



2024 NATIONAL INTEGRATED SOLID WASTE/RESOURCE MANAGEMENT POLICY FOR TRINIDAD AND TOBAGO







Foreword

The ways in which we source, utilise and repurpose our resources are testament to our stewardship of the land on which we live. But more than that, they echo throughout generations, impacting futures that we, ourselves, will not be here to witness. It is critical therefore, that we manage these resources in sustainable ways that will not just benefit current generations, but that will set a foundation upon which those who come after can continue to build.

Indeed, it is the younger generation that must take ownership of the vision enshrined in this policy, and embrace it as they craft a new society. This, of course, does not absolve us, the older ones, of the responsibility of taking the necessary steps to secure a better future for us all.

The **National Integrated Solid Waste/Resource Management Policy (NISWRMP)** represents a milestone on that journey. Prepared by the **Ministry of Public Utilities (MPU)** in collaboration with the **Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL)**, the NISWRMP

outlines a strategic framework that brings together various stakeholders, including government agencies, local communities, private sector entities and civil society, to work collaboratively towards effective waste management solutions..

It does this while emphasizing the principles of reducing, reusing and recycling, thus promoting waste reduction at the source, encouraging the reuse of materials and enhancing recycling processes – all geared towards minimizing the environmental impact of waste, and establishing a circular economy.

Furthermore, the NISWRMP addresses the need for robust infrastructure, innovative technologies, and capacity-building initiatives to support efficient waste management practices. It also highlights the importance of public awareness and education in driving behavioural change and fostering a culture of environmental responsibility.

As we embark on the implementation of this policy, we invite all of Trinidad and Tobago to join us on a journey towards a more environmentally-aware society that responsibly and intentionally utilises its resources to build a secure and sustainable future.

Warm regards,
Honourable Marvin Gonzales
Minister of Public Utilities



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LIST OF ABBREVIATIONS AND ACRONYMS

CBOs	Community Based Organizations
CEPEP	Community-Based Environmental Protection and Enhancement Programme
EMA	Environmental Management Authority
EPR	Extended Producer Responsibility
GoRTT	Government of the Republic of Trinidad and Tobago
IC	Industry Committee
IDB	Inter-American Development Bank
ISWRMP	Integrated Solid Waste /Resource Management Plan
LBS Protocol	Protocol Concerning Pollution from Land-Based Sources and Activities
LGAs	Local Government Agencies (Cities, Boroughs, and Regional Corporations)
MEEI	Ministry of Energy and Energy Industries
MoH	Ministry of Health
MLG	Ministry of Local Government
MPD	Ministry of Planning and Development
MPU	Ministry of Public Utilities
MRDLG	Ministry of Rural Development and Local Government
MSW	Municipal Solid Waste
MSWM	Municipal Solid Waste Management
MTI	Ministry of Trade and Industry
NAC	National Advisory Council
NEP	National Environmental Policy, 2018
NISWRMP	National Integrated Solid Waste /Resource Management Policy for Trinidad and Tobago
ODPM	Office of Disaster Preparedness and Management
POPs	Persistent Organic Pollutants
RDC	Rural Development Company of Trinidad and Tobago Limited
RRF	Resource Recovery Fund
RHAs	Regional Health Authorities
SDGs	Sustainable Development Goals
SEP	Sustainable Energy Programme
SWMCOL	Trinidad and Tobago Solid Waste Management Company Limited
SWMCorp	Trinidad and Tobago Solid Waste Management Corporation
THA	Tobago House of Assembly
TTBS	Trinidad and Tobago Bureau of Standards
WMR	Waste Management Rules, 2021
WMFR	Waste Management (Fees) Regulations 2021
WRMA	Waste Recycling Management Authority
WtE	Waste to Energy

EXECUTIVE SUMMARY

The National Integrated Solid Waste/Resource Management Policy for Trinidad and Tobago (**NISWRMP**) 2024 was developed by the Government of the Republic of Trinidad and Tobago (**GoRTT**) to set a clear direction for the integrated and sustainable management of Municipal Solid Waste (**MSW**) in Trinidad and Tobago.

The **NISWRMP** 2024 seeks to establish a policy framework that builds on the existing foundation and to provide a nationally agreed direction and focus for the next ten (10) years. It addresses Municipal Solid Waste Management (**MSWM**) and outlines the vision, objectives and policy strategies of the **GoRTT** for the **MSW** sector.

VISION

The efficient harmonization of municipal solid waste management to support sustainable and inclusive communities and the promotion of environmental conservation.

GOAL

To establish an integrated and sustainable municipal solid waste management system, integrating socio-cultural, environmental, and economic objectives while promoting human well-being, community awareness and involvement.

The Policy proposes thirteen (13) objectives that place greater emphasis on employing **MSWM** policy strategies in alignment with the circular economy and zero waste management hierarchy:

Objective 1:

Strengthen institutional and organizational arrangements to address the management of **MSW** comprehensively and effectively.

Objective 2:

Strengthen institutional coordination, collaboration, and governance.

Objective 3:

Improve and develop, where required, national standards and regulations for the storage, collection, transportation, recovery, recycling, and disposal of **MSW**.

Objective 4:

Establish an effective legislative framework that enables the management of **MSW** as an Integrated Sustainable Solid Waste Management System in accordance with the zero-waste hierarchy, where the focus is placed on prevention rather than disposal through the initiatives of reduce, reuse, and recycle.

Objective 5:

Develop strategies to reduce greenhouse emissions from landfills and other **MSW** activities including collection, recovery, recycling and treatment.

Objective 6:

Manage **MSW** in a cost-effective manner that maximizes environmental benefits and minimizes long-term financial liability for the population.

Objective 7:

Ensure that **MSW** generators take responsibility for the environmentally sound management of their wastes, and identify, communicate and allocate management costs equitably among those who use or benefit from the system.

Objective 8:

Develop national **MSW** classification and data management systems consistent with international best practice that would be beneficial in supporting evidence-based decisions and future plans.

Objective 9:

Enable sustainable recycling industries, including for reuse, repair and remanufacturing of products to extend their useful life and minimize disposal.

Objective 10:

Support the use of sustainable procurement principles which are in alignment with public procurement and disposal of public property legislation along the **MSW** value chain.

Objective 11:

Establish an approach to reduce hazardous substances from entering the nation's landfills and to enable environmentally sound management of hazardous **MSW**.

Objective 12:

Implement public awareness and education programmes to encourage a national shift towards the adoption of a circular economy and to foster sustainable consumption habits.

Objective 13:

Create incentives to encourage research, design and innovation in solid waste management, including promoting the eco-design of products to encourage closed loop production systems.



1.0 INTRODUCTION

The National Integrated Solid Waste/Resource Management Policy for Trinidad and Tobago (NISWRMP) 2024 is the scheduled revision of the National Integrated Solid Waste/Resource Management Policy for Trinidad and Tobago 2014. It sets the trajectory for establishing an Integrated and Sustainable Solid Waste Management System for Trinidad and Tobago.

1.1 Scope of Policy

The NISWRMP 2024 addresses **MSW**, which includes the management of:

- a. **Residential solid waste** - wastes generated by the normal activities of households, including, but not limited to, food wastes, rubbish, ashes, and bulky wastes.

Where:

- i. Rubbish is a general term for solid waste (semi-solid, liquid and gaseous waste) taken from residences, commercial establishments, and institutions.
 - ii. Bulky waste means large items of solid waste such as household appliances, furniture, large auto parts, trees, branches, stumps, and other oversize wastes whose large size precludes or complicates their handling by normal solid wastes collection, processing, or disposal methods.
- b. **Commercial solid waste** - all types of solid wastes generated by stores, offices, restaurants, warehouses, and other non-manufacturing activities, subject to the Waste Management Rules 2021, Schedule 1 and Schedule 2; and
 - c. **Institutional solid waste** - wastes generated by educational institutions, non-medical waste generated by health care providers, and non-manufacturing waste generated by correctional and government facilities, and other institutional facilities.

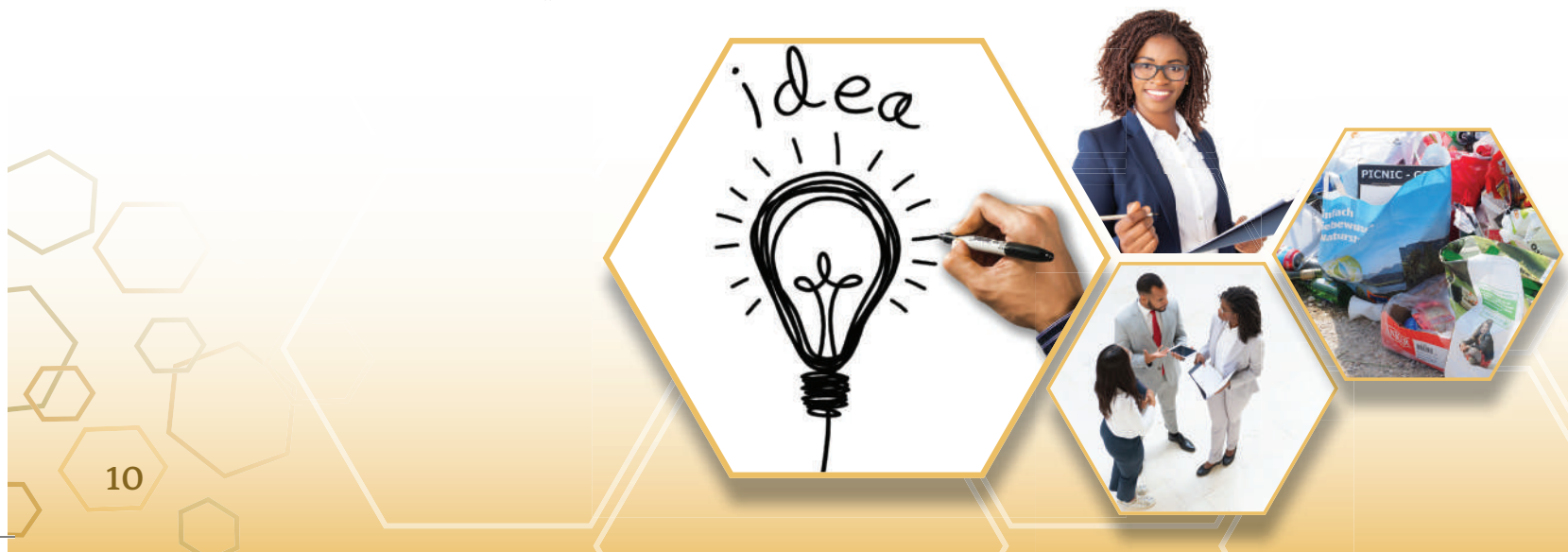


1.2 Background

Over the years, **MSWM** has seen increases in waste generation as the population continues to grow, combined with increasing urbanisation and consumerism. These increases are projected to lead to increased waste management costs, and the further depletion of landfill disposal infrastructure. However, national emphasis continues to be placed on final disposal rather than on the development of comprehensive waste prevention, minimization and diversion strategies.

In 2012, the National Integrated Solid Waste/Resource Management Policy for Trinidad and Tobago was prepared by the Ministry of Rural Development and Local Government (**MRDLG**), formerly the Ministry of Local Government (**MLG**), and approved by Cabinet in 2013. Subsequently, the Policy was further revised and approved by Cabinet in 2014. The **NISWRMP 2014** was developed to govern the management of **MSW** and the resource recovery agenda of Trinidad and Tobago within seven (7) key commitments over a ten-year period. The **NISWRMP 2024** continues to uphold these commitments as follows:

1. **Taking responsibility** - the national community must share responsibility for reducing the environmental, health and safety footprint of products and materials across the manufacture-supply-consumption chain and at end-of-life.
2. **Improving the market** - facilitating efficiency and effectiveness of local markets that can be targeted for waste and recovered resources, utilizing indigenous technology and innovation where possible.
3. **Pursuing sustainability** - designing out waste and pollution, minimizing waste, and improving the use of waste as a resource, closing production loops and achieving broader environmental, social and economic benefits.
4. **Reducing hazards and risks** - reducing potentially hazardous content of wastes by adopting consistent, safe, and accountable waste recovery, storage, transportation, treatment and disposal methods.
5. **Tailoring solutions** - increasing capacity at the community and national levels to manage **MSW** in an environmentally sound manner.
6. **Providing the evidence** - facilitating access by decision makers to meaningful, accurate and current data and information on **MSW** that could be used to inform evidence-based policy making and integrated planning, measure progress, educate and inform the national society, and also influence the behaviour and the choices of citizenry.
7. **Behavioural Change** - It would require a significant change among the population to achieve effective and efficient waste management. Decision-makers have to ensure that individuals, communities, businesses and institutions are provided with the information, resources and mechanisms required to adopt the desired attitudinal changes.





1.3 Situation Analysis

To assess the **MSW** sector, an analysis of the deficiencies and gaps in the existing management system was undertaken to provide information that would form the basis for institutional, technical, economic and legislative considerations leading to the development of the revised **NISWRMP 2024**.

In Trinidad and Tobago, the population continues to grow. This, combined with increasing urbanization, will result in the increasing generation of wastes as well as increasing demands on the solid waste management systems and infrastructure of the country. According to the 2011 population census, the total population of Trinidad and Tobago was 1,328,018, an increase of 5.2% over the 2000 census figure of 1,262,366. In 2018, the mid-year population was estimated at 1,359,193, a 2.3% increase over the 2011 census figure.

With the slow national cultural change towards waste minimization, diversion and recovery practices, it is anticipated that waste volumes will grow in parallel with population growth and increasing consumerism and industrialisation. As such, the current waste disposal infrastructure does not provide an environmentally sound, cost-effective and long-term sustainable waste disposal solution for Trinidad and Tobago. This growing demand on the **MSWM** system has created major social, health, environmental, infrastructural, institutional and economic challenges in the sector, including:

- The absence of a solid waste management focal point or a single overarching body with the regulatory capability and mandate to address all aspects of waste management. Currently, several agencies are involved in the management of solid waste and their regulatory roles and responsibilities are not always clear and overlap.
- Inefficient **MSW** collection and disposal systems that contribute to increasing incidences of indiscriminate dumping;
- Non-compliance with international best practices as it relates to environmental management practices at existing landfill disposal sites, including the inappropriate siting of landfills and the impingement of waste and landfill effluents into a fragile ecosystem;
- The proximity and location of informal settlements to landfills;
- The absence of data collection infrastructure and systems to assess composition and quantities of waste at the waste disposal sites;
- Slow progress towards developing a recycling framework to promote waste segregation at source, and implementing national programmes for recovery of useful resources;
- Health, safety, and citizen security risks emanating from the practice of illegal salvaging of metals and other materials from existing waste disposal sites;
- Frequent landfill fires which pose serious health concerns to surrounding communities;
- High overall costs of **MSW** collection and waste disposal, coupled with the lack of cost recovery mechanisms have increased dependence on funding from **GoRTT** to manage **MSW**;
- Poor compliance, enforcement and monitoring that contribute to indiscriminate and illegal dumping.

More recently, there is a continuous move on the part of Local Government Agencies (**LGAs**) and the Tobago House of Assembly (**THA**) to increase self-sufficiency via the availability of supporting cost recovery mechanisms. This movement has presented new opportunities and initiatives at the regional levels, as there is a general trend by the **LGAs** and the **THA** towards viewing waste as a resource, where recovery activities can generate revenues and, at the same time, achieve waste prevention and reduction with minimum risk to public health and the environment.

Although the existence of formal and informal sectors in the waste recovery and recycling industries is recognized, the operational activities of these sectors need to be incorporated and guided by a national framework that prescribes environmental standards and safeguards that lead to sustainable rewards.

Notwithstanding the deficiencies in the current system, the **GoRTT** accomplished a notable milestone following the approval of the **NISWRMP 2014**. In 2016, the **GoRTT** was supported by the Inter-American Development Bank (**IDB**) to develop a Solid Waste Management Strategic Plan for Trinidad and Tobago. It outlines strategies including short, medium and long-term Action Plans to improve the solid waste management system. The key elements of the Plan which are being adopted and implemented include:

- the Establishment of a Centralized Engineered Sanitary Landfill at Forres Park;
- the Establishment of Transfer Stations and Materials Recovery Facilities;
- the Closure and Remediation of the existing Beetham and Guanapo Landfills; and
- Institutional Strengthening, Capacity Building and Public Awareness and Education.

1.3.1 Policy, Legislation and Multilateral Agreements

Over the years, **GoRTT** has recognized the urgency to transform the waste management system into an Integrated Sustainable Waste Management System. The National Development Strategy of Trinidad and Tobago 2016-2030 (Vision 2030) identifies integrated solid waste management as an area of focus for national development efforts. Theme V - Placing the Environment at the Centre of Social and Economic Development as outlined in Figure 1 below, has defined the national commitments to be undertaken to achieve the envisioned outcomes of a 'healthier environment' and 'a more environmentally aware citizenry' by year 2030 as follows:

SHORT

Short-term Goals 2016-2020:

- Creation of a comprehensive waste and pollution management system; and
- Strengthened environmental governance and management systems.

MEDIUM

Medium-term Goals 2016-2025:

- Improved institutional arrangements for effective environmental management;
- Meet all international environmental obligations; and
- Improved waste management and recycling capabilities.

LONG

Long-term Goals 2016-2030:

- A healthier environment;
- Improved energy efficiency;
- Improved climate resilience;
- Wastes will be reduced;
- Improve the quality of ecosystems and sustainable use of natural assets; and
- Citizens are more environmentally aware.



Figure 1: Theme V- Placing the Environment at the Centre of Social and Economic Development, Vision 2030

Placing the Environment at the Centre of Social and Economic Development

THEME V

LONG-TERM GOALS

1-15 Years; 2016-2030

1 A healthier environment

2 Improved energy efficiency

3 Improved climate resilience

4 Wastes will be reduced

5 Improve the quality of ecosystems and sustainable use of natural assets

6 Citizens are more environmentally aware

MEDIUM-TERM GOALS

1-10 years; 2016-2025

1 Renewable energy will be incorporated into the energy supply

2 Institutional arrangements for effective environmental management will be improved

3 Meet all international environmental obligations

4 Improved waste management and recycling capabilities

5 Biodiversity and ecosystem services are incorporated into all areas of national development

SHORT-TERM GOALS

1-5 Years; 2016-2020

1 Environmental governance and managements systems will be strengthened

2 Carbon footprint will be reduced

3 Climate vulnerability will be assessed

4 Comprehensive waste and pollution management systems will be created

5 Natural resource management will be improved

SUSTAINABLE DEVELOPMENT GOALS

2015-2030





The key policies that comprise the policy framework for the sustainable management of **MSW** are outlined below:

- United Nations 2030 Agenda for Sustainable Development (including the Sustainable Development Goals);
- National Development Strategy of Trinidad and Tobago 2016-2030 (Vision 2030);
- Roadmap for Trinidad and Tobago (Post Covid-19 Pandemic);
- National Spatial Development Strategy for Trinidad and Tobago;
- National Climate Change Policy, 2011;
- Strategy for Reduction of Carbon Emissions in Trinidad and Tobago, 2014;
- National Environmental Policy (**NEP**), 2018;
- Green Government Policy, 2011;
- Trinidad and Tobago National Tourism Policy, 2021-2030;
- Draft Comprehensive Disaster Management (CDM) Policy;
- Scrap Metal Policy of Trinidad and Tobago, 2016;
- National Integrated Solid Waste/Resource Management Policy for Trinidad and Tobago, 2024 (a revision of the Integrated Solid Waste/Resource Management Policy for Trinidad and Tobago, 2015);
- The Waste Recycling Policy, 2024 (a revision of the Waste Recycling Policy, 2015);
- Beverage Container Deposit Return Policy, 2024 (a revision of the Beverage Containers Deposit Refund Policy, 2019).

The management of **MSW** in Trinidad and Tobago is multijurisdictional, and therefore, the legislation governing **MSW** is administered by various entities. The key legislations applicable to **MSW** are summarized below:

Legislation	Summary of Applicability	Responsible Entity
Environmental Management Act Chapter 35:05, 2000.	This Act formed the Environmental Management Authority (EMA) to co-ordinate, facilitate and oversee the execution of the national environmental strategy and programmes, to promote public awareness of environmental concerns, and to establish an effective regulatory regime which will protect, enhance and conserve the environment.	Environmental Management Authority (EMA)
Waste Management Rules, 2021 and Waste Management (Fees) Regulations, 2021.	The Waste Management Rules 2021 (WMR) and the Waste Management (Fees) Regulations (WMFR) 2021 are operational from 31 May 2022. They support the legal framework to improve the national management of hazardous and non-hazardous waste. The objective is, through a permitting regime, to regulate activities related to the management of waste.	EMA
Municipal Corporations Act (Act 21 of 1990);	Section 232 of the Municipal Corporation Act confers several additional functions on corporations established under that Act. These include the disposal of garbage from public and private property, and the development and maintenance of sanitary landfills. The following are exempted from the WMR and WMFR , as such wastes are controlled or will be controlled by other legislation: radioactive waste, gaseous emissions; and wastewater from wastewater treatment premises.	Municipal Corporations
Litter Act Chapter 30:52	The Litter Act seeks to control the littering of public places and premises. Section 2 makes it an offence to deposit litter in a public place. Section 3A makes it an offence to deposit litter from a motor vehicle or trailer.	Municipal Corporations
Pesticides and Toxic Chemicals Act	The Pesticides and Toxic Chemicals Act regulates the importation, storage, manufacture, sale, use and transportation of pesticides and toxic chemicals. Although this Act does not strictly deal with waste, it has implications for the management of MSW .	Pesticides and Toxic Chemicals Board (PTCB)
Tobago House of Assembly (THA) Act (1996).	Under the THA Act, the THA has 33 areas of responsibility, including municipal sanitation services, the environment, infrastructure (including public utilities), land and marine parks, and tourism in Tobago.	THA
Scrap Metal Act, 2022	The Scrap Metal Act enacted in 2022, implements a registration and licensing system for scrap metal dealers, collectors, and scrap yards within Trinidad and Tobago.	Ministry of Trade & Industry (MTI)

Trinidad and Tobago is also a signatory to several multilateral environmental agreements regarding **MSW**. These are outlined below:

- **Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Disposal:** The Convention seeks to regulate the transboundary movements of hazardous and other wastes and requires that its Parties ensure that these wastes are managed and disposed in an environmentally sound manner.
- **Stockholm Convention on Persistent Organic Pollutants:** Signatory governments agreed to take actions to reduce or eliminate the production, use, and/or release of certain Persistent Organic Pollutants (POPs).
- **Rotterdam Convention:** This Convention creates legally binding obligations for the implementation of the Prior Informed Consent Procedure. Accordingly, Parties to the Convention agreed to share responsibility and cooperative efforts in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm, and to contribute to the environmentally sound use of those hazardous chemicals, by facilitating information exchange about their characteristics, by providing for a national decision-making process on their import and export and by disseminating these decisions to Parties.
- **Protocol Concerning Pollution from Land-Based Sources and Activities (LBS Protocol):** The Protocol sets forward general obligations and a legal framework for regional cooperation pertaining to land-based sources and activities and the associated contaminants of greatest concern to the marine environment of the wider Caribbean, including establishing specific regional effluent limitations for domestic sewage, and outlining the process for developing regional standards and practices for the prevention, reduction, and control of these land-based sources. Contracting Parties are also obligated to develop plans, programmes and other measures for the prevention, reduction and control of agricultural non-point sources.
- **Protocol of 1978 of the International Convention for the Prevention of Pollution from Ships, 1973, MARPOL 73/78:** These provisions require the government of each party to ensure the provision of adequate port reception facilities for ship-generated waste as part of the implementation of the International Convention. A port reception facility is anything which can receive shipboard residues and mixtures containing oil, noxious liquids or rubbish.

1.3.2 Institutional Framework

A lack of a sound institutional framework is generally the root cause of many failures in service delivery. Such institutional weakness often results from the lack of a clear institutional “home” for planning and management, together with limited capacity within institutions to coordinate and manage initiatives.

In Trinidad and Tobago, there is no single agency or authority responsible for the management of **MSW**. Rather, there is a multiplicity of Ministries, State Enterprises and Municipalities that play a role in the management of solid waste. This not only results in a duplication of efforts, but it also slows the implementation of any major policies, strategies and programmes and creates a challenge for private sector involvement.

The roles and responsibilities of the key institutions involved in the management of solid waste are summarised below and Figure 2 depicts the current governance and institutional structure of the sector.

1. Ministry of Public Utilities (MPU)

The Ministry of Public Utilities (**MPU**) has responsibility for formulating policies and legislation for the Utilities Sector. The Ministry provides oversight to the waste sector and is the line Ministry to the Trinidad and Tobago Solid Waste Management Company Limited (**SWMCOL**).

2. Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL)

SWMCOL is a wholly government-owned, limited-liability company with the responsibility for the management, collection, treatment, and disposal of solid waste. **SWMCOL** manages the three largest landfill disposal sites in Trinidad, namely: the Beetham, Forres Park and Guanapo Landfill sites. Additionally, in 2017, the functions of **SWMCOL** were expanded to include the functions of the proposed Waste Recycling Management Authority (**WRMA**), including to:

- Develop plans and programmes to effect the efficient diversion of recyclable materials from the general waste stream;
- Make recommendations for the rationalization of all governmental entities performing waste management functions;
- Monitor compliance with the regulatory standards criteria and programmes developed, consistent with the objects of the Waste Recycling Bill; and
- Compile, analyse and disseminate data and information relating to the character and quantity of waste.

Although **SWMCOL** has a clear mandate to manage the country's municipal solid waste and to develop and implement a National Recycling Programme, it is constrained in effectively delivering this mandate as a legal instrument has not been established to allow **SWMCOL** to act as a national authority responsible for the function.

3. Ministry of Rural Development and Local Government (MRDLG)

The Ministry of Rural Development and Local Government (**MRDLG**) is responsible for organizing, promoting and implementing rural development policies and strategies. **MRDLG** administers the Municipal Corporations Act (Act 21 of 1990). It also has responsibility for formulating policies, providing management oversight and coordination to the fourteen (14) Municipalities and the Community-Based Environmental Protection and Enhancement Programme (**CEPEP**) which fall under its purview, and assisting communities by pooling resources in targeted areas such as Infrastructure Development, Disaster Management, Public Health and Sanitation. The **MRDLG** also has under its purview the Rural Development Company of Trinidad and Tobago Limited (**RDC**), a wholly owned State Enterprise responsible for identifying and implementing developmental projects in rural communities in Trinidad. **RDC** also provides project management services for the implementation of approved development projects on behalf of **GoRTT**.

4. Municipal Corporations

The fourteen (14) Municipal Corporations administer the curbside collection and transportation of **MSW** within their respective regions through a combination of in-house and contracted services, and are:

- Two (2) City Corporations – Port of Spain and San Fernando;
- Five (5) Borough Corporations – Arima, Chaguanas, Diego Martin, Point Fortin, Siparia; and
- Seven (7) Regional Corporations – San Jan/ Laventille, Tunapuna/ Piarco, Sangre Grande, Couva/ Tabaquite/ Talparo, Mayaro/Rio Claro, Penal/ Debe and Princes Town.

With the passing of the Miscellaneous Provisions (Local Government Reform) Act, 2022, there is a new governance structure for **LGAs**, which includes the establishment of Municipal and Executive Councils with responsibility for developing and implementing the strategies and plans of the Municipal Corporations.



5. The Community-Based Environmental Protection and Enhancement Programme (CEPEP) Company Limited.

The **CEPEP** Company is a limited liability company that falls under the remit of the Ministry of Rural Development and Local Government (**MRDLG**). It develops, implements, and manages programmes that protect, enhance and beautify the environment in service areas known as environmental work areas.

In this regard, the Company is responsible for:

- Cleaning of areas that contain substances that could have a harmful effect on humans and/or the environment;
- Partnering with the Office of Disaster Preparedness and Management (**ODPM**), as a second responder, to provide clean-up operations during natural disasters such as floods, landslides and other natural disasters;
- Collection, sorting and batching of recyclable materials;
- Removal of dead animals from all major roadways across Trinidad; and
- Maintenance of nature trails, picnic sites and other open spaces.

6. Ministry of Health (MoH)

The Ministry of Health (**MoH**) is the national authority charged with oversight of the entire health system in Trinidad and Tobago. It administers Public Health Ordinance Ch. 12, the Litter Act Chap. 30:52 and the Code of Practice for Bio-Medical Waste Management. While the **MoH** does not directly operate health facilities, it is required to play a key role in ensuring that they are properly operated by setting policies, goals and targets for regions based on assessment of the health needs of the nation. The health facilities are managed by the Regional Health Authorities (**RHAs**) with the passing of the Regional Health Authorities Act No. 5 in 1994.

RHAs are autonomous bodies that own and operate health facilities in their respective Regions. There are currently five (5) **RHAs** which deliver public health care services to the population:

- Eastern Regional Health Authority;
- North Central Regional Health Authority;
- Northwest Regional Health Authority;
- Southwest Regional Health Authority; and
- Tobago Regional Health Authority (TRHA) which falls under the purview of the Tobago House of Assembly (**THA**).

The Ministry of Health also has under its remit County Medical Officers of Health who play an important role in public health matters such as environmental sanitation.

7. Ministry of Planning and Development (MPD)

The Ministry of Planning and Development (**MPD**) is a collaborative Government Ministry that provides the necessary policy guidance and development, technical support, advice, and feasibility assessment for national advancement. The principal mandate of the **MPD** is national development concentrated on four (4) main pillars, which are: economic development, social development, spatial development, and environmental development.

MPD facilitates environmental development by developing, monitoring, and coordinating the implementation of national policies, programmes, and obligations under the multilateral environmental agreements. Additionally, the **MPD** assists in identifying and mobilising financial and technical assistance to support and promote the sustainable developmental goals of the Government. In that regard, the **MPD** is the line Ministry for the Environmental Management Authority (**EMA**).

8. Environmental Management Authority (EMA)

The Environmental Management Authority (**EMA**) is a statutory body and is responsible for the management, conservation, use and regulation of the environment under the provisions of the Environmental Management Act, Chap. 35:05 and its subsidiary legislation, inclusive of the Certificate of Environmental Clearance Rules, 2001, and the Waste Management Rules, 2021. The **EMA** drafts and enforces laws and regulations for environmental management as well as develops and establishes environmental standards and criteria.

9. Ministry of Energy and Energy Industries (MEEI)

The Ministry of Energy and Energy Industries (**MEEI**) is responsible for developing policies and strategies for Renewable Energy and Energy Efficiency. The **MEEI** has worked with the **IDB** to develop a Sustainable Energy Programme (**SEP**) for Trinidad and Tobago. One key recommendations made in the **SEP** was to undertake a full-scale feasibility assessment of the technical and economic viability of introducing Waste to Energy (**WtE**) technologies to simultaneously deal with the country's **MSW** challenges, while meeting its sustainable energy objectives. The **MEEI** is continuing to explore the feasibility of utilising **WtE** technologies.

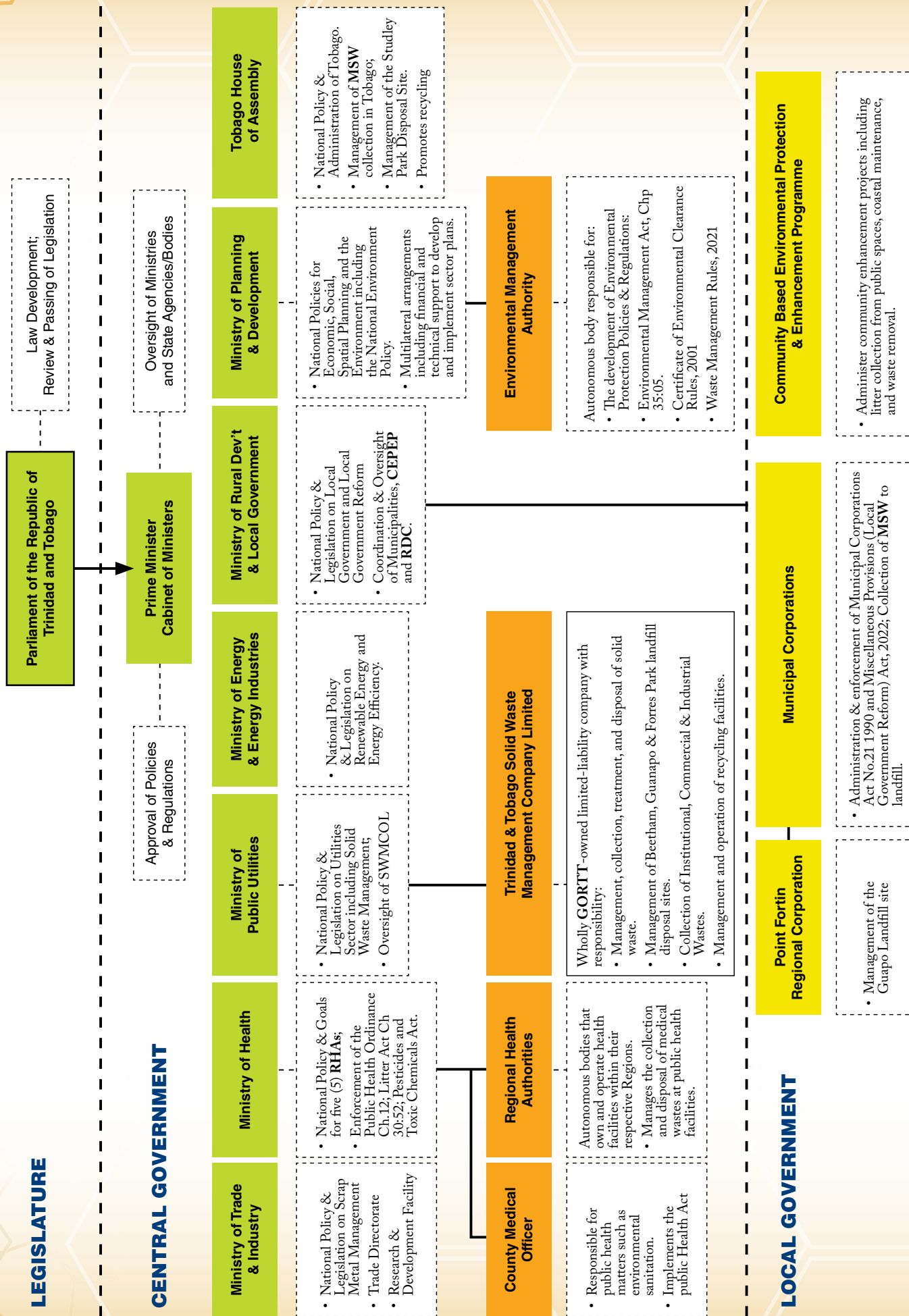
10. Ministry of Trade and Industry (MTI)

The Ministry of Trade and Industry (**MTI**) drives manufacturing, business and investment in Trinidad and Tobago. Its efforts are geared towards creating a facilitatory and supportive environment for business, especially through inter alia policy and legislative support, trade promotion and development, and investment promotion. **MTI** actively manages and coordinates the trade process to ensure access to international markets for local companies. Additionally, the **MTI** through the Scrap Metal Act, 2022, implements a registration and licensing system for scrap metal dealers, collectors, and scrap yards within Trinidad and Tobago.

11. Tobago House of Assembly (THA)

The Tobago House of Assembly (**THA**), through its various divisions, is responsible for matters pertaining to, inter alia, the environment and waste management in Tobago. In respect of the environment, the **THA** is responsible for the protection, preservation, and enhancement of Tobago's environment. Given **THA**'s responsibility for environmental protection, it works closely with the **EMA**, and carries out the functions outlined in the Environmental Management Act through a Memorandum of Understanding with the **EMA**.

Figure 2: Current Governance and Institutional Structure for Solid Waste Management in Trinidad and Tobago



1.3.3 Collection and Transport

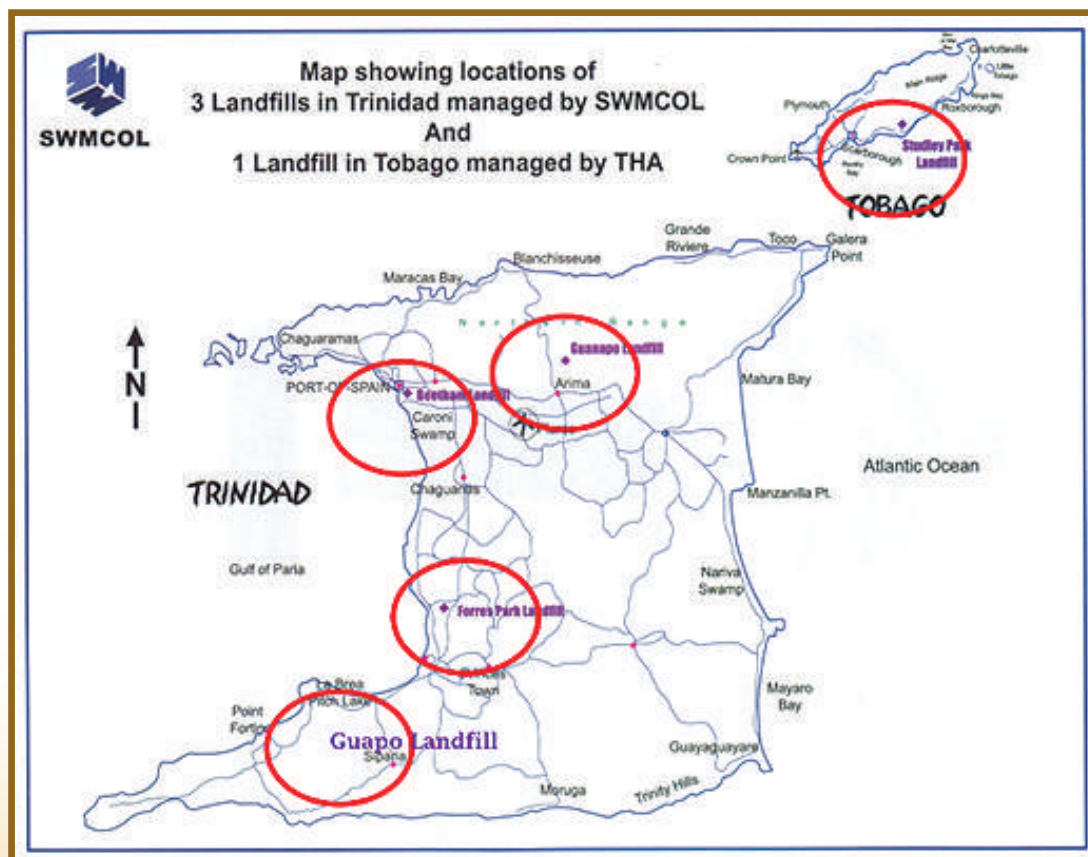
Approximately 90% of the **MSW** collection function is performed by private contractors on behalf of the municipalities, and the remaining 10% by the public sector. The public sector focuses primarily on the town center areas. The Port of Spain City Council controls approximately 90% of the collection for the capital city. San Fernando, Point Fortin and Arima also perform some collection in their town centers. Private collection contractors are engaged through a tendering process by the municipalities. Contractors are engaged for a three-year period, during which they collect primarily household, institutional and market waste. Bulky waste and yard wastes are also collected on schedules specific to the various municipalities.

There has been substantive **MSW** collection coverage over the last 20 years and the country has seen the adoption of new approaches to solid waste management services, where equipment technologies gradually shifted from non-compaction waste transportation systems to compaction systems that can haul more waste per load for disposal. While these national efforts have been recognized as improvements, the rapid pace of development and industrialization has not paralleled the introduction of new solid waste management systems.

1.3.4 Disposal

SWMCOL operates the three (3) major landfill disposal sites in Trinidad at Beetham, Forres Park and Guanapo. A fourth site located in Guapo is managed by the Point Fortin Borough Corporation through a sub-contractual arrangement. The **THA** is responsible for waste disposal in Tobago and manages the only waste disposal site on the island, located at Studley Park. **Figure 3** below shows the locations of the disposal sites in Trinidad and Tobago.

In the 1980s, both Beetham and Guanapo were converted from indiscriminate dumps to managed sites with basic infrastructural and monitoring requirements. Forres Park was selected and developed based on technical criteria and design specifications with the intention of constructing a sanitary engineered landfill in the future.



In 2023, it was estimated in the Trinidad Waste Characterization and Centroid Study that approximately 733,623 tonnes of **MSW** were disposed of annually at the four (4) landfill sites in Trinidad. **Figure 4** presents a breakdown of the composition of **MSW** disposed of in Trinidad. Further, the 2023 Waste Characterization Study reported that approximately 77% of **MSW** entering the landfills is recyclable.

Figure 3: Location of Landfill Sites in Trinidad & Tobago

Recyclable Materials represents 77% of Total Waste

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

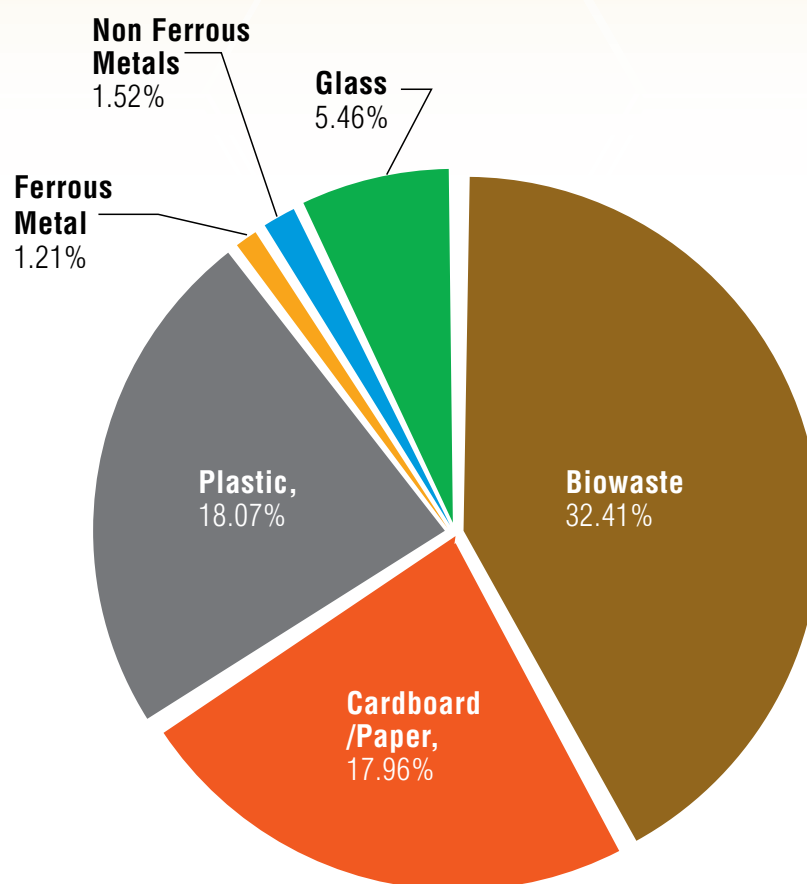


Figure 4: Breakdown of the Composition of Municipal Solid Waste Generated in Trinidad

In a September 2010 Solid Waste Characterization Study for Tobago prepared by EGARR & Associates, Tobago recorded approximately 17,228 tonnes of waste deposited at the Studley Park landfill site. Paper, paperboard and plastics represent approximately 52% of the waste disposed of at the Studley Park landfill disposal site.

There has also been an increase in public and business sector sensitivity and awareness on solid waste management issues, such as waste recycling, landfill management, storage and containerization methods and litter control. This sensitivity has fueled increasing demands for a cleaner environment, improved sanitation practices in communities, and a general move by large industrial and commercial generators to seek improved waste containerization, transportation, processing,

and disposal services. Concerted efforts have been made by householders to improve containerization practices, and businesses and industries have engaged waste management contractors to address their generation quantities and types.

While the solid waste management industry should be commended for their efforts, the rapid increase in waste generation and types, plus the effects that come with socio-economic development, have exceeded efforts relative to the level of support infrastructure, new technology, and management strategies and systems. Prioritization in effectively researching new strategies and technologies has not paralleled the demands for new approaches and thinking to address solid waste management issues.

Trinidad and Tobago is presented with the opportunity to make fundamental national statements regarding environmental enhancement and sustainability and to demonstrate its commitment to the principles and achievement of the United Nations Sustainable Development Goals (SDGs). The main SDGs which will provide the underlying sustainability principles of the NISWRMP are:

- **SDG 3: Good health and well-being**
- **SDG 6: Clean water and sanitation**
- **SDG 7: Affordable and clean energy**
- **SDG 11: Sustainable cities and communities**
- **SDG 12: Responsible consumption and production**
- **SDG 13: Climate Change**
- **SDG 14: Life below water**
- **SDG 15: Life on Land**
- **SDG 17: Partnerships for the Goal**

Adopting the “best practices” approach in solid waste management is critical to any national plan seeking to ensure a reduction in risk to human health and the environment.

The **GoRTT**, therefore, has recognized that a solid waste management dilemma is looming and requires the development of a system to manage this challenge into the future with the support of an effective policy and legislative framework. The chosen solution has to be economically and financially sound while preserving the environment for the enjoyment of future generations.

2.0 A FRAMEWORK FOR CHANGE

2.1 Policy Framework

A policy framework is the **GoRTT**'s first strategic response to the growing challenges to the management of **MSW**. It creates a blueprint for:

- Structure planning and sustainability;
- Synchronizing the strategic vision of the **GoRTT** as outlined in the National Development Goals, Vision 2030 and the **SDGs**;
- Supporting economic, spatial and cultural aims;
- Encouraging full stakeholder support;
- Facilitating public and private sector collaboration and participation;
- Protecting public health and the environment;
- Unfolding more detailed plans, programmes and projects;
- Effective and achievable implementation and monitoring;
- Promoting greater public awareness and behavior change.

In addition, the policy framework will serve as an important reference for the revision of the Master Plan for an Integrated Waste Management System which was developed in 1980 by Planning and Stanley Associates on behalf of **GoRTT**. The formulation of the **NISWRMP** framework will subsequently lead to the development of an Integrated Solid Waste/Resource Management Plan (**ISWRMP**) that recognises and revisits previous plans and programmes that have been structured while building on the recommendations that may still be relevant to the current demands.


The ISWRMP will identify the outcomes and implementation targets that will advance the solid waste sector towards achieving the vision, goal and objectives of the NISWRMP 2024.

2.2 Purpose

The purpose of the **NISWRMP 2024** is to outline the vision and objectives of the **GoRTT** for the solid waste sector and to adopt strategies that are designed to:

- Provide a coherent, comprehensive national framework for **MSWM**, to include waste prevention, minimization and diversion - reduction, resource recovery and recycling through a life cycle approach, over the next decade;
- Enable Trinidad and Tobago to meet its international obligations regarding the management of hazardous wastes and substances, and materials with toxic chemicals such as **POPs** with reduced risk for future generations;
- Structure and encourage recycling initiatives;
- Provide national leadership on waste and resource recovery where it is needed and facilitate collaboration with other regional states on pertinent issues;
- Combat climate change, contribute to sustainability, innovation and employment opportunities, and
- Be high impact and cost effective by setting clear national directions informed by a consultative process and carefully targeted actions that incrementally build on the previous and existing efforts of governments.

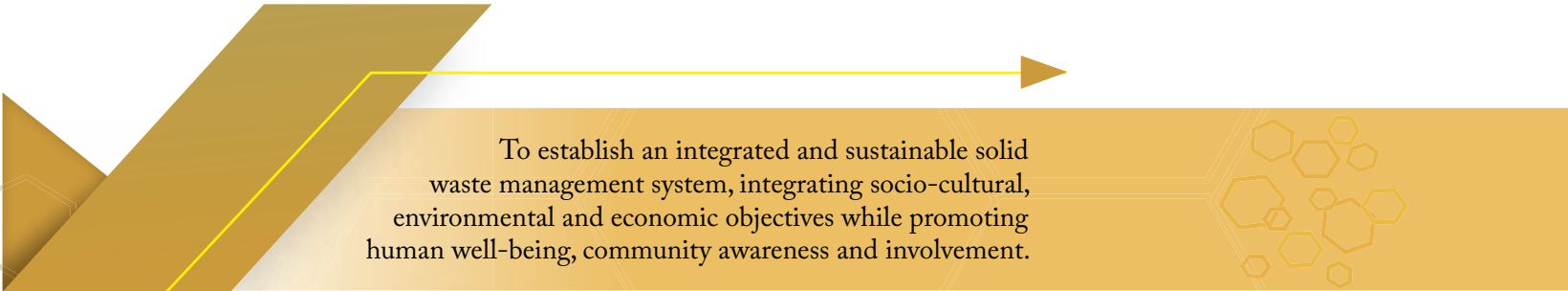
2.3 Vision



The efficient harmonization of municipal solid waste management to support sustainable and inclusive communities and the promotion of environmental conservation.

The Policy sets forth a vision of sustainability for Trinidad and Tobago over the next ten (10) years and beyond, where **MSW** is viewed as a resource and will be managed by technologies and methods that support sustainable communities and environments.

2.4 Goal



To establish an integrated and sustainable solid waste management system, integrating socio-cultural, environmental and economic objectives while promoting human well-being, community awareness and involvement.

The aim is to establish a **MSWM** System that promotes ecological integrity through waste prevention, fosters management efficiency, and develops resources to revitalize local economies.

2.5 Objectives

To bring the **NISWRMP** 2024 vision and goal closer to reality, an Integrated Solid Waste/Resource Management Plan (**ISWRMP**) will be developed that targets specific objectives:

Objective 1:

Strengthen institutional and organizational arrangements to address the management of **MSW** comprehensively and effectively.

Objective 2:

Strengthen institutional coordination, collaboration, and governance.

Objective 3:

Improve and develop, where required, national standards and regulations for the storage, collection, transportation, recovery, recycling, and disposal of **MSW**.

Objective 4:

Establish an effective legislative framework that enables the management of **MSW** as an Integrated Sustainable Solid Waste Management System in accordance with the zero-waste hierarchy, where the focus is placed on prevention rather than disposal through the initiatives of reduce, reuse, and recycle.

Objective 5:

Develop strategies to reduce greenhouse emissions from landfills and other **MSW** activities including collection, recovery, recycling and treatment.

Objective 6:

Manage **MSW** in a cost-effective manner that maximizes environmental benefits and minimizes long-term financial liability for the population.

Objective 7:

Ensure that **MSW** generators take responsibility for the environmentally sound management of their wastes, and identify, communicate and allocate management costs equitably among those who use or benefit from the system.

Objective 8:

Develop national **MSW** classification and data management systems consistent with international best practice, that would be beneficial in supporting evidence-based decisions and future plans.

Objective 9:

Enable sustainable recycling industries, including those which facilitate the reuse, repair and remanufacturing of products to extend their useful life and minimize disposal.

Objective 10:

Support the use of sustainable procurement principles which are in alignment with public procurement and disposal of public property legislation along the **MSW** value chain.

Objective 11:

Establish an approach to reduce hazardous substances from entering the nation's landfills and to enable environmentally sound management of hazardous **MSW**.

Objective 12:

Implement public awareness and education programmes to encourage a national shift towards the adoption of a circular economy and to foster sustainable consumption habits.

Objective 13:

Create incentives to encourage research, design and innovation in solid waste management, including promoting the eco-design of products to encourage closed loop production systems.

3.0 THE POLICY INSTRUMENT

3.1 Overarching Principles for the Management of MSW

The main overarching principles that have informed the formulation of the **NISWRMP 2024** are consistent with the principles established in the National Environmental Policy (**NEP**), 2018. These principles will guide the implementation of the **NISWRMP 2024** and **MSWM** in Trinidad and Tobago:

- **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 the integrated community of life shall be respected and supported.
- **Integrated Solid Waste Management:** Integrated Solid Waste Management refers to the strategic approach to sustainable management of solid wastes covering all sources and all aspects, including generation, segregation, transfer, sorting, treatment, recovery and disposal in an integrated manner, with an emphasis on maximizing resource use efficiency (Figure 5).



Figure 5: Segments of Integrated Waste Management

Source: What is Integrated Waste Management, US Environmental Protection Agency

- **Sustainable Development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- **Sustainable Consumption and Production:** The use of services and related products which respond to basic needs and bring a better quality of life, while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations.
- **Circular Economy:** Policy strategies will promote an economic system aimed at eliminating waste and the continuous use of resources.
- **Evidence-Based Management:** Policy formulation and implementation will be based, to the maximum extent possible, on tangible evidence, data and information as the basis of decision-making.



- **Polluter Pays Principle:** Those that cause pollution should pay the cost of managing it to prevent damage to human health and the environment. Polluters are those who “damage” or impose “costs” on the environment.
- **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.
- **User Pay Principle:** The theory or rule that a user of a service or resource pays directly for the amount they use, rather than the cost being shared by all the users or a community equally. Those who generate more waste should pay more for having their waste managed. The **GoRTT** will encourage and facilitate enhanced levels of waste management, including cost recovery, from commercial waste generators, linked to the amount of waste they generate. This will provide these waste generators with incentives to reduce, reuse, and recycle the waste generated from their activities.
- **Regulatory Tools:** Regulatory tools will be applied, where necessary, to influence a direct response to particularly wasteful practices. These tools will also ensure that waste generation is minimized in ways that are broadly fair and equitable across society. The **GoRTT** and all relevant civil society stakeholders will take all necessary measures to ensure that this Policy and its enabling legislation are adequately enforced, to include the provision of adequate personnel and resources.
- **Policy Integration:** Waste prevention strategies, such as reduction, reuse and recycling, are critical components of a wider integrated solid waste management system and would therefore be linked to, and harmonised as far as possible, with other relevant policy areas and instruments.
- **Adaptation and “Learning-by-Doing”:** Waste generation, waste types, waste treatment and technologies, as well as economic, social and cultural conditions, 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 therefore be an integral component of policy implementation, with data, results and lessons-learned being used to empower management to be 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 prevention will be shared among all stakeholders, who must be provided with the right to actively participate in the management and decision-making processes.
- **Viewing Waste as a Resource:** The policy framework advocates a transition to a new way of thinking about waste, based on principles of sustainability and resource conservation.

- **Solid Waste Management Hierarchy:** The waste hierarchy is the framework for action. It stresses the need to manage waste in an integrated system, in accordance with the preferred waste management practices, prior to the reuse, recycling, recovery, and disposal in landfills, thus promoting resource conservation and environmental protection. (Figure 6). Consistent with the waste hierarchy, which focuses on minimizing waste, the **GoRTT** will promote the 7Rs: Rethink, Refuse, Reduce, Reuse, Repair, Recycle, and Rot (Compost).

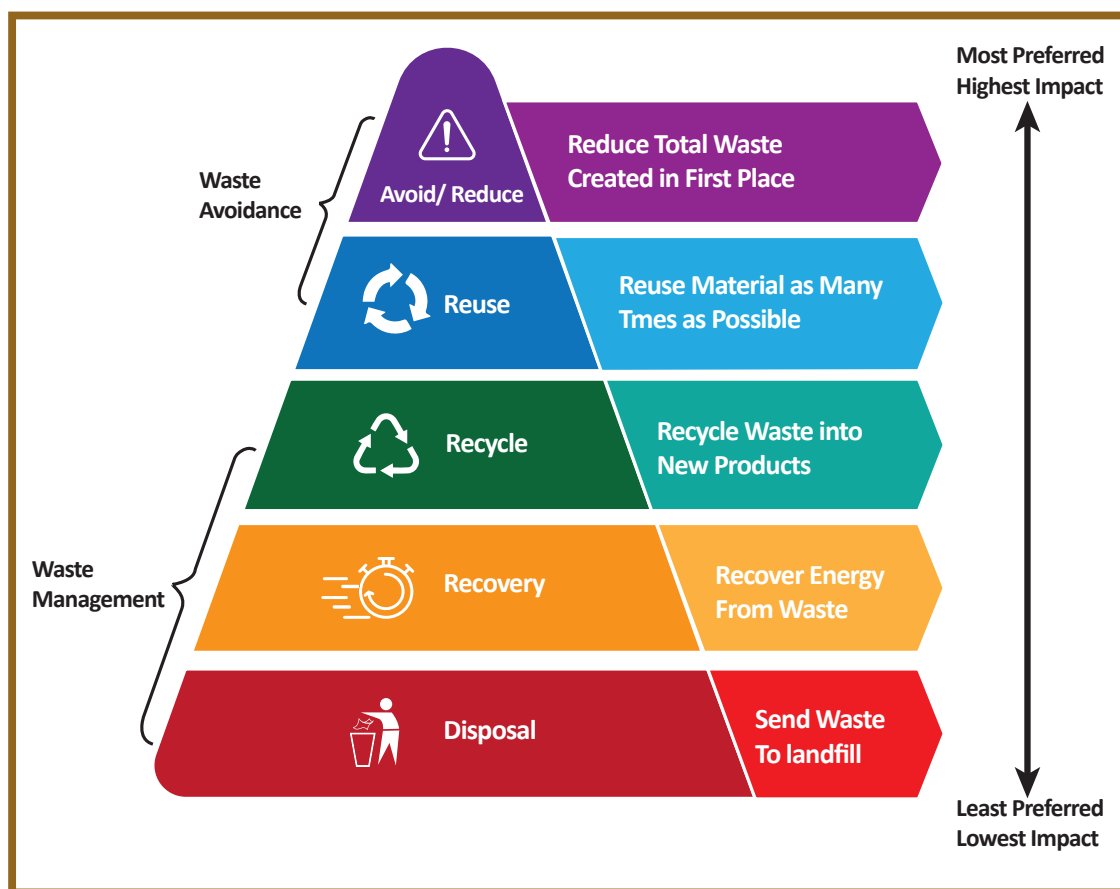


Figure 6: The Solid Waste Management Hierarchy

- **Extended Producer Responsibility (EPR):** This policy framework advocates that manufacturers/generators play a role in the treatment and disposal of products at the end-of-life.
- **Government as a Leader:** The policy framework is designed to steer the country towards a vision, where the **GoRTT** will lead the way by assuring that its actions are consistent with the Policy.
- **Product Stewardship:** Product stewardship will be emphasized with the intent being that **GoRTT** will reduce its role in the management of some wastes, while those that produce, import, sell, and use products will assume greater responsibility for the management of products at the end of their useful lives. This approach will be supported by the **EPR** that requires direct stewardship for items generated.
- **Private Sector Initiative:** The policy framework calls for the private sector to take a greater role in addressing the waste management dilemma, in a manner that is consistent with the national vision. It advocates greater private sector involvement in **MSWM**, and sets out the procedure for identifying, selecting, certifying, contracting, monitoring and evaluating private service providers.

- **Consolidate and Build Recovery and Recycling:** The Policy seeks to organize, formalize and consolidate recovery and recycling efforts and to build on the existing initiatives, so that the **LGAs** and the **THA** and, by extension, the country can more fully realize the environmental and economic benefits of diverting resources from the waste stream and recycling.

3.2 Policy Strategies

The Policy Strategies (PS) for achieving the goal and objectives of the **NISWRMP 2024** are categorized in the following key areas:

1. **Policy & Legislative Framework;**
2. **Institutional Framework;**
3. **Data Availability, Monitoring & Reporting;**
4. **Stakeholder Awareness & Communication;**
5. **Financing & Cost Recovery Mechanisms;**
6. **Waste Prevention, Minimization and Diversion;**
7. **Waste Recovery and Recycling;**
8. **Waste Separation, Storage, Collection & Transportation;**
9. **Waste Treatment & Processing; and**
10. **Final Disposal.**

3.2.1 Policy & Legislative Framework

- PS1.** Sufficiently develop national policy standards and legislation to facilitate a comprehensive and integrated approach to **MSWM** that would achieve the objectives of:
- Protection of human health and the environment;
 - Creation of a culture of waste minimization; and
 - Enhancement of economic development by the creation of business opportunities in the reduction, collection, handling, re-manufacturing, refurbishment, upcycling, recovery, and recycling of waste.
- PS2.** Review and reform existing legislation pertaining to **MSW** with a view to developing an appropriate legislative framework to enable the implementation of the **NISWRMP 2024**, including developing standards and licensing systems, as required, for the storage, collection, transportation, recovery, recycling and disposal of **MSW** in collaboration with the **LGAs**, the **THA** and the Trinidad and Tobago Bureau of Standards (**TTBS**).
- PS3.** Ensure that subsidiary policies and related legislation on **MSWM** are aligned with the **NISWRMP 2024** and its enabling legislation.
- PS4.** Review penalties for non-compliance to laws and regulations to reflect the nature of the offences and to create an appropriate deterrent.
- PS5.** Establish a regulatory framework as the basis to undertake cost recovery through **EPRs** supported by incentives and economic instruments as an integral part of managing the different waste streams. Generators will be required to take responsibility through the product life cycle approach with the appropriate regulatory instruments and incentives developed to support the programmes.
- PS6.** Support the implementation of Waste Manifest Systems and Codes of Practice to monitor the movement of hazardous and bio-medical waste, consistent with Rule 34 of the **WMR 2021**.
- PS7.** Establish Industry Committees (**ICs**) as the forum through which importers, distributors, manufacturers and industrial sector entities can actively participate and provide industry insight and recommendations to the Board of Directors of **SWMCorp** on key aspects of respective recycling programmes for products post-consumer. It is expected that this will allow direct involvement by key stakeholders in the development of environmentally and economically sound and sustainable management approaches for their post-consumer materials.

3.2.2 Institutional Framework

- PS8.** Review and rationalize the existing institutional arrangement to streamline the governance structure of the **MSW** sector, including reconfiguring the Trinidad and Tobago Solid Waste Management Company Limited (**SWMCOL**) to a statutory corporation, the Trinidad and Tobago Solid Waste Management Corporation (**SWMCorp**), with responsibility for implementing the **NISWRMP 2024** and managing, controlling, treating, recycling and disposing of all wastes, either alone or jointly with other companies, statutory authorities, or entities in Trinidad and Tobago.
- PS9.** Establish a National Advisory Council (**NAC**), chaired by the **MPU** (in the first instance) within a six (6) month period of the approval of the **NISWRMP 2024** to commence roundtable dialogue with stakeholders and to develop the **ISWRMP** to guide and monitor the implementation of the **NISWRMP 2024**. Upon its establishment, **SWMCorp** will chair the **NAC** that will consist of representatives of the relevant government ministries, authorities, agencies, local municipalities, private sector representatives, non-governmental organizations, Community-Based Organizations (**CBOs**), civil society and academic institutions. The **NAC** will be appointed for a period of one-year, in the first instance, after which an evaluation will be undertaken to assess the milestones, establish new targets and reconstitute the composition where necessary.
- PS10.** Strengthen the procurement procedures and systems for procuring infrastructure and services for the collection, transport, treatment (including recovery and recycling) and disposal of **MSW**.
- PS11.** Collaborate with the Office of Disaster Preparedness and Management (**ODPM**) and Disaster Units of the Municipal Corporations to coordinate response activities as it relates to post-disaster waste management.
- PS12.** Collaborate with the **LGA**s and the **THA** to identify relevant roles and responsibilities, as outlined in the various national and municipal contingency plans in preparation for effective and efficient response strategies, and provide relevant inputs to the development, strengthening and effectiveness of future plans.

3.2.3 Data Availability, Monitoring & Reporting

- PS13.** Establish a system for classifying, collecting, evaluating and publishing data and information on sources, composition, quantities and methods of treatment, recycling and disposal of **MSW**.
- PS14.** Establish a register of **MSW** collectors/transporters and entities that handle, treat, recycle and dispose of waste in Trinidad and Tobago.
- PS15.** Conduct waste characterisation surveys and publish the findings at regular intervals of no more than five (5) years.

3.2.4 Stakeholder Awareness & Communication

- PS16.** Develop a series of direct and sustained national education and community participation programmes to engage all target groups and to reinforce the importance of waste prevention, minimization, and diversion through the 7Rs. In the first instance, primary schools, through curriculum structuring, will be targeted as the key change agents.
- PS17.** Collaborate with the **LGAs, THA** relevant Ministries, non-governmental and community-based organizations, and other stakeholders to understand and respond to community priorities and address the “not-in-my-backyard-syndrome”, thus ensuring:
- ▶ A participatory approach to **MSWM**, in which all affected stakeholders have the opportunity to participate in **MSWM** decision-making;
 - ▶ Two-way communication, in which information and ideas are exchanged between government and community stakeholders at the national and local levels;
 - ▶ Public awareness programmes that effectively communicate waste management issues and initiatives, where the media is also engaged as part of strengthening the messages;
 - ▶ Communication with target audiences that uses communications tools appropriate to those audiences;
 - ▶ Ongoing feedback mechanisms that include responses to complaints and information on significant changes that can affect **MSWM**;
 - ▶ Monitoring and evaluation of communication programmes and interventions.
- PS18.** Encourage private sector engagement and participation through the establishment of Industry Committees, as a mechanism in the decision-making process for the various resource streams.

3.2.5 Financing & Cost Recovery Mechanisms

- PS19.** Establish, administer, and utilize a Resource Recovery Fund (**RRF**) to address operations and management financing relating to recycling services, incentives and deposit return systems to ensure sustainable financing. The resources of the **RRF** will include, inter alia:
- ▶ sums of money appropriated by Parliament for the operation of the **RRF**;
 - ▶ sums of money which **SWMCorp** collects as deposits under deposit return systems or in relation to other systems to encourage recycling;
 - ▶ sums of money which are provided to **SWMCorp** or the **GoRTT** by foreign States, international organisations, multilateral or bilateral lending agencies, private individuals, foundations, corporations or other entities to encourage recycling; and
 - ▶ other sums to which the Fund may make a lawful claim.
- PS20.** Facilitate sustainable financing of **MSWM** by collaborating with Municipal and Executive Councils of **LGAs** to ensure appropriate cost recovery systems and financial mechanisms are in place to support the effective implementation and efficient operation of **MSWM** services.
- PS21.** Formulate and implement a system of incentives to encourage manufacturers and importers to produce and market eco-friendly products.
- PS22.** Support funding for research and innovation on product development and new technologies which promote sustainable solid waste management, including recovery.

3.2.6 Waste Prevention, Minimization and Diversion

- PS23.** Develop a national framework for **MSW** prevention, minimization and diversion to realise the incremental reduction to 50% of the quantity of waste requiring final disposal within a ten (10) year period.
- PS24.** Develop and implement **EPR** Systems to foster a greater appreciation for the true cost of the management of post-consumer materials.
- PS25.** Partner with local/international academic institutions, including, but not limited to, the University of the West Indies and the University of Trinidad and Tobago, in research and development initiatives that would enhance **MSW** prevention, minimization and diversion initiatives, while maximizing resource use efficiency and value recovery from wastes.
- PS26.** Develop incentives to encourage manufacturers and importers to adopt waste prevention, minimization, and diversion strategies such as designing waste out of the system (introducing eco-packing) and facilitating industrial symbiosis (waste exchange programmes where waste generated becomes a raw material input for another industry).
- PS27.** Encourage generators to adopt self-regulation policies by achieving international standards certification. Standards such as the International Organization for Standardization (ISO) 14001, an environmental management standard and the SA 8000, a social accountability standard, will contribute to firm self-regulation by specifying requirements that go beyond local government regulations.

3.2.7 Waste Recovery & Recycling

- PS28.** Collaborate with the **MRDLG**, **LGA**s the **THA**, and other stakeholders, as appropriate, to promote waste recovery through reduction, reuse and recycling initiatives. This will be done in two ways:

Pre-Collection

- ▶ Work with importers, distributors, and manufacturers to establish systems for the recovery of reusable/recyclable materials to divert these materials from being disposed of at the landfill sites. Beverage containers such as glass, plastics, and aluminium cans will be targeted for deposit return systems, as proposed under the legislation to manage beverage containers.
- ▶ Initial priority will be given to packaging materials and reusable/recyclable materials generated by residential, commercial, and institutional entities. Items such as tyres, waste oil, automotive batteries, derelict vehicles, and white goods will be considered under these mechanisms.
- ▶ Pilot projects to test the source separation of reusable and recyclable materials by householders and small and medium commercial generators will be considered and selectively undertaken, as appropriate. These will be implemented on a wider scale where it is logistically, technically and economically feasible.

Post-Collection

- ▶ Systems will be introduced for retrieving reusable and recyclable materials from mixed waste. These will be implemented where it is logistically, technically and economically feasible.

- PS29.** Provide incentives to facilitate the development of a long-term, stable and robust recycling industry where a local source stream of recyclable materials and products are recovered, and the concept of a circular economy is fully realized through sustainable activities.

- PS30.** Establish recycling and processing centres alone or jointly to promote recovery, processing and recycling in Trinidad and Tobago.

PS31. Partner with the economic, industrial, and technological parks in Trinidad and in Tobago to drive the recycling industry through innovative technologies that can enhance existing practices.

PS32. Introduce appropriate standards and innovative opportunities for salvagers at the landfills to be integrated into formal recycling activities, while being sensitive to fenceline communities, thereby eliminating informal salvaging activities at landfill sites.

3.2.8 Waste Separation, Storage, Collection & Transportation

PS33. Collaborate with the **MRDLG**, the **LGAs**, **TTBS** and the **THA** to develop Standards for storage, collection, macro and micro-routing, contract procurement and equipment management to ensure that **MSW** is properly contained, and efficiently and securely transported to the disposal site or facility.

PS34. Collaborate with the **MRDLG**, **LGAs**, **TTBS** and the **THA** to design and select appropriate containerization systems at single and high-density residential generators, in the first instance. The objective is to provide safe and secure storage while limiting access to animals and persons rummaging through the waste items. Pilot projects will be established for source separation systems in selected areas on a phased basis. More tangible incentives will be introduced gradually as attitudinal changes are evident among the population.

PS35. Collaborate with **LGAs** and the **THA** to design, establish and operate Transfer Stations, to improve the efficiency of the waste collection systems.

3.2.9 Waste Treatment & Processing

PS36. Utilize treatment and processing technology that would support the fulfilment of the country's obligations to international conventions such as the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Stockholm Convention on Persistent Organic Pollutants (**POPs**) and the Cartagena Convention and its Land Based Sources of Pollution (LBS) Protocol.

PS37. Collaborate with the **MRDLG**, **LGAs**, the **THA** and other stakeholders, as appropriate, to determine the feasibility of adopting waste treatment strategies, and introduce technologies and systems to recover value from waste, where economically and environmentally feasible, that will ensure a reduction in the amount of waste sent to the landfill, namely:

- ▶ Physical processes – those that separate the waste physically into different categories, with each stream being sent for use as a fuel, for recycling and/or for disposal. Waste is reduced to residual items as a result of extraction from the waste stream through the physical process of diversion and recovery;
- ▶ Biological processes – those that convert the organic fraction of waste through biological processing (including anaerobic digestion and aerobic composting) to other, useful products; and
- ▶ Thermal processes – those that reduce waste volumes through the combustion of the carbon-based fraction of waste, specifically the organic and plastics fractions.

3.2.10 Final Disposal

- PS38.** Collaborate with the **LGAs** and the **THA** to create the enabling environment for the environmentally sound disposal of **MSW** including the establishment of transfer stations, material recovery and final disposal facilities.
- PS39.** Site, construct and operate waste treatment, recovery and recycling facilities and disposal sites including sanitary engineered landfills, in accordance with national and international standards to manage the country's waste.
- PS40.** Develop operating and environmental performance standards for the storage, treatment and disposal sites for **MSW** that will ensure public health safety, environmental security and opportunities for the informal sector to recover materials.
- PS41.** Implement measures to segregate hazardous household waste from **MSW** streams and to prevent the landfilling of hazardous and special wastes such as bio-medical wastes, by encouraging use of best available technologies and environmentally sound practices. These wastes will be required to be separated at the source and would not be accepted at non-hazardous waste disposal sites but diverted to hazardous waste sites that are approved and certified by the **EMA**.

4.0 IMPLEMENTATION

The Trinidad and Tobago Solid Waste Management Company Limited (**SWMCOL**) is mandated with the responsibility to manage, control, collect, treat and dispose of all wastes in Trinidad and Tobago. In 2017, the mandate of **SWMCOL** was further expanded to include the development and implementation of a National Recycling Programme.

However, **SWMCOL** has been constrained in its ability to deliver its original and expanded mandate in its current form as a limited liability company, as **SWMCOL** is inhibited in establishing and enforcing standards to improve **MSWM**. As a limited liability company, **SWMCOL** is also prohibited from managing the envisioned **RRF** to implement the National Recycling Programme and manage deposit return systems.

Considering these administrative challenges faced by the mandated entity, **SWMCOL**, it will be repositioned as a statutory corporation, the Trinidad and Tobago Solid Waste Management Corporation (**SWMCorp**) within eighteen (18) months of the approval of the **NISWRMP 2024**. **SWMCorp** will replace **SWMCOL** as the national entity with the responsibility for managing, recycling and disposing of **MSW** in Trinidad and Tobago.

The early establishment of **SWMCorp** is a central feature to the strengthening of the institutional framework and the deepening of coordination across the multiple entities involved in the management of **MSW**, as **SWMCorp** will work in collaboration with the **MPU**, **MPD**, **EMA**, **MoH**, **MRDLG** and the various **LGAs**, the **THA**, other public sector agencies, private sector and non-governmental organizations to implement the **NISWRMP 2024**.

It is recognised that **SWMCOL** has over forty-two (42) years of experience in managing solid waste and is clearly positioned to provide an administrative and a technical resource base for the formation of **SWMCorp**.

*Therefore, the objectives of **SWMCorp** will include those of **SWMCOL**, as outlined in its Memorandum of Association, as follows:*

- i. To manage, control, collect, treat and dispose of all wastes either alone or jointly with any other companies, statutory authorities or persons in Trinidad and Tobago.
- ii. To establish and operate:
 - a) disposal sites in accordance with proper sanitary landfill procedures;
 - b) a central hazardous waste disposal facility;

- c) transfer stations, where appropriate, based on sound economic considerations.
- iii. To promote, establish and operate resource recovery systems for retrieval of valuable secondary materials wherever technically and economically feasible and in accordance with good public health and sanitation practices.
- iv. To develop technical resources and advise Local Government Bodies or other agencies and operating branches of the Company on equipment selection, preventative maintenance procedures, routing, scheduling, safety and productivity.
- v. To provide technical support to Local Government Bodies and operating branches of the Company with respect to evaluation of bids, contracting procedures and contract monitoring.
- vi. To educate the public on the hazards of poor sanitation and on their role in maintaining a clear and healthy environment.
- vii. To maintain close liaison with community groups and other public and private agencies in planning and undertaking country-wide and region-wide clean-up campaigns and to encourage public participation.

Additionally, to:

- viii. Advise the Minister on matters of general policy relating to **MSWM** and recycling in Trinidad and Tobago;
- ix. Chair the National Advisory Council (**NAC**) to develop a strategy to guide and monitor the implementation of the **NISWRMP 2024**, and take all such steps as are necessary to develop and implement an Integrated Solid Waste/Resource Management Plan for the effective management of **MSW**, including collection, storage, transportation, recycling, reuse or disposal in an environmentally sound manner.
- x. Establish and administer the **RRF** for the operation of deposit return systems and other systems to encourage recycling;
- xi. Prioritize waste streams and develop strategies to address problematic waste streams and track emerging waste issues along with their potential impact at a national level.
- xii. Introduce cost recovery measures for services provided by or on behalf of the **SWMCorp**;
- xiii. Develop, monitor and enforce standards, guidelines, codes of practice, rules, regulations and licensing systems, as required, for storage, collection, transportation, recovery, recycling and disposal of **MSW** in collaboration with the **MRDLG**, the **LGA**, the **TTBS** and the **THA**;
- xiv. Embark on and support Research and Development initiatives and pilot projects geared towards improving waste management practices, including refurbishment and re-manufacturing, resource recovery and recycling, in collaboration with educational institutions, non-governmental organizations, NGOs, the private sector, and regional and multilateral agencies.
- xv. Establish a system for classifying, collecting, evaluating and publishing data and information on sources, composition, quantities and methods of treatment/disposal of solid waste.
- xvi. Assist in creating an enabling environment for Private-Public-Partnership initiatives to develop treatment and disposal infrastructure, as well as cradle-to-cradle/take-back stewardship arrangements and deposit return systems, where feasible, for recyclable and reusable materials (e.g. paper, plastics, metals, rubber, car batteries, tyres and electronic wastes);
- xvii. Establish technical cooperation and institutional linkages locally, regionally and with international agencies, geared towards capacity building and institutional strengthening.

4.1 Revised Institutional Framework

While **SWMCorp** will have responsibility for the management of **MSW**, environmental management and protection will continue to be the responsibility of the **EMA**. This institutional arrangement would also maintain the oversight of the line Ministry and the Minister responsible for the management of **MSW** and recycling, and for setting the policy framework (Figure 7).

Although the creation of **SWMCorp** is primarily to strengthen the institutional framework of the **MSW** sector, the creation of a National Advisory Council (**NAC**) and Industry Committees (**ICs**) will also serve to strengthen the institutional framework. Both the **NAC** and **ICs** will be separate and will not be constituted as sub-committees of the Board of **SWMCorp**.

While the role of the Board of **SWMCorp** will be to provide governance oversight to the management of **SWMCorp**, the primary role of **NAC** will be the development of the **ISWRMP** to guide and monitor the implementation of the **NISWRMP 2024**. The **NAC** will be constituted within six (6) months of the approval of the **NISWRMP 2024** and will be chaired by the **MPU** in the first instance. However, upon its establishment, **SWMCorp** will Chair the **NAC** that will consist of representatives of the relevant government ministries, authorities, agencies, local municipalities, appropriate private sector representatives, non-governmental organizations, **CBOs**, civil society and academic institutions. The **NAC** will be constituted for a period of one-year, in the first instance, after which an evaluation will be undertaken to assess the milestones, establish new targets and reconstitute the composition where necessary.

Likewise, **ICs** will be established to provide industry insight and recommendations to **SWMCorp** in the management of the sector. The membership of each **IC** will be specific to the recyclable waste stream being addressed. For example, for the management of beverage containers, an **IC** comprising stakeholders specific to the beverage industry such as beverage manufacturers, importers and retailers, etc. will form its membership. Similarly, for e-waste and tyres, etc., associated **ICs** comprising stakeholders from these industries will be constituted.

In addition, an Inter-Ministerial Oversight Committee for the Establishment of an Integrated Sustainable Solid Waste Management System will be established as an advisory body to provide technical and operational guidance for project implementation and to ensure coordination and synergy among key Ministries and Agencies. The membership will comprise representatives of **SWMCorp**, **MPU**, **MRDLG**, Municipal Corporations, **MPD**, **MoH** and **THA**.



Figure 7: Institutional Framework with SWMCorp, National Advisory Council and Industry Committee

SWMCorp will also work closely with **MRDLG**, **LGAs**, the **THA** and other ministries, agencies, and entities in the public and private sectors to:

- Facilitate Integrated Solid Waste Management (ISWM) sub-planning at the local level, together with development and implementation of Solid Waste Management Plans;
- Establish a forum for continuing dialogue and communication among all of the **LGAs** and the **THA** on solid waste management issues;
- Ensure that the contribution of the informal salvagers at the landfill sites is appropriately integrated into waste management activities at the local level;
- Work with the **LGAs**, the **THA** and other public and private stakeholders to ensure that the participation of private sector organizations in the waste management sector is undertaken in the context of:
 - ▶ Private sector service organizations being considered a tool through which the objectives of the **NISWRMP 2024** may be met;
 - ▶ Legal, institutional and financial frameworks supportive of private sector service organization participation in the waste management sector;
 - ▶ Open competition, transparency and accountability;
 - ▶ Equitable application of contractual obligations; and
 - ▶ Consideration of the social impacts associated with the participation of private sector service organizations in the waste management sector, and mitigation of negative social impacts as appropriate.

5.0 PARALLEL SUPPORT FOR IMPLEMENTATION

Implementation of the policy strategies will follow best industry practices in relevant aspects of policy implementation. The policy strategies in the **NISWRMP 2024** will be further developed in the **ISWRMP** and coordinated by **SWMCorp** in consultation with **MPU**, **MRDLG**, **LGAs**, the **THA** and key public and private sector entities. It is envisaged that the implementation of **NISWRMP 2024** will lead to the development of relevant plans, programmes and projects implementable over defined time periods.

Implementation of the **NISWRMP 2024** will require supporting actions, including:

- ▶ National Land Use Planning;
- ▶ Related National Policies;
- ▶ Legislation; and
- ▶ Communication Strategy.

5.1 Land Use Planning

Solid waste management will be recognized as an integral part of land use planning. Land use policies and plans will incorporate the objectives of the **NISWRMP 2024**, to include other development requirements such as the Certificate of Environmental Clearance of the **EMA** and the approval processes of the National Planning Authority and **LGAs**. Adherence to these established physical plans and approval processes will become significant where disposal and transfer station site selections are contemplated. Development plans for the **MSW** sector will be established consistent to the National Spatial Development Strategy of Trinidad and Tobago, 2013.

5.2 Related National Policy

The Policies identified in Section 1.3.1 above will also lend support to the implementation process.

5.3 Legislation

The existing legislative framework will be reviewed and laws and regulations will be developed to support the implementation of the **NISWRMP 2024**. In this regard, **GoRTT** will take steps to:

- ▶ Give legislative support to the objectives of the Policy by developing new legislation and regulations to establish an Integrated Sustainable Solid Waste/ Resource Management System including:
 - i. Establishing **SWMCorp** as a statutory corporation; and
 - ii. Developing and scheduling the revision of an **ISWRMP** as a tool for strategic planning;
 - Establish a **RRF**;
 - Establish a regulatory framework for waste minimisation and diversion strategies, including extended producer and user responsibility systems;
 - Structure appropriate disincentives for the improper management of MSW.

5.4 Communication Strategy

A Communication Strategy will be developed to effectively convey the vision, goal and objectives of the **NISWRMP 2024** and to detail the roles and responsibilities expected of its stakeholders. The Communication Strategy will be a tool to lend support to the implementation process and the achievement of the objectives, which are to:

- ▶ Build awareness of the Policy among a wide group of stakeholders;
- ▶ Secure the commitment of stakeholders to the vision and goals of the Policy;
- ▶ Encourage participation by all stakeholders within the population; and
- ▶ Influence policymakers to act on the key issues in a timely basis.

6.0 MONITORING, EVALUATION AND REVIEW

The established policy will be revisited every five (5) years to test the success of the vision, goals and objectives targeted during implementation. The monitoring and evaluation will be done against a series of criteria that would effectively measure the level of success of policy implementation so that lessons learnt are documented, modifications needed are addressed and responses to current demands are fulfilled.

Special attention will be given to monitor progress in the following areas:

- ▶ Strengthening of the legislative framework for the management of **MSW** and recycling;
- ▶ Strengthening the institutional framework with the establishment of **SWMCorp**, the **NAC** and relevant **ICs**;
- ▶ Creation of a **RRF**;
- ▶ Reducing waste generation levels;
- ▶ Increasing waste diversion, recovery and recycling levels;
- ▶ Increasing adherence to relevant national and international conventions and treaties;
- ▶ Developing and managing new waste management facilities that meet international standards and best practices.

7.0 THE WAY FORWARD

Doing nothing is not an option, Trinidad and Tobago must develop a sustainable and efficient system to manage **MSW**. Concerns have been expressed with regards to rising costs, increasing waste volumes and the imminent saturation of the existing landfill sites. These conditions continue in the presence of a consumption-led lifestyle that requires limited responsibility for the real cost of solid waste management.

Pivotal to the success of the goals of the **NISWRMP 2024** will be the level of responsibility assumed by all citizens. **GoRTT** is taking the lead to encourage the public to take ownership. Every generator must appreciate the real cost of achieving “best practices” in solid waste management so that the costs are shared equitably. Residential generators will have an opportunity to contribute to good practices through mechanisms such as the deposit return systems, and the commercial and industrial sectors have to assume responsibility through the **EPRs**.

The **NISWRMP 2024** calls for a wide range of actions that challenge the status quo, while fostering responsible behavior that would ensure a safer environment for future generations. It is a working partnership between **GoRTT** and the population of Trinidad and Tobago.



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