

## TC Document

### I. Basic Information for TC

▪ Country/Region:	TRINIDAD AND TOBAGO
▪ TC Name:	Trinidad and Tobago Organic Waste Municipal Curbside Recycling Programme (MCRP)
▪ TC Number:	TT-T1122
▪ Team Leader/Members:	Lewis, Gilroy Francis (INE/WSA) Team Leader; Rihm Silva, Juan Alfredo (INE/WSA) Alternate Team Leader; Agostini, Dorri Michelle (CCB/CTT); Carolina Piamonte (INE/WSA); Leslie Crespín (INE/WSA); Lopez, Liliana M. (INE/WSA); Mendoza Benavente, Horacio (LEG/SGO)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	.
▪ Date of TC Abstract authorization:	20 Sep 2022.
▪ Beneficiary:	Government of Trinidad and Tobago (GoRTT) via the Ministry of Planning and Development
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	OC SDP Window 2 - Infrastructure(W2B)
▪ IDB Funding Requested:	US\$250,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	Execution 30 months
▪ Required start date:	January, 2023
▪ Types of consultants:	Firm and individual consultants
▪ Prepared by Unit:	INE/WSA-Water & Sanitation
▪ Unit of Disbursement Responsibility:	CCB/CTT-Ctry Off Trinidad & Tobago
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Environmental sustainability; Gender equality; Institutional capacity and rule of law; Productivity and innovation

### II. Objectives and Justification of the TC

**2.1 Context.** Trinidad and Tobago is an independent twin-island Republic located in the Caribbean and is considered as a high-income economy by the World Bank. The population of the country was just over 1.3 million as of 2011<sup>1</sup>. The mainstay of the economy is the petroleum and natural gas sector and many large industries have developed to support this sector. This has led to waste generation that differs quite substantially in quantities and types from the rest of the Caribbean. According to the 2010 Waste Characterization Study for Trinidad and Tobago, the composition of household generated waste was reported as follows: organics 126,700 tones; plastics 89,460 tones; and paper and cardboard 105,470 tones.

**2.2 Justification.** Waste management in Trinidad and Tobago is fraught with several legislative, institutional, infrastructural, social, and economic challenges. Chief among

<sup>1</sup> Source: <https://www.worldbank.org/en/country/trinidadandtobago/overview>

these are the following: (i) The lack of a single overarching body with the necessary regulatory authority and mandate to address all aspects of waste management. (ii) Several agencies are currently involved in Solid Waste Management (SWM), and their regulatory roles/responsibilities are not always clear. (iii) A combination of outdated legislation (including the Public Health Act) and a lack of targeted legislation pertaining to such critical aspects as management of medical waste, hazardous waste, e-waste, etc. (iv) The high overall costs of waste collection when compared to disposal. (v) The existing disposal sites are not managed in accordance with international best practices. This inadequate environmental management practices produce pose risks to human health, which may alter the environment and to the country's and fragile ecosystems in the country. (vi) Common environmental problems include fires, comingling of healthcare waste with domestic solid waste, lack of leachate and landfill gas management, etc. (vii) Unreliable data on waste quantities managed at the waste disposal sites because there are no weigh scales available at any of the disposal sites. (viii) The lack of full-fledged implementation of programs for recovery of useful resources and the associated absence of source segregation. (ix) Illegal salvaging of metals (and other valuable materials) from existing waste disposal sites and the associated health and safety risks. (x) No national-level cost recovery mechanisms are in place.

- 2.3 Since 2016, the Solid Waste Management Company Ltd. (SWMCOL), through its Municipal Curbside Recycling Program (MCRP) has been pursuing partnerships with municipal corporations across the country with the objective of transforming citizens' attitudes towards waste disposal to one that is eco-friendlier. The MCRP focuses on waste reduction, separation, and collection of post-consumer beverage containers – glass and plastic bottles, aluminum cans, and drink cartons – at the household level. This entity currently serves through pilot campaigns in: Couva/ Tabaquite / Talparo, San Fernando, Arima, Port of Spain, Princes Town, Sangre Grande and Siparia. It has been estimated that about 27% or 126,700 tons of organic waste is generated by households. Therefore, it makes sense to target the organic waste fraction for separate collection through the MCRP and to incorporate additional municipalities.
- 2.4 The current Municipal Curbside Recycling Program (MCRP) is a program that allows SWMCOL to partner with Municipalities and focus on waste reduction, separation, and collection of post-consumer beverage containers – glass and plastic bottles, aluminum cans, and drink cartons – at the household level. This TC will help to expand the scope of the program to include the separation, collection, and processing of organics fraction and/or e-waste in the following Municipalities: Chaguanas, Diego Martin, Mayaro/ Rio Claro, Penal/ Debe, Princes Town, and San Juan /Laventille. The MCRP Pilot will focus on the use of digital technology, GIS, and apps to improve the logistics as well as include a public education and awareness program within the communities and schools.
- 2.5 The TC is expected to design and pilot the introduction of curbside recycling programs through the separate collection and composting of organic waste that would otherwise be disposed in landfills. The diversion of organic waste has the following benefits: (i) reduction of the disposal of organic waste in landfills thereby reducing pollution and mitigation of climate change through reducing methane emissions, aligned with the initiatives and goals to reduce emissions of this gas, and additionally extending the life of landfills; (ii) use as a soil amender in agriculture, landscaping and urban

gardening and recovery of degraded lands; and (iii) production of energy from anaerobic digestion.

- 2.6 Few studies have been carried out with a gender perspective on the initial separation of garbage in the home. Halvorsen (2008)<sup>2</sup> points out that due to the lack of sanctions and economic incentives for recycling from home, it becomes a strictly voluntary action, which means sacrificing time that was previously destined for other activities, such as rest. López and Espinoza (2020)<sup>3</sup> point out that in Costa Rica, households headed by women are more likely to separate waste than those headed by men, by a magnitude of 5 percentage points. When it comes to households with a head in the company of her partner, the magnitude is 7 percentage points. Sanz de Acedo et al. (2007)<sup>4</sup> point out that women are more concerned about uncertainty, doubts, and dynamism in decision-making processes, which seems to be the reason why they tend to worry more about climate change and take concrete actions. Therefore, it is considered that it could be useful that when designing the Plans to transform the attitude of citizens in the elimination of waste and for the separate collection of organic waste at the household level, they should include the gender approach and thus encourage male-headed households to be as likely to separate waste as female-headed households.
- 2.7 Also, this TC is aligned with the Water and Sanitation Sector Framework Document (SFD, GN-2781-13) approved by the Bank in December 2021, and the promotion of the digitization of solid waste management services, the inclusion of women in the formalization and valorization of informal recycling, and the impact of climate change on the operation and closure of landfills. Finally, the purpose of this TC is consistent with the objectives and activities pursued by “OC SDP Window 2 – Infrastructure (W2A)” (GN-2819-14), being one of its objectives to improve the performance, quality, and sustainability of infrastructure services.
- 2.8 **Strategic alignment.** The TC is consistent with the Second Update of the Institutional Strategy 2020-2024 (AB-3190-2) through the Productivity and Innovation challenge, by accelerating the transition to circular production and consumption models, thus contributing to strengthening productive capacity. It is aligned with the cross-cutting themes of (i) Climate Change and Environmental Sustainability, through the improvement of solid waste management and the reduction of Greenhouse Gas (GHG) emissions; (ii) Institutional Strengthening and Rule of Law through support to governments in terms of regulation and standards; and, (iii) Gender Equality and Diversity through the promotion of women participation on solutions based on digitalization and STEM and the design of programs for initial separation with a gender perspective. The former is relevant as few studies for waste sorting have analyzed the gender perspective and evidence reflects that women role in these processes is vital. This TC is also consistent with the IDB Group Country Strategy with Trinidad and Tobago 2021-2025 (GN-3071), specifically with the strategic objective of 'enhancing

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<sup>2</sup> Halvorsen, Bente (2008). Effects of norms and opportunity Cost of time on household recycling. *Land Economics*, 84(3), 501-516.

<sup>3</sup> López, Ana y Espinoza, Daniel (2020). Conducta de separación de residuos en los hogares costarricenses. *Dissertare*, 5(1), 1-25.

<sup>4</sup> Sanz de Acedo, María L., Sanz de Acedo, María T. y Cardelle-Elawar, María (2007). Factors that affect decision making: gender and age differences. *International Journal of Psychology and Psychological Therapy*, 7(3), 381-391.

the digital delivery of services' by financing the design and implementation of a digitalization strategy in solid waste management based on the pilots of the targeted municipalities. The TC is aligned with the cross-cutting issues highlighted in the Country Strategy of gender and diversity, climate change and environmental sustainability and institutional capacity and the rule of law.

- 2.9 **Objective.** The objective of this TC is to expand pilot municipal curbside recycling and organics management in the targeted municipalities (Chaguanas, Diego Martin, Mayaro/ Rio Claro, Penal/ Debe, Princes Town, and San Juan /Laventille) through the separate collection and composting of organic waste, taking advantage of digitalization, and promoting citizen participation, with behavioral change techniques, and seeking the financial sustainability of these innovative source separation schemes.

### III. Description of activities/components and budget

The TC is structured in two components:

- 3.1 **Component 1. Curbside recycling and organics valorization (USD\$200,000).** The Municipal Curbside Recycling Program (MCRP) will allow SWMCOL to partner with Municipalities and focus on waste reduction, separation, and collection of post-consumer beverage containers – glass and plastic bottles, aluminum cans, and drink cartons – at the household level. This TC will expand the scope of the program to include the separation, collection, and processing of organics and/or e-waste. The MCRP Pilot will also include a public education and awareness program within the communities and schools. The TC will also finance the design and implementation of digitalization strategies in solid waste management (optimization of routes, tariff payment, recycle) through behavioral change, digitalization and collecting, composting, producing energy, recycling, and re-integration of these materials back into the manufacturing and biological process. Main **activities** include: (i) public education, awareness, and outreach program; and (ii) pilot organic waste collection and composting at households, schools, businesses, and communities. Using digitalization and Geographic Information System (GIS) to facilitate curbside recycling. Generation of a written blog with results will be included, as well as registration in images and testimonies for further repository and communications material. The design of these activities will include the gender approach, when applicable. Main **products** of the TC are the following:
- 1) Behavioral change campaigns designed and implemented, with gender approach.
  - 2) Organic waste collection and composting pilot project design and implementation, with gender approach, using digitalization tools as GIS.
- 3.2 **Component 2. Institutional and financial sustainability (USD\$ 50,000).** The goal of this component is to analyze and propose innovative schemes to promote solid waste management sustainability in the targeted municipalities. The following activities will be financed under this Component: (i) institutional, legal, and financial analysis of the solid waste sector to promote financial sustainability, including the digitalization strategy in solid waste management using as a base the pilot for organic waste collection in component 1 and expanding to the complete solid waste management system. Main products of this component are: Financial sustainability

study. All the products will be in line with the institution's image and will be saved in a repository for future use

- 3.3 This TC will be financed with resources from the “OC SDP Window 2 – Infrastructure (W2A)” (GN-2819-14) in the amount of US\$250,000, according with the distribution below:

**Indicative Budget**

Activity/Component	Description	IDB/Fund Funding US\$	Counterpart Funding	Total Funding US\$
<b>Component 1</b>	Curbside recycling and organics valorization	200,000	N/A	180,000
<b>Component 2</b>	Institutional and financial sustainability	50,000	N/A	50,000
<b>Total</b>		<b>250,000</b>		<b>250,000</b>

#### **IV. Executing agency and execution structure**

- 4.1 At the request of the Government of Trinidad and Tobago (GoRTT) via the Ministry of Planning and Development, the Bank, through the Water and Sanitation Division (INE/WSA) will be the Executing Agency (EA) of the project. This execution arrangement is justified under OP-619-4 Annex 2 due to (i) Bank's experience in the implementation of technical support in the areas of solid waste management that will contribute more effectively to the achievement of the TC objectives in a timely manner; (ii). the Bank and the beneficiary agree that contracting by the Bank would enhance national coordination and independence under the impartiality criteria, as several stakeholders might have different interests in the various areas in solid waste management and (iii) likewise, execution by the Bank helps to ensure that the lessons learned from the activities carried out are properly disseminated within the region.
- 4.2 The beneficiary of this TC will be the GoRTT, represented by the Solid Waste Management Company Ltd. (SWMCOL) who has been taking the leadership in the areas of integrated solid waste management in Trinidad and Tobago. The Bank will coordinate and engage with the main stakeholders from the beginning of the implementation of the TC, seeking feedback and regularly presenting and discussing progress reports on all matters relating the implementation of the activities under the two components. The designated focal point and sector specialist responsible for the execution and supervision of the TC will be the Team Leader (INE/WSA), and the UDR will be the Country Office of Trinidad and Tobago (CCB/CTT) with the support of the INE/WSA team.
- 4.3 The beneficiary may provide technical inputs to the terms of reference and reports of the consultants, such inputs should be provided directly to the Bank. The Bank will have the autonomy to approve such documents. This dynamic will facilitate proper articulation between the various actors within the framework of the technical dialogue of this TC. The TC does not present fiduciary management risks as it will be implemented by the Bank. Therefore, no financial audit is required.

- 4.4 The execution period will be 30 months. The IDB will be responsible for the selection and contracting of consulting firms, and individual consultants. and non-consulting services in accordance with the Bank's current procurement policies and procedures for Bank-executed operations.: The activities to be executed are included in the Procurement Plan and will be contracted in accordance with Bank policies as follows: (a) AM-650 for Individual consultants; (b) GN-2765-4 and Guidelines OP-1155-4 for Consulting Firms for services of an intellectual nature and (c) GN-2303-28 for non-consulting and other related services. On the other hand, for the development of digital tools, the Bank's ITE will be included and involved.

## **V. Major issues**

- 5.1 The main risks associated to this TC are: (i) low institutional capacity of the country in solid waste management; (ii) low involvement of local governments in project implementation; and (iii) low uptake of the public. To mitigate these risks a working group will be created to share the products, capacity building products, and campaigns progress report will be developed. As well, as coordinating with other entities in SWM to socialize the project and be inclusive.

## **VI. Exceptions to Bank policy**

- 6.1 This TC operation does not include any exception to Bank policies.

## **VII. Environmental and Social Strategy**

- 7.1 This Technical Cooperation is not intended to finance pre-feasibility or feasibility studies for specific investment projects or associated environmental and social studies; therefore, this TC does not meet the applicable requirements of the Bank's Environmental and Social Policy Framework (ESPF).

## **Required Annexes:**

[Request from the Client - TT-T1122](#)

[Results Matrix - TT-T1122](#)

[Terms of Reference - TT-T1122](#)

[Procurement Plan - TT-T1122](#)