided it was noted that the World Economic Forum determined that Trinidad is the top waste-producing country in the developing world. When you look at that, together with the fact that we are told there is minimal segregation of waste materials, prior to disposal there is little recycling and reuse of the waste, and we also have limited sites for landfill. This suggests to me, probably the entire Committee, that we are not efficiently managing our waste. So what I would like to know is what is being done, one, to reduce waste produced in Trinidad and Tobago, and what is also being done to more effectively manage the waste produced?

Ms. Hinds: I want to defer from a policy perspective we have written the documents. We have said we want to reduce it. We have said that we want to do certain things to ensure that waste is managed in a sustainable way. You always start with the overarching documents. I am quite pleased that we were able to achieve that in terms of Vision 2030, and we are also quite pleased that we are reviewing our National Environmental Policy, the NEP, to tighten up on the very specific strategies that would be required. But I am going to defer to the Manger for the Environmental Management Authority, because there is one specific project that is endeavouring to target just what you have asked, and that would be the ICARE project. So, Mr. Romano.

Mr. Romano: Thank you, PS. Yes, following through from the coordination question the EMA is empowered by its Act to be the coordinator of a lot of these environmental issues. And one project that we are doing, which is a Green Fund sponsored project, and amongst the partners are our line Ministry, the Ministry of Planning and Development, SWMCOL, the Ministry of Public Utilities, the IMA, the Ministry of Rural Development and Local Government, and this project which goes under the name ICARE is really supposed to prepare the country for the passage of the waste rules, the EMA waste rules. The EMA waste rules is the only outstanding rule of the suite of the Environmental Management Authority, the EM Act rules. I mean, it is the one piece of legislation that is still to be enacted. This we expect will be enacted in 2019. We are going through the process, we have a draft prepared that will be submitted to the Ministry, and the expectation is after the public comment period that in 2019 the waste rules will become law, but back to ICARE. So ICARE is about recycling, and it is about all the elements of recycling. It is about reuse, it is

about reduce, and it is about recycling. The Government has made a decision—the Cabinet made a decision that the Solid Waste Management Company will be the company that will be responsible for recycling in Trinidad and Tobago. So SWMCOL already has a facility at NAMDEVCO, which is the material recovery facility which Mr. Roach will tell us, I am sure, much more about. What we are attempting to do, or what we are doing in this project is really to moving the country into a culture of recycling. We have some 80 bins around the country where people are bringing recycled materials. This material is transported by the project and it goes to the three SWMCOL sites, Forres Park, Guanapo and Beetham, and then it goes to NAMDEVCO, which is where the material recovery facility is located. So, yes, the country is moving towards a recycling culture. I mean, this is a culture change and therefore we feel it is going to take some time. We are pushing especially with public education, and we are coordinating. I mean, the Public Utilities have just started a public sector recycling programme which is being supported by ICARE. A number of schools have started programmes. A number of private sector entities are very much interested in the ICARE project. So I think the ICARE project is moving forward, and we look forward to it continuing with the support from everybody.

Madam Chairman: Thank you, Mr. Romano. Some of the questions that you will hear coming from us will be questions that we think may be of interest to our listeners, but this one is of interest to me as well as a law, because I always had the impression that the EMA was a regulatory body. So how does that fit in with the more dynamic role which you have described? Or is it that SWMCOL is acting on your advice or you regulate what SWMCOL does? Could you just clarify?

Mr. Romano: The Environmental Management Authority, one of its roles is that of regulator. We are also educator, we are also protector of the environment, and we are also facilitator, and this is one of our facilitation roles where in a number of instances we enacted rules, the Water Rules, the Noise Rules, the Air Rules, and we did not have that public education that was necessary beforehand so that the public is prepared for these rules, and we have decided we would not make the same mistake with the waste rules, especially in an island—well, two islands where waste is much a major issue. And, therefore, we are using this iCARE project to prepare the country, not only individuals but really companies, because the commercial sector is going to be impacted with the waste rules. So to prepare the country for the enactment of the waste rules, and we are using the business, the company, SWMCOL, who is going to take over, because when this project is completed, and the project has a finite start and a finite end, it morphs into what SWMCOL does

as their day-to-day business. So it is really preparation and facilitation which is all part and parcel of the EMA with respect to the EM Act.

Madam Chairman: Thank you. Mrs. Crichlow-Cockburn.

Mrs. Crichlow-Cockburn: Thank you, Madam Chair. Just a follow-up question, one, I commend that I find the project is commendable, but do you have the necessary support in place? For example, in my constituency a number of the schools are very much aware about the whole thrust with recycling, so as the MP they have been asking, could we be provided with bins so that they can recycle, and there has not been a positive response. As a matter of fact, in the constituency people are interested in recycling. When we look at the number of plastic bottles that are generated on a daily basis, I mean, it is a large amount, what is to be done with the waste? And I think that is where we may be falling short in that persons are becoming aware and they are being educated, but what do they do with their waste? That is the question I would like answered, please.

Mr. Romano: And I surely would want Mr. Roach to also get involved in terms of the answer. But what is happening with respect to the schools is the first thing that we have to do is to write the Ministry of Education to get approval for us to approach the schools to get bins. So some schools already have bins because we have gotten approval, but we have written the Ministry of Education now to get a wider participation with respect to bins. With respect to communities our major challenge is that people see a bin and they think it is a garbage bin not a recyclables bin. So we get a lot of garbage in the bins and sometimes we have to move the bins because nobody is taking responsibility to ensure that recyclables are going into the bins. We are ramping up with respect to our public awareness and education. There are going to be lots more bins, I mean, in the communities. We congratulate communities like Cashew Gardens, I mean, who have been doing this for maybe over a year now, and very successfully. So some communities are already actively engaged, but, clearly, I mean, we know, I mean, for it to become a national project we need to get deeper into the communities, and we are doing that.

Mr. Rambharat: Thank you very much. To the EMA, you mentioned Cashew Gardens, and that is a good opening for me. Last year on December 21st I visited the Carlsen Field area. There is a lot of discussion in this country now about agricultural lands and what happens on agricultural lands, and in Carlsen Field we have a significant amount of agricultural lands, and I highlighted on December 21st on social media—the story is so ironic, we have a company operating in Carlsen Field that is recycling metals, and that area that was previously occupied by Tanteak has now been

converted into one massive recycling area. The people are handling various items, but items like barrels, for example, and containers which previously had oil, and the oil gathers on the land in pools and find its way into the drainage system in Carlsen Field. Day and night they are lighting massive fires and burning rubber, and other things, and polluting that environment, and that to me is something—and that is agricultural land, and I know for a fact that the EMA has had reports, and I would like to know—it is all well and good to talk about law and policy, and who is operating in silos, and different Ministries, but this is a classic example of something happening in full view of the public and there is absolutely no action.

Madam Chairman: Who are you directing that question?

Mr. Rambharat: The EMA.

Mr. Romano: Thank you for that, Minister Rambharat. Yes, we are aware of the operation in Carlsen Field, and, again, through our coordination mechanism with the Commissioner of State Lands, with the Town and Country Planning Division, with the regional authority and the public health authority, we are taking action against that establishment. It never happens as quickly as any of us would like it to happen, but we have to be clear that we are following the correct procedures, and we do what we have to do, and action is being taken.

Madam Chairman: Well, could I be more specific, could I enquire whether—is there some sort of notice that has to be served on them, and if so, have they been served?

Mr. Romano: I know the notice of violation because it will be a breach of an environmental requirement. The notice of violation was being prepared. I mean, it is not one that I have followed up on, Chairman, so I can get back to you, I mean, with respect to what is the status of the notice of violation.

Madam Chairman: Well, this brings me to—perhaps part of our problem is timely responses. So for a fairly big difficulty like that, what is the average time that you would take to investigate, prepare a notice and have it served?

Mr. Romano: Because of the size of the operation it could take us a couple of months, reason being is that sometimes, I mean, we want to ensure that the facility does not have approval from some other agency with respect to operation. And, again, you know, the need for coordination, the need to get responses, timely responses from other agencies with respect to the approvals for whatever is the land use in the area, and that is sometimes a challenge, and that is why sometimes it takes that length of time. Also, in some areas getting who is the owner of the property could

also be a challenge. So it all depends on the nature, the scale and the location of the activity.

Madam Chairman: Is it that the EMA is under-resourced in terms of the provision of personnel? Let me explain why I asked the question, because it seems to me that in this day and age when we have email and WhatsApp, and so on, even if a WhatsApp group is formed amongst the leaders in the Ministry so to say, could you have your person check to see if a notice has been sent. I mean, that is something that could be verified very quickly. So I think that a two-month period seems to be a bit excessive. Would you agree?

Mr. Romano: I would not agree, I mean, with respect to whether the EMA is under-resourced, I mean, I do not know any agency that can say that they have all the resources that they require. So I think that is a given throughout all our agencies. We are in difficult financial circumstances and all of us are required to do, I mean, more than our so-called job descriptions. I mean, that is also a given. So, yes, we are under-resourced. Whether or not the timelines are where they should be, I mean, I think we are improving. I think we are doing much better than we did maybe a year or two ago. The EMA was focusing on getting the regulations in place, so you had the NEP to do, you had all the various rules to put in place, now just the waste rules are outstanding. So the focus was getting all the legislation in place and then it was permitting, you know, doing all the permits. Now I would say, within the last year, the focus is changing to monitoring and compliance, and therefore I think we are going to be seeing—not think, I know we are going to be seeing improvements in terms of monitoring and compliance. And we are hearing from the public, you know, that we are improving with respect to monitoring and compliance.

Madam Chairman: Now, forgive me because we are really down to three members, so if you keep hearing my voice asking questions, it is just that the Secretariat has provided me with a bit more information than my colleagues have. So to keep the session going you may hear from me more often than the Vice-Chairman of the Committee and from Sen. Obika. I am not sure, Mr. Romano, if this question should be directed to you, but PS in the Ministry of Planning and Development, would it have made more sense for ICARE to be simply given the SWMCOL to run with having regard to all of the other things that the EMA is responsible for?

Ms. Hinds: I am going to defer to, of course, the Managing Director to share his thoughts on that, but I want to take us back just one little bit, just in terms of—because I know that the intent of this Committee is to truly understand the processes and understand what happens behind the scenes in agencies and Ministries such as ours, and when we speak to the issue of resources it is not per se

only—because I see where you are going, you know, focus on what is your mandate and let other people do the other things. It is not so much only a case of bodies sitting on a chair, but it is also a case of systems and how procedures, and these systems in different sectors and agencies, how well they work. If you are to take somebody to court, and you would appreciate this, you have got to be absolutely certain that your ducks are lined up. And that thing about knowing who the owner is, as simple as it sounds, it is quite challenging. So when Mr. Romano says that it takes some months to make sure but what he is alluding to, to make sure that you have the information accurately so that you can then present yourself in court, because once you submit a notice you are going in a particular direction, and there have been instances if this is not well done, then after all of the hard work it just falls down.

So I am aware that there is work taking place, even in the Registrars of the RGD, that will improve and help us to be able to do our work better in order to be able to get that kind of data much more quickly, because now at this point your search clerks go in. I know that there are in some cases we have quite a few deeds that are already scanned and available and you have access, but not all. So it is even a process, and I just wanted to say that in terms of how resources are used and who is doing what, we admit, it is a challenge, but I just needed you to appreciate that it is not a simple matter. It is not always a case of just delaying. The value of the technology is a good one but there is still room for improvement. And I suspect, even now while I am chatting, that Mr. Romano is sending a WhatsApp message to his people to enquire as to the status of that particular notice. Now, I will defer to Mr. Romano to say his thoughts on whether ICARE should stay with us or if it should go SWMCOL, and when.

Mr. Romano: Thank you for that, PS, and, yes, I am sending a WhatsApp. However, we are also, I mean, in terms of improving in efficiency the EMA is actually launching ISO 9001 certification, on the road to certification this morning. Well, of course, I had to be here because, you know, everybody else is at the launch. ICARE, I-CARE, as I said, is a Green Fund funded project. SWMCOL would not be able to access the Green Fund, and therefore this is the reason why the EMA is facilitating the project, because at the end of the day though, I mean, SWMCOL is going to be the people that is going to continue with this project to make sure, to ensure that Trinidad and Tobago, I mean, recycles, and is best practice with respect to recycling.

Madam Chairman: Okay, thank you. So there was actually an easy answer to that question.

Mr. Romano: Yes.

Madam Chairman: How is that having an impact on the EMA, I mean, is it creating a kind of dysfunction? Because you have to now devote a considerable amount of your personnel, and so on, to the ICARE programme to liaise with SWMCOL. That is like one line of activity and on the other side you have to deal with certification, regulation, and all of the other matters that you are required to do. Is there any way—is that creating a difficulty, and if it is then is there some way in which that could be resolved?

Mr. Romano: Well, we are fortunate, it does not create a difficulty because projects in the EMA is handled by a separate projects unit. And the projects unit do not meet with the regulators, it is separate from the regulators. So the EMA as regulator and the EMA as projects is separate, and the projects, of course, support themselves. So the projects unit is supported by funds from the project so it does not impact on the operations of the EMA. So it is a quite good situation for us. But it also assists, because the people involved in permitting in the regulations in the EMA get to work closely with each project to see what they are doing great, what they can do better, and what they can do differently and, of course, the EMA is a public educator, I mean, so we need to always be involved in public awareness and education.

Madam Chairman: Thank you. I know there are many people in the room do not think that we are ignoring you or we do not have questions for you, it is just I am trying to keep a sort of logical flow going with respect to the issues that we are looking at. Now, the Vice-Chairman raised an issue with respect to pollution taking place on land in central. Who is responsible for addressing situations where, let us say you have oil discharged from a tanker in the western peninsula, who is responsible? And is there any method by which the perpetrator can be found and punished, or made liable or fined? How do we deal with that as a country?

11.10 a.m.

Mr. Romano: As a country with respect to pollution, we do have the National Oil Spill Contingency Plan which is managed by the Ministry of Energy and Energy Industries. However, the plan speaks to a certain level of spills, and therefore small spills like what we had in Chaguaramas, or this week in Carenage, really do not fit into that plan. So what we have been doing as the agencies, as the various agencies: the Ministry of Energy and Energy Industries, the Maritime Services Division, the IMA and sometimes the regional corporations where this thing happens, we have been coordinating amongst ourselves to ensure that action is taken.

What we need to do and what we are trying to develop—because in the EMA Act another

section that we have not implemented, section 61, speaks to spills. That is something we need to work on, again with the other agencies, to really develop, formulate a clear framework in terms of responsibilities and accountabilities, and that is happening.

Madam Chairman: Thank you.

Mr. Rambharat: To the Ministries and agencies before us, nothing crystalizes an issue like a nice photo, and I have reposted on my Facebook page the photos from Carlsen Field. You know what, people out there would ask, and we have listeners and viewers, and the country get very cynical because with all of this that is happening here, the four key agencies—Rural Development is not before us yet—and you have the people in Carlsen Field and people in other parts of the country who pass this problem every day. They live with it. This did not happen a few weeks ago; this has been years.

The environmental management legislation is with us 18 years now. Section 58 is very clear. Section 65 is very clear. Section 68 creates the offence, section 65 gives you your power. And the public will be asking, with all this talk and pointing fingers at Ministers, and saying, with all of this discussion, why? If we go back to even the Summary Offences Act there is provision in there for dealing with what is happening in Carlsen Field. We could go on and on about legislation and policy and green this and ICARE and you care and we care, but the people in Carlsen Field, this morning they will look on and say nobody cares.

If you have heard me in the Senate over and over, I say we as legislators could give the best legislation. If the people paid by the taxpayers of this country to give effect to the legislation are not doing their jobs, then all of us will fail, and the people out there who pay our salaries, including mine, will become more and more cynical.

I have a lot of questions to ask, but I just want to make that very clear. When I went to Carlsen Field, and as I go around this country, I do not have the answers. As a Minister I do not have the power to charge or to enforce. When I do in fact go to the limits of my authority and take action, there are people who threaten to take me to court. I am hearing that agencies with clear jurisdiction are still trying to find out whether they have the jurisdiction.

So my question is, with all this duplication and overlap, some responsibilities in the corporation, some in SWMCOL, EMA, Public Utilities, Planning, I want to ask at what stage we will have convergence. Because on many issues, food safety, various issues in this country, we hear about these silos and the duplication and the overlap. On the matter of waste management,

as the people who are being paid by the taxpayers to sort out this issue, what is the point of convergence? Who is going to stand and take responsibility for delivering to this country a modern waste management programme? The question is to anybody who could answer it.

Madam Chairman: Well, somebody has to pull the short straw. [*Laughter*]

Mr. Roach: I would like to take a stab at that answer. As far back as 1979 when that Planning Associates and Stanley Associates study was done, there was the recommendation for a single central authority with responsibility for waste management, overall waste management. In 1996 another study was done that said the same thing. In 2000 a study was done that said the same thing, and in 2014 another study was done that said the same thing, and that is the answer. To me the answer is clear. There still is need for a single central authority for waste management, and until that is done then we will continue to have these problems, and we will continue to deflect and work together in little pockets, which we are doing now, and it will lead to incremental improvements, but it will not solve the problems. That to me is the one single solution to the issues that we face.

Mr. Rambharat: I would just say it would be something like SWMCOL. But how would that central authority, or lead authority, interface with the municipal corporations which currently have garbage collection and waste management responsibilities?

Mr. Roach: One of the things we have to realize is waste management is quite a specialist field as well. It is a question of coordination. One of the challenges with the regional corporations now is that they do not have the expertise. They try their best, they do their best, but they do not have the expertise in waste management, in simple things like route management for the municipal services that are performed right now. Once you can do those things in a proper manner and so, it can lead to so much increase in efficiency. We keep on talking about the challenges with efficiency, the inefficient collection service, the inefficient disposal service and so. So that central authority will have authority over the waste collection. At the end of the day the municipal corporations will still have the direct responsibility, but they would be supervised by the Waste Management Authority to ensure that the objectives are met, that the routes are properly planned, that the collection service is done as per schedule, and that the waste ends up at either a landfill or a recycling facility or a waste energy facility, if and when that may come in place.

Right now there is no oversight of that function. So if a contractor chooses to dump waste in Carlsen Field, there is very little follow-up, and certainly no penalties for that contractor. And

that sometimes is the unfortunate modus operandi of some of these contractors, because they want to make two trips when they should be making one, and instead of reaching the landfill they just empty it. That is the unfortunate reality. Those are the things that a waste management authority will be able to do.

SWMCOL was set up in 1980. The recommendation was to set up a Waste Management Authority. SWMCOL as a company was set up, and that has had ripple effect problems from 1980 onwards. We have continued to try to do what we could do without the authority, working with the various other agencies like the EMA and the Ministry of Planning and Development, but there is only so much we can do without having those authorities.

I want to add that in the 1990s, SWMCOL in a capacity of a consultant went to the OECS countries and made recommendations for implementation of solid waste systems there, including the setup of authorities. Those countries have since then set up authorities, and they all function in the same manner that we would like our system to function. So we have been able to set up those systems in other countries, but in our country that system still does not exist, and as I said, it comes back to that lack of authority that we have here.

Madam Chairman: You provided us with some written material, and we would just like to have it shared with members of the viewing and listening public, and the terms understood, because as we go forward you may be making statements, doing education programmes and using terms of reference, and people do not know what you mean when you say, for example, you use the phrase “sanitary engineered landfill”. What is that? What is a sanitary engineered landfill?

Mr. Roach: Right; so in waste management terms a sanitary engineered landfill refers to a disposal site that has engineering arrangements built into that site for the protection of human health and the environment. What those engineering aspects are, include having a leachate system, having an impermeable liner so that—and in talking about leachate systems I need to define what “leachate” is. Leachate is the product when rainwater seeps through the waste and dissolves the soluble components, the waste in itself when it degrades, organic waste and so produces its own leachate. So it is really a liquid substance coming out of a landfill. It is a natural occurrence, but because of the types of waste coming into the landfills that leachate can be toxic, and therefore as waste management we need to ensure that that leachate does not end up in the environment. So an engineered sanitary landfill site will have those engineering mechanisms in place for the protection of public health and the environment.

Madam Chairman: Sen. Obika, I understand you have a question.

Mr. Obika: Several, but it depends on the time.

Madam Chairman: No, no, no, by all means.

Mr. Obika: Thanks Chair. The questions I have cannot be asked, furthermore answered in the time permitting, so I will pick from it because waste affects all of us.

I will start with the easiest question. From the vacant positions at March 16, 2018, SWMCOL, I see that 41 per cent of all vacancies are with recycling and recovery. That is nine vacancies. Just at a glance, if 41 per cent of your entire vacancies is in the area of recycling, it would beg the question is it that we are wasting time with recycling in Trinidad and Tobago and paying lip service? What accounts for that level of vacancy in recycling and recovery? Of all areas that should be the area with the least vacancies.

Mr. Roach: Actually what would have happened is that those would have been the latest set of vacancies only because of the ICARE project. Phase two of the ICARE project was only launched in January, and because of that we have identified a number of vacancies, but those vacancies will soon be filled so that we will no longer have that challenge.

Mr. Obika: How soon can we expect that to be filled?

Mr. Roach: Definitely by the month of April.

Mr. Obika: The other question I want to go to is regarding the Waste Management Authority. How would you reconcile the role of the Waste Management Authority and the EMA, given that the EMA is already fulfilling some of the mandate of an eventual Waste Management Authority? How would you reconcile the work of the EMA as it is featured right now in today's setting versus the Waste Management Authority?

Mr. Roach: From where I sit, the Environmental Management Authority has authority over the environment. Waste management is more than just the environment, it is also public health, and therefore the Environmental Management Authority, as it stands now, would only have responsibility over one aspect of the total waste management function. The Waste Management Authority will ensure both on the environmental side as well as the public health side, as well as the other legal issues involved in waste collection. Right now there is no permitting process for waste management, so anybody can get involved in waste management, and buy a truck and park it at his house and say he is a waste collector. Anybody can collect waste and not dispose of it at a landfill site right now, at one of the approved landfill sites, and that is what the waste management

authority would do.

Also with respect to recycling and so, there is a definite need for one coordinated approach to recycling. So the individual regional corporations, municipal corporations, they all have interest in setting up recycling programmes, but there are some things that need to be done from a coordinated basis, and again that is where the waste management authority will come in.

Mr. Obika: I take that as whatever role EMA is filling today they may have to give some of that away to the Waste Management Authority. Hold the answer and give it with regard to this question.

There are a lot of reports of dumping of sewage in open pits in certain sites, for example at Beetham, where I assume the rates that they would pay are at variance with what you would pay WASA if you are sending sewage. You can clarify in a response. How is this being handled in terms of the dumping of raw sewage in pits versus giving it to WASA by contractors? Are there any plans afoot to stop that and how widespread is it?

Mr. Roach: I would like to defer that answer to the Ministry of Planning and Development.

Ms. Hinds: Can you repeat, thanks.

Mr. Obika: First, I wanted to verify that the reports are accurate, the dumping of sewage in open pits, for example at Beetham as well as other sites across the country, to ascertain how widespread this dumping of sewage is versus delivering it to WASA where it will be treated.

Ms. Hinds: I will have to defer to Public Utilities. I cannot speak to dumping and how widespread it might be. I am asking if Mr. Romano has had any reports about sewage being dumped in landfills.

Mr. Obika: Maybe I used the wrong term by saying landfills.

Madam Chairman: Just a second. Perhaps we could now invite Mr. Joseph to indicate, because as PS in the Ministry of Public Utilities, you may be the person best placed to say whether there have been any reports of dumping of sewage outside of the WASA facilities for treatment of sewage?

Mr. Joseph: Thank you, Madam Chair. At this point in time I am not aware of any reports being made to the Ministry of Public Utilities with respect to this particular activity. Based on the concern posed by the hon. Member, we can do some investigation to see whether or not that is in fact so.

Mr. Obika: If I may ask the question in a different way. Can you give an idea as to how sewage

is treated? Is it that we have the WASA facility, and do we have other facilities within which contractors would dispose of sewage so we understand how it is handled? Maybe the technical terms I used are not in line with what you are accustomed to, the industry jargon.

Mr. Joseph: Thank you, member. Again, I am not fully aware of how that is done. Again, I can engage WASA on this and we can provide that answer in writing to you.

Madam Chairman: PS, there are just some things that I wanted to clarify with you. One of the interesting things about your written submission is that you were talking about the move from waste to recycling, to waste to energy production. What exactly is that? Could you explain that in simple terms for our listening and viewing members?

Mr. Joseph: I will ask the CEO at SWMCOL to treat with it.

Madam Chairman: Perhaps there is a reason you all put him to sit in the middle. That is the hot seat.

Mr. Roach: So there is what is called a “waste management hierarchy”. The most preferable form of waste management is not to generate waste in the first place. After that, once waste is generated then you want to reuse as much as possible. Reuse simply means if you have a glass you use it several times before it becomes waste. Then you have recycling. Recycling involves some reprocessing of waste. So you can take this plastic bottle and you can chip it up and make a new plastic product with it, and that is recycling.

Waste to energy comes as the next rung in that hierarchy, which is now taking this bottle and putting it in an incinerator where it is burnt, and the energy, the heat from that is used to generate energy, either through electricity or in some places they can actually use that heat for heating of buildings and so forth. That is waste to energy.

The final tier on that waste hierarchy is the disposal. So you want disposal as the last thing that you can do, because there is no benefit to disposal, and in disposal you have for the next 100 years you have that waste still around. So that is the waste management hierarchy which includes recycling and waste to energy.

Madam Chairman: Sure; well I think I have realized that perhaps I should leave it to the members attending to determine who will answer what question, because I am not sure that we are posing our questions to the persons with the particular competence or specialization to deal with them. But you will have to forgive us for that.

With respect to the Beetham Landfill, one of the things which concern people is when

things are burnt there and the capital city is covered in a haze, and it is a health hazard to people with asthmatic conditions and so on. What is responsible for that? How can it be prevented, if at all or ameliorated? And what impact is that having on the environment because it is a swamp area? So there are three questions. I do not know if three people will answer it or if one person may answer all.

Mr. Roach: I can certainly start. The impact of fires—so we spoke previously about the sanitary engineered landfill site. In any landfilling process, whether it is a sanitary engineered site or not, you need to do at least a certain minimum amount of activities. What we do at Beetham is to compact the waste as much as possible, so when it comes in we have a compaction equipment and tractors that roll over it and compress it into as small a space as possible, and then that needs to be covered with six inches of dirt or any kind of top soil, any kind of inert material. That is the standard procedure for disposal of waste.

There is a cost to that. The unfortunate thing is that SWMCOL, when we calculate what is required for sanitary disposal of waste that adds to \$120 million for the three sites that we have, based on the amount of hours, based on the amount of waste, based on the fact that we need to compress it and to have six inches of dirt to cover the waste.

Because of the subvention we receive, we are unable to complete all those operational activities. So what happens is that we are not able to cover the waste as we should and therefore there are exposed areas of waste that remain, and those are the areas that can catch fire, especially in the dry season.

Added to that, we have the issue of salvaging at the three landfill sites as well. Salvagers are people who rummage through the waste and they try to take out what they consider still valuable. Because you have that human element in an engineered sanitary landfill site—in proper sanitary landfilling procedures there is not supposed to be any persons on the site. So because we have that social element, we have increased chances of fires because they would light fires to burn the copper, the plastic around copper products and so, and that increases the chance of a fire.

Notwithstanding that, since 2014—SWMCOL would have had a major fire in 2014, and since then we have made improvements in terms of reducing the incidence of fires, and we have ensured that as much as possible, especially during the dry season, that the waste is covered, if not 100 per cent, very close to that. But the fact remains we do not have the resources that are required to do proper sanitary engineered landfilling.

Madam Chairman: Do you have the resources to deal with at least one landfill? Because I would suspect that the Beetham Landfill has the greatest impact because of the huge numbers of people coming into the city and environs from all over the country to work every day and to go to school. And also because most of the Ministries and all the things you are required to do in terms of Government departments, they are still based in Port of Spain. So the impact of a fire in the Beetham has a very far-reaching consequence. So is it that your subvention can cover at least one?

Mr. Roach: From where we sit, I mean, the challenges at the three landfill sites are equal. Yes, Beetham is close to Port of Spain, but Guanapo is on the outskirts of Arima, Forres Park is upstream to the communities of Springvale and Macaulay and so, and those communities are affected very, very drastically when we have fires as well. So as I said, we have put systems in place at each of the landfill sites to improve what has been occurring. But there is still the chance of the intermittent fire at any one of those sites in particular, especially in the dry season of course.

Madam Chairman: Again, I am just asking this because I do not know who may be able to answer it. Biomedical waste, how is that collected and dealt with?

Mr. Romano: Biomedical waste is specific, and is sometimes considered hazardous waste. There are facilities throughout Trinidad to deal with biomedical waste, or in some cases the facilities, the hospitals, like the San Fernando General Hospital would have their own incineration facilities. So it is not supposed to go to any landfills or get into the normal garbage. It is supposed to be handled by certified people and taken to their facilities to dispose of, and generally it is incineration.

Mr. Roach: If I may just add to that, and that is a very important word, “supposed” to. The reality is there are three major hospitals and they do have proper systems for the disposal of biomedical waste. One of them incineration, the other two they use a private company. But apart from that there is still a lot of other small medical institutions, and there really is not enough control over that situation at this point in time.

So on occasion we do receive biomedical waste. It is usually hidden amongst other types of waste, but the reality is unfortunately biomedical waste sometimes reaches our landfills.

Madam Chairman: And in that case what do you do? How do you separate it and address it?

Mr. Roach: In those cases we simply bury it along with the other waste. It is already received. In a lot of cases we are not aware. Because it is hidden, we are not aware of the particular contractor or truck that has brought it in, and therefore there is very little we can do at that point.

Madam Chairman: I want to go back to an issue that had been raised by one of the members

earlier, and that is to say our rating in terms of how much waste we produce. Now, I was reading somewhere that our rating is affected by the fact that we are tiny islands and we have a petrochemical based industry. Is that why we are rated so high for waste, for the production of waste?

11.40 a.m.

Mr. Roach: Right. So, I just want to—there has been some misinformation going around as of, I think, two years ago, 2016. The World Bank, unfortunately, reported that Trinidad and Tobago had the highest per capita generation in the entire world and they quoted a figure of 14-plus kilograms per person per day. The reality is, that was simply not correct. And the source of the error was the fact that the World Bank took the waste that was generated in the country and divided it by the population of Port of Spain alone, so they came up with an astronomically high figure. If you look at the next in line after us was something like 5.5 kilograms. The reality is that our waste generation is 1.5 kilograms per capita, and that is, I mean, in the scheme of things quite average, so we are not one of the highest producers by any means. In fact, some of our Caribbean counterparts, Barbados in particular is quite significantly higher than us.

Notwithstanding that, it does not mean that we do not, as a society, generate—we do, in fact, generate too much waste. We are, of course, a consumer-oriented society, we import a lot of finished goods and so, and once you are importing products it usually comes with a lot of packaging, so our packaging waste is, you know, quite high and of course, packaging is voluminous, so it appears to be quite significant in quantity, but from an average basis, as I said, we are very average.

Madam Chairman: You know, late news is still good news. *[Laughter]* That bit of information about our rating is still on the Internet. I mean, every now and again you would see somebody plug it in as if it has been newly discovered, and this takes me to my other question. Was anything put out by any of our agencies, you know, in a forceful manner or let us say, on the TV news via an interview or so, to say that, “Listen, this was done incorrectly and this is where we actually stand”? Was anything like that done?

Mr. Roach: Yes. Yes. Definitely. So, we got the World Bank to correct their error and to retract that publication, but as you said, I mean unfortunately, once that news gets out, there is no way for it to come back. So whilst there were a lot of news articles related to the fact that we were the highest generation, when we got the official retraction and got the apology from the World Bank,

that did not make the news as it should have. So it was, in fact, that retraction was, in fact, carried in at least one of the newspapers, but as I said, it was not as significant as the articles associated with the fact that we were the highest generator.

Madam Chairman: Well, it seems as though the proposal for a management authority will also have to include a PR officer?

Mr. Obika: Thanks, Chair. I have a question regarding the use of tyres, because the whole issue with ICARE is about a culture shift regarding waste management and recycling in Trinidad and Tobago. Are there any plans afoot regarding the use of tyres in construction, in road repair and building, et cetera? Is there anything for that?

Ms. Allong: Okay. Through the Chair. So, I get a chance to speak now. Yes. We actually have some downstream industries that we are approaching to reprocess the tyres to some sort of value-added products. Right? But like everything else, it is very incremental. We also have to go through things like the EOIs, we have to do due process to ensure that it is equitable. So construction, of course, things like we have—well, I do not think I can name the entities, but yes we have been working with them for road resurfacing, for even converting, using it as form of tyre-derived fuel as well—that is another option—and other downstream products.

So, we are, as you may be aware, in 2014 we purchased a shredder, and waste management and recycling have different stages. So the first stage of reprocessing the tyres would be to reduce the size of it, size reduction. So, we were only able to purchase a shredder for the size reduction. Then, the other stage would be to de-wire the tyres, move the wire, so that we were not able to reach that stage as yet because of limited financial resources and so, but we are seeking to partner with other agencies or other entities to do that, and then, of course, to reprocess other downstream products.

Mr. Obika: As a follow-up question, because you mentioned the subvention and its inability to fulfil the requirements of SWMCOL in the main, specifically regarding the recycling of tyres, is any aspect of the environment tax being applied directly to your subvention, to increase your subvention to facilitate those projects you mentioned?

Mr. Roach: Unfortunately, no, not at this point. And again, yeah, that certainly is one of the disconnects. So we have shredding operations and we charge for our shredding operations, so people would arrange for us to collect their tyres, we will shred it at a fee. And there are a number of companies that willingly pay the fee and, of course, they charge it back to their customers and

so. The challenge now with the tyre tax is that the tyre tax has been implemented and now those same companies are now asking us, “Well, why am I still paying SWMCOL a fee if I am now paying a tyre tax?” So there is a little bit of a disconnect there. We are working with, of course, our Ministry to try to resolve that in terms of how best that tyre tax can, in fact, work for the benefit of the environment.

Mr. Obika: Follow up regarding that. If a company still wishes to get their tyres shredded, how much will they have to pay per tyre depending on the class of tyre?

Mr. Roach: Right. We have a tiered rate ranging, starting at \$10 and based on quantity going down to \$5.

Madam Chairman: One of the Senators some time ago had been talking about using recycled tyres to patch holes in roads, is that actually taking place and who is doing it?

Mr. Roach: It is not taking place now. One of the reasons it is not taking place is that, what we are doing is just shredding the tyres, and we do not have a system for removing the metal in the tyres so there are many tyres that are steel-belted and there is wire or metal in it. To properly resurface roads and so you need to have a system that removes that metal. So as Maria would have discussed we are working with companies now to see how best we can further process those tyres so that we can have the metal separated from the rubber, and once we do that then we can have the host of downstream projects including, yeah, use for resurfacing roads.

Madam Chairman: Well, are you aware of anyone using this, with or without wires, using old tyres to patch roads, a private company?

Mr. Roach: Do you mean locally?

Madam Chairman: Yes.

Mr. Roach: No. It is not happening locally.

Madam Chairman: Okay. The other thing I wanted to ask and I am not so sure that anybody here might be in a position to give an answer to this, but is there a system to track toxic chemicals coming into the country and to track distribution and disposal of those chemicals?

Mr. Romano: And I am sure that David will help me, Dr. Persad will help me. But under the Basel Convention for trans boundary movement of waste—and the Ministry is the focal in the EMA is the competent authority—before any waste moves through Trinidad, you have all these various forms to fill out and we need to, I mean, give approval for the waste to enter Trinidad. Our National Environmental Policy as it exists is very clear that no waste is to be imported into Trinidad

and Tobago, that is a clear statement in the NEP, and therefore, waste is generally not imported in Trinidad and Tobago. I mean, if it is happening we are not aware of it, if it is happening, because you are supposed to register through the Basel Convention for which we are signatories of. You are supposed to do the registration and get all the approvals from the EMA who is the competent authority.

Madam Chairman: Well, I am not sure, perhaps I used the word “waste” when I should have used another. What I am asking about is the importation of potentially toxic chemicals, for example, things that you may find in fertilizers, cleaning agents and so on and so forth.

Mr. Romano: So, we also have the toxic pesticides and toxic, whatever it is, board which is under the Ministry of Agriculture, Land and Fisheries and they, I mean, register products before they come in, and I mean, they do a full registration, so that board is the authority for that.

Madam Chairman: Dr. Persad—

Mr. Romano: Sorry, the Ministry of Health not Ministry of Agriculture, Land and Fisheries.

Madam Chairman: Dr. Persad, you wanted to say something?

Dr. Persad: Well just to elaborate, with the Basel Convention what the CEO of the EMA indicated is right. So, we are working the Ministry of the Attorney General to look towards putting, at least, give some legislative background by putting these things on the negative import and export list. Right now we work through the Basel competent authority’s notification, so the Basel Convention really is to—one of the main tenets is to make sure that countries are informed prior to waste being shipped to them to make sure that they could handle it locally. So if we have export waste, we have to notify Basel competent authorities in the receiving countries and get consent in that regard. So, we are looking towards to having some kind of legislative framework in place to give the force of law to the Basel Convention nationally.

Mr. Rambharat: Thank you very much. So, I want to say that the submission from the Ministry of Planning and Development was very comprehensive because one of the things that we set out to do was to conduct the enquiry into waste management policies, and I think reading it we have a very good understanding of, at the high level, the way Vision 2030, the sustainable development goals which we have endorsed as a Government, and as it filters down, the National Environmental Policy and all of that. But the most important thing is down at the end when question number 8 where you asked about the legislation, and Mr. Roach has spoken about the waste management authority. So, how far advanced are we in putting this new legislation before the Parliament?

Ms. Hinds: Sorry to sound like this, but the Ministry of Planning and Development took this process to a certain point, and then it was handed over to the Ministry of Public Utilities.

Mr. Rambharat: Right.

Madam Chairman: Do we have a comment from the Ministry of Public Utilities on the matter?

Ms. Johnson-Lawrence: Madam Chair, the recycling policy is an approved policy. With regard to the waste recycling Bill and the corresponding legislation with the bottle Beverage Containers Bill and all those other pieces of legislation, they are far advanced and that is being taken up by the Ministry of the Attorney General. The Ministry of Public Utilities is responsible for ensuring that SWMCOL has the organizational structure that will be able to deliver the mandate as envisioned by the role and responsibilities for the waste recycling authority.

Madam Chairman: Thank you. Okay, we have two questions from members of the public. The first is: Where can the public get information on the proper way to dispose of certain types of waste and other materials such as motor vehicle oil after an oil change or motor vehicle tyres? Is there a proper way and is there any incentive for persons such as mechanics to do so? So that is from the first person who has communicated with us. Who is going to take that question or those three questions?

Mr. Roach: So certainly they can contact SWMCOL, it is not that we have information available on our website, but they can certainly send an enquiry to us and we can direct them. There are systems in place at present, private sector companies that are involved in the collection of waste oil, as well as there are private sector companies that are involved in being able to return your tyres for eventual processing by SWMCOL. So we can provide them with that information based on their location through email.

Madam Chairman: What is the email address of SWMCOL?

Mr. Manswell: SWMCOL info, so info@swmcol they can send it to that or they can send it directly to myself which is dmanswell@swmcol.com.

Madam Chairman: Dmanswell@swmcol.com. Great. Excellent. The second one is: What efforts are being made by any of the entities appearing to encourage and educate the public on disposal of waste according to types, metal, organic, plastic and paper to allow for downstream recycling? Well, I know we have, to some extent, already touched on those issues, but can somebody give us a sort of sound bite so that the viewer or listener may be able to appreciate better what has been said thus far.

Mr. Romano: We have quite a good website and the ICARE project is on the website, and it really gives persons, gives members of public very clear information in terms of how you can handle waste, what are some of the best waste-handling methodologies, and also, I mean, where our facilities, where our bins located in terms of delivering their recyclables, and it clearly states what recyclables should be placed in bags, and where they are located. So I think, I mean, if they go to our website and you can also contact us because there is button to contact us on the website and it is www.ema.co.tt.

Madam Chairman: Thank you very much, Mr. Romano. What I wanted to ask is this. You know, “audit” is a word used in different contexts these days, but in terms of the ICARE project, are there sort of audits being done to say, okay, we expected to be at this particular stage at this time? This is where we are? Are we ahead, are we behind? If we are ahead, well that is fantastic, we should let the public know. If we are behind, are we analyzing the reason for that? Are there such audits being done on the project?

Mr. Romano: I think not only the EMA, I think but Government on the whole, you know, are trying to establish monitoring and evaluation, because you want to know what are the gaps, you want to know how to move forward. So in our 2018 NEP, which we are happy to state, went to the Minister this week, so hopefully within a month’s time, I mean, we should have a new or a revised National Environmental Policy in Trinidad and Tobago which would speak to waste and the importance of us doing something different with respect to waste. And in that NEP, I mean, we are now actually in planning to have an action plan and monitoring and evaluation framework. So every agency that has responsibilities in the National Environmental Policy will have to give how they are going to proceed and to ensure that the actions in the NEP are fulfilled and report.

And similarly, with respect to the ICARE project, I mean, we realize that one of the things that we were not doing is monitoring and evaluating, and now we are actually putting in place a framework with our partners including SWMCOL, the Ministries, public utilities, everybody else in terms of what are the goals and when they will be achieved, and that, again, should happen, I mean, within the next three months or so.

Madam Chairman: Thank you. Sure.

Mr. Obika: I just want to ask a question, just a general question. How far are we from the separation of waste at the homes, from the residential users? For example, you have this colour garbage bag for glass bottles, this colour garbage bag for plastic, this colour garbage bag for food

waste?—or are we getting there? If not, by what year we think we should reach there?

Mr. Manswell: Thank you, through the Chair, basically what we have done and we alluded to it earlier in this conversation, we had a pilot project with the Tunapuna/Piarco Regional Corporation where we educated the public on the separation of waste at source, whereby you separate your recyclables and you place at the curb for collection. This is in support of the ICARE project, because while ICARE has the 81 bins and we are partners with them, you will appreciate the fact that some individuals might just want to come at their gap and place their recyclables at the curb. So in answering your question, thus far we have had great support for this initiative so much so that we have two other regional corporations who came on board, and the population is ready to embrace and accept this process.

What we mentioned earlier in our conversation and I believe the PS for the Ministry of Planning and Development alluded to was some of the mechanisms. And what SWMCOL has put in place with the new municipal contract, municipal waste contracts going out, we have a component which is adopting this same TPRC model whereby the population will be advised of placing your recyclables at your curb, similar to what happens abroad, place your recyclables at your curb. And thus far we are looking at Wednesdays for doing this in our conversations with the regional corporations, we are looking at Wednesdays, but it is what is amenable for the corporation.

So in answering your question, yes, the population is ready. Yes, we have implemented our model and the model has been working, and we believe with just the right systems in place, you can see this going throughout Trinidad and Tobago.

Ms. Khan: If I might add, Chair.

Madam Chairman: Certainly, Ms. Khan.

Ms. Khan: We have also started to encourage separation at the workplace. So, PS Hinds would have alluded to the fact that the Ministry of Public Utilities in collaboration with SWMCOL and EMA and MTS initiated the public sector recycling programme earlier this year. And we have targeted in this phase of one first, seven Ministries that are headquartered in Port of Spain, so that we can begin the drive to separate indeed focusing on beverage containers as a first step. And that process now is going to be extended into the private sector starting with the commercial banking sector. And the Central Bank of Trinidad and Tobago which will be launching their own effort will take place by the middle of April, and Central Bank will become a partner with the Ministry

and SWMCOL to take it to the financial sector, and thereafter the programme will be taken out to different sectors of the economy focusing on separation at the workplace to encourage recycling.

Madam Chairman: Okay. Before I ask for the closing statements, I just want to go back to an issue raised by the Vice-Chairman which is to say, he spoke about the photographs of a dump site that people are passing by every day on their way to work. Is there anything or any authority which can simply go and remove what is there, take it to a landfill and charge the owner of the property? Is that a possibility or a way of possible resolution of a situation like that?

Mr. Roach: As far I am aware, that falls under the remit of the municipal corporations and they do have that authority to do that. Again, it comes back to the situation of who owns the property and that sort of thing, and then there is also the complication of you may have a piece of property that you are not using and somebody else comes and throws waste in your property, so you know, how do you deal with that. But as I said, it falls under the remit of the municipal corporations.

Mr. Obika: Chair, I want to ask a follow-up regarding that. Because I went to look at some land at a time when I was working at a cooperative, in a prior incarnation, in central, I think Chickland is the area. And the land is beautiful, but at the side of the hill you are seeing waste. And the guys at the cooperative were saying that the people are coming and they created their own landfill site, dumping home appliances and stuff like that. How many of these types of ad hoc landfills, if you want to call them that, that we have in Trinidad and Tobago? And what processes the ordinary citizen can take? If, let us say, they decide to take out their smartphone, take a picture of the person who is doing this? Of course, it may be the crowd may be dumping, it may not be an organized effort, but can the ordinary citizen just as we have 800-TIPS for crime, can the ordinary citizen now be a whistle-blower, and to whom to get this phenomenon ended?

Mr. Romano: The ordinary citizen should do that, because, I mean, I think we need to do more naming and shaming, I think that is important. In terms of the law, there is the Litter Act, there is nuisance Act, all of these are summary, I mean, convictions that the lawyers amongst us could tell us, I mean, so much more about. And really it is through the regional corporations and through the police. You can also, of course, contact the EMA, I mean, and we either through our environmental police unit or through the Trinidad and Tobago Police Service, I mean, we will contact them and try to get some sort of conviction. However, in this case the person has to be caught, I mean, doing the activity.

And Chairman, to end on a good note, I mean, on a high note, action was taken in Carlsen

Field by the Commissioner of State Lands, I mean, the person on January 5th was given notice to vacate the property, and I suspect the Commissioner is going through the process in terms of getting the person to vacate the property. Their legislation, of course, is superior legislation to our rules, I mean, therefore, we have basically deferred to the Commissioner to continue with the process. We will continue communicating with the Commissioner as we do with all the other agencies, but I think it speaks to the fact that the coordination amongst the agencies is improving.

Ms. Hinds: And, Chair, might I add another approach as well. This is quite excellent, but data has always shown that the kind of areas that you spoke about, areas that people have traditionally been dumping in, you know. Sometimes when communities come together after it is cleaned, if the space remains almost vacant, I have seen some communities where they have started to plant flowers even trees, put down a few logs as pretend benches and show that they were owning the space. It helped deter the natural sort of habit of dumping. Now that cannot work all the time, but that too is something else that can be done by communities as well.

Madam Chairman: The Vice-Chairman has a comment.

Mr. Rambharat: Yeah. I just wanted to make the point about the Carlsen Field. Commissioner of State Lands operates in the Ministry of Agriculture, Land and Fisheries. I was there on December 21st, and the Commissioner took steps in January, but there are other agencies with responsibilities for what happened and is still happening on the site, and that is the matter I was addressing, that the land issue is one, but the activity remains on the site.

Madam Chairman: Okay. This has been a fairly long and quite intense section. I know that the members have learnt a lot and I am sure our viewing and listening public has also learnt a lot. So, I am going to ask for closing remarks, but I am going to ask for it in a different order from when we began. So, may I invite Mr. Joseph to make a few closing remarks?

Mr. Joseph: Thank you, Madam Chair, and for allowing us the opportunity to come here today and share with you various aspects of what the enquiry was concerned about. In going forward, I think, it has been made quite clear that we cannot continue to operate in these silos as it were. There needs to be a greater level of coordination between the various agencies, and in going back to the drawing board we will need to look that very carefully in order to really get a better, stronger approach in how we treat with waste management within Trinidad and Tobago.

12.10 p.m.

We will continue to provide the support to our line agency, SWMCOL, in its efforts in going

forward, whether or not it is through the creation of the engineered sanitary disposal sites, as well as the creation of transfer stations and recovery facilities, the building of public awareness, cost recovery. All those are areas we will continue to provide that support to SWMCOL in its efforts to deliver on its mandate. And like I said, we will continue to work with the other agencies in taking this process forward. Thank you.

Madam Chairman: Thank you. Mr. Roach.

Mr. Roach: Yeah, so we certainly, you know, have been glad to be part of these discussions and we hope that it helps to enlighten the members as well as the public as to the situation with waste management. We encourage people to be part of the solution as well. So where as a lot of people look to the agencies here for the solutions, the public has a great part to play in getting involved, becoming responsible citizens or becoming more responsible citizens, playing a part in the ICARE programmes and the other available programmes. I mean, besides ICARE there are a number of other available recycling programmes and so, get involved, get active and so. And we will continue to do our part, we will continue to strive for change in the waste management sector. But I do think there is a lot of hope in having quick changes that can see very tangible results in the very near future.

Madam Chairman: That sounds quite positive. Ms. Hinds.

Ms. Hinds: And to continue with that positivity, the Ministry of Planning and Development and its sister agencies are quite determined and serious about its responsibility. In terms of not only developing the overarching policy which we have done, but tracking it and seeing the extent to which these policies are effective and as efficient as we hope it would be and we are doing that through the National Performance Framework. I also wanted to signal that in Vision 2030 we did speak of going in the direction of one landfill. So, you did express—you shared some thoughts that it seemed to make sense to put your resources in one. And that is the intent, it has been signaled.

So again, we just wanted to thank you. Thank you for the opportunity to participate. We suspect that we may be here again, we are not certainly sure, but we are happy to continue to collaborate to achieve the outcomes that we all want.

Madam Chairman: Thank you. What I am going to suggest, because I know we have covered a pretty wide area and we have covered a number of agencies and their different responsibilities. I appreciate that in answering some of the questions, you were concerned about simplicity and

abbreviation because you realized that you could not go into full depth or in-depth answers to some of the questions that were posed to you. I invite you—without Mr. Oglivie who is the head of the Secretariat for this Committee—if you think that this Committee would be informed by other materials which you have in your possession, with respect to any of the projects or any of the solutions that you see, I invite you to send them in writing to us so that we may benefit from your scholarship, because clearly the different entities have done quite a bit of work. And this Committee would benefit from your work. So if you are so minded, we would be most grateful to accept.

I also at this stage want to thank the media, the persons in the public gallery and the viewing and listening audience. There being no other business, this meeting is now adjourned.

12.14 p.m.: *Meeting adjourned.*

VERBATIM NOTES OF THE TWENTY-SECOND MEETING OF THE JOINT SELECT COMMITTEE ON FINANCE AND LEGAL AFFAIRS HELD IN THE J. HAMILTON MAURICE ROOM (MEZZANINE FLOOR) (IN PUBLIC), OFFICE OF THE PARLIAMENT, PORT OF SPAIN INTERNATIONAL WATERFRONT CENTRE, #1A WRIGHTSON ROAD, PORT OF SPAIN, ON FRIDAY, APRIL 27, 2018, AT 10.25 A.M.

PRESENT

Ms. Sophia Chote SC	Chairman
Mr. Clarence Rambharat	Vice-Chairman
Mr. Taharqa Obika	Member
Dr. Lovell Francis	Member
Dr. Lester Henry	Member
Mrs. Vidia Gayadeen-Gopeesingh	Member
Mr. Julien Ogilvie	Secretary
Ms. Terriann Baker	Research Assistant
Mr. Brian Lucio	Research Assistant

ABSENT

Mr. Terrence Deyalsingh	Member [<i>Excused</i>]
Mrs. Cherrie-Ann Crichlow-Cockburn	Member [<i>Excused</i>]

**MINISTRY OF RURAL DEVELOPMENT AND
LOCAL GOVERNMENT**

Ms. Stara Ramlogan	Deputy Permanent Secretary (Ag.)
Ms. Julia Ramirez-Modeste	Planning Officer I

MINISTRY OF HEALTH

Dr. Vishwanath Partapsingh	Chief Medical Officer
Mr. Brian Armour	County Medical Officer of Health
Mr. Mark Mahadeo-Dookeran	Public Health Inspector IV
Mr. Beesham Seetaram	Programme Administrator, External Patient Programme

PORT OF SPAIN CITY CORPORATION

Ms. Lystra Parke	Deputy Chief Executive Officer
Mr. Mitra Sooklal	Public Health Inspector IV
Mr. Dale Agarrat	Transport Foreman II

TUNAPUNA/PIARCO REGIONAL CORPORATION

Mrs. Betty Ramdass-Ali	Chief Executive Officer
Mr. Paul Leacock	Chairman
Ms. Nadine Ribeiro	Public Health Officer

CHAGUANAS BOROUGH CORPORATION

Mr. Gopaul Boodhan	His Worship the Mayor
Mr. Raymond Seepaul	Chief Executive Officer
Dr. Neevan Sampson	Principal Medical Health Officer

SAN FERNANDO CITY CORPORATION

Mr. Junia Regrello	His Worship the Mayor
Mr. Indarjit Singh	Chief Executive Officer
Mr. Gerard Ramarack	Sanitation Foreman III

Madam Chairman: Good morning all. The meeting of the Joint Select Committee on Finance and Legal Affairs is reconvened. I wish to welcome all of you here and indicate that this is the Twenty-second Meeting of this Committee. The Committee is convening its second public hearing pursuant to its enquiry into waste management policies and initiatives of the State. There are some formalities that I need to go through because this is being broadcast live. Members of the public may send comments via the Parliament's social media platforms. Normally these are listed on the sheet, but I do not see them on the sheet today. So I will interject with that information shortly.

Before I proceed to welcome officials, I want to apologize to the members of the Arima Borough Corporation. Time in Parliament is tight, especially on a Friday morning, because there are members here who have parliamentary sitting this afternoon. So we made arrangements to

hear or to treat with persons who had responded to our request. So it seems as though the response from the Arima Borough Corporation may have been misplaced or we never got it. So I apologize to you for not having been able to accommodate you this morning. Thank you very much, however, for showing your interest and for attending. We have other sessions and we will certainly ask if you can attend one of those other sessions, but it may be useful for you to just listen to see how the other corporations operate, and so on. It might be helpful to you for when you return.

So today we have officials and representatives of the Ministry of Rural Development and Local Government, Ministry of Health, Port of Spain City Corporation, San Fernando City Corporation, Chaguanas Borough Corporation, Tunapuna/Piarco Regional Corporation. It is a lot of you, but if you could just very quickly press the button on your microphone and just introduce yourselves, starting from Mr. Leacock.

[Introductions made]

Madam Chairman: Thank you all very much. I do not think we have ever had such a full house. Now I will introduce myself and permit members of the Committee to introduce themselves.

[Introductions made]

Madam Chairman: The two other gentlemen you see sitting at the table are members of our Secretariat. In particular you may have heard from Mr. Ogilvie who is the Clerk to the Committee. Now, just so that we can focus and so that our listening public and viewing public may be reminded of the purposes of the enquiry, I will just review very briefly the three objectives of this enquiry:

1. To examine the level of waste production in Trinidad and Tobago.
2. To assess the effectiveness of regulations and policies directed at waste management.
3. To assess the adequacy of resources and institutions associated with the management of waste.

There are quite a few of you who I am going to ask to make opening statements. So we normally ask that these opening statements be kept to two minutes because we want to get down to the business at hand. So I will ask you to please keep an eye on the clock and marshal yourselves so that you can make your opening statement within that two-minute period. May I begin by asking Ms. Ramlogan who is the Acting Deputy Permanent Secretary at the Ministry of Rural Development and Local Government to make an opening statement?

Ms. Ramlogan: Good morning, Chair, esteemed members of the Committee and our viewing

public. The Ministry of Rural Development and Local Government would like to thank you for this opportunity to participate in the enquiry into the waste management policies and initiatives of the State as we all seek to determine the effectiveness of the existing regulatory, administrative and institutional framework for solid waste management. It has been established by previous submissions to this esteemed Committee that the administration framework for waste management in Trinidad and Tobago is complex, spreading across four Ministries, namely the Ministry of Health, Ministry of Public Utilities, Ministry of Planning and Development, and Ministry of Rural Development and Local Government.

Of course, we also have one state liability company, SWMCOL; one statutory authority, the EMA; and the THA, all having responsibility for waste management. So you can just imagine in terms of the delineation of function, and in terms of lead responsibility for waste management to the country. It is expected that through our collaborative efforts here today we can identify the existing gaps, deficiencies and constraints which can inform the recommendation required to improve the governance structure, policies, systems and processes of solid waste management for the health and well-being of all our citizens, the protection and preservation of our natural environment and the optimization of our financial and human resources. Thank you.

Madam Chairman: Thank you very much. I will now ask Dr. Partapsingh to make some opening statements.

Dr. Partapsingh: Thank you very much, Madam Chair. Madam Chair, I wish to express my sincere thanks for granting us the opportunity to appear before this Committee on the subject enquiry into waste management policies and the initiatives of the State. Referencing the official Government Policy Framework 2015—2020, the environment and public health is a high priority. This forum serves as a great opportunity to strengthen best practices within our context, as well as to review and address the challenges and threats with supporting recommendations in the operations and management of the environment with respect to policy, programme formulation, and implementation. Madam Chair, I thank you.

Madam Chairman: Thank you. Mayor Boodhan, would you make an opening statement?

Mr. Boodhan: Thank you, Madam Chair. We at the Borough of Chaguanas, we are very grateful for this opportunity here this morning that we could share some of the work that we do in Chaguanas, some of the challenges that we may face in terms of waste disposal and the whole issue of health and the environment, and also to recommend to this Committee, and to the country

at large, some of the initiatives that we think that we could put forward so that we could have a better health, not only in Chaguanas, but throughout the country. Thank you very much.

Madam Chairman: Thank you. Mayor Regrello.

Mr. Regrello: Madam Chair, we are also pleased to be here and for the opportunity to express our thoughts and our views. We want to begin by commending the Ministry for all the initiatives and, of course, our waste management policies that they have introduced so far. We are guided by the contractual arrangements and, of course, we have no problem with it. However, we may have one concern if we are to be critical here, which deals with the recycling aspect which was not considered up to this point, and we seriously recommend that we look at including recycling at the national level because that is a critical aspect in terms of we move forward with waste management. Thank you.

Madam Chairman: Thank you, Mayor. May I now invite Mrs. Stapleton Seaforth to make some opening comments?

[Secretary confers with Madam Chairman]

I am sorry, I just cannot see. It is Ms. Lystra Parke?

Ms. Parke: Yes.

Madam Chairman: Yes, I apologize. Would you make a brief opening statement?

Ms. Parke: Good morning and thanks for extending the invitation to the Port of Spain Corporation. Well, at the Port of Spain Corporation, I know that we have a very good waste disposal system in place in that we have a very large area that we service within our electoral district. We also have contractors that we have in the different accessible and inaccessible areas, in Belmont, in areas like that. Well, right now we have a subcommittee that is dealing with waste management where we are looking at starting—we have an initiative to start doing recycling. Thank you.

Madam Chairman: Thank you very much. May I now invite opening comments from Mr. Paul Leacock?

Mr. Leacock: Good morning again, Madam Chair, and to all members of the Committee. Tunapuna/Piarco Regional Corporation is by far—well it is physically the second largest corporation in the country, but it is by far in terms of population the largest corporation in the country and, therefore, scavenging and garbage collection is significant to us. We spend several millions a year involved in this process and, therefore, we have participated with SWMCOL in a

short pilot project as regards to the recycling. It was successful, but our aim is to see that expanded throughout the region and to ensure that we are able to do so in a way where we have local businessmen who have been able to benefit from the process; well, at the same time, we could change the mind sets of the burgesses of the region. So we look forward and we thank you for the opportunity to participate in this forum.

Madam Chairman: Thank you very much, Mr. Leacock. So the process is now that you are here members of the Committee will be asking you certain questions, and please remember that when you answer to turn on your mike, otherwise what you say will not be recorded and we would very much like to have a proper recording of all that is said here. Parties are supposed to direct their questions through the Chair, and similarly you direct your answers through the Chair. So I now invite members who may have questions. Dr. Francis?

Dr. Francis: Good morning, Chair, good morning to our panellists this morning. Chair, through you, Madam Perm Secretary, I will start with you. Good morning again. You have stated the truth which is that we have an intertwined waste management system in this country. For the sake of the viewing public, what is the role of your Ministry in this?

Ms. Ramlogan: Presently, the role of our Ministry is reduced to collection only. Solid Waste Management Company has been moved to the Ministry of Public Utilities. When they were previously under the Ministry of Rural Development and Local Government, we were responsible for the management and development of landfills. Thank you.

Dr. Francis: And just for clarification, all of the collection is done through the regional corporations, the cities and the boroughs?

Ms. Ramlogan: Presently, yes.

Dr. Francis: Okay. So now the substantive question: What kind of oversight is provided by your Ministry to ensure that these processes under 14 regional corporations is handled properly? Maybe to make it simpler, do you provide oversight and then what kind of oversight is provided?

Ms. Ramlogan: We do the management on oversight of these solid waste management contracts at the regional corporation, through the formulation of the contracts and the provisions within the contract. Subsequent to every contract period, we do our evaluation and based on the outcome of this evaluation, it determines the next terms of reference through the procurement process for those contractors, and at every subsequent opportunity that we do have, we try to introduce measures to improve that system. We could go into it further as we go along.

Dr. Francis: How do you evaluate?

Ms. Ramlogan: We evaluate by feedback from both the citizens and the corporation's CEO, and the staff at the corporations.

Madam Chairman: Okay. Mr. Regrello, your opening statement caught me in the sense that you said that you would like to have attention placed on recycling. Could you just elaborate a little bit on that?

Mr. Regrello: The policy that exists currently does not speak to recycling and I am saying that there is an opportunity for us at this point to include it at the national level. We could look at the culture, the education aspect, opportunities and benefits from recycling that need to be explored and probably developed.

Madam Chairman: Thank you.

Mr. Rambharat: Good morning again. I would like to go straight to Gerard Ramarack who played a very critical role in the national clean-up campaign. Gerard, you would have learnt a lot of lessons from that national campaign across 14 municipalities. Tell us a little bit about the end result of the campaign and what you picked up in terms of what we should be doing with waste management in Trinidad and Tobago?

Mr. Ramarack: Madam Chairman, I am happy to be here today to share the experiences I had by going through the entire country with the national clean-up campaign 2017. I have no doubts in my mind that there is need for improvement with respect to waste management throughout the country, but more specifically with respect to each regional corporation getting it right with respect to having proper scavenging schedules with respect to dates and times. I have observed throughout this country a lot of indiscriminate dumping and the question that comes up is if it is we are spending so much money on waste management, procuring scavenging contracts, we need to deal with the culture. How do we deal with the culture with respect to this indiscriminate dumping? There is need for serious public health education throughout this country.

Mr. Rambharat: Well, I got part of the answer. Is there anything else? Because I understand what you mean by culture. So, for example—and I do not know if you have the data—the clean-up dealt with tyres, for example, across the country. I do not know if you have the data on the collection. So that is one part of it, the culture and the need to change attitudes, and maybe to increase penalties and so on. Was there anything else you encountered in terms of—

Mr. Ramarack: Madam Chairman, I would want to say that that programme was a success, and

to remind the Committee that, of course, it was a voluntary service provided by contractors throughout the country, and if you were to look at some of the figures with respect to waste collected and disposed of throughout the entire country, if we were to look at tyres alone and if I were to look at the different regional corporations, for example, the Diego Martin Regional Corporation, we collected and had over 4,500 tyres shredded through SWMCOL; Port of Spain City Corporation, 1,200; the San Juan/Laventille Regional Corporation, 1,500; Chaguanas Borough Corporation, 1,800; Couva/Tabaquite/Talparo Regional Corporation, 1,200; San Fernando City Corporation, 500; Penal/Debe Regional Corporation, 1,930; Siparia Regional Corporation, 75; Point Fortin Borough Corporation, 375; Princes Town Regional Corporation, 5,000; Sangre Grande Regional Corporation, 566—

Madam Chairman: Do you have a total figure?

Mr. Ramarack: When we look at the total, it is approximately 10,700 tyres were collected and shredded through SWMCOL.

Madam Chairman: Thank you. What I want to ask you, when the tyres are shredded what happens to them?

Mr. Ramarack: It was reused by SWMCOL for probably road building at their landfill site.

Madam Chairman: It is reused—

Mr. Ramarack: At SWMCOL facilities' landfill.

Madam Chairman: At the landfill site?

Mr. Ramarack: At the landfill.

Madam Chairman: I see. I have a question for the Deputy PS. Ms. Ramlogan could you just explain to me, because we received submissions from the corporations and what I am seeing is that some corporations have garbage collection vehicles and some have none. Who is responsible for procuring garbage trucks for the corporations?

Ms. Ramlogan: Madam Chair, the corporations themselves, through their recurrent expenditure budget proposals, development planning projects as well, PSIP, they can submit for the procurement of vehicles for that purpose.

Madam Chairman: So would there be any reason why—well, perhaps I can ask Mr. Boodhan. Mr. Boodhan, have you submitted requests for garbage trucks for your corporation?

Mr. Boodhan: Madam Chair, many, many years ago the regional corporations, they had their own garbage trucks that was owned by the corporation that they do garbage collection. It would

have been like 20 years more that it came under a contractual arrangement, and the process works in the way that when you have those persons on a yearly basis that bids for those contracts it would be done by SWMCOL. We identified the areas that we work with. In the case of Chaguanas, we have 13 scavenging areas and contracts are awarded by SWMCOL for those areas. So it is not that we at the corporation do the procurement and the selection of those contractors, but it is done by SWMCOL, which is national tenders, open tenders.

So anybody from even outside of the Central Trinidad, or where, are entitled to apply and to be a contractor in the Borough of Chaguanas. There are times that we have grave challenges with that and also too the hours that those contractors would work, and a lot of complaints come to the corporation as it relates to those garbage contracts. I heard earlier that the oversight by SWMCOL as it relates to that, and I think that if I could share something here that it needs greater oversight to have those contractors operate within their contracted hours and within what they would have in terms of their obligations.

Madam Chairman: But do you think the oversight issue may be resolved if the corporation has its own fleet?

Mr. Boodhan: Yes, that could be one of the options as you move forward, if they have the fleet. But, Madam Chair, it brings us to a bigger process as we go forward, in that one of the things that we at Chaguanas would have indicated, and it has been touted a long while, that you will have local government reform, and I would have said many times in our council meetings that if we have to have local government reform I think one of the best places that we could start as a pilot project is the transport and workshop sections in regional corporations because there has always been an historical perspective on that that it takes very long in terms of vehicles being repaired, the procurement of parts or so, and to have that done. So if that could go hand in hand in an initiative where we could have that then the corporations could, in a first phase basis, have those compactors to do garbage collection.

Madam Chairman: Well, what I would ask you arising out of that, and I do not want to steal the time from the members, but just a final question on this is: Has the corporation done any recent study or comparison to show that having your own compactors would be cheaper to acquire and manage and maintain than contracting it out? Has there been any sort of evaluation of that?

Mr. Boodhan: Yes, I think that is work in progress and I would like to ask our CEO Mr. Seepaul if he could share some information on that.

Mr. Seepaul: Good morning, Madam Chairman, and members of the Committee. Let me just say that it is a privilege to be here to be discussing this very, very important matter which is of great national significance. With respect to the issue of the corporation having its own in-house fleet of garbage removal vehicles, there has been somewhat of a feasibility study conducted, and because of the tremendously high cost to procure such equipment along with the maintenance of equipment, it was seen as a good decision to go the contractual route. Being responsible for a fleet of these vehicles, while there will be advantages, it is a very complex exercise, particularly with respect to the maintenance and the servicing of these vehicles.

So I will say that at this point in time, unless we do not have a very efficient mechanical workshop with all the skills and competences, all the people who are competent enough to maintain vehicles, as well as dealing with wear and tear on a monthly basis, it may be advisable for all the municipal corporations to go the contractual route.

10.55 a.m.

Madam Chairman: Mrs. Gayadeen-Gopeesingh.

Mrs. Gayadeen-Gopeesingh: Thank you, I do not want the Ministry of Health to feel alienated here so I would like to ask a question. It is my understanding that a few years ago, there ought to have been established a body called the Board of Survey, as an oversight body to deal with the disposal of expired drugs. So my first question is: What is the status of that particular body, the Board of Survey, because I believe it ought to have been established by the regional health authorities? And it is also my understanding that there were about 70,000 flu shots that were imported, not all have been given, there are still thousands of them yet to be administered and the expiry date is sometime in June of 2018. So how does the Ministry deal with the disposal of expired drugs to have it with best practice?

Dr. Partapsingh: Thank you very much, Madam Chair and member, for the question. So with regard to the Board of Survey with the first question that you asked, I do not have that information. I would ask if we can be allowed to provide that via written response. With regard to the disposal of expired medicines, so there is a procedure for addressing this and that procedure is adhered to. It is followed by all the RHAs. It is followed through the Ministry of Health. So it is a very detailed procedure, I can also provide that account in a written response. Does that suffice the member?

Madam Chairman: Well, we would have been grateful for a little more information but certainly

feel free to provide it to the Secretariat. We look forward to amplification of what you have just said.

Dr. Partapsingh: Madam Chair, because the steps are so detailed and so outlined, I think it will take a lot of time to do so and we can support the answer by sending the process flow and so that supports that so that will provide a more comprehensive answer to the information to the panel.

Madam Chairman: Thank you.

Mrs. Gayadeen-Gopeesingh: With respect to the flu shots, do you have any information like how many still to be administered?

Dr. Partapsingh: So, we need to remember that the flu—so the flu season extends from October until about of the preceding year until the winter time, say end of March/April of the current year. The administration of vaccines is something that continues throughout the period, it is not restricted to that particular period in time. We still have a significant part of the year within which to administer the flu vaccines. So with that context, there is still time for the year to administer the remaining flu vaccines. To answer the question as to how many are remaining, I did not walk with that information today but we can also provide that answer in written response.

Madam Chairman: Thank you.

Mrs. Gayadeen-Gopeesingh: Just one more to follow up. With respect to the expiry date, can those shots be administered—how long after the expiry date? Is it still viable three months after, six months after the expiry date?

Madam Chairman: Member, is this related to waste?

Mrs. Gayadeen-Gopeesingh: With respect to getting rid of the disposal of expired drugs.

Dr. Partapsingh: So maybe I can summarize by saying that expired drugs are incinerated, that is the primary method of disposal and within there now—and so that is why, I mean, I am taking you all the way down to the end but to show you the rigidity of the process. So through incineration and so we are not looking at a possibility of say persistent organic pollutants of pharmaceuticals getting into the water supply or the food chain supply, if that is the concern, because of the method of disposal.

Madam Chairman: Now, we understand. You see, we laypeople do not necessarily follow these technical things and we need to have it explained to us.

Dr. Partapsingh: My apologies.

Madam Chairman: Dr. Francis, you have a question?

Dr. Francis: Thank you, Chair, through you, in her opening statement, the Deputy CEO of the Port of Spain City Council expressed satisfaction with the contractual arrangements under which garbage is collected. Mayor Boodhan said something a bit different. So I was wondering if I could get the views of Mayor Regrello and the Chairman of the Tunapuna Regional Corporation on the same issue.

Mr. Regrello: Based on our data analysis and gathering of information, we are satisfied with the contractual arrangements. It would differ from the municipality but we are satisfied with what we are having so far with the contractors and their ability to deliver.

Mr. Leacock: Thank you, Dr. Lovell. First of all, Dr. Lovell, just let me put on record, a question was asked about if the municipalities are the bodies that pick up garbage. I just want to point out that HDC also is involved in garbage collection in some of their sites, for instance East Grove, Greenvale, Maloney and Cleaver Heights and on private estates such as the University of the West Indies. They have their own contractors, right?

Dr. Francis: Thank you, Sir.

Mr. Leacock: Having said that, my understanding is that at some point, Tunapuna may also have had their own fleet. There has been an issue with productivity at all corporations and this is over, I guess, the life of the 1990 Act to now. And therefore, the maintenance of those fleets of vehicles have—those separate fleets of vehicles at the different corporations have become significant issues as Mayor Boodhan attempted to explain. So that the challenge always has been how efficient can any of your services that rely on your own vehicles be. As a matter of fact, at TPRC, from time to time, we have one backhoe for months and that is to service a region that goes from Blanchisseuse to Monroe Road, Aripo to Mount Hope. So that putting it in the hands of your own fleet has always been difficult.

On the other hand, it was contracted out hoping that contractors would be more efficient. Unfortunately, I think because the contracted services have been concentrated in the hands of a few contractors, they too have become very complacent. I always point out to the contractors when we meet with them that when I went to primary school and read *Miguel Street*, there used to be a sub-story about a guy who wanted to be a scavenging engineer and that was a proud accomplishment in that particular village. But today, the majority of contractors hire persons who are not best suited to deal with the public, persons who they could underpay and as a result, the interaction between the burgesses and the contracted services is poor and as a result, it is not half

as efficient as it should be.

Dr. Francis: Okay. So if neither template seems to be—well to use a bad word—ideal, what would either both Mayors, Madam Deputy CEO or you, Mr. Leacock, suggest as a best-working formulation?

Mr. Regrello: Chair, what I would suggest is that—well, I should not say suggest. Our system where we have members of our department, public health department monitoring the process and there are various reporting processes, again, to ensure that they adhere to the strict guidance and regulations of our contracted arrangement and that is working for us so far.

Dr. Francis: So you have already implemented a kind of an intervention?

Mr. Regrello: Yes.

Dr. Francis: Okay.

Madam Chairman: Okay. I have a question from Dr. Henry.

Dr. Henry: Morning, everyone. I want to change gears somewhat and deal with the issue of single-use plastics. I know there is a lot of concern—in fact, in the whole world about what are we doing about these bottles, like water bottles and so on that tend to be clogging up, just about everywhere—the rivers, seas and so on. Are any of the corporations taking initiatives on their own to deal with single-use plastics or is it that you sit back and wait for a national policy to be implemented? Any of the corporations could answer.

Mrs. Ramdass-Ali: Good morning, Madam Chairman, members of the Committee, so I would just like to say that the Tunapuna/Piarco Regional Corporation did attempt an initiative in 2016 for a six-month period where we did do some segregation of waste. We rolled it out at a few communities. It was successful in one particular area, Trincity for example, but we found that it was not quite sustainable. So the Corporation sees it as—it is important because what we are discussing here this morning is that sustainability in terms of garbage collection, right?

Garbage collection should not really be seen as just garbage itself. We have to look at the implications in terms of going forward and as Dr. Henry, as you rightly said, plastic is something in the environment we have to look at long term. This is something that is not going to just degrade on its own. So I think the corporations really should look at initiatives, continuing initiatives, and what I am pleased about really is that we are looking at it now through this forum on a national perspective, so it should be a holistic approach really.

Mr. Leacock: Dr. Henry, if I may add to that, the TPRC has also engaged the University of the

West Indies on two other initiatives. One being the use of crumb rubber in paving, so much so that we have engaged a contractor and the university under Dr. Forde and I forgot the other Professor's name. Dr. Forde in chemistry. They are looking at an international already-used solution and adapting the mix to a Trinidad space together with a contractor in an attempt to try to use it on two roads within this fiscal year, and then see if we could replicate it in other spaces.

We have one cement company who has indicated to us that they would like to speak to us about the use of plastic and cement in doing paving in rural spaces. We also intend to explore that. And our own PHO, Ms. Ribeiro, who is seated behind me, has engaged a lot of the staff in ways that are innovative to see if we could reuse tyres on the compound for simple things like tables and chairs that we could use in our own grounds and spaces. So we have looked at some recycling initiatives in our space.

Madam Chairman: Thank you. Dr. Henry, you have another question?

Dr. Henry: Just a follow-up. No, because the gist of my question is also to urge the corporations not to wait on a national policy. And I mean I like the initiatives that I have heard but I think there needs to be more of that, instead of just waiting for the central government to declare a Bill or a law or whatever to deal with this issue because I think it is something that is very critical. And as I said, it is not only in Trinidad and Tobago, it is all over the world that this—and most of the time, you read about plastics being banned or being sort of prescribed in any particular way. It is usually done at the local level eh. It is at the local level, it is hardly done at a national level. If you look at Australia, England, it is usually the local regional corporations that deal with the issue rather than the overall Government.

Just one more point, in terms of the encouragement of more biodegradable material to be used in especially the food containers, those styrofoam things apart from the plastics, you know, there might be an initiative.

Madam Chairman: Actually, Dr. Henry, I am quite glad that you raised that issue because I think even though we have not been able to have a very deep discussion from the points that have come out so far, we recognize that the corporations are taking the initiative to try to address waste and recycling and reusable materials and that kind of thing. I do not think that there has been any corporation present or any person present who has not spoken about some such project. I also recognize, however, that they are under the Ministry, the directive of the Ministry, so they answer to Ms. Ramlogan if they step out of bounds. So we appreciate the constraints that you are working

under. We congratulate you for the efforts you have made. Mr. Leacock, at a later stage, I want you to tell us a little more about that pilot project, but before we go there, Sen. Obika has a question.

Mr. Obika: Thank you, Madam Chair. I have three quick questions and the first is regarding the health and safety of these gentlemen and ladies who are engaged in the collection of garbage and the other regarding the removal of derelict vehicles and the third is an initiative that could be looked at.

So for San Fernando City Corporation, I realize you have a small fleet, so could the Mayor or Mr. Ramarack indicate what measures are there to protect the health and safety of the persons who are involved in the garbage collection? For example, you may see persons, their face is uncovered, their hands may not have protective gear and they may have children at home and they may be interacting with persons in transport when they are going home as well. You can only imagine if you just take a cloth across your face, you get all the germs and so on and if they have young children, they can be affected. Is there anything to look at that?

Mr. Regrello: This exercise is conducted by the Public Health Department but I would like our CEO to answer this question, Sir.

Mr. Singh: Good morning, Madam Chair, good morning, members. In respect to health and safety, at the San Fernando City Corporation, the first approach to health and safety relates to our health and safety department. What we try to provide based on money releases to us and in fact, moneys are released to us for the purchase of PPE. Our Public Health Department ensures that the uniforms are worn prior to exiting the site. Most of our fleets are based at the Carib Street compound.

And as you are aware, we are one of the corporations that has three of these compacting trucks. What we also have in place is that the contractors, that is the contracted trucks, report to the Carib Street compound before they go into their various districts and this is where we ensure that the proper PPE are worn by these contracted workers. The Corporation, as I said, receives money under the recurrent expenditure to purchase equipment, to purchase PPE for our staff. So it is something that is—it is a mandate in the sense of every morning.

In fact, I have been at Carib Street at three o'clock on one morning just to inspect to make sure that these things are undertaken. Now, at times, you would see the vehicles out there without the right PPE and in most instances, would be the contracted trucks, the contracted workers are the ones that are really not wearing the PPE and when these things are reported to us, we address it

immediately with the contractor. And as Mayor had suggested earlier on in terms of the working of the contractors in the City of San Fernando, we have an arrangement with them in terms of where we are guided by their contract agreement and the contract agreement specifically speaks to PPE and wearing PPE.

Another aspect of health and safety would be with respect to the vehicles, the sanitizing of the vehicles, ensuring that the sump pan of the vehicles are properly working so that they can collect the liquid waste and these are things that are inspected on a regular basis. Thank you.

Mr. Obika: Thank you. At least there are systems but I have seen persons, I guess they may have been the private contractors, to the extent of persons being bareback or with just some slim vest on. So if those could be addressed, it will be good, at least for the contractor's sake.

The other thing is the derelict vehicles. From the report, we have many corporations having removed derelict vehicles in the past three years but no indication as to what was done regarding the recycling or the disposal, except San Fernando City Corporation stating that they were rotted shells and so they were placed at a waste disposal site. But even when it reaches this site, what happens with those vehicles? Is it that we have some compaction and we have the repurposing of the materials for use in manufacturing, et cetera? Can anyone provide an answer?

Mr. Regrello: Mr. Ramarack will answer the question for us, please.

Mr. Singh: Morning, again. In San Fernando, in terms of at the site—well we are all aware that there are salvagers at the site and when you take these items there—in fact before you actually have the opportunity to discard these things, these things are normally taken care of. Hence the reason why in 2015, the council of San Fernando City Corporation approved the use of a land space in San Fernando for the purpose of constructing sheds so that we can conduct sorting of these materials, this bulk waste. Applications were made for funding under the PSIP in 2016 and we continue to make application today so that we can provide a space for this bulk waste. Now, the derelict vehicle, after it is litter, it is treated as bulk waste.

Mr. Obika: Thanks. I just want to make one comment probably for the Ministry. Just as the country was energized for the national clean-up campaign, we could benefit from probably a most cleaned or the cleanest corporation campaign and with some kind of award you know, so persons can have some bragging rights and that may also help spur some activity and energize the staff at the regional corporations. Thanks.

Madam Chairman: Well that is an excellent suggestion, competition is always good. But if we

may go back to the derelict vehicles, Mr. Leacock, I see you have a very big problem because you had 199, so how do you deal with that?

Mr. Leacock: Madam Chair, in my electoral district which is Bon Air/Arouca/Cane Farm, at present, I can identify at least 10 derelict vehicles that I cannot move because I have nowhere to take them. When we started to take up these derelict vehicles, we identified the salvagers who were willing to take them and cut them up and export them. As a matter of fact, at that same time, most corporations would have had challenges keeping their manhole covers because the price of steel was so attractive that the salvagers would salvage those too. But then the price of steel fell significantly and then nobody wanted to take the items from us. And then you also have the challenges of finding a place to hold them in the interim and that has been a significant challenge for us.

So all over the region, we have derelict vehicles that we are not—we could serve the persons who we think are the owners but we have nowhere to take them to. And so although our litter wardens are, in fact, some of our most reliable workers, they have not enjoyed the kinds of success that we would want in terms of getting these vehicles removed. But we are contacting some salvagers, we have looked—we have heard that there is a company or two that is involved in compacting in recent times and we are looking into those. Probably the solution may lie in really finding ways to monetarize these services and getting the garbage elsewhere.

Madam Chairman: Dr. Francis.

Dr. Francis: Through you, Chair, local government reform, as viewed now in this incarnation, might result in even broader responsibilities for the regional corporations, boroughs and city corporations, vis-à-vis waste. Are you all in the process of getting ready for this? I would like an answer from the Perm Sec, her view and then from the purveyors themselves.

Ms. Ramlogan: With respect to getting ready at the regional corporation level, the municipalities, I know my Permanent Secretary did present to the honourable House already with the consultative process that has taken place with the corporations in terms of the institutional and administrative structures that have to be put in place for these devolved responsibilities. That Note actually has gone before the Ministry of Public Administration, but in the interim, we have taken the proactive approach in terms of hiring persons on contract until those positions become established. Positions such as the Litter Wardens and we presently have Public Health Officers on contract to assist with respect to solid waste management.

So we are taking an incremental approach to implementation because if we wait for the whole of reform to happen, it is never going to happen. We have been attempting for the last 15 to 20 years and we do hope that with this effort, we would achieve some incremental gains towards devolution of some of the responsibilities totally to the corporation, but we have to ensure that they have the capacity to deal with those devolved responsibilities. So, in the interim, we are trying to formulate policies, et cetera, that would guide some of the operations, standard operating procedures to ensure that there is consistency in the approach across the corporations, but it is a work in progress. Thank you.

Madam Chairman: Thank you. Vice-Chairman has a question.

Mr. Rambharat: To the Port of Spain City Corporation, nothing like a real-life example. Two things: the first is that—and this is how the public sees it—particularly on a Saturday morning but sometimes during the week, I have observed a pickup pulling up opposite Long Circular Mall, just outside Forestry Division, and the guy sells his fish, scaling the fish on the pavement, scales falling all over and for a few hours, that spot turns into a fish market. I have brought it to the attention of the city corporation on many occasions. I am sure there is a requirement at the by-law level for the sale of fish and for activities of that nature to be conducted in a particular manner. That is the first one.

The second one: When I became Minister, I observed certain practices of the coconut vendors around the Savannah and I presented to the corporation a report done by an expert. Over the Easter weekend, I observed around the Savannah construction activities going on all the carriages that the vendors sell out of. If you go now, you would see rusty steel plates on the ground, you would see where the operators decided to do repair work and strip those carriages and put the materials all over. You would see there is no removal of the coconut waste. The waste is piled up there for days and weeks. You would see rats at night, you know, traipsing over the coconut.

And a lot of people do not realize that the Queen's Park Savannah, like everything in this country, jurisdiction is a big factor. A lot of people do not realize from the rail to the edge of the sidewalk is the jurisdiction of the city. The road is the jurisdiction of the Ministry of Works and on the inside of the rail is the jurisdiction of the Ministry of Agriculture. A lot of people have problems understanding that and I do not blame them. But waste management and health and public health go together.

So I have used that to ask, at the household level—and this is across the board—what are

the powers available to all of you and each of you to deal with indiscriminate disposal at a household level, on lot and curbsides, in drains and in water courses? In relation to business premises, what are your powers? In relation to institutions, like schools, what are your powers? And in particular, what are your powers in relation to public health? I told the Committee, when we were in camera, that part of the challenge is that the city has Public Health Inspectors, the Ministry has Public Health Inspectors and it is difficult to know who is responsible for what. So what are your powers in relation to public health? Enforcement of the Litter Act and the other actions that you can take.

So, for example, when I drove on the Lady Young yesterday and I saw the pile of tyres on the roadside, as a citizen, I really do not know who to alert. Now I know that that is San Juan Regional Corporation.

11.25 a.m.

You might think is the city. It is San Juan. But who do I call? The Public Health Inspector because mosquitoes could dwell in the tyres? Do I call SWMCOL and say: “You have tyres to recycle”? Do I call the Public Health Inspector of the Ministry of Health? Do I call the Public Health Inspector of regional corporations? That is the—and nothing like a good example to maximize the strength of this team we have in front of us, and this big issue we have to deal with. And I would really like if you could address everything I have said.

Madam Chairman: Well, if I may make a suggestion. I think, perhaps the person to best answer that would be Ms. Ramlogan.

Ms. Ramlogan: I would like to defer to public health and the municipal corporations who are our, what I should say, they are our operational arm. So they would be more intimate with some of the limitations of our regulations.

Madam Chairman: Well, Ms. Parke, perhaps we could start with you?

Ms. Parke: Madam Chair, through you, can I ask our Public Health Inspector IV, Mr. Sooklal to respond, please?

Madam Chairman: Certainly, Mr. Sooklal.

Mr. Sooklal: Okay, thank you. Good morning again, Madam Chair and members. In relation to the authority that we have to enforce litter removal, that would speak to really two pieces of legislation, which would be the Litter Act and the Public Health Ordinance. Under those two pieces of legislation, we can deal with private, public and institutional premises and we can enforce

the removal of litter. The Acts would also allow the local authority to take its own action to abate those nuisances if we do not get compliance from the owners or occupiers of such.

Madam Chairman: Thank you. Mrs. Gayadeen-Gopeesingh.

Mrs. Gayadeen-Gopeesingh: Thank you, Madam Chair. I would just like to continue with the line that Mr. Rambharat has just cited. And there was a common question. One common question was asked by the corporations and the response, I just want to relate to the response. The common question asked was: How many written notices were issued further to section 6 and 7 of the Act, which is the Litter Act, 30:52, during the past three years? San Fernando gave us 413 cases. Chaguanas gave us 4,358 cases, and Port of Spain City Corporation gave us zero.

So, when I listened to what Mr. Rambharat just said and he spoke about the plethora of problems he had cited in the Port of Spain City Corporation: driving down Lady Young, driving around the savannah and so, I am just trying to figure out how have we come with zero in Port of Spain City Corporation for the number of written notices sent? Is it that you have Litter Wardens or you do not have? How have we come with this to be zero?

Ms. Parke: Madam Chair, through you, we have Litter Wardens. But I would also ask our Public Health Inspector to answer this question, please, because the Litter Wardens, he is the supervisor for the Litter Wardens.

Madam Chairman: Before we go there, Ms. Parke, clear up one thing before we move on. I see you have six Litter Prevention Wardens. Are you operating at maximum capacity or is it that only six are hired?

Ms. Parke: Eleven were hired but we are down to six.

Madam Chairman: How many are you able to hire? What would be an adequate amount, should I say?

Ms. Parke: Okay, the hiring of the Litter Prevention Wardens, that is done through the Ministry, at the Ministry level. For us in Port of Spain, I believe if we can get about, let us say about 30 Litter Wardens.

Madam Chairman: So you would like to have 30?

Ms. Parke: About 30.

Madam Chairman: Is it that you are allocated the numbers by the Ministry?

Ms. Parke: Yes, we are.

Madam Chairman: So what is your allocation?

Ms. Parke: Eleven. We got 11 at the beginning.

Madam Chairman: What is the reason for it now being six?

Ms. Parke: I believe four of them resigned. Four of them left the Litter Warden.

Madam Chairman: Okay, well now could we go on to the other aspect as well?

Ms. Parke: So Mr. Sooklal.

Mr. Sooklal: Just in terms of clarification, we would have had one transfer from the 11 initial— in answering the previous question—one transfer and four resignations. That is what brought it down to a total number of six Litter Prevention Wardens.

To answer the other question, in terms of the issues that we have in the city, the wardens that we have attached to us, what we normally do is we utilize the fixed penalties to enforce provisions of the Act, because of the nature of some of the littering that takes place within the city. So, to that end, the warden attached to the city would normally serve, like I said, those fixed penalties. We would have served 807 of those fixed penalties for the three-year period.

Madam Chairman: Now, perhaps, I do not want to lose the Vice-Chairman's point. With respect to this issue of the state of the pavement around the savannah, who is responsible for that? Is it the corporation?

Mr. Sooklal: Yes, that would be the city corporation.

Madam Chairman: Well, if so Mr. Rambharat has said that he has made more than one complaint, I believe. Why has no attention been paid to that?

Mr. Sooklal: That is in relation to the issue with the coconut vending. We have had inspectors visit the coconut vendors and they are currently engaging the attention of the Public Health Department with respect to their waste collection and management.

Madam Chairman: Could you tell me what that means, please, “currently engaging the attention of the Public Health Department”?

Mr. Sooklal: Well, we would have sent inspectors to the site. We would have interfaced with all of the vendors there and indicated to them what is required, in terms of their collection and removal of waste from their facilities. We are also in the process of monitoring and ensuring compliance with our directives.

Madam Chairman: Well, how often is that done?

Mr. Sooklal: I would not be able to answer the frequency within which it is done. Once we receive a complaint, because that would normally—the District Public Health Inspector assigned

to the savannah and the district would normally address that issue. They will have other duties to perform but in the normal scheme of their duties would require visits to the savannah, which are done at least twice a month and if there are issues at that point in time then we will address it.

Madam Chairman: Mr. Obika.

Mr. Obika: Thank you, Madam Chair. Through you, could Mr. Sooklal indicate if these coconut vendors are serviced by any waste disposal garbage collection appliances?

Mr. Sooklal: They are not serviced by the Port of Spain Corporation. They have their own private arrangements for removal of their waste.

Mr. Obika: So then, would it be safe to say that that system has failed and that some revisit to that could be entertained? Because if it is simply a matter of—at least one of the main concerns that Minister Rambharat raised was disposal of the waste, if that can be alleviated, at least that is one, the rats issue could be easily handled from there. So could there be any revisit of that system that the vendors are utilizing?

Mr. Sooklal: Yes, the corporation is currently looking at the contractual obligations or the manner in which the coconut vendors operate at the savannah. And so we are in the process of addressing that as part of a larger issue where—

Madam Chairman: Meaning?

Mr. Sooklal: Well, what we would want to look at is to ensure that they operate, you know, as is required. What we need to ensure is that those requirements are enshrined in our contractual arrangement with the coconut vendors.

Madam Chairman: Well, in the meantime, it seems to me that, I mean, these coconut vendors are almost a fixture in the city. It is not only the citizens who go there. It is tourists who go there, and this kind of thing. While we talk about who is responsible for what, can there not be garbage receptacles placed in the vicinity, collected by garbage trucks, which would alleviate the problem and alleviate possibly a great health problem?

Mr. Sooklal: Madam Chair, we will have to have that discussion with our Chief Executive Officer in terms of if that issue can be addressed outside the remit of the contract. But it is something we are willing to look at.

Madam Chairman: If we have a gyro shop operating on the side of the road and there is a receptacle outside where he puts the waste from his shop when he closes it, is it collected by the Port of Spain City Corporation?

Mr. Sooklal: Yes, the receptacles. There are receptacles around the savannah. In relation to, if you have a business operation generating that type—the commercial quantities of waste then they are responsible for their own refuse collection and disposal. In relation to the Queen’s Park Savannah, there would be receptacles around the savannah. Those are normally serviced by the corporation.

However, the nature of the waste that is generated by the coconut vendors, as you would appreciate, is bulky in nature and as they are conducting a business as well, we feel that they should bear some of the burden of management for the removal of that waste.

Madam Chairman: Or, I see. So it comes down to who is going to pay at the end of the day, and that has not yet been resolved.

Mr. Sooklal: Well that, in addition to some of the other contractual obligations, have not been resolved as yet with the vendors.

Madam Chairman: Before we run out of time, I certainly want to hear from Mr. Leacock about this pilot project which took place in his corporation. Because I am sure it is something of interest for the other corporations as well.

Mr. Leacock: My last Chairman, I was Vice-Chairman at the end of the last term. My last Chairman was Alderman Edwin Gooding and he sat with SWMCOL and came to some agreement that they would champion a recycling project. They identified Trincity, because Trincity was well planned, in terms of gridding of the streets, access to trucks, et cetera. So the public health officer, Ms. Ribeiro, together with a clerk from Mr. Gooding's office, Ms. Hosein and the then CEO, got together and planned how it could work.

We held some public education events and invited the public to discuss how we could do it. And we involved the majority of Trincity, Beaulieu, Cane Farm, Cazabon, Castleton, Dinsley, et cetera. In the first six months, I think, they were able to collect over 10,000 tetra packs, single-use plastic bottles, et cetera. SWMCOL had indicated that they wanted to replicate the programme significantly. Part of the challenge has been that to do so, we created special bags that the burgesses were given free. And as a result, burgesses had gotten accustomed to getting that free. That was not sustainable over the long run, of course. But we still do feel that it can be. If we get the bags properly labelled we could sell them in the right places. Of course, you have to change attitudes about how you will put them out, what they will be used for. So you do not sell them cheap and then somebody will buy the bags and use it for something else, because they are cheaper

than other garbage bags. Or we could allow burgesses to just use clear plastic bags period.

So what we have asked SWMCOL to do is extend the programme to all gridded areas, all well-planned areas throughout TPRC. And we are prepared for our public health officers to sit with SWMCOL, identify what these grids should be, and instead of using the large contractors—now another issue was that the large contractors felt that was not part of their normal open-tray service. Because they picked it up on Wednesdays, and SWMCOL felt that was a part of the contract. And so that has been the major fallout to the programme, that the contractors are not willing to pick it up unless we vary the contract.

We are saying going forward, we would like to have a separate contract, possibly reduce the open tray service to two days and instead, identify one day only for recycling throughout the region where they would pick up tetra packs, plastics, et cetera, in one set of packaging and we would also do grass pick up, because we have a memorandum of understanding with the University of the West Indies, and one of the projects—I think it is Dr. St. Forte—is willing to explore is that of composting.

So there is the opportunity for us to pick up both grass and plastics on the same day. And if you take that out of the garbage collection, you can use that money, one, to create small contractors who could probably use a truck as small as a two ton truck and service the grid, and at the same time—so you support small business and at the same time change attitudes about pick up.

Let me just put that against the background that in the City of Toronto, the garbage pick up for a fortnight is only on three days. One for recycling, one for recyclables, one for regular pick up and one for composting.

Madam Chairman: Dr. Henry?

Dr. Henry: Yes, I want to go back to the issue of the contracting and the various overlapping or sometimes conflicting responsibility for garbage collection.

Just to be clear, some of the corporations, the contractors who pick up the garbage like where I live in Diego Martin, the corporation is not always the one issuing the contract to that particular garbage collector. Right? Is that correct? So it is SWMCOL who issues the contract?

Mr. Leacock: I think we need to make it clear that cities have a different set of powers that the municipalities do not have. So one example is that there is a Country Medical Officer of Health that is contained in each city. In the municipalities, we have to rely on the centralized County

Medical Officer Health Services. And this garbage collection thing also has that kind of difference when it comes to city and municipality. In the municipalities, all of the contracting, as far as I know, is done through SWMCOL.

Dr. Henry: So when people want to complain about their garbage collection and trucks coming at inappropriate times, and so on, and they go to the regional corporation and the regional corporation says: “Well, you know, we not did hire the contractor”, what is the comfort, the average citizen, that something could be done?

Mr. Leacock: Assuming that your question is geared to me.

Dr. Henry: Anyone.

Mr. Leacock: That should not be a response. It is our responsibility to pick it up. The challenge, as Mayor Regrello pointed out, is really supervision. It is cheaper. If I have a contract for \$1 million to pick up garbage for the year, and sometimes a lot more than that, it is cheaper, in some cases, to encourage the persons who are supposed to be that buffer between the corporation and supervising the work that we do. It is cheaper to encourage them to do other things.

And unfortunately in this space, we find many cases where contractors are out on the field, soliciting from burgesses, tell burgesses whatever stories they want, and our people are not there to supervise. Our people seem to work for the contractors and not for us. So it is really about supervision and we need to take charge of it. And Mayor Regrello pointed to the fact that we have been doing that. We have been ensuring that we return to that level of supervision.

Dr. Henry: Just quickly, is that sentiment across the board, or is it just in the Tunapuna regional?

Mr. Ramarack: Madam Chairman, I would like to add to this discussion with respect to contracts and who are responsible for procuring the contracts and who are responsible for monitoring the contracts. The present contracts, the municipal solid waste contracts, that exist now, has been in existence since 2013. The contracts were initially procured by the Solid Waste Management Company Limited on behalf of the Government and the contracts are to be managed between the corporations and the contractor. These contracts presently they have expired 2016, February and they continue on a month-to-month basis. So the corporation is responsible, to answer Dr. Henry, the corporation is responsible for the complaints or the problems you encounter in your area. Each regional corporation is responsible for monitoring these contracts.

Madam Chairman: Ms. Ramlogan, could you just tell us what is the problem? Why it is on a month-to-month basis? Because it seems to me this is a sort of essential service; garbage

collection, waste collection.

Ms. Ramlogan: Okay, Chair, I will defer to my planning officer who has been very instrumental presently in redoing these contracts and we are taking our time because we are addressing the existing deficiencies and gaps and problems that have been identified, with respect to actually including in these contracts the area of recycling and the other new initiatives that we would like to see happening at the corporation level. So I will hand you over to Ms. Ramirez.

Madam Chairman: But before you do, I just want to find out about the collections, you know. Because I think, Sir, you were talking about the collection of garbage alone; the contracts for the collection of garbage?

Mr. Ramarack: Yes, collection and disposal, Madam Chairman?

Madam Chairman: Yes, so what he is saying is that contracts have expired and there is a month-to-month contractual arrangement for people who perform this essential service. So what I want to know is why are we now doing it after the contract has expired? Why are we now looking at the contract after it has expired?

Ms. Ramlogan: We are not only looking at it after it expired. It was an ongoing evaluation of what was taking place on the ground, and subsequent to the termination of the expiration of these contracts we started a consultative process with the providers, with the corporations and also SWMCOL, with a view of improving the system that we have presently, and we identified that there were a lot of problems associated with the terms and conditions of the contracts, in terms of enforcement and if there are problems and issues related to the contractors.

So, it took a little time, because we were trying to get some really good indicators and do a comprehensive evaluation in terms of—people were tendering at different corporations with the same equipment. So we came up with a multi-criteria evaluation process. So it means that we had to do a comprehensive situational analysis of the existing situation to address the deficiencies and gaps. So that is the explanation. But we have already procured and we are presently developing the contract.

Madam Chairman: Essentially what you are saying is that you had problems with the procurement process, not so much the contract.

Ms. Ramlogan: Yes, and the contracts. The terms and conditions of the contracts.

Madam Chairman: Mrs. Ramirez-Modeste, perhaps you could give us, very succinctly, what were some of the problems encountered in these contractual arrangements.

Mrs. Ramirez-Modeste: Thank you, Madam Chair. With respect to the contractors, some of the issues we were having with the arrangement was that too many large contractors were more or less controlling one area, we would say, and at times they would hold that area at ransom. So we looked at that situation also.

There were issues where one contractor would be given too many contracts, more than he is capable of dealing with. Those were more, or less, some of the major issues that we were looking at to rectify with this new arrangement that we are looking at. Contract-wise, the corporation felt that they were limited with their ability to actually rectify some of the situations that they were actually experiencing on the ground since the contracts were managed by SWMCOL. Now we are looking at having the contracts being managed by the corporation itself. Those are some of the new arrangements that we are looking at.

We are also looking at training the corporation with respect to contract management, so that, you know, we would be able to, more or less, hold contractors accountable for their performance.

Dr. Francis: Thank you very much, Mrs. Modeste. And then this leads to the obvious question which is: Does bad contracting work play any part in the tendering process? Meaning, if you have a history of performing poorly, or holding citizens to ransom or dumping garbage at the side of the road, does that play any part in the selection process going forward, which is the case that we just keep recycling the same poor performers over and over.

Mrs. Ramirez-Modeste: And that is one of the things that we have—SWMCOL would be actually carrying out that procurement process for us. Those are some of the things we outlined to them that we do not want. Because, normally what would happen, at the end of each contract, the corporation would provide a performance appraisal for SWMCOL. Those performance appraisals are being looked at as part of the evaluation in determining consideration and selection.

Dr. Francis: So I would be very clear. It should not be the case going forward that people who have traditionally and historically performed poorly would be selected again for the same job. It should not be the case.

Mrs. Ramirez-Modeste: It should not, based on what we requested.

Dr. Francis: I will remember that response.

Mr. Agarrat: Through the Chair?

Madam Chairman: Yes, certainly.

Mr. Agarrat: If I could speak briefly on how we will operate in the Port of Spain Corporation where the contractors are concerned, it is separated in three parts basically where we have the central business area under one contractor. We then have the east Port of Spain area, which is made up of nine contractors. We service the east Port of Spain area. Then we have areas of the east side of Port of Spain where that we service in-house.

Where the contractors are concerned, there is a monitor done by what we call charge-hands specials. They monitor these contractors on each day of collection in all the areas. The supervisors, they bring in a daily report on the performance of these contractors. Appraisals are done every month in relation to the performance of these contractors and in most cases when a contractor fails to abide with the terms and conditions in relation to collection, we assess what was not done and we then make that report to the engineer's department where in turn he is not being paid; that contractor is not being paid for that period of time that work was not done.

We also have meetings every so often. We have not had any for the past, well, months or so. But the fact remains that every so often we call them in and we liaise with them one on one. In most cases we call them in if we have issues with them to explain what our assessment has been and as such corrective measures need to take place in regard to our observation.

Madam Chairman: Thank you. Sen. Obika.

Mr. Obika: Thank you, Madam Chairman. To Mr. Agarrat, regarding the network, in Port of Spain, during the short upheaval on that faithful day, the garbage truck dumped some refuse in Port of Spain. Are there any consequences that followed for that contractor? And what mechanisms are in place to prevent this from happening in the future?

Mr. Agarrat: Through the Chair. We have little impact. There is nothing we can do in circumstances such as that, because you will have to appreciate the circumstances in which that event took place. It was said that the driver was under duress. He was threatened by residents at gunpoint. It became a police matter. As far as I could recall, he was charged. I do not know the circumstances why he was charged, but I know he was charged. But there is little that we can do because you have to understand, for the east Port of Spain area, it is a hostile area in most cases. Reasons being why a lot of it was contracted, we have to understand that we have workers in some instances who work within particular areas or live within particular areas where they cannot venture or go even—say for instance upper Gonzales may be in war with lower Gonzales and as such, over the years, we have noted that it would be very difficult to have our workers go into

those areas without being threatened. And as such, that is why we would have been led to having to contract the east Port of Spain area to what it is presently. But we have little control of what could be done in relation to what transpired that couple of months back. The most we can do is monitor it and report it and hope that it can be resolved in a particular way.

Mr. Obika: Can I ask has any consideration been given to, I mean not necessarily police escorting the garbage trucks, but some heightened police presence around the time of the pickup of refuse? Has that not been considered in the past?

Mr. Agarrat: Nope. Through the Chair, it has not been considered. It could be a bit challenging. East Port of Spain is a big area, and adding to the fact there are areas where, in some cases, let me refer more to like the inaccessible areas where the contractors are required to have people walk within the lanes and the narrow roads where the vehicles cannot pass. So even at that stage, it is difficult to even have police follow them at that point. No, we have not considered that in the past.

Madam Chairman: Is it that regular contractors are intimidated and then contractors from the area bid for the contracts so they can go in safely and pick up the garbage? Is it that they are intimidating contractors?

Mr. Agarrat: Through the Chair, I do not think that is the case. What we have tried to do is, in most cases the contractors who are deemed suitable, once all requirements are met, in relation to providing the correct equipment and so forth, we try to choose persons from within the area. So they would hire workers within the areas also. So I do not think it is a case of being intimidated or so.

11.55 a.m.

Dr. Francis: Mr. Agarrat, if I were to ask you a question based on your last statement we will need a whole new session. So, I will not.

I will ask a simple question. Is there any feedback mechanism in terms of getting responses from the burgesses in terms of the quality of service provided by the contractors? Or is it complaints and you judge based on that?

Mr. Agarrat: A lot of it could be based on complaints. Added to the fact though, we have an open line, because we have been giving out fliers for the past, over two years or so. We usually give out fliers. Where there is contact, it could be made through our office to lodge any complaints, issues that the burgesses may have with the services provided and as such we then take action to deal with the matter of it being contracted in-house or out-house.

Dr. Francis: Thank you, Sir.

Mr. Leacock: Through you, Madam Chair. Just, one is that I would like to point that garbage collection is a capital intensive business, and therefore it favours those who already have. And that is a big part of the problem that it is almost monopolistic and the planning officer has, I think, highlighted well what needs to be done to fix it.

Two, is that there need to be some consistency across the municipalities about the issue of bulk waste. In most of the contracts, we do not pick up particular types of bulk waste, in particular building material. And yet we tell the burgess that is your responsibility.

So, the burgess who does the right thing will take that bulk waste, pay somebody three/four hundred dollars a truck load to carry it down to the dump. But as that person exits the home of the burgess, they often would look for the closest available empty space and dump it and then the Corporation still has to find resources to pick it up. So, I think somewhere in there corporations should monetize bulk waste removal and make it affordable.

And then finally your last question, Dr. Lovell, about a feedback mechanism. I think you will find that the politician's view of how effective the pickup is and often the administration's view of how effective the pickup is, will differ significantly.

Dr. Francis: I was just being polite, sir, you know.

Mr. Leacock: We have to face the burgesses. And burgesses call you every day and tell you stories about this person say "if I do not pay them I picking it up"—now sometimes burgesses create that monster, eh, because they want you to pick up things that they know they are not supposed to, so they offer you. And once they offer the contractors once the contractors then say every time I want, and it is worse at Christmas—

Madam Chairman: Thank you. Just a few quick things to wrap-up. I see one corporation allows for the collection of waste from pluck shops, but we realize that the Port of Spain City Corporation has a difficulty with picking up the waste from the coconut vendors. Is it that the corporation is paid by pluck shop owners?

Mr. Boodhan: Madam Chair, can I answer that? Yes, we had grave challenges in Chaguanas in the past, where you would have those pluck shops disposing of their waste, most of the time; Friday night, Saturday, Sunday in open spaces. So, different traces or lonely areas and we had devised a policy where we charge \$5 per bag and we go on Fridays and Saturdays and Sundays to the different pluck shops and collect those bags.

Madam Chairman: We had the EMA and SWMCOL before us on the last occasion and they spoke about the iCARE project, well that would be in relation to the Port of Spain City Corporation, would it? Would you all have had anything at all to do with that project? Any Corporation? Yes, Mayor?

Mr. Boodhan: Madam Chair, we had a partnership arrangement with the EMA with that iCARE Project. But, one of the challenges we faced is that it was supposed to be much more educational, the education aspect of it than just having the brochure.

Also Chaguanas has partnered with corporate entities as it relates to recycling glass and plastic, and we have continued that programme in schools. We have not achieved our target of the 22 primary schools within the Borough of Chaguanas. But, it is a work in progress with that recycling, as it relates to these schools. But, we are part of the EMA iCARE Project and also recycling with other corporate entities.

Madam Chairman: Is any other corporation involved in the iCARE Project?

Mr. Leacock: Madam Chair, at a few of our grounds the EMA has placed bins, and they have been generally well used. The challenge has been, however, as with the CMOH doctor—I think the PHI—who spoke about the savannah. When you create large receptacles to put anything, people come from everywhere and dump everything that does not belong in it.

So education is key. Even in our recycling project, we partnered with Bishop Anstey and Trinity East and with a few of the schools on the Tacarigua Main Road and in the Dinsley area and when the children do it that helps the parents to follow.

Madam Chairman: What about scrap yards and unregulated garages with oil and that kind of thing? How do the corporations deal with that? Perhaps, we can find out from Mr. Regrello?

Mr. Regrello: Madam Chair, there is a dichotomy between the various municipalities and how we function. I could say that we have enforced the Litter Act. We have our—a very efficient Public Health Department and they do the jobs, so my job is very easy.

Madam Chairman: So is that the same for all of you? With respect to scrap yards and motor oils and what not?

Mr. Leacock: Madam Chair, if it is all right, can we ask Ms. Ribeiro to respond?

Madam Chairman: Ms. Ribeiro, sure.

Ms. Ribeiro: At present the Litter Prevention Wardens, working under the Litter Act, they deal with those issues.

Madam Chairman: Okay, now SWMCOL has a waste management policy. Is it that SWMCOL has passed that policy on to the regional corporations and said listen whatever programmes you put in place you must keep this policy in mind? Or is it that you formulate your own policies?

Mr. Leacock: I am not even aware of SWMCOL's policy to be honest. What I can also tell you about the issue of the garages and the oil is that EMA is the main body, but EMA is severely hampered by the date of the Act. A lot of those garages, if they came up prior to the Act, EMA could take only action to have them clean-up, but not remove them from residential areas, et cetera, and that has been a challenge.

Madam Chairman: Well, interestingly enough the EMA also has an updated national environmental policy. It is still draft form, but it seems to be very thorough. So perhaps the corporations could liaise with both SWMCOL and the EMA and have a look at their policies, and take some guidance or ideas if any of these policies are helpful to you in preparing your programmes.

Do we have any other questions from members? So, what I am going to do is I am going to ask each of the heads, starting with Ms. Ramlogan to just make a brief closing statement.

Ms. Ramlogan: Thank you, Chair. Today has indeed been very fruitful and productive for us as a team. And it is indeed encouraging to see that while we are taking initiatives at the regional level, we have adopted an incremental approach to solid waste management. And we actually were the author of that Integrated Solid Waste Management Policy through a consultancy and when SWMCOL was transferred to Public Utilities we passed that policy to them. But that was done through a consultative participatory process with the regional corporations.

The Ministry is committed to good governance through effective participation, collaboration, transparency and above all, accountability. Our vision is that solid waste will be viewed as a resource and will be managed by technologies and methods that support sustainable communities and environments that minimizes waste, promote ecological integrity through pollution prevention, promotes efficiency and develops resources to revitalize our local economies in these trying financial economic times.

We hope to reduce our reliance on landfills, reduce the toxicity and quality of waste, conserve our natural resources and energy, improve public health while support the economy and reduce greenhouse gases.

The Ministry will continue to work accordingly to improve our legislative regulatory

framework, our development capacity to ensure effective implementation and enforcement towards enhanced quality service and balance sustainable development for our citizens with sound infrastructure and a healthy environment through effective solid waste management systems and processes. Thank you.

Madam Chairman: Thank you very much. Dr. Partapsingh.

Dr. Partapsingh: Thank you very much, Madam Chair. The Ministry of Health wishes to reiterate the World Health Organization's definition or understanding of what is health and that health is not just the absence of disease, but really and truly, it encompasses the social, the political, the economic, the cultural as well as the biomedical.

Within that framework the link between the environment and health has been established the risk factors that are associated with from those links and along those causal pathways have been established.

The Ministry is actively involved and through the public health inspectorate through the office of the CMOH through the other agencies and within the regulatory frameworks and legal frameworks that it has and the technical frameworks within which it has. The Ministry remains committed to risk characterization as it relates to waste and the health risks associated with them.

And the Ministry remains committed to recognizing the value for inter-departmental, inter-sectoral, intra-sectoral collaborations to allow for ensuring that we secure the health of the population moving forward.

Madam Chairman: Thank you. Mayor Boodhan.

Mr. Boodhan: Thank you, Madam Chair. As I said early in my opening statement that there should be greater oversight from the key players and in this case SWMCOL as the key authority in terms of garbage collection and waste disposal.

And I would like to say because coming out of comments here from members and from Chairmen of Corporations, there are times when we all have grave concerns in terms of the contractors and the collection of garbage—and may I say and I hope it is not strong words, that there is a garbage cartel, if to use that word, Madam Chair, I hope I am not breaking any rules. But there is some greater level or greater input coming out of this Committee in terms of the way forward. Because many a time, and the information come that contractors have contracts in several corporations and at times they would not have their obligation to a particular corporation. In the cleaning of Chaguanas they will come at all given hours at the dissatisfaction to our burgesses and

I think that is one key area that we should look to have corrected to make sure that the happiness of persons and the disposal of garbage is done on a timely manner.

And may I share very briefly the way forward. I think that in terms of Chaguanas, we have already put in place and we are awaiting in terms of money how we can move this process forward. And other corporations could also benefit from it because a lot of moneys is spent in picking up those tree trimmings and garbage of that nature. And I think that the way forward should be like you have a wood chipping machine that you could have land space, do it in your particular region and use the compost or the mulch to do beautification projects, start with the schools, religious organizations and so. And even on a wider scale it could be sold back to persons who want to do that. So, I think that will eliminate a lot of cost in going to the dumps and those could be recycled as part of a new innovative programme. Thank you.

Madam Chairman: Thank you. Mayor Regrello.

Mr. Regrello: Madam Chair, this is a very enlightening programme for us today. I will just like to say that we in San Fernando are very fortunate for the system that we have in the City of San Fernando. As I said before, we have a very competent group of litter officers. As a matter of fact, they charged Councillors—I think it was last year—some of our Councillors were charged for breaching the Litter Act. And that tells you how serious they are, and we do not encourage that sort of thing, as well as the level of the Public Health Department, they are very strong in what they do and they make our work very easy.

Of course, Mr. Rambharat and our CEO, they have been involved, as somebody indicated earlier on, they campaign—I do not know if it is a Rio Claro thing, but there is something about that, how they get it done. Let me go further to say that maybe we could look at the—Mayor Boodhan spoke about the cartel and I know that there is a new policy that is going to be introduced by SWMCOL which will really address that in reducing that and maybe make it in various—for instance there are categories of small, medium and large contractors which will give you a greater sense of monitoring and ensuring that you get the work done.

So, all in all it was a very fruitful and a very rewarding meeting for us and we will leave here encouraged and enlightened by this experience. Thank you.

Madam Chairman: Mr. Leacock.

Mr. Leacock: Madam Chair, Mr. Vice Chair, all members of the Committee, I want to thank you for the opportunity to have addressed these issues with you. We at the TPRC are very concerned

with the state of affairs when it comes to scavenging and health issues. We note, for instance, we had an incident of a rat actually attacking a person in the Bangladesh community and those things only happen when the population grows too large so that they cannot feed adequately.

And we, therefore are very aware that we require a clear set of initiatives that will deal with scavenging in a timely manner. We look forward to reform giving us the power to do some of the things that we need to do, and even before reform that the persons involved will allow us the space to do what we need to do because we cannot just sit down and wait on the reform.

Chair, we understand that this could only work with careful monitoring of the present scavenging arrangements and the future scavenging arrangements and we hope that those will be put in place by the Ministry very quickly. We look forward to a strategic shift in the model which should be based on a clear policy whether it be waste to product, or waste to energy, or some combination of the two.

So that will see Trinidad and Tobago come closer; one, to satisfying the SDGs which we have already signed on to. And two, just seeing us become a healthier space.

Madam Chairman: Thank you. Ms. Parke.

Ms. Parke: First, let me thank the Chairman and the members of the board here for inviting us this morning. It has been very educational. We noted the views of members, we noted the questions and also the views expressed by the other persons here and we know that garbage disposal and collection is a nationwide problem and we at the Corporation we are trying because we know we have all the reports of the conditions of the City and even to the Vice Chairman, only recently I walked the Savannah and I spoke to all the coconut vendors there, and I did my report. So I know the Public Health Department, they are working towards improving the conditions of the coconut vendors which we will be seeing soon, very soon. I can assure you, and we are trying at the Port of Spain Corporation, because we do have our challenges and our constraints. But we are all for having the city in a much better condition. Thank you.

Madam Chairman: Okay. Thank you all for attending and contributing. We have learnt a lot and I hope that when we put out our report that you will have a read of it to see whether your views were reflected accurately.

I think what this has also shown is that the regional corporations perhaps need to have tighter links amongst themselves, in terms of laying out projects and this kind of thing and sharing of ideas amongst each other. I do not know if that happens in any formal or informal way. But

what I get from you is that you have separate inputs into your respective communities and you may benefit from liaising with other communities to find out how you may solve a problem more easily than you would have otherwise thought.

So I want to thank you all very much for attending. You certainly have given us a lot of assistance. And I want to thank the listening and viewing audience.

I apologize for not being able to give you the usual information with respect to how you could channel your comments or questions to us, but at the next live meeting I assure you that that will be the case. There being no other business, this meeting is now adjourned.

12.20 p.m.: *Meeting adjourned.*

VERBATIM NOTES OF THE TWENTY-THIRD MEETING OF THE JOINT SELECT COMMITTEE ON FINANCE AND LEGAL AFFAIRS HELD IN THE ANR ROBINSON MEETING ROOM (WEST), NINTH FLOOR, (IN CAMERA), AND THE J. HAMILTON MAURICE ROOM (MEZZANINE FLOOR) (IN PUBLIC), OFFICE OF THE PARLIAMENT, PORT OF SPAIN INTERNATIONAL WATERFRONT CENTRE, #1A WRIGHTSON ROAD, PORT OF SPAIN, ON FRIDAY, MAY 18, 2018, AT 10.35 A.M.

PRESENT

Ms. Sophia Chote SC	Chairman
Mr. Taharqa Obika	Member
Mrs. Vidia Gayadeen-Gopeesingh	Member
Mr. Clarence Rambharat	Vice-Chairman
Dr. Lester Henry	Member
Mr. Julien Ogilvie	Secretary
Ms. Sheranne Samuel	Assistant Secretary
Ms. Terriann Baker	Research Assistant
Mr. Brian Lucio	Research Assistant

ABSENT

Mr. Terrence Deyalsingh	Member [<i>Excused</i>]
Dr. Lovell Francis	Member [<i>Excused</i>]
Mrs. Cherrie-Ann Crichlow-Cockburn	Member [<i>Excused</i>]

TOBAGO HOUSE OF ASSEMBLY

Mr. Raye Sandy	Chief Administrator, Tobago House of Assembly
Mr. Linford Beckles	Director, Environment
Ms. Damika Marshall	Environmental Officer II
Mrs. Dianne Baker-Henry	Administrator
Mr. Ricardo Bobb	Public Health Inspector III
Ms. Jasiyah Ibrahim	Project Engineer

ACE RECYCLING LIMITED

Mr. Kevin Clarke Director/Operations Manager
Mrs. Tricia Clarke-De Freitas Director, Finance

COUNCIL OF PRESIDENTS OF THE ENVIRONMENT

Ms. Kelli Danglad Technical Manager, Green
Engineering
Mr. David Jacob Technical Manager,
Green Engineering

Madam Chairman: Good morning all. I was simply waiting on the queue from the audio visual team for us to be able to start. The 23rd meeting of the Joint Select Committee on Finance and Legal Affairs is hereby reconvened. Today we are having our third public hearing in relation to our enquiry into the waste management policies and initiatives of the State.

I want to welcome officials and representatives of the Tobago House of Assembly, Ace Recycling/Caribbean Battery Recycling and Green Engineering. May I invite you all to introduce yourselves? I cannot see the names from where I sit but, perhaps, if we can start from left to right.

Introductions made.

Madam Chairman: Thank you all for attending this morning. Now, we will introduce ourselves. My name is Sophia Chote and I am the Chairman of this Committee. I will ask other members present to introduce themselves.

Introductions made.

Madam Chairman: Miss Samuel who sits to my left is the Assistant Secretary of the Secretariat from Parliament which assists us in our work in these Committees. Just as a reminder, I would like to repeat the three objectives of this enquiry: One, to examine the level of waste production in Trinidad and Tobago; two, to assess the effectiveness of regulations and policies directed at waste management; three, to assess the adequacy of resources and institutions associated with the management of waste.

I think you all must have been warned by the Secretariat that opening statements will be sought from some of you. So if I may start with Mr. Sandy. Would you do a brief opening statement, please?

Mr. Sandy: Thank you very much, Madam Chairman. The Tobago House of Assembly has the responsibility for waste management—the legal responsibility, that is—on the island of Tobago. This responsibility is shared across two divisions: the Division of Infrastructure, Quarries and the

Environment—environmental department, and the Division of Health, Wellness and Family Development via its department that deals with public health and waste management, and so on. The waste in Tobago, generally, is collected by private contractors engaged by the Tobago House of Assembly, and is carted to the—I am speaking primarily about solid waste here—lone authorized landfill we have in Tobago at Studley Park. That landfill is managed by the Division of Health, Wellness and Family Development.

With me today, I have the Director of Environment, Public Health Inspector and the Engineer of the landfill at Studley Park in Tobago, and they will be able to answer all of your questions and queries and provide the kind of information that should be able to give you some information about waste management in Tobago and the policies, and so on, that guide that activity. So I want to thank you very much for inviting us and we are here to contribute.

Madam Chairman: Excellent. Thank you, Mr. Sandy. May I now invite Mr. Kevin Clarke to make an opening statement?

Mr. Clarke: Thank you and good morning again, Madam Chairman. As I said, my name is Kevin Clarke. I am the Director of Operations at Ace Recycling Limited. Ace Recycling Limited is a wastepaper recovery facility that was established 22 years ago, 1996, and is the largest of its kind in Trinidad and Tobago. We recycle approximately 14million pounds of paper annually. The paper is collected at various locations throughout Trinidad and is brought back to our facility where it is sorted into different grades, baled into half-tonne bales, loaded into containers and shipped to various mills all over the world to be used as feedstock for making recycled products. With me here is the Director of Finance, Tricia Clarke, and we are both willing and happy to be here to answer any questions that you may have. Thank you very much.

Madam Chairman: Thank you. Ms. Danglad?

Ms. Danglad: Good morning, Madam Chairman. I am here wearing two hats. I am representing COPE which is the Council of Presidents of the Environment, which is an environmental NGO. But I am also an environmental consultant and contractor. So where I work at Green Engineering, we are a hazardous waste management company, so we would deal with a lot of hazardous materials from industry as well as asbestos-containing materials. We do also remediation of contaminated lands and this morning this is what we want to highlight to the Committee, volumes of hazardous materials that we encounter in our day-to-day operations, as well as concerns that we have with regard to the areas of contaminated sites, which I think also has to be covered, hopefully,

in this session, and ways that we think that we can reduce the waste volumes that we are observing.

Thank you.

Madam Chairman: Thank you. Members, does anyone want to start?

Mrs. Gayadeen-Gopeesingh: To Mr. Clarke: you just said that you all do wastepaper recovery and annually it is 14million pounds. So when this is processed, what is the actual weight you get from these 14 million pounds? That is the first question. And the second question, when you recycle the products, you said you ship to different parts of the world. Which country is the main importer of that product? And what is the cost per tonne that you get? Do you weigh it in pounds or tonne? And what is the cost per tonne?

Mrs. Clarke-De Freitas: Good morning, member. I think that I might be better able to answer that. The material that is collected is sorted into various grades. We ship about 12 to 13 different grades of paper. The country that we ship most to right now in volume is India, but we also ship to some Latin American countries, we also ship to the DR, Taiwan, Thailand, Korea, just to name a few. So the material is—if we collect, say, about 14millionpounds of paper, we recycle, or we ship most of it. There is very little waste that comes out of the system. The waste that may come out of the system is plastic contamination, or anything like that, but not the paper itself, because we even ship a super-mixed—a mixed grade of paper which is something that cannot be sorted. So we ship that as a grade also. The cost per metric tonne, on average, it varies from as low as \$50 per metric tonne, to about \$300 per metric tonne, depending on the grade of paper, and that is US dollars.

Mrs. Gayadeen-Gopeesingh: I was just going to ask about the currency.

Mrs. Clarke-De Freitas: We do have a local mill here in Trinidad that we supply quite a bit of material to. It is the tissue mill in the Arima Industrial Estate, and they take higher grade materials, the white—the cleaner paper, to use as feedstock in making a recycled tissue product.

Mrs. Gayadeen-Gopeesingh: And that tissue product is really for industrial use?

Mrs. Clarke-De Freitas: It is for local use. It goes into—there are different types of toilet paper that you will see on the market, locally, and even abroad. Where the paper is a little greyer, there is recycle content in it. Our mill here does not have a bleaching facility so they are unable to whiten—get the brightness of the paper. So some manufacturers use a recycle grade of tissue to make different priced products. So they take more or less the clean paper, the white ledger, in their manufacturing process.

Madam Chairman: I had a question for one of the representatives of the THA. Perhaps the person representing the Division of Health, Wellness and Family Development might be the best person to answer this. What is the relationship between THA and SWMCOL, and THA and the EMA? Is there a working relationship of any sort?

Ms. Marshall: Good morning, Madam Chairman. Currently with SWMCOL we recently had a tyre-shredding exercise that we would have partnered with them. That would have been in 2016. We invited the public to drop off their tyres at the Studley Park Landfill where SWMCOL would have brought up their tyre shredder and we had an exercise with them for approximately a month. We also are in discussions with SWMCOL pertaining to a recycling initiative and when requested, they also provide us with technical advice since the landfill was originally managed by SWMCOL.

With EMA, the relationship we have would be as seeking technical advice, but the relationship would be directly to the Division of Environment.

Madam Chairman: Well, what I wanted to find out, really, was, whether there was any synchronization in terms of policy towards waste management between the THA, which is handling waste management in Tobago and any of the agencies, such as the EMA or SWMCOL in Trinidad. Is there any sort of synchronization in terms of policy?

Mr. Beckles: Thank you, Madam Chairman. The Department of the Environment, we definitely do have a very longstanding relationship with primarily the EMA. That relationship is defined through a Memorandum of Understanding—where all matters related to the environment, particularly, the Environmental Management Act. In the context of Tobago we act for and on behalf of the Environmental Management Authority.

With respect to SWMCOL, the relationship we have is not that formal. The relationship has essentially been defined through a series of collaborative efforts that are mostly related to the commemoration of significant environmental days. With respect to wider waste management policies, the policies that are developed for the national space, those are the same policies that actually apply in the Tobago context. And, of course, pursuant to those policies a series of programmes and projects come out of that, and some of those programmes and projects we actually do implement in collaboration with the EMA and SWMCOL.

Just for example, you may know about the iCARE programme that is being piloted by the Environmental Management Authority. We are collaborating with the EMA to roll out that particular initiative in the Tobago context. Similarly, there is the Public Sector Recycling

Programme which is essentially being piloted by SWMCOL in the national space. And, again, in the Tobago context, we are coordinating that particular effort on behalf of the Solid Waste Management Company of Trinidad and Tobago.

Madam Chairman: In your presentation—I do not know, perhaps Mr. Sandy may assist us as to which member may be able to answer this, or tell us something about it. So far in the enquiry we realize that there is a problem with the disposal of derelict vehicles in Trinidad. Is there a division of the THA that deals with derelict vehicles? And if so, how do you deal with it?

Mr. Sandy: There is a collaboration between the Division of Infrastructure, Quarries and the Environment, and with the Division of Health, Wellness and Family Development, and I will ask Mr. Bobb to treat with that particular issue.

Mr. Bobb: Madam Chair, derelict vehicles fall under the purview of the Division of Health, primarily, in terms of its identification and removal. If we have reports or if we see derelict vehicles and they are deemed to be such as we would recognize under the Act, then we would try to make contact with the owners so that we could have them removed. A notice is given and a timeframe. If it is not done, we also have the facility to remove the vehicles to Studley Park where they are disposed.

Madam Chairman: Is there any special method of disposal for vehicles as opposed to any other kind of waste?

Mr. Bobb: What we do is, as with any other waste, we would put them in the cell, we would crush and cover.

Mrs. Gayadeen-Gopeesingh: You said that if the owner of the vehicle does not remove it, THA removes it? That is what you said?

Mr. Bobb: Yes.

Mrs. Gayadeen-Gopeesingh: Is there a cost that the owner has to pay? Or is it that you do it and you incur that cost?

Mr. Bobb: There is no cost at this point in time.

Mrs. Gayadeen-Gopeesingh: And is there any intention of at least letting the owner know that a cost will be levied?

Mr. Bobb: User fees are in the process of being determined.

Mrs. Gayadeen-Gopeesingh: You all trying to figure out what might be the user fee, how much?

Mr. Bobb: Yes. Well, that is under discussion at this point in time.

Mr. Obika: A follow-up question regarding the output. So after the vehicles are crushed, is the waste monetized? What happens? Or it rests at the landfill at Studley Park?

Mr. Bobb: Member, could you repeat the question, please?

Mr. Obika: After the vehicles are crushed and compacted, what use is put to it? Will it rest at Studley Park, or is it sold? Is it cannibalized, et cetera?

Mr. Bobb: They rest at Studley Park.

Mr. Sandy: I might want to also add here that there is an informal recycling that takes place at Studley Park, through the—I do not want to call them scavengers, but through the entrepreneurs who see the benefit of doing so. And there is an active trade taking place with respect to persons going to Studley Park, taking out the metal components, and so on, and selling them in the scrap metal market, I could say. It is a very informal arrangement, but we do facilitate them at Studley Park.

Mr. Obika: Mr. Sandy, will you be able to indicate how many—not the smaller guys; not the individual operators, but the scrap metal business dealers—are there that probably may export or send the scrap metal in larger quantities in Tobago?

Mr. Sandy: I do not know if a study has been done, but I know of a number of persons who are engaged in that trade and the scrap metal is sent to larger facilities into Trinidad. So on a nightly basis on the port you would see trucks loaded with scrap metal being transported to Trinidad.

Dr. Henry: Good morning everyone, again. I am interested in the issue of the single-use Styrofoam products. I see in your submission here you talked about your limited ability to make law to ban the use of it since the THA is not a law-making body. And you also talked about the expense of it, that the biodegradable replacements are much more expensive because of the duties on it. Could you elaborate on that a little bit?

Mr. Beckles: Thank you very much, member. With respect to the price differential between the Styrofoam containers and those containers that are made from biodegradable material, there is a very wide price differential. And while many factors might actually influence the price differential, one of the key factors, clearly, is the tariff structure, and so on. As I indicated in the submissions, at this particular point there are no taxes on Styrofoam products coming into Trinidad and Tobago. However, you have taxes that are levied on environmentally-friendly alternatives to Styrofoam, coming into the country.

Dr. Henry: Okay. That is a good point—

Mr. Beckles: And, clearly, this does not really align with our environmental ideals. So there is clearly a need for that particular situation to be addressed. And one of the ways that it could be addressed is through legislation, through upgrade of policy and that kind of thing. And at this particular point, given the constitutional arrangements and so on—the existing constitutional arrangements—between Trinidad and Tobago, we at the Tobago House of Assembly, we do not really have the legislative clout to make some of those kinds of changes. So it is incumbent upon us—and we have been doing this—to make structured appeals to our counterparts in Trinidad to assist us in this particular initiative.

Dr. Henry: Okay. So I sense that there is a willingness to move in that direction on the part of your division or—

Mr. Beckles: Yes, there is a willingness, of course, but not just willingness. I mean, we are taking very active steps to phase out Styrofoam. I mean, legislation is one way we can actually do it. However, given the situation at present, we are working with the private sector to phase out Styrofoam on a voluntary basis. Okay? At present, we have the Castara Tourism Development Association, for example. I mean, Castara is a rural village in Tobago where their socioeconomic survival is largely based on tourism, and we are working with the stakeholders in that particular community essentially to make Castara the very first Styrofoam-free village in all of Trinidad and Tobago. And efforts in that regard are very much underway. We are also working with a couple business associations, primarily the Crowne Point Community Partnership Association in the Crowne Point area. For those of us who would normally visit Tobago from time to time, you know that Crowne Point is quite active, and so on, in terms of recreation and restaurants, and so on. And we are currently working with them to make Crowne Point a much greener area.

We expect in a few weeks on the occasion of World Environment Day, a couple of the businesses are actually going to totally phase out their use of Styrofoam. So we are working with them, and having them assisting us to promote the alternatives, and so on. So those private businesses are actually going to be our champions in this particular initiative.

Madam Chairman: Okay, thank you. I want to congratulate you on not only on your willingness, because it seems to me that it is more than that. You are being very proactive in trying to change the policy, so that certainly is highly commendable. What I wanted to ask is this: I read somewhere that for landfills—and it seems to me as though all the waste in Tobago goes to Studley Park. For landfills to be considered safety-compliant, for want of a better phrase, you must be able to cover

the waste with at least six inches of dirt. Is that happening at Studley Park?

Ms. Ibrahim: Madam Chairman, we cover our waste daily. Where we would receive the material from primarily, we have a lot of agricultural vehicles that will come into the landfill and dispose of soil. We also do, from excavations and that sort of thing. So we have a stockpile of material that we can use to cover the waste. So that is being done.

Madam Chairman: Well, it is not simply covering it. It is doing it in such a way that it meets a certain standard. That is really what I am interested in, because I know that landfills in Trinidad have difficulty meeting that standard. So what I wanted to find out was whether there was such a difficulty of a similar difficulty in Tobago.

Ms. Ibrahim: The workers at Studley Park, they are very efficient at what they do. They have also been there for a number of years and we do not have such a difficulty. It is something that they do on a daily basis and we usually have enough material to cover.

Mr. Sandy: Madam Chair, can I also add that Studley Park Landfill is located right next door to the Studley Park Quarry. Quarrying activities require us to remove the overburden. Studley Park requires the overburden to cover the material in the landfill. So we have a symbiotic relationship with Studley Park Quarry and Studley Park Landfill. So as the officer indicated, there is adequate material to cover the landfill at Studley Park.

Madam Chairman: Thank you. In your submission to us, you said that solid waste was disposed of by using engineered cells. For people with no scientific background like myself, could somebody explain what that mean?

Ms. Ibrahim: Okay. The engineered cell, it is a cell that they would construct similar to a container. It looks like a container, in a sense. It is usually lined with a material known as polythene which would prevent any liquid from going into the soil, ground water.

11.05 a.m.

That is in the initial stage of preparation, and we have pipes that are laid to collect leachate, also pipes that are used to vent the methane gas before the garbage is deposited in that area. That is how the cell starts and then we start to put the domestic waste and then it is covered on a daily basis and the process will continue. So engineered meaning that environmentally sound, minimal damage to the environment in terms of primarily the leachate getting into the soil and the ground water and venting of the gas.

Mr. Jacob: Madam Chair, if I may also include here, Tobago is pretty lucky in that they have a

manageable situation there. They have landfill cover material next door, they can afford to construct an engineered cell like she described. However, here in Trinidad, it is not quite the same. We do hazardous waste management and we practice a technique called co-disposal in Trinidad here which means we dispose of both hazardous and non-hazardous waste at the same landfill. We should be adopting that same technique, the engineered cell. We do it here in another way. We have at Forres Park, in particular, we have a clay-lined landfill. It does not require that we use a polythene sheet lining to create the cell. So we use the natural clay lining which resists migration of waste from the deposit. So that is another engineered type of cell.

We do not have the capacity here—I use that word guarded—to construct venting pipes, et cetera. I think the sheer scale of the operations at the Beetham in particular and Forres Park, it is difficult to get that type of engineering into the cells here in Trinidad. The problem probably stems from the fact that there is no tipping fee for SWMCOL to operate these cells the way they should. So we have our challenges here in Trinidad but hats off to the guys in Tobago.

Madam Chairman: Thank you. Dr. Henry.

Dr. Henry: Yes, this issue, I did not see it reflected in the submission or in the questions, but I wanted to know: Is there any issue of waste ending up in the beaches and so on in Tobago? Is that a problem or this is something that you do not have to deal with and if so, what type of waste?

Mr. Beckles: Member, while in Tobago we pride ourselves on trying to be very good environmental stewards, we are not always that way and just like any other small island developing state, we do have challenges with waste ending up on our coastlines and so on. In my submission to the Committee, I would have indicated to you the efforts that we make at cleaning up the coastline and so on. It is normally a very large effort once per year as part of the international coastal clean-up campaign.

What we have noticed over the years, and these are of some concern to us, is the fact that we have had increasing participation from the public in this particular campaign. However, at the same time, there is a corresponding increase in the amount of waste that we collect. Now, we can probably make the analysis by saying that, well, maybe the fact that we have more hands on deck, it means, therefore, that we are in a position to collect more waste or alternatively, we could conclude that we are actually producing more waste and more waste is actually passing through the cracks, so to speak, and finding its way to our coastline. But the issue of trash on our coastlines and so on, it is a global issue but it is particularly a challenge for us in the small island developing

states.

Mr. Obika: Question regarding the methane gas at Studley Park: Has any consideration been given to commercialization of the gas, capturing it as opposed to flaring it and utilizing it in industry or any other use?

Mr. Bobb: Member, there was some feasibility done in relation to that but at the moment, there are no systems in place for doing it.

Mr. Obika: The other question I have is regarding sourcing waste at—residential waste at source. For example, if you are in the Scarborough area and you have plastic waste, you have food, whatever the technical terms would be, sorting it at source from the homes. Has any consideration been given to that as well and what has been the outcome of it?

Mr. Bobb: Member, at present, that is one of the limitations that we have in terms of there is no mechanism for the separation at source so those are some of the things that we are looking to put into the system.

Mrs. Gayadeen-Gopeesingh: I think this question might be more relevant to Green Engineering. From your submission, you said that over last 10 years, you have managed contaminated soil projects. My question is: What is the main agent of contamination and the source of that contamination and what is your estimated cost for that particular treatment of the soil?

Ms. Danglad: The projects that we encountered over the last 10 years were mainly lead-contaminated areas and the contamination stemmed from the improper disposal of batteries. So in the Arima area, there used to be, in the 1970s, I believe, a lead smelting factory and they would dispose of slag and other items in nearby communities, what we call fly-tipping. They would just go and dump the waste in these areas so the soil became contaminated with lead, and in one case, they did a blood lead study. The EMA together with, I believe, the University of West Indies, did a blood lead study with primary school children and the children that had high concentrations of lead in their blood, they went to their homes to try to investigate why, and they realized that they were living in a community where they had batteries that were indiscriminately disposed. So that led to the lead contamination.

There was another site in Arima, again, La Chance Trace, where the gentleman was doing informal battery recycling. So he would collect the batteries, break it open, smelt the lead and right in his yard do this battery recycling and that led to also contamination of the soils there and it also affected his children who lived on the premises. So we also remediated that site but the

main causes are improper waste disposal.

I just wanted to make another point. As you all were talking about the end of life vehicles, remember the vehicles would also have hazardous components, right. So you have the batteries, you would have waste oil, you would have your coolant which would be ethylene glycol, it is organic, some vehicles have catalysts, you have your tyres. So when we have all these informal recycling where, on the one hand, it is good that you have an informal market, but on the other hand, it leads to contamination of areas, of soil and land which leads to health issues which also then leads to costing with regard to, you will have incidents of cancer and, you know, other diseases linked to contaminated sites.

And then the cost to remediate, because the sites that we remediated, it was not the owners. The owners did not have to pay, it was us, taxpayers because the EMA got involved at that point. So there are all these costs that we, as the State, are burdened with, right, whereas it should be the polluter pays. But in this case it did not happen. And even one of the sites that we remediated, the gentleman went right back and started to do his informal battery recycling again, and when we visited the site, we just dropped in, the soil is grey, you could see the lead and then all this lead is running off into the Arima River. It is really disturbing.

Madam Chairman: Is there no way that through, perhaps, the Office of the Attorney General that some sort of injunctive relief may be sought against him because, I mean, when lead gets into the system, especially the system of a child, that affects the child's brain and life outcome at the end of the day.

Ms. Danglad: In fact, his own kids had mental retardation. There were mental issues from ingesting or incidental ingestion of the lead from, you know, when they play in the soil and also in the community. One of the communities in Arima, the children there were also affected with—their mental capacities were affected from that exposure, lead exposure. So as to injunctions, I am not sure if EMA would have explored that option or I do not know if that would fall under public health, but I do not know if that was even explored. But Mr. Jacob will discuss the cost.

Mr. Jacob: Typically, waste treatment and disposal, non-hazardous waste could attract a cost of probably TT \$500 per cubic yard, depending on the type of waste and hazardous waste. Like the lead-contaminated soil could attract \$5,000 per cubic yard, 10 times the cost.

Mr. Obika: Could I ask, Chair, Ms. Danglad, regarding the offending person in Arima, is he still engaged in this activity?

Ms. Danglad: The last time I visited his home—informally, I just drove pass just to see. It was not like a formal visit and that was in 2014 and he was still operating. And we did a site in Guayaguayare where, again, some persons recycle the lead to use as sinkers in fishing and this is what was happening in Guayaguayare. So even his animals, he kept animals, and some of his animals were affected by the lead and unless, as Madam Chairman mentioned, if there is not some type of legal injunction or some type of follow-up monitoring, they would just go back to doing what they know.

Mr. Obika: Two quick questions. You are conducting this in what capacity? These site visits that you conduct, what capacity, and two, if you can send us a list of all the offending persons in the past as well because they may have gone to another location and continued to do that. I do not want to know that my child, by virtue of just going somewhere where I live, could get some mental retardation despite my best efforts to educate her and as well as every child in Trinidad and Tobago. So I find this is a very alarming and disturbing and frightening prospect. So if you can provide that information: In what capacity do you do this work and if you all are properly funded and if you need more assistance from the Government?

Ms. Danglad: Well, to answer your first question, the study that I mentioned before, the blood lead study that was conducted by the EMA and the University of the West Indies, I believe that was Dr. Chang-Yen who conducted that investigation and through that investigation, we identified these lead-contaminated sites and then EMA would have put the project out for tender and we won the tender and we worked with EMA to remediate these sites. The other site which was contaminated by lead slag, we have two other sites.

Mr. Obika: Sorry to cut you. “We” is who? You said “we won the tender”.

Ms. Danglad: Oh, Green Engineering, sorry. The other two sites were private sites. I think the owners realized that there were contamination issues associated with the site and they decided to remediate. So, again, EMA was involved in that case as well and we cleaned up those sites.

And we realized also that we were beginning to see a trend so we started to an in-house study. Green Engineering did an in-house study and we developed a preliminary contaminated land inventory for Trinidad. So we looked at sites that would have had previous industrial uses where it would have been a battery factory, previous gas stations, previous chrome plating, because we know that we are an industrialized state and most industrialized countries, they have a contaminated land inventory. So they know in each regional corporation, which lands in that

regional corporation are contaminated. So that if somebody wants to purchase the land, they can say, listen, you need to remediate it to this level before you can reuse it. But what is happening now, because we do not have an inventory, we do not know which sites are contaminated and land use changes so quickly, you have people remediating and changing use and you are being exposed and you do not know.

Another example of that was when they were building, I think, the hospital in San Fernando, while excavating, they punctured a UST, an underground storage tank, which had oil and which was released because the site was a former gas station and it changed use several times. They did not remove the UST. The UST still remained there and then when they started to build it for, I believe it was the hospital, they punctured the tank. So if you do not know the historical background of the land that you are purchasing and what previous uses, you know, you could be exposing yourself, your workers and your population.

Mr. Obika: Not a question but if you are saying that there is a preliminary contaminated land inventory for Trinidad, if you could say when last it was updated and when you can send it to us so that we can have some information before us.

Mr. Jacob: Member, that study was done three years ago at the behest of AMCHAM. We are also members of AMCHAM and they asked us to do this study, it is self-funded by the way and we would appreciate if there could be funding for a project like that to continue the project. So we think we are about 10 to 15 per cent there. We suspect many more sites that are contaminated and we are hoping to continue the study within the next couple of years, of course with funding.

Madam Chairman: What I would like to ask is when you discovered or you were asked to work or give your input on a particular site, do you liaise with any state agency? For example, do you lay a complaint with the regional corporation or do you bring it to the attention of the district medical officer for example?

Ms. Danglad: When we reach to the point where we are remediating the site, we are there as a subcontractor. So in most cases, the EMA would be the project leader in these cases. So they would liaise with public health and the regional corporations and we would have meetings. We would attend meetings. A couple of times we did public consultations with the community to let them know what we are doing, what we have found. But usually, it would be the EMA that would lead that type of interaction and consultations.

But we decided—again, remember we are wearing two hats. So we are contractors but we

are also environmentalists and we are also scientists. So we noticed that there was a trend so we decided to do an in-house study to try to identify if there are other sites throughout Trinidad. We are an industrialized country so we would expect that you would have more sites. And how we approached the project was to go to the government archives which I thought had a lot of information and we got a telephone directory from 1950 and we looked to see what type of companies were available and were present in 1950 and where they were located, and then we went on ground to see, okay, are these companies still there, such as paint manufacturers, battery manufacturers, people selling chemicals; those types of things. And most times, when we would go to the site, the land use would have changed so what would have been a battery factory is now residential housing and that is the problem. When the land use changes, is there any decommissioning of an industrial plant? Is there any remediation before you change land use?

There is another site we went to that the facility is still up. It used to be a creosote plant where they would treat timber. So they had these big tanks of creosote which is a preservative—like a pesticide—and they would dip timber into these big tanks of creosote to preserve the timber which was used as electricity poles. And when the plant was closed down, they simply punctured the tanks and let all the creosote run out into the soil. But now farmers are using the soil, they are using the land. So the structures are still there because they never decommissioned the plant. So the structures are still there and farmers are planting because it is an abandoned site, “they see land”, they are looking for somewhere to plant so they started to plant. So is the contamination now being spread to the public, to the farmers now who are tilling the soil? So it is a concern. It is a concern and like I said, as an industrialized country, we need to have a contaminated land inventory. We need to have a proper hazardous waste inventory and an asbestos inventory which—

Madam Chairman: But before we go there, I just want to go back to the THA to ask you how do you dispose of your batteries, your car batteries?

Ms. Ibrahim: Currently, all the waste comes to the site. What we try to do is allocate specific areas so that it will be in a particular area and with the lining and the proper use of the cell, we hope, but as anything else, you would naturally have instances where—because we do not have a proper facility to actually deal with those sorts of hazardous-type of waste.

Madam Chairman: Well, it seems to me that then it means that the waste is not being properly managed and disposed of and it is just going into the soil, because I cannot imagine that polythene

would prevent anything from soaking into the soil. Has the THA considered contracting someone to deal specifically with this kind of waste?

Mr. Sandy: If I can add, Madam Chair? There are many entrepreneurs in Tobago who collect batteries and send them to Trinidad for recycling. I know of at least three persons in Tobago who are currently involved in that exercise. They drive around through the villages asking if anybody has batteries and so on, or you can take your batteries to them because I do that. There is a particular gentleman in Scarborough, if I have to change a battery in my car, I take my old battery to them and I think they pay you \$5 or something like but I just leave my batteries there. So there are some entrepreneurs who do that.

There are also entrepreneurs operating out of the landfill who will take batteries out but, of course, I am certain that there are some that will pass through the system, might get covered by other types of garbage and so on and might still end up in the landfill. But there are some entrepreneurs who are involved in some form of recycling of batteries in Tobago.

Madam Chairman: But would it not simply be easier to say that the landfill will not accept batteries and direct them to these people will send them to Trinidad?

Mr. Sandy: Madam Chair, the way the system operates, it is pretty difficult to get that done because the waste is commingled. So a truck will come into the landfill with kitchen waste, batteries, household waste, construction waste and we have a difficult time in terms of sorting that to determine where it goes. So in some cases, you would call it kind of almost like fugitive waste passing through the system. So we do have that challenge at the landfill.

Mrs. Clarke-De Freitas: Madam Chairman, I believe that we could answer some of these questions and issues with respect to lead acid contamination because we do have a company, Caribbean Battery Recycling Limited, and it is the only battery collection facility that is licensed by the Government, by the Ministry of Trade, and certified by the EMA and OSHA to collect lead acid batteries which we export. The batteries that go to the landfill in the Tobago. Unfortunately, there are a lot of exporters of lead acid batteries that hide in the system by not declaring that they are exporting batteries because you do need a licence to export it and you do have to meet certain criteria and it is difficult to meet the criteria. So there are many yards, and I am sure that we could provide you with some names of yards of people that are—

Madam Chairman: We would be most grateful.

Mrs. Clarke-De Freitas:—draining the acid to get the lead into the ground and in this draining

process, they are not just draining the acid but there are lead particles that also go into the ground and we have reported some of these to the EMA in the past and to OSHA because they make the export of the product, of course difficult because they are not following any regulation and some of these salvagers from Tobago are also part of that because they provide that material to these yards that are not handling it environmentally sound.

So we have gone through the process. It was a tedious process; it took us years. It was the first time the EMA, since the law had been put into place, that they were also dealing with it, so it was a learning process for the EMA and ourselves but we went through the process. It took us about three years to eventually get the licence and to come up to scratch, to bring the facility up to scratch to meet the EMA requirements and OSHA requirements for the handling and export of the lead acid batteries.

Madam Chairman: Sen. Obika.

Mr. Obika: Mr. De Freitas, could you shed some light for the public to find out, okay, if you have a car battery—well categorize which battery will have lead in it and what is the procedure? So if they bring the batteries to you, what happens in the exchange?

Mrs. Clarke-De Freitas: Well when they bring the battery to us we normally pay for the batteries. So we give them something for the batteries. So there are many yards that we go to that sell like that.

Mr. Obika: Sorry to cut you, will you be willing to venture how much you pay for the batteries?

Mrs. Clarke-De Freitas: It depends on the size of the batteries. It goes from like \$25 up to \$80 for a battery, for a car battery. Some of the bigger scrap dealers that collect scrap metal, we encourage them to supply us with the batteries. Some of them do. We may pay as high as \$4,000 to \$5,000 a metric ton for their batteries because they are bringing it in bulk. We will collect it from them, bring it to our facility where it is palletized according to standards and then we load them into containers. We line the containers, we load them into containers and the majority of this goes to South Korea.

Mr. Obika: And where is your facility located or facilities?

Mrs. Clarke-De Freitas: In El Socorro.

Ms. Danglad: Madam Chair, if I could also include that what I think is needed is a dismantling facility for end of life vehicles and that is something that I think SWMCOL can do as part of integrated waste management approach or a waste park approach. So that you have a formal way

of dismantling the vehicles, getting the batteries, the batteries could then be sent to ACE to recycle and you have a formal process and controlled process of dismantling a vehicle. Because when it happens—I am not sure if any of you all ever visited the Forres Park landfill site, but when you have these scavengers pulling things off the trucks or doing their informal recycling, it happens at the side of the road, and sometimes it is piles and piles of metal you would see just as you are driving up the road. So it is not only an environmental risk, it is also a security risk. And then it also causes squatting because now they are squatting to be able to get access to the trucks first. I know the community in Forres Park is also affected by it but something has to be done about the scavenging in the landfill. The landfill is supposed to be secure, it is supposed to be sanitary. We cannot have those activities continuing because it is an environmental impact and it is a security issue as well.

11.35 a.m.

Madam Chairman: Mrs. Gayadeen-Gopeesingh, you have a question?

Mrs. Gayadeen-Gopeesingh: Thank you, Chair. To the THA, I saw in your submission you said two roving checkers conduct random site visits at various localities. I was just trying to figure out what does random mean; how regular is random? And those two roving checkers, what do they check for? Is it that perhaps now as we have this exposé on lead if perhaps one of their job specs could be to identify the batteries at those sites? So the question is, what do they look for, these roving checkers?

Mr. Bobb: Member, the roving checkers are checking to see whether the system is operating efficiently in terms of contractors collecting the garbage as they ought, or the householders are storing them as they ought to, so that the trucks can take them up. That is their main function, and it is more like a random sample throughout the island to ensure that the service is executing efficiently. In terms of the lead issue, that does not form part of their operations.

Mrs. Gayadeen-Gopeesingh: How often is random?

Mr. Bobb: It is done daily.

Mrs. Gayadeen-Gopeesingh: So instead of saying random, you should put daily in this?

Mr. Bobb: The sites are random. It is a number of locations so it is not the same site every single day.

Dr. Henry: Once again back to Green Engineering. I see your very first recommendation was for a centralized waste management facility at Point Lisas. Could you elaborate on that, please?

Mr. Jacob: Well, we know about lead. We learned a lot about lead this morning, but there are other hazardous materials that could really cause problems to our people, and in the environment here. Another common one is mercury in fluorescent tubes. Mercury is a mutagen and is a very serious hazard. If you are looking at the exposure of children, for example, in the environment, mercury is one, asbestos is another one. We have a lot of industrial chemicals. You are talking about the pops and the benzenes, and the acetones and the acids that are being generated daily out of places like industrial sites, like Point Lisas.

What we have found in the past working with the companies there is that one guy would have sulphuric acid to dispose of, say, and another guy would have lime to dispose of, but these guys do not walk hand in hand. So we usually would take materials from both these guys and mix them together, treat them. So we decontaminate both materials using each other's waste. So we use the acid waste to decontaminate the lime, and the lime to decontaminate, or neutralize is the word, the acid. So you get a nice relationship there. But it does not happen just like that. We have to get in the middle of these two guys usually and literally tug and twist at these two guys to get them to agree to that type of treatment. Even when it in fact cuts the cost 50 per cent for either of them. It is very difficult.

What we were recommending there is that perhaps Plipdeco, the company who manages the estate, should construct a facility that would in fact invite all these companies to deposit their waste streams at a location, have it tested there, characterized, treated and disposed of properly.

What we have also found is that these guys hire truckers to dispose of their waste. They prefer to pay a trucker than to pay Green Engineering to do the waste disposal, because as I mentioned before it could cost anywhere between TT\$500 and TT\$5,000 per cubic yard. Of course on our end it would cost closer to the \$5,000. On a trucker's end it will be closer to the \$500. I mean, economics will tell the generator that he could use the trucker and get away with \$4,500 per cubic yard, and we have experienced that type of behaviour.

As I speak now, we have state company—I do not think it is a state enterprise—they are looking at tenders for asbestos disposal. They have one certified asbestos contractor and three truckers tendering for that project. Who do you think would get the project? They look at cost. They say they look at the pre-qual exercise, which should in fact dismiss the other three, the three truckers. But they have one certified contractor, three truckers, and I suspect one of the truckers will get that job, and this is asbestos which is a serious carcinogenic.

Madam Chairman: Which company is this?

Mr. Jacob: You mean the state company?

Madam Chairman: Yes.

Mr. Jacob: Am I allowed to?

Madam Chairman: Yes, you are.

Mr. Jacob: UDeCott.

Madam Chairman: UDeCott?

Mr. Jacob: Yes

Ms. Danglad: I just would like to add, member, that sometimes what we observed in industry they would have an activity that they would like to do quickly, so at that point they just want the waste removed. They do not care who takes it; they do not care what happens to it. They just want it removed from the site. So we are thinking, if you have a centralized waste management centre then that would remove the haste to just get rid of the waste. So they could send to this facility; it would be stored there temporarily until they can get a certified waste manager or resource manager to deal with the material, and that is where the truckers come in. They just somebody to take the waste and get rid of it, and sometimes they just turn a blind eye as to what happens to it. God alone knows what happens to it. They could go dump it, pump it somewhere, which happens. That happens a lot.

Madam Chairman: Could I just ask Ace Recycling, do you all deal with other kinds of batteries?

Mrs. Clark-DeFreitas: We also deal with marine UPS batteries, but not the domestic household batteries. So cell tower units, those kind of batteries that Digicel would use in the cell towers, from TSTT. So we try to appeal, of course, to corporate enterprises to recycle environmentally sound. Some of them would do that, but just like in every other organization there are loopholes and everybody is looking for a dollar. So when the scrap person and say, "I will give you \$200 for this," it will go somewhere as opposed to us. It is many different types of batteries. There are forklift batteries that we also deal with.

Madam Chairman: Is there a phenomenon of electronic waste, you know, when people toss out printers and computers and so on, and do you know how that is addressed?

Mrs. Clark-DeFreitas: There is a company in south that deals with e-waste, but there is only one person that I know of, that we know of, and have ever heard of that deals with the e-waste. I know that when it goes to the landfill the salvagers would pull out the copper and the other usable or

valuable parts to it, or components, but no.

Madam Chairman: I have a question for the THA, just to go back to the methane point. Do you test emissions from the landfill? Is there any way that you can do that.

Ms. Ibrahim: Currently no we do not test the emissions at the landfill.

Mr. Sandy: Madam Chair, the tube that she spoke about earlier, basically we just vent the cells to prevent the build-up of gas in the cells. So as the methane is produced, it is just vented, so the concentration is fairly low, and it is just vented in the atmosphere. We do not collect it and flare it or anything like that. We just vent it.

Madam Chairman: For Green Engineering, you were focusing on Point Lisas. I know you spoke about different sites around the country and so on, but what about companies which deal with harmful chemicals, not just paint companies and that kind of thing, how is their waste dealt with?

Mr. Jacob: We have a relationship with some of these larger manufacturers, and we have found that the larger guys, especially those that a foreign affiliate, or affiliated to a foreign company, they have very robust EHS departments and professionals employed at their companies. They have no choice but to do the correct thing. That is where most of our work comes from.

However, the local companies, because there is no local legislation enforcing the limited regulations we have, they tend not to even bother to institute measures that would preserve the environment, including the health of their workers, their employees, but the larger companies with foreign affiliations yes, they work closely with us.

Dr. Henry: To the THA, with the issue of scavenging and so on. When we had the local government bodies, the boroughs and so on a couple weeks ago. There was a lot of issues that were raised with contracting versus owning and so on. Do you have any similar issues in Tobago, the garbage trucks in terms of dealing with contractors who may not be 100 per cent above board? Do you have similar issues in Tobago or is it that is not an issue as we heard about this in Tunapuna, in Diego Martin, SWMCOL, issues they contract to the garbage collectors. So the regional corporation gets the blame, but they do not have any control over the contract, for example. So when there is a problem with garbage collection they get all the licks, but they do not control who is given the contract to pick up the garbage in the first place.

Mrs. Baker-Henry: Member we issue contracts to the contractors, we control them and we also monitor their activities. So we do not have the issue to which you speak about there.

Dr. Henry: Okay, that is fair enough.

Mr. Obika: I have a question for THA regarding the Studley Park Landfill, Chair. In some landfills in Trinidad they have the phenomenon of residents, landfill residents, persons living basically in the precincts of the landfill with families. Is that a challenge in Studley Park?

Mr. Bobb: Member, we have no such thing. We do not have any residents on the landfill.

Mr. Obika: Thank God for that.

Madam Chairman: Well, this is amazing. How did you avoid that?

Mr. Bobb: In the past, people may have tried it, but what we did was increase security and surveillance and monitoring. So we strongly discourage that kind of activity and behaviour.

Mrs. Gayadeen-Gopeesingh: Do you have cameras placed there, or you just do manual, or you just drive up? How do you do it? Do you have anything for real-time?

Mr. Jacob: Manual surveillance, and we do not have any cameras at this time, but with the manual surveillance, walking the site, driving the site, checking the sites daily.

Madam Chairman: This is for the THA again. How do you deal with biomedical waste?

Ms. Ibrahim: The Scarborough Hospital has an incinerator. They would incinerate their waste, and the incinerated ash would come in a barrel. It is placed in a container and that comes to the Studley Park landfill. We have a particular area that is assigned to sensitive and hazardous waste. The incinerated ash would be placed in that particular area and covered.

Mrs. Gayadeen-Gopeesingh: Just one follow-up question. Do you have any education campaigns to educate perhaps the schools, people? What is the initiative you all have?

Mr. Beckles: Thank you, member. In Tobago over the years what we had was a number of entities, so to speak, who were bombarding the schools with proposals to conduct public education campaigns to benefit the students. Naturally this was something that was very overwhelming for the schools, and as a result of what I would describe as push back from the schools, we did the sensible thing which was really to bring all of those entities together, entities from state agencies, entities associated with NGOs and so on. We brought all of these entities together, and what we now have is, if you wish, a singular kind of entity that would engage the schools.

This is something that we discussed with the EMA and SWMCOL recently, and they were quite impressed with the model, and they were proposing in the future to do something similar in the Trinidad context, because they were also experiencing the same kind of push back.

Having said that, we have one or two, we have a couple initiatives that we have been engaging the schools on over the years. The most important being what we call the “Clean School”

initiative, which is again something that the state agencies and the NGOs collaborate on. That would have been included in the submissions.

Initially it started essentially as a kind of beautification programme in the schools, but we have used that particular mechanism to engage the students on a wide range of environmental topics. The response to that has been very good. We are very encouraged by it, and we are actually adding additional components to that particular programme to benefit the students.

Madam Chairman: I would just like something cleared up. It has been brought to my attention by Ms. Samuel, and this is with respect to the THA, you were telling me about how you deal with biomedical waste. In your written submission to us this is what you had said:

A proposal has been submitted to the Division for the implementation of environmentally sound technology to dispose of biomedical waste from the Scarborough General Hospital.

Does this mean that your current method of disposal is not environmentally sound?

Ms. Ibrahim: The current method of incineration I should say that it should be probably a bit more environmentally sound. A proposal is submitted that we are currently looking at to use technology that does not require incineration. So that is being revisited which would be more environmentally sound than the current process of incineration.

Madam Chairman: I do not know. I do not follow what you are saying. To me, it is either that something is environmentally sound or it is not. So is there a grade that we will put on incineration? Is there a grade that is used and if so what grade is put on incineration of biomedical products?

Mr. Bobb: It is always important, Madam Chairman, that we strive to make the system as efficient as possible. What we are doing now is acceptable, it is good, but we want to get better than that. I think that is where the technology is looking towards, to have something better than what we have.

Madam Chairman: Well I think what you have just said is you have told me the same thing using different words. Maybe it is because I am a lawyer, I am seeing it this way. Maybe other members would see it another way. But I apologize to you if it sounds as though I am cross-examining you. That is my not my intention, I am simply trying to understand the process. We also have people listening on the radio and looking on at the Parliament channel so we want to break down the terms that we use to make it easily understandable.

So it would seem to me that it would be fair to say that the current method of incinerating

biomedical waste is not acceptable. Let me reassure you, there is no harm in accepting that that is so, because if you do not accept it then it means nobody is going to fund you to get the technology that you require, because there would be no problem. So I urge you to say your piece now that you have the opportunity before a Joint Select Committee of Parliament.

Mr. Bobb: Madam Chairman, if I am to suggest a response, for example one of the things you want to do, especially in this time, is to reduce the amount of waste that goes to the landfill. So let us say one of the things that we would have mentioned in the report is carbonization. It is a technology that we are actually researching at this point in time, where you can have package plant that carbonizes everything in a community so that nothing goes to the landfill. So in that way you save on landfill space and the quantity of stuff that goes there. So the new technology is to look at the fact that we may not even need to send any waste to the landfill, biomedical waste to the landfill, and it is from that perspective that we are looking at it. So it is not that incineration is unacceptable at all, but like other technologies, we are researching what could be even best in the industry.

Madam Chairman: Since the EMA is a research body for the environment in general, have you had any partnerships with the EMA with respect to researching how biomedical waste should be best dealt with?

Mr. Beckles: Not at this juncture that I am aware of; not at this juncture, but it is something to be taken into consideration.

Mr. Obika: I have two quick questions. One is a follow-up to that, and the other is regarding the material of choice in Castara. So as a follow-up to the question on the incineration of biomedical waste in Tobago, is there any opinion proffered from Green Engineering on it, if you are familiar with the case, regarding the carbonization I guess?

Mr. Jacob: I am not familiar with the carbonization process. However, what happens in the biomedical industry is there are ways to reduce the volume, or the percentage, of infectious waste, which is the really tricky waste to manage in a hospital environment. There are a couple ways: autoclaving, microwaving, things like that. Probably this is what the THA is referring to.

When you autoclave or microwave you remove the infectious agents and so you can treat that material like it is non-hazardous or non-biomedical. It is a biomedical waste, but non-hazardous, non-infectious, so you treat it with the normal waste stream, and it reduces the waste you have to send to the incinerator.

Mr. Obika: The other question I had was for the THA regarding the materials of preference in Castara to replace the Styrofoam containers. So for example if I go to a fisherman's fete would I get a paper-based thing as you had in the Green Market in Santa Cruz or would I get something else, and what material do you have? So then you can use this opportunity to, let us say, the national population might decide to voluntarily get on board with Castara and probably Parlatuvier and L'Anse Fourmi might follow suit.

Mr. Beckles: Thank you very much, member. Well, as you mentioned paper is one alternative, but there are two other relatively popular alternatives, one is bagasse based. You know that many years ago we had a lot of bagasse here. That is not the case anymore with the decline of the sugar industry. It is little an ironic that we have to actually import the bagasse now.

The other material is actually corn based, basically coming out of the United States. These are the two popular materials that we actually make the alternative packaging to Styrofoam from. The containers are quite sturdy, and they are actually able to contain a lot of grease, because you know that generally in Trinidad and Tobago we tend to consume a lot of greasy food, and one of the concerns that consumers would have is whether the alternatives are actually going to leak, but they actually contain the grease in the food for a very, very long time, normally around eight hours or so. It is quite good.

Mr. Obika: The last question I have regarding that is, given the supply chain explained by Ace—so the tissue factory in Arima as well as exporting. Is there any possibility of utilizing waste from companies similar to Ace? So when you have the public sector recycling initiative that you can have a result where you can replace the corn based or the bagasse based, so therefore we do not have to find additional foreign exchange to supplement the Styrofoam based thing, so that will also increase the potential for a reduced cost. Is there any opportunity to link with Ace on that?

Mr. Beckles: Well, I just got familiar with Mr. Clark, and we expect to exchange contact information subsequent to this particular sitting. But certainly that is something that we can explore. But if I may be so presumptuous and to speak on behalf of some of my colleagues at the Ministry of Planning and Development, I know that they are actually in the process of working with some of the corporate interests here, who would normally produce Styrofoam containers. They are working with them to assist them to retool their plants so they would be now able to manufacture some of those same containers right here in Trinidad and Tobago.

Madam Chairman: Just to go back to Ms. Danglad—I am sorry I called you “Ms. Danglade”

earlier—could you just give us a brief synopsis as to what COPE is it and what it does?

Ms. Danglad: COPE is an environmental NGO. It operates solely on a volunteer basis and from donations from different companies. What we do we try to engage industry proponents to practise environmentally sound practices—the way to say it. One of the things that we did was to review EIAs. So at one point EIAs that would be submitted to the EMA, they would also give us a copy to review and submit comments, and we would invite those proponents to meet with us to discuss EIAs. We would give them advice as to how they can adjust it so that it is minimal impact on the environment.

We did, at one point, training. We did an outdoor management course. We try to engage the communities to find out what are the issues they are having with regard to the environment. We used to do monitoring, drive around Trinidad, look for issues and submit those comments to the EMA. So we were quite an active group. But it is an umbrella organization and it is made up of several different environmental NGOs, but it is purely voluntary.

Madam Chairman: Before I allow Mrs. Gayadeen-Gopeesingh to ask a question, just a quick follow-up. What is your membership?

Ms. Danglad: At this point I cannot say. I will need to ask our Chair, Ms. Pat Mc Gaw, as to the numbers. I cannot say offhand what the numbers are; it fluctuates.

Mrs. Gayadeen-Gopeesingh: For the THA also. I was reading again your submission and you said over 15,000 tonnes of waste is collected. It includes agriculture, carcasses and tyres. With respect to the agriculture, do you have any networking with the Ministry of Agriculture, Land and Fisheries that you could use some of this waste to recycle, use it perhaps as compose or mulch or so? Do you have any networking with the Ministry of Agriculture, Land and Fisheries?

12.05 p.m.

Ms. Ibrahim: The majority of what would be classified as agriculture, the bulk would be, as Mr. Sandy said, from the quarry which we would use as the cover. The agriculture department, they are also free, I guess, to come and utilize what we have as well. We have that working relationship with them, but they can come and also use the material that we have, if it is needed or requested as well.

Mrs. Gayadeen-Gopeesingh: So, what you are saying, the material is the soil? That is the material? It is over 15,000 tonnes you are saying you collect as waste?

Ms. Ibrahim: When the trucks come into the landfill via the weighbridge it would be

classified on the computer system. It falls within the agriculture brackets. So, it would be classified as agriculture.

Mr. Sandy: If I can add some clarity, Madam. When the waste comes into the landfill they operate out of the landfill. Now, the person who is in charge on that day will place the waste in a particular category. But, remember, the waste is coming in there, perhaps on a truck, and if they see the truck covered with tree trimmings they might be classified as agricultural waste. And underneath those tree trimmings could be concrete, plastic, because the waste is not segregated at source, so it is usually mixed waste.

So, they do a general kind of categorization and try to get it as close as possible to be viewed as categories that they are supposed to put waste in. So, the truck then enters an area that is designated for agricultural waste. And what the member was saying is that if you need to get some mulch you are free to come to the landfill and go to that area where agricultural waste is deposited and they would permit you to collect it if you want to. But in most cases it is contaminated and it is mixed, and you do a general categorization. So, it is really a rough estimate of the waste that you are getting, given the system now in place. If the system facilitates segregation at source, and then you have a particular day where agricultural waste is collected, then you know it is pure agricultural waste. But, it is really mixed waste, and they categorize it based on the volume where it tends to lean more to, if it is agricultural, or domestic, or that kind of thing.

Mrs. Gayadeen-Gopeesingh: Are you saying perhaps the collection of the waste should be more structured?

Mr. Sandy: Definitely. We can all agree on that.

Mrs. Gayadeen-Gopeesingh: Okay, thanks.

Madam Chairman: Okay, unless there are any more questions, I will now move to that stage where we ask for closing statements, but I will go in a different order. So, Mrs. De Freitas would you make a brief closing statement?

Mrs. Clarke-De Freitas: Madam Chairman, and members, I thank you for the opportunity that you have given us to share a little bit on Ace Recycling and Caribbean Battery Recycling. We know that the efforts that we have made over the last 22 years, and for Caribbean Battery, in the last 10 years, are large in the scope, but we are working towards doing more, and Ace Recycling is in the process of funding a First World recycling centre here in Trinidad that will take into

consideration Trinidad as well as Tobago. So, we are hoping that that would be funded soon, and in place in the next two to three years that we could deal with all solid waste recyclable commodities. So, I thank you.

Madam Chairman: Thank you. Mr. Sandy, would you make a brief closing statement?

Mr. Sandy: Madam Chair, let me thank the Committee for inviting us and for giving us this opportunity to inform and to also learn. Tobago's mantra for the last—what?—since 2005 has been clean, green, safe and serene. The clean speaks to the issue of how we managing our waste. And, if I may say so myself, Tobago is probably one of the cleanest islands in the Caribbean, as far as waste in the streets and waste throughout the general environment is concerned. We are not even in that we do have our issues and our challenges, because as Mr. Beckles would have said earlier about waste meeting our shores and so on, but we really try to do our best.

We are limited by the legislation that governs this. We are limited because persons are not forced to segregate their waste, and we are limited by the technology that is available, but we do try our best with the limited resources that we have with the antiquated laws under which we operate, and Tobago really wants to maintain its position as one of the better managed islands as far as waste management is concerned in the Caribbean. And we will continue to do our best, and we are hoping that with the new legislation that we hope to be treating with soon, will give us the kind of authority to treat with some of the issues that are now affecting us, as far as waste management is concerned. Again, thank you very much for the opportunity.

Madam Chairman: Thank you, and to your team. Mr. Jacob would you make a brief closing statement?

Mr. Jacob: Thank you, Madam Chairman. The issues we have here in Trinidad are not unsurmountable. There is a definite need for strengthening, institutional strengthening. There is need for facilities to manage waste, systems, procedures, of course, legislation, regulations, and to monitor these things. And existing facilities there is a need to upgrade, and to support, and I would look at a simple one, the landfill sites. For example, SWMCOL has been doing a very good job given the resources they have to do the job with. There is need for funding, probably by way of tipping fees so that SWMCOL would source the required cover material and the other infrastructure, monitoring wells, berms, security, et cetera, to manage their landfills properly. Thank you.

Madam Chairman: Thank you, and I would like to thank everyone who attended and made a

contribution here today. It was extremely valuable to us, and certainly it will be useful for us when we produce our report to be laid in Parliament. I wish to thank the media, and the attending, and viewing, and listening audience to this session. There being no other business, this meeting is now adjourned. Thank you.

12:12 p.m.: *Meeting adjourned*