Government of the Republic of Trinidad and Tobago

NATIONAL

WASTE RECYCLING POLICY

February 2015

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LIST OF ABBREVIATIONS AND ACRONYMS

CEHI	-	Caribbean Environmental Health Institute
CEP	-	Caribbean Environment Programme
CBO	-	Community Based Organization
EMA	-	Environmental Management Authority
EM	-	Environmental Management
HDC	-	Housing Development Corporation
IMA	-	Institute of Marine Affaire
LBS	-	Land Based Sources
M&E	-	Monitoring and Evaluation
MARPOL	-	International Convention for the Prevention of Pollution from Ships
NGO	-	Non Governmental Organization
SWMCOL	-	Trinidad and Tobago Solid Waste Management Company Limited
THA	-	Tobago House of Assembly
UTT	-	University of Trinidad and Tobago
UWI	-	University of the West Indies

1.0 INTRODUCTION

1.1 State of Waste Management

1.1.1 Waste Character

These figures were gained from a 2010 waste characterization study commissioned by the Ministry of Local Government. The study was conducted for the three (3) landfill sites managed by the Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL), that is, Beetham, Forres Park and Guanapo, as well as the privately managed Guapo Landfill. Despite the limitations of the study, there was clear evidence that a significant amount of recyclable materials were being disposed in the four (4) major landfills on the island of Trinidad, as detailed hereunder.

Type of Waste	Beetham	Forres Park	Guanapo	Guapo
Organics	32.0%	22.4%	21.7%	10.5%
Paper	21.4%	13.7%	18.0%	18.7%
Glass	8.7%	11.6%	10.3%	23.0%
Metals	2.8%	4.0%	6.3%	3.5%
Plastics	16.0%	26.0%	19.1%	17.0%
Textiles	8.2%	7.8%	6.6%	8.6%
Beverage Containers	0.8%	1.3%	0.9%	0.6%
Other	1.8%	2.7%	5.2%	5.5fh%

It can therefore be concluded that the reuse of such recyclable materials would have significant positive impacts on the capacity of the existing landfills to meet the final waste disposal needs of the country.

1.1.2. Waste Collection System

Solid waste collection has always represented a significant aspect of any integrated waste management system. Since the development of the solid waste master plan in 1980, Trinidad and Tobago continues to be faced with escalating challenges in its collection system. The solid waste collection system has, however, shown some robustness to the increased volumes and types of waste requiring disposal over the last twenty (20) years.

In Trinidad, waste is collected three (3) or four (4) days per week in many of the residential areas and seven (7) days per week in the town centres and at the central vegetable and meat markets. In Tobago, waste is collected seven (7) days per week. Approximately 90% of the collection function is performed by private contractors and the remaining 10% by the public sector. These public sector collectors focus primarily on waste collection in the town centres. There are approximately two hundred and sixty-six (266) collection districts in the

country which are defined by boundaries such as rivers, access roads and foothills of mountain ranges.

The main type of waste collection vehicles being operated in the collection system are rear-loading compaction vehicles, with one private contractor operating side-loading vehicles for commercial and industrial customers. These rear-loading vehicles are equipped with hydraulically powered rams that compact waste to increase payload, and then eject the waste from the vehicle at the disposal site. The collection activities are handled mainly be three (3) man crews consisting of a driver and two (2) loaders with some crews equipped with gloves and coveralls. Crew numbers are determined by the requirements for the use of rear-loading compactors, and labour agreements in the municipalities.

1.1.3 Waste Disposal System

The current primary methodology for the final disposal of waste in Trinidad and Tobago is landfilling. There are presently nine (9) operating disposal sites in Trinidad and Tobago receiving approximately one thousand tonnes (1000) of waste per day. These are:

Beetham

The Beetham site, which is managed by SWMCOL is the largest disposal site on the island and has been operating for over thirty years. The site is approximately sixty-one (61) hectares in size and is located within the ecologically sensitive Caroni Swamp, thereby posing a threat to the surrounding wetlands, migratory wildlife and inshore artisanal fisheries. As a result of its location in a wetland, a ready source of cover material is not available on the site. Additionally, salvagers at this site pose a health threat to the wider society. The site functioned as an open burning dump site until the mid 1980s when some degree of control was introduced to curb fires, odours, indiscriminate salvaging and overall negative impacts on the Caroni Swamp.

Guanapo

The Guanapo landfill has been in operation for over twenty (20) years. Initial site development plans included the expansion of the Guanapo landfill but this has been curtailed due to encroachment by squatters. The site which has been operated by SWMCOL since 1983, is approximately seven (7) hectares and has a number of physical constraints including depth of overburden, presence of adjacent homes, and a failing main access road. Scavenging of waste is a very common practice at this site, posing a health threat to the wider community.

Forres Park

The Forres Park site, which is also operated by SWMCOL was selected, designed, developed and operated using engineering principles. This site has been in operation since March 1983 and is approximately eight (8) hectares in size. The site has a leachate collection system that runs throughout the centre of the landfill, draining into a leachate pond. The site has been constructed on

several metres of naturally formed compacted clay. Groundwater monitoring wells are incorporated as part of the site's infrastructure.

Toco

The Toco site, which is operated by the local Regional Corporation, is three (3) hectares in size and has operated since 1969. This site is located within the Melajo Forest Reserve, close to a nature reserve and within the vicinity of a wildlife sanctuary. Cover material is not always available at this site and as a result the site is plagued with vultures that feed on exposed food. The site drains into a channel that empties into the western section of the forest. This channel has been blocked by loose waste, which creates ponding and flooding to the north of the site during periods of extreme precipitation. Scavenging by local villagers also occurs at the site. In addition, there have been complaints from communities located to the west of the landfill about the offensive odours, leachate and runoff originating from the site.

Blanchisseuse

The Blanchisseuse site, which is operated by the local Regional Corporation, is located in the hills of the Northern Range on private lands. The site has been in use for the last ten (10) years. The site is situated on lands that slope about sixty (60) degrees and therefore does not accommodate proper landfill operations. The use of cover material upon deposition of waste is also limited. Burning of waste occurs at the site but salvaging has not been observed. The surrounding lands are natural forest and agricultural holdings and drainage from the landfill terminates in the forest.

Point Fortin

The Point Fortin Landfill is operated by a private contractor, and located on lands owned by the Petroleum Company of Trinidad and Tobago (PETROTRIN) . This land was previously used for oil exploration following which disposal operations commenced in 1991 to service the Point Fortin borough. There is no cover material on site, fires regularly occur, and the surrounding community is involved in salvaging at the site.

Cedros

The Cedros Landfill is under the jurisdiction of the local Regional Corporation, and is located in the County of St. Patrick east of the town of Bonasse. The site is situated in a mangrove swamp that is being filled by waste deposition. Daily operations do not include covering waste, as cover material is not available on site. Burning of waste is commonly used to reduce waste volumes and salvagers are known to frequent this site. It is believed that any leachate generated at the site is probably washing into the swamp, posing a potential human health and ecological hazard. Recent indications are that site use has been reduced or prohibited.

Los Bajos

This site is operated by the local Regional Corporation, and has been in operation for about ten (10) years. The site drains into the adjacent forest and is cluttered with uncovered waste causing potential human health and environmental impacts due to the surface water contamination. Waste is reduced on the site by salvaging and burning. The proximity of the site to the forest presents potential impacts to the forest vegetation and the animal wildlife. The gases produced and the noise levels during the operations further exacerbate this impact.

Studley Park Integrated Facility

This site, operated by the Tobago House of Assembly is located approximately fifteen (15) km east of Scarborough and is the only official disposal site for the island. The site was constructed in 1984-85, and is an integrated facility that consists of a sanitary landfill, an oily waste collection facility and a faecal waste disposal system. The landfill was designed to service Tobago for twenty (20) years and was expected to accept a solid waste inflow of seven thousand three hundred and sixty (7,360) tonnes per year. The faecal waste disposal facility was designed to accommodate two thousand six hundred (2,600) cubic metres of faecal waste per year. The facility was designed as a two-celled anaerobic lagoon with overflow to an infiltration basin and occupied 0.5 hectares.

1.1.4 Institutional Arrangements

In Trinidad, domestic waste collection is the responsibility of the municipal corporations, while medium and large commercial and industrial generators hire private waste haulers. In this regard, the Ministry of Local Government functions as the central coordinating agency for the fourteen (14) municipal corporations, comprising:

- Two (2) City Corporations – Port of Spain and San Fernando
- Three (3) Borough Corporations Arima, Point Fortin and Chaguanas
- Nine (9) Regions – Couva/Tabaquite/Talparo; Diego Martin; Mayaro/Rio Claro; Penal/Debe; Princes Town; San Juan/Laventille; Sangre Grande; Siparia and Tunapuna/Piarco

Landfilling is managed by SWMCOL and local government bodies in Point Fortin and Toco. SWMCOL was established with a larger mandate than managing landfills, however enabling legislation to permit the institution to act as a national authority for waste management has not been promulgated. SWMCOL also operates under the administrative authority of the Ministry of Local Government .

The Environmental Management Authority (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 EM Act, Litter Act and Public Health

Act and have issued clean-up orders and other notices of violations to persons contradicting these Acts. The EMA, is also currently developing 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. The EMA operates under the administrative authority of the Ministry of the Environment and Water Resources and therefore by extension that Ministry also has some responsibility for establishing policy frameworks related to waste management.

In Tobago, the Tobago House of Assembly (THA) through the Local Health Authority is responsible for the collection and disposal of solid waste.

The administrative framework for waste management in Trinidad and Tobago is therefore complex with two Ministries (Local Government; and the Environment and Water Resources); one (1) state limited liability company (SWMCOL); one (1) statutory authority (EMA) and the THA all having responsibility for waste management. There is no clear delineation of function and a lack of coordination, leading to confusion as to which entity has lead responsibility for waste management in the country. The situation has resulted in duplication of efforts and wastage of resources as well as the creation of administrative and management gaps in the system when none of the entities take responsibility for certain functions.

1.1.5 Legislative Arrangements

The management of waste in Trinidad and Tobago is governed primarily by the provisions under the Litter Act of 1973 and the Public Health Act of 1950 and their accompanying regulations. The municipal corporations are primarily responsible for the enforcement of these Acts. The municipal corporations themselves are governed by the Municipal Corporation Act of 1990 and under this act the corporations have responsibility for the disposal of garbage, the development and maintenance of sanitary landfills and the abatement of public nuisances.

In 2000, the Environmental Management (EM) Act was enacted with the objective, *inter alia*, to ensure the establishment of an integrated environmental management system; facilitate coordination among government entities to effectively harmonize activities designed to protect, enhance and conserve the environment; and enhance the legal, regulatory and institutional framework for environmental management. In this regard, the EM Act mandates the EMA to develop and implement a programme for the management of wastes which may include the registration and further characterization of significant sources of wastes being disposed in the environment. The Act also provides for the development of Rules to regulate the handling and disposal of waste which the EMA is currently developing.

The legislative framework of Trinidad and Tobago also addresses the manufacture, use and sale of hazardous substance through the Pesticides and Toxic Chemicals Control Act and the Occupational Safety and Health at Work Act. The Pesticides and Toxic Chemicals Control Act regulate the importation, storage, manufacture, sale, use and transportation of pesticides and toxic chemicals whereas the Occupational Safety and Health at Work Act is concerned mainly with hazards in the workplace. Although, these acts do not strictly deal with the management of waste, their implementation may have implications to the implementation of the Litter Act, Public Health Act and the EM Act given the inter-relatedness and the need to manage hazardous substances using a "cradle to grave" approach.

1.2 Issues and main drivers of change

The management of solid waste in Trinidad and Tobago has been an area of growing concern in recent years due to the rapid growth in the overall volume of waste being generated, and the increase in the proportion of non-biodegradable and hazardous waste. Rapid industrialization, commercialization and residential development have contributed to increase volumes and types of wastes that have demanded new approaches to waste management. This is evidenced by the quantum of new business establishments registered in Trinidad with primary concentrations in the cities of Port of Spain and San Fernando, the borough of Chaguanas and the municipal corporations of San Juan/Laventille, Tunapuna/Piarco and Couva/Tabaquite/Talparo. Tobago has also seen an increase of new business establishments. The Housing Development Corporation (HDC) also proposes the increased construction of new units. These new units are to be distributed throughout the country, requiring the reorientation of the waste management system to accommodate the waste stream from these new units.

The solid waste generated is generally disposed of by landfilling. There has been a significant and rapid reduction in landfill capacity at the official landfills (Beetham, Forres Park, Guanapo and Studley Park) as a consequence of the rapid growth in the volume of solid waste being generated. Apart from the reduction in landfill capacity, the collection system for waste is also constrained by the increased volume. One of the most notable problems with the inadequacy of the collection system is the untimely collection of garbage especially in urban areas on weekends which has resulted in the pile-up of garbage and the associated unsanitary conditions in the country's major city centers. Some other problems with the poor collection system include:-

- Poor storage of waste.
- Dogs and scavengers scattering waste.
- Illegal dumping by private collectors.
- Distance and poor condition of disposal sites.

These inefficiencies in the collection services exacerbated by the poor levels of environmental literacy among the citizenry have also led to increasing incidence of illegal dumping of waste along the verges of roadways, vacant lots and watercourses. Apart from the impacts on the aesthetics of the natural environment, illegal dumping is a major contributor to the annual problem of flooding and poses a serious public health concern.

Records from SWMCOL indicate that a significant amount of recyclable materials (paper, plastics, metals and organics) are being disposed of at landfills. The removal of recyclable material from the waste stream for reuse/recycling as well as the promotion of composting by households, can extend the life of the existing landfills and improve the efficiency of the waste collections system.

2.0 POLICY CONTEXT

The National Waste Recycling Policy cannot operate in isolation of other policy instruments that directly and/or indirectly impact on, or can be applied to, the waste management sector. The Policy was therefore developed in the context of currently approved and draft policies, plans, and programmes related to waste management as well as commitments made to the international community by virtue of the Government being signatory to waste related agreements.

Sectoral policies also have important implications for the National Waste Recycling Policy, the two (2) most significant being the National Environment Policy and the National Integrated Waste Management Policy. The National Environmental Policy provides a rational, practical and comprehensive framework for environmental management in Trinidad and Tobago. The Policy establishes the context under which all environmental related polices operates. In this regard, the policy on waste management is based on the principles of reuse and recycling. According, to the National Environment Policy the Government will:

a) Encourage the reduction of waste production and its harmfulness, particularly through the development of clean technologies, techniques for the recovery or final disposal of dangerous waste substances, and the development and marketing of products designed to have minimal environmental impact by nature of their manufacture, use or final disposal;

b) Encourage the recovery of waste, including recycling, reuse or reclamation, and the use of waste as a source of energy;

c) Ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment and, in particular, without risk to air, soil and plants and animals, or cause a nuisance through noise or odours and without adversely affecting the landscape;

d) Prohibit the abandonment, dumping or uncontrolled disposal of municipal waste including bulky waste**,** derelict vehicles, stoves, other appliances and tyres;

e) Establish an integrated and adequate network of waste disposal installation; and

f) Promote economic instruments and market incentives including deposit/refund taxes for beverage containers, tyres, batteries, fluorescent bulbs, appliances, used oil and automobiles;

The National Integrated Waste Management Policy establishes the plan for managing the country's waste. One of the main objectives of the policy is to manage waste in an integrated waste management system in accordance with a hierarchy that minimizes land-filling, with an increased focus on reduction of toxicity and volume of waste, through reuse, recycling and source-separated organic waste management. The policy also advocates the following measures: the treatment of waste as a resource; emphasis on reduction and recycling in order to promote resource conservation and environmental protection; generators taking responsibility for the waste they produce; greater involvement of the private sector in waste management; and the reinvigoration of recycling.

At the Caribbean regional level, the main instrument for cooperation in waste management is the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean, (the Cartagena Convention), including its Protocol Concerning Pollution from Land-Based Sources and Activities (LBS Protocol). Trinidad and Tobago is a signatory to, and has ratified, both the Convention and the Protocol, and it is an active participant in the Caribbean Environment Programme (CEP), which coordinates the implementation of these international instruments. The Government also hosts a Regional Activity Centre for the Protocol at the Institute of Marine Affairs (IMA). Of direct relevance to the national waste recycling policy are: the list of land-based sources, activities and their associated contaminants of greatest concern to the marine environment of the Wider Caribbean; the regional effluent limits for domestic wastewater (sewage) and requirements for the development of plans to address agricultural non-point sources of marine pollution.

At the global level, Trinidad and Tobago is signatory to most of the primary international agreements on waste and chemical management including, the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal; the Stockholm Convention on Persistent Organic Pollutants; and the International Convention for the Prevention of Pollution from Ships (MARPOL Convention). The country also hosts the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region.

3.0 SCOPE AND PURPOSE

The purpose of the National Waste Recycling Policy is to provide the guidance to enable Trinidad and Tobago to establish an appropriate legislative, administrative and institutional framework for waste reduction and recycling. This framework will be: easily understood; comprehensive; and clearly organised and described. Accordingly, the best available waste management practices and technological developments would be incorporated as far as possible into this Policy.

The National Waste Recycling Policy is envisaged to be a living document that will be monitored and formally reviewed and updated every 10 years to reflect new needs, issues and opportunities, and to adapt to changing conditions.

4.0 VISION

Trinidad and Tobago in pursuing its ambitions to become a developed society is committed to the development and delivery of waste recycling and re-use systems, which have a high degree of efficiency, an acceptable balance of costs and benefit, and are capable of maximizing resource use efficiency and value recovery from wastes, whilst protecting human health and the environment.

5.0 GOAL

The goal of this policy is to provide guidance for the creation of an enabling legislative and administrative framework to facilitate a 60% reduction of waste requiring final disposal by the year 2020 based on a 2010 baseline in the Waste Characterization Study, thereby minimizing the impact of waste on human health and the environment, and to improve resource use efficiency.

6.0 PRINCIPLES AND VALUES

A number of overarching principles have informed the formulation of this policy statement and will guide its implementation. These are:

Respect and care for the community of life: human beings and communities are an integral part of the community of life which includes all living things. The implementation of this policy will be based on a premise that ensures that this integrated community of life shall be respected and supported.

Evidence-based management: policy formulation and implementation will be based, to the maximum extent possible, on tangible evidence and information as the basis of decision-making.

Polluter pays principle: producers of waste will bear the costs imposed by waste on human health and the environment including waste treatment

and disposal in order to provide a fair system and one that discourages producers from generating waste in the first place.

Precautionary principle: lack of scientific certainty as to the likelihood, magnitude, or causation of a potentially negative environmental impact, will not be used as a justification to prevent action to avoid serious or irreversible potential harm to human health and the environment.

Sustainability and carrying capacity: all forms of resource use and patterns of development must remain within the capacity of the country, to support and maintain these activities indefinitely.

Enforcement and effective control: the main challenge to effecting policy always hinges on implementation, and policy measures and instruments have little value unless they are properly enforced. In this regard, the State and all relevant civil society actors, will take all necessary measures to ensure that this policy and its enabling legislation are adequately enforced, including through the provision of adequate personnel and resources.

Policy Integration: waste reuse and recycling policies are a critical component of a wider integrated waste management system and would therefore be linked to, and harmonised as far as is possible with, other relevant policy areas and instruments.

Adaptation and "learning-by-doing": Waste generation and character, economic, social and cultural conditions, and waste treatment and disposal technologies are constantly evolving and changing. As a result, policy and management responses must be able to adapt to these changes through continuous improvement and innovation. Monitoring and evaluation will be an integral component of policy implementation, with data, results and lessons-learnt being used to make management adaptive and responsive.

Accountability: there will be fairness, transparency and accountability in the formulation, adoption and implementation of policy instruments and measures.

Empowerment, collaboration and participation: the costs, benefits and responsibility for waste reuse and recycling will be shared among all stakeholders, who must be provided with the right to actively participate in management and decision-making process.

Occupational health and safety: implementation of the waste recycling policy should be conducted in accordance with the national Occupational Health and Safety legislation.

7.0 POLICY OBJECTIVES

Trinidad and Tobago will develop an enabling legislative and administrative framework for waste recycling to achieve the following mutually-reinforcing objectives:

(i) Protection of human health and the environment

(ii) Maximization of resource use efficiency and value recovery from wastes

(iii) Reduction by 60% of the quantity of waste requiring final disposal by the year 2020, based on a 2010 baseline

(iv) Minimization of litter

(v) Creation of a culture of waste minimization

(vi) Enhancement of economic development by the creation of novel business opportunities in the reduction, collection, handling and recycling of waste

(vii) Creation of a culture of shared responsibility for waste management among government, producers, distributors and consumers

8.0 POLICIES TO ACHIEVE OBJECTIVES

8.1 Waste Recycling and Reuse

Reuse is to use an item more than once. This includes conventional reuse where the item is used again for the same function, and new-life reuse where it is used for a new function. By contrast, recycling is the breaking down of the used item into raw materials which are used to make new items. In order, to initiate reuse and/or recycling of materials, systems and incentives have to be developed and implemented to remove reusable materials from the waste stream. Towards this end, Government shall:

i. establish a priority list of products and materials that can be reused and recycled;

ii. establish return/deposit systems where feasible for recyclable and reusable materials (e.g. paper, plastic, metals, rubber, organics) and products (e.g beverage containers, car batteries, tyres, electronic equipment)

iii. establish a system for curbside source separation of recyclable and reusable materials ensuring that there are adequate design standards for tamper proof disposal bins

iv. encourage household composting where practical by providing 50% off the cost of one (1) composting bin per household with the expenditure being sourced from the Resource Recovery Fund

v. establish a network of waste collection centers/materials recovery facilities to allow the public to drop-off recyclable and reusable materials that its bulk or toxic nature makes curbside pick-up impractical

vi. establish a phased prohibition of the land-filling of recyclable and reusable materials and products which have been listed and being managed under the national system for waste recycling

vii. encourage product-substitution by providing fiscal incentives such as tax-breaks, removal of import duty and value added tax on products composed of at least 70% of recycled materials

viii. provide grants from the Resource Recovery Fund for the development of novel products and materials made of recycled materials

ix. provide tax breaks on equipment to be used for the establishment of recycling plants

x. provide incentives to encourage local small business development in the refurbishment and marketing of used products such as computer, cell phones, televisions, refrigerators, stoves, washing machines and other household appliances and electronics to extend their usability and life

8.2 Management Arrangements:

In order to administer and effectively manage the implementation of a system for waste recycling, the Government shall:

i. through a consultative process with all relevant stakeholders, establish a Waste Recycling Management Authority to administer and coordinate an integrated waste management system that would include the implementation of the National Waste Recycling Policy. This Authority shall:

    a. be established so as to facilitate:

        i. efficient coordination of the implementation of an integrated waste recycling management system, including a programme for waste recycling, with beverage containers being the first waste stream to

be addressed followed by other waste streams which pose harm to the environment;

ii. transparency and accountability in management of the National Waste Recycling Programme;

iii. development of partnerships with stakeholders to facilitate active participation in the implementation and decision-making for this National Waste Recycling Programme ;

iv. flexibility in responding to management needs;

v. human resource management that is suitable to the special demands of the waste management sector;

vi. independent access to and management of funding;

b. have an Executive Board to guide its operations, which shall comprise representation from central government, local government, community organisations, non-profit organisations, academic institutions, and the private sector encompassing disciplines such as waste management, environmental management, public administration, business development and management, accounting, engineering, social and community development, local government, and law;

c. appoint such committees, working groups, or councils to assist in the performance of its functions;

d. enter into contracts with national, regional and international agencies involved in waste management

e. establish, administer and utilise the Resource Recovery Fund to enable implementation of this Policy. The Fund will be financed via the deposition fees, tipping fees, disposal taxes, penalties and fees, and other fiscal measures established in relation to the implementation of the Waste Recycling Policy and from external sources such as multilateral donor agencies and Governments;

f. function to:

i. develop and execute policies and programmes for the efficient and cost effective implementation of an integrated waste management system that emphasises waste recycling, with beverage containers being the first waste stream to be addressed followed by other waste streams which pose harm to the environment;

ii. implement provisions under national laws and regulations governing waste management;

iii. make recommendations for the rationalisation of policies, laws, regulations, and administrative arrangements for the management of waste in Trinidad and Tobago;

iv. collaborate with relevant government agencies and other stakeholders for management of waste.

v. assist each municipal cooperation, borough and city of Trinidad and the Tobago House of Assembly with the establishment and implementation of appropriate management arrangements for waste management including the development of area-specific waste management strategies and plans that focus on recycling;

vi. establish multi-stakeholder management committees as required, to coordinate and facilitate the management of area-specific waste management strategies and plans. These would include representatives of all of the government agencies with responsibility for waste management as well as other key stakeholders from civil society and the private sector;

vii. collaborate with existing national committees with responsibilities and interests relevant to waste management;

viii. strengthen structures and mechanisms for effective inter-agency and inter-sectoral communication, collaboration and coordination.

8.3 Participatory Implementation

In order to empower the effective participation of the private sector, academic institutions, Non Governmental Organizations (NGOs), Community Based Organizations (CBOs), communities and individuals, and to ensure the proper implementation of efforts geared towards waste recycling, the Government shall:

i. adopt structures and mechanisms to institutionalise stakeholder participation in the development, implementation, review and evaluation of all policies, plans and reports associated with waste recycling;

ii. adopt and strengthen policy and legislative frameworks, structures and mechanisms to enable allocation of appropriate management responsibilities to governmental and non-governmental stakeholders

(e.g. private sector, community-based organisations, volunteer groups) and facilitate agreements between the State and private sector to enhance the involvement of the private sector in waste collection, operation of collection centres/depots, materials recovery centres, recycling plants and other components of the waste recycling system;

iii. develop community-based programmes to encourage rural stakeholders involvement in the waste recycling effort

8.4 Legislation

The revision, development and declaration of supporting legal instruments (laws and regulations) will be required to effectively implement the Waste Recycling Policy. In order to achieve this, the Government, shall develop an enabling legislative framework to:

a. establish a Waste Recycling Management Authority for the administration and coordination of waste recycling, with beverage containers being the first waste stream to be addressed followed by other waste streams which pose harm to the environment;

b. provide for the establishment and operation of a Resource Recovery Fund;

c. establish financial mechanisms, and processes for preventing and recycling waste including deposit/refund systems, disposal taxes, landfill bans, tipping fees, tax breaks, materials and packaging taxes, etc.;

d. establish and operate a network of collection centre/depots and/or materials recovery centres

e. establish and operate a system to facilitate the curb-side segregation of waste

f. establish requirements for the development and implementation of regional/municipal waste recycling plans;

g. provide for Licenses, Permits, Enforcement Notices, Cessation Orders, Incentives and Fines;

h. revise or repeal as necessary the Municipals Cooperation Act, Litter Act, Environmental Management Act including the Waste Management Rules, legislation establishing the Trinidad and Tobago Solid Waste Management Company Limited, Tobago House of Assembly Act, and other key enabling laws and regulations to ensure consistency with the new enabling legislation for waste recycling.

8.5 Conflict Management

Recognising that many different stakeholders with sometimes conflicting perspectives and interests would have a vested interest in, and be affected by, decisions regarding the implementation of this Policy the Government shall address conflicts between and among stakeholders by authorizing the Board of the Waste Recycling Management Authority to establish multi-sectoral conflict resolution committees or use of the Environmental Commission or other suitable body in arbitration and/or mediation.

8.6 Harmonising Policies

In order to ensure that there is harmonisation of relevant policies and programmes with this Policy, the Government shall:

i. address any areas of conflict with existing and proposed policies and programmes by establishing appropriate Cabinet-appointed committees to advise the Board of the Waste Recycling Management Authority and/or Government on mechanisms to resolve conflicts;

ii. integrate the provisions of this Policy into existing and proposed policies;

iii. address gaps and areas of overlap with existing policies (e.g. National Environment Policy, Municipal Waste Management Policy) to ensure coherence and complementarity.

8.7 Municipal/Regional Waste Recycling Plans

It is recognized that different municipalities and regions of the country generate different composition and amounts of waste. For instance, an industrial area such as Couva would generate different waste compared to that of an urban area such as Port of Spain or Scarborough, or an agricultural/rural area such as Siparia. Moreover, the waste generation of the island of Tobago would be different from the island of Trinidad. In order to address this reality and give effect to the systematic implementation of this Policy, the Government, in collaboration with all relevant stakeholders, require:

i. each municipal, city, borough corporation and the districts of the island of Tobago, to develop through a participatory process a Municipal/Regional Waste Recycling Plan to effectively implement this policy;

ii. the Board of the Waste Recycling Management Authority to integrate within one (1) year of the receipt of the Municipal/Regional Plans into a National Plan which shall clarify roles and responsibilities and ensure coordination of implementation among municipal authorities.

8.8 Financial Mechanisms

Adequate financial resources will be needed as an incentive for effective waste recycling in Trinidad and Tobago. A sustainable financing mechanism should be developed that would include multiple strategies for acquiring funding through environmental taxes, product taxes, disposal taxes, return/deposit system, tax relief incentives, national budgetary support, and grant funding. In order to ensure the development of mechanisms for the sustainable financing for waste recycling efforts, the Government, shall:

i. create a Resource Recovery Fund;

ii. facilitate revenue collection through the application of appropriate return/deposit systems, environmental taxes, product taxes, disposal taxes on waste that can be reused and/or recycled; and bulky or toxic wastes that are difficult to dispose;

iii. formulate and implement a system of incentives to encourage manufactures and importers to produce and market eco-friendly products. Such incentives could include, removal of import duties and taxes on products composed of 70% to 100% recyclable materials; tax breaks on equipment used for recycling; provision of grants from the Resource Recovery Fund for development of innovations for re-use and recycling of materials; and removal of value added tax on products composed of 70% or greater, recycled materials.

iv. provide adequate annual budgetary allocations to municipal, borough and city corporations; Tobago House of Assembly and the new Waste Management Authority;

v. advocate the use of the Green Fund to support civil society participation in waste recycling;

vi. provide increased funding for research on product development that reduces packaging, re-uses materials and uses recycled materials;

vii. optimally utilize multilateral and bilateral donor grant funding to encourage waste recycling.

8.9 Capacity Building:

In order to facilitate effective participatory management in waste recycling, the Government shall:

i. build the capacities of stakeholders from government, civil society and the private sector including in:

   a. technical aspects of waste recycling (including expertise in materials handling, manufacture and marketing; waste separation including source separation; waste recovery; and management and operations of materials recovery centres);

b. developing, maintaining and using a system of data collection to guide waste recycling efforts including waste characterization studies;

ii. provide resources to assist NGOs; CBOs and the private sector to effectively participate in implementation of waste recycling efforts which may include provision of technical assistance, and financial or material resources;

iii. provide technical and financial support for the development of sustainable recycling industries and small businesses

iv. improve and adapt the skills mix and increase the number of staff in key government agencies involved in implementation of this policy, at technical and professional levels;

v. improve administrative and management efficiency and effectiveness of the key government agencies involved in implementation of this policy;

vi. enhance training in disciplines relevant to the implementation of this policy at the technical, undergraduate and graduate levels including the University of the West Indies (UWI) and the University of Trinidad and Tobago (UTT);

vii. explore and utilize opportunities for capacity building and training available regionally and internationally through the Caribbean Environmental Health Institute (CEHI), the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region and the Regional Activity Centre for the LBS Protocol

viii. institutionalise mechanisms for continuing professional education of waste managers in the public service including the provision of scholarships and other educational grants;

ix. develop terms and conditions of employment that address the human resources needs to effectively implement this policy, in the relevant Government agencies;

x. promote overseas study visits, exchange programmes and short professional workshops and seminars;

8.10 Research

In order to facilitate effective research and monitoring to inform decisions regarding waste recycling in Trinidad and Tobago, the Government through the Waste Recycling Management Authority, shall:

i. identify the priority research needs for guiding waste recycling;

ii. facilitate and support the design and implementation of research programmes;

iii. promote and support use of the best available technologies in waste segregation, recycling, handling, collection and disposal;

iv. collect baseline data and conduct continuous and periodic inventories on waste character and quantity, waste collection, and waste disposal, using appropriate technology;

v. collect socio-economic and environmental impact data related to waste recycling;

vi. ensure that data from research is shared with government agencies involved in waste management

8.11 Education and Awareness

Education and awareness of national efforts for waste recycling is critical to the success of the implementation of this Policy. Accordingly, the Government shall:

i. integrate educational programmes on waste management including waste recycling into primary and secondary school curricula;

ii. partner with tertiary institutions to enhance programmes on waste recycling;

iii. develop and implement within one (1) year of the adoption of this policy a communication strategy to ensure public buy-in of the waste recycling programme and thereby ensure the effective participation of the public;

iv. conduct continuous public awareness programmes and initiatives targeting key audiences utilising a variety of methods and media (including the internet, film and radio);

v. ensure that national and local stakeholders have equitable access to and benefits from information and knowledge on waste recycling, including information and knowledge from foreign stakeholders and researchers;

vi. utilize wherever possible financial resources from the Waste Resource Recovery Trust Fund to support education and awareness programmes geared towards waste recycling

8.12 Regional and International Programmes

Recognising that Trinidad and Tobago has obligations under several international agreements, and that these and other international instruments provide opportunities to facilitate and support waste recycling in Trinidad and Tobago, the Government, shall:

i. cooperate with regional and international partners and participate in regional and international programmes in the implementation of this Policy, including participation in and implementation of relevant Multi-

lateral Environmental Agreements (including the Basel Convention, Stockholm Convention, Cartagena Convention and its LBS Protocol and MARPOL);

ii. continue to provide technical and financial resources to ensure the long-term sustainability of the the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region and the Regional Activity Center for the LBS Protocol which are hosted by the Government.

8.13 Monitoring, Evaluating, Reporting and Review

Monitoring, evaluation, reporting and review will be integral parts of the policy implementation and management process, in order to ensure that the provisions of the National Waste Recycling Policy remain relevant to current and emerging needs, that lessons gained from experience are applied, that changes are made whenever necessary, and that there is full transparency and accountability in that process. In order to achieve this, the Government shall:

i. ensure that monitoring and evaluation (M&E) of implementation of the National Waste Recycling Policy is coordinated by the Board of the Waste Recycling Management Authority and involves stakeholders, including through the appointment of committees focusing on specific areas (e.g. segregation, source reduction, handling and collection, establishment and operation of materials recovery centres, research and data collection) and through establishment of performance targets for implementation of this Policy within one (1) year of its adoption;

ii. ensure that monitoring is continuous and informs adaptive management by the implementing agencies and organisations;

iii. ensure that participatory evaluation of the implementation of the policy is conducted every two (2) years, using tools such as small focus group meetings, interviews, hotlines, and surveys to prepare for an open public forum where progress and results, impacts and outcomes are reviewed;

iv. conduct a comprehensive review of the National Waste Recycling Policy every ten (10) years;

v. ensure that any minor revisions or adjustments to the National Waste Recycling Policy are coordinated by the Waste Management Authority;

vi. ensure that the results of the review of the National Waste Recycling Policy are reported to Cabinet with any recommendations for substantial policy revisions;

vii. ensure that the review of the implementation of this National Waste Recycling Policy is linked to, and integrated into, other national M&E and reporting requirements.