

TRINIDAD AND TOBAGO

Project Profile

BASIC DATA

Project name:	Wastewater Infrastructure Improvement Program
Project number:	TT-L1018
Project Team:	Marcello Basani (WSA/CGY), Team Leader; Rodrigo Riquelme, Lu Shen, Jorge Ducci, Gerhard Knoll, and Catalina Gallego (INE/WSA); Stefanie Brackmann (VPS/ESG); Magda Theodate; Denise Ann Salabie (PDP/CTT); Dale James (CCB/CTT); and Guillermo Eschoyez (LEG/SGO).
Borrower:	Republic of Trinidad and Tobago
Executing Agency:	Water and Sewerage Authority (WASA)
Financing Plan:	IDB (OC): US\$ 30,000,000 Local: US\$ 0 Total: US\$ 30,000,000
Safeguards	Policies triggered: OP-703, OP-102, OP-704 Classification: Category B

I. GENERAL JUSTIFICATION AND OBJECTIVES

- 1.1 Trinidad and Tobago (T&T), located in the southeastern Caribbean with an area of 4,768 km² for Trinidad and 300 km² for Tobago, has a population of 1.3 million. The country's main sources of revenue are from the petroleum, manufacturing and tourism sectors, where oil and gas account for about 45% of gross domestic product and 80% of its exports. These sectors all depend on reliable water and wastewater services for their success.
- 1.2 According to the 2010 UNICEF/WHO Joint Monitoring Program, 94% of the population in T&T use an improved drinking water source (98% in urban areas and 93% in rural areas), as compared to 91% in 2000. This report also indicated that 92% of the population use improved sanitation facilities. Despite these improvements, the wastewater and water services face operational, maintenance, financial, and institutional challenges, as explained below.
- 1.3 The Water and Sewerage Authority (WASA), created under the WASA Act 1965, is the statutory body responsible for the provision of water and wastewater services in T&T and for carrying out the sectoral Government policies. It falls under the policy direction of the Ministry of Public Utilities. In 2008, the Government of the Republic of Trinidad and Tobago (GORTT) announced plans to create an independent wastewater entity. While a new wastewater division was created within WASA, in July 2010 WASA announced that the management of water and sewerage would not be separated.
- 1.4 The Regulated Industries Commission (RIC) is the independent statutory body regulating all public utilities. Its functions include: making recommendations on the

awarding of licenses; monitoring and enforcing compliance with license conditions; and establishing the principles on which tariffs will be based. Other GORTT agencies which have roles in the sector include: the Tobago House of Assembly (part of the political directorate which oversees the operations of WASA in Tobago), the Water Resources Agency (appended to WASA, promotes water conservation, development and protection), the Forestry Division of Ministry of Agriculture, Land and Marine Resources and the Ministry of Health.

- 1.5 **Wastewater Service.** T&T introduced centralized sewer and wastewater treatment systems in the 1960s. Since then, the sewage collection and treatment infrastructure has grown to an estimated 560 km of sewers and 243 wastewater facilities in both Trinidad and Tobago. However, this infrastructure only covers approximately 30% of T&T's population (about 400,000 persons serviced by centralized systems), with the remaining 70% serviced by septic tanks and pit latrines. The main sewered areas include Port of Spain, San Fernando and Arima in Trinidad and Scarborough in Tobago. Current WASA statistics for wastewater can be summarized as follows: (i) only 20% of the total population serviced by WASA's centralized sewerage system; (iii) operation of 40 wastewater treatment plants¹ and 32 lift stations; and (iv) average wastewater flows treated of 130MI/d.
- 1.6 Overall, the wastewater sector faces the following challenges: (i) limited expansion of the central sewers; (ii) tariffs below the cost of providing sewerage services; (iii) limited financial and human resources; (iv) poor infrastructure designs; and (v) poor maintenance of the existing infrastructure. As a consequence, the sewerage system is currently in a state of despair and in urgent need of rehabilitation.
- 1.7 **The Packaged Orphan Treatment Plants.** Over the last five decades, population growth and housing developments have not been matched with adequate expansion of the central sewerage systems. As a result, the GORTT required residential and industrial land developments to build and operate their own sewers and packaged wastewater treatment plants which were in turn not properly operated or maintained. The intent was to allow WASA to expand its central sewerage systems in the meantime to accommodate for future housing schemes and the closure of the packaged treatment plants. However, to date the central sewerage systems have not expanded as anticipated, and the packaged plants, approximately 200 in total, have not been closed or integrated into a centralized wastewater management system. The majority of these plants, located in Trinidad, have since been malfunctioning or abandoned. In 2004 WASA was mandated by the Cabinet to assume responsibility for all of them and integrate them into its wastewater system, bringing about a great institutional, organizational and technical challenge.
- 1.8 Below-quality-standard effluents² from these facilities are often discharged into water courses or upstream of water intakes, posing health and environmental risks and increasing the costs of potable water treatment. The disposal of untreated

¹ The remaining wastewater treatment plants are owned by Housing Development Corporation (HDC)

² The 2006 Water Pollution Rules of the Environmental Management Authority set effluent quality standards.

sewage into rivers and coastal waters impacts also on the quality of aquatic life, posing ecological threat, as well as an economical threat to the tourism sector.

- 1.9 **Potable Water Service.** WASA has approximately 340,000 customers. While it is estimated that 92% of T&T's population have access to a piped water supply,³ the water supply system operates under constant challenges, mostly related to aging pipes and lack of the adequate maintenance. These problems have led to a gradual deterioration of the network, high level of non revenue water (as high as 44%), and low service levels (only 20% of the population in Trinidad and 58% in Tobago have access to continuous water supply). The water sector is also heavily affected by the poor performance of the wastewater treatment plants as they impact the quality of surface and ground water sources - representing 62% and 27% of the total water supply respectively.
- 1.10 **Tariff Structure.** Currently, the tariff structure does not meet the full cost recovery for WASA. As a result, WASA depends on Government transfers to maintain a positive cash flow. It is the intent of the GORTT to resolve the tariff issue in a gradual approach by first addressing the service quality issue of WASA and addressing the tariff adjustment at a later stage, when service provision is at a more acceptable level. The RIC is currently reviewing a proposal to increase WASA efficiency, which includes institutional restructuring and tariff modifications.
- 1.11 **Program objective.** The general objective of the proposed program is to improve the environmental conditions of T&T, by decreasing the uncontrolled discharge of untreated wastewater into the environment. The specific objective is to improve the existing wastewater management services in priority areas, through: (i) the takeover, refurbishment, upgrade and eventual integration, or decommissioning, of malfunctioning wastewater treatment facilities in T&T; (ii) the strengthening of WASA operational and maintenance performance.
- 1.12 **IDB Assistance.** Until recently, the Bank's support in the sector has been limited to studies. A Technical Cooperation (TC) was approved in 1999 to develop a plan for wastewater sector development. In 2008, under the Water and Sanitation Initiative (GN-2446-2), the Bank financed another plan to review the strategic vision of the water sector. In December 2009, a TC "Preparation of Wastewater Rehabilitation Program" (ATN/OC-11932-TT) was approved. After some delays, it started being implemented early in 2011. The purpose of the TC is to: (i) prepare an action plan to rehabilitate the mal-functioning or abandoned wastewater facilities, including the final designs for selected interventions; and (ii) provide recommendations for the improvement of the institutional arrangement for the wastewater sector. The interim outputs of the TC include technical, environmental and socio-economical studies that will support the proposed program, including the list of priority interventions and their economic viability. Civil works financed through this program will start early in 2012, upon completion of the final designs.

³ Source: Water Sector Strategy, June 2008 prepared by Cecil Pemberton for the Inter-American Development Bank

- 1.13 **Link to Country Strategy.** Wastewater is one of the priority areas included in the Country Strategy Issues Paper, which was approved by the President's Committee in November 2010. The sector is also cited as priority area in the draft 2011-2015 Bank's Country Strategy (CS) with T&T under preparation. The program will contribute directly to attaining the draft CS indicators related to the increase in the volume of wastewater treated and in the number of households connected to an improved sanitation network. The operation is also aligned with the previous 2004-2007 CS and its subsequent updates (GN-2335, GN-2477, GN-2570), through the public sector modernization and the social development priority areas. The program is consistent with the Bank's Water and Sanitation Initiative as it contributes to the goals set under its "100 Cities" and "Water Defenders", as well as with the new lending program priorities and the second sector priority of the Ninth IDB General Capital Increase (infrastructure for competitiveness and social welfare).

II. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

- 2.1 **Program Design.** It is proposed that the program include the following:
- 2.2 Component 1: Improvement of T&T's wastewater system: Based on the results of the studies financed throughout program preparation and through ATN/OC-11932-TT, this component will finance civil works related to the takeover, refurbishment, upgrade and eventual integration, or decommissioning, of the malfunctioning wastewater treatment facilities in T&T. Selection criteria for priority interventions will include environmental impact as well as economic viability. The component may include the construction of new sewerage sub-systems in Tobago.
- 2.3 Component 2: Institutional strengthening of WASA: This component will address the institutional strengthening needs of WASA, related to (i) the re-integration of the wastewater division; and (ii) the operation and maintenance of the improved wastewater system. Potential activities under this component include: development of wastewater management plans, asset management (maintenance) programs, staff training programs, public awareness campaigns.
- 2.4 **Execution and complementary activities required.** The Executing Agency (EA) for the proposed program will be WASA. WASA is slowly becoming knowledgeable of the Bank's policies and procedures as it started the execution of ATN/OC-11932-TT. However, the Bank will provide support in procurement and fiduciary matters through the local Country Office. The ongoing institutional capacity assessment may also reveal the need for additional strengthening activities, which will be addressed through component 2.
- 2.5 **Lessons learned and sector knowledge.** The experience with the orphan treatment plants suggests that privatization of wastewater services provision can be extremely difficult to put into practice, and needs to be conceptualized properly considering the existing institutional and legal framework as well as the capacity of all relevant parties and the scale of the market.

III. SAFEGUARDS AND FIDUCIARY SCREENING

- 3.1 The program is not expected to have any large scale, significant and/or irreversible negative environmental or social impacts. Negative expected impacts and risks are mainly related to wastewater infrastructure construction works, including noise, dust, waste generation, traffic disruption and occupational risks. Key policies and directives triggered include B.04 (other risks), B.06 (consultation), B.11 (pollution prevention and abatement) of the Environment Safeguards Policy (OP-703), Access to Information Policy (OP-102) and the Natural Disaster Policy (OP-704). It is not likely that Involuntary Resettlement Policy (OP-710) will apply, however this will be assessed during the due diligence process, as well if B.9 of OP-703 (Natural Habitats and Cultural Sites) and the Gender Equality in Development Policy apply.
- 3.2 The potential impacts of the program are anticipated to be low to medium and the team proposes an environmental classification of “B”, under OP-703. The risks of the operation could be classified as high due to the limited capacity of the EA, the readiness of the studies which have been delayed, the lack of comprehensive overview of the wastewater sector, and potential issues of liabilities due to past contamination during the time when the treatment plants were not well managed.
- 3.3 The Environmental and Social Strategy involves the preparation of an Environmental and Social Analysis and the preparation of an Environmental and Social Management Plan. In compliance with OP-102, this document will be disclosed in the T&T local offices and on the IDB external website.
- 3.4 The Bank and WASA are currently conducting the Institutional Capacity Assessment System analysis for WASA, whereby all areas of its operations, including fiduciary and financial management, will be analyzed. Recommendations on institutional strengthening, with particular attention paid to Bank-related procedures, will be made. To date, no significant issues have been noted.

IV. OTHER ISSUES

- 4.1 The GORTT has allocated US\$141 million for fiscal year 2010-2011 to improve the water supply system in T&T. The Bank is following closely the implementation of the activities that will be financed using these resources.
- 4.2 Relevant policies that apply to this program include OP-708 (Public Utilities), OP-742 (Health), and OP-745 (Basic Environmental Sanitation).

V. RESOURCES AND TIMETABLE

- 5.1 Annex V details steps, milestone dates and estimated resources for program preparation. The administrative preparation budget provides US\$40,550. US\$30,000 from C and D country funds will be used for consultancies (IDB Ref 35739859, 02/16/11). ATN/OC-11932-TT provides US\$690,000 for the preparation of the technical inputs. Expected approval date for the Draft Loan Proposal is September 23, 2011, and expected Board Approval is October 26, 2011.

SAFEGUARD POLICY FILTER REPORT

This Report provides guidance for project teams on safeguard policy triggers and should be attached as an annex to the PP (or equivalent) together with the Safeguard Screening Form, and sent to ESR.

1. Save as a Word document. 2. Enter additional information in the spaces provided, where applicable. 3. Save new changes.

PROJECT DETAILS	IDB Sector	WATER AND SANITATION-SEWERAGE	
	Type of Operation	Investment Loan	
	Additional Operation Details		
	Investment Checklist	Infrastructure Water and Sanitation	
	Team Leader	Basani, Marcello (MARCELLOB@iadb.org)	
	Project Title	Wastewater Infrastructure Improvement Program	
	Project Number	TT-L1018	
	Safeguard Screening Assessor(s)	Brackmann, Stefanie U. S. (SBRACKMANN@iadb.org)	
	Assessment Date	2011-03-07	
Additional Comments			
SAFEGUARD POLICY FILTER RESULTS	Type of Operation	Loan Operation	
	Safeguard Policy Items Identified (Yes)	Activities to be financed in the project area are located within a geographical area or sector exposed to natural hazards (Type 1 Disaster Risk Scenario).	(B.01) Disaster Risk Management Policy– OP-704
		The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy– OP-102
		The operation is in compliance with environmental laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	(B.02)
		The operation (including associated facilities) will be screened and classified according to their potential environmental impacts.	(B.03)
		The Borrower/Executing Agency exhibits weak institutional capacity for managing environmental and social issues.	(B.04)
		The operation may be of higher risk due to controversial environmental and associated social issues or liabilities.	(B.04)

		An Environmental Assessment is required.	(B.05)
		Consultations with affected parties will be performed and considerations of their views will be taken into account.	(B.06)
		The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.	(B.07)
		The operation has the potential to pollute the environment (e.g. air, soil, water, greenhouse gases...).	(B.11)
		Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.	(B.17)
	Potential Safeguard Policy Items (?)	Potential disruption to people's livelihoods living in the project's area of influence (not limited to involuntary displacement, also see Resettlement Policy.)	(B.01) Resettlement Policy– OP-710
	Recommended Action:	<p>Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.</p> <p>The project triggered the Disaster Risk Management policy (OP-704).</p> <p>A more limited and specific Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p>	
	Additional Comments:		
ASSESSOR DETAILS	Name of person who completed screening:	Brackmann, Stefanie U. S. (SBRACKMANN@iadb.org)	
	Title:		
	Date:	2011-03-07	

SAFEGUARD SCREENING FORM

This Report provides a summary of the project classification process and is consistent with Safeguard Screening Form requirements. The printed Report should be attached as an annex to the PP (or equivalent) and sent to ESR.

1. Save as a Word document.
2. Enter additional information in the spaces provided, where applicable.
3. Save new changes.

PROJECT DETAILS	IDB Sector	WATER AND SANITATION-SEWERAGE		
	Type of Operation	Investment Loan		
	Additional Operation Details			
	Country	TRINIDAD AND TOBAGO		
	Project Status			
	Investment Checklist	Infrastructure Water and Sanitation		
	Team Leader	Basani, Marcello (MARCELLOB@iadb.org)		
	Project Title	Wastewater Infrastructure Improvement Program		
	Project Number	TT-L1018		
	Safeguard Screening Assessor(s)	Brackmann, Stefanie U. S. (SBRACKMANN@iadb.org)		
	Assessment Date	2011-03-07		
	Additional Comments			
PROJECT CLASSIFICATION SUMMARY	Project B	Category:	Override Rating:	Override Justification:
	Conditions/ Recommendations			<p>Comments:</p> <ul style="list-style-type: none"> Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements). The Project Team must send to ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports. These operations will normally require an environmental and/or social impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary.

	Identified Impacts/Risks	Potential Solutions
<p>SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS</p>	<p>The negative impacts from production, procurement and disposal of hazardous materials (such as fuel and chlorine) are minor and will comply with relevant national legislation, IDB requirements on hazardous material and international standards and guidelines such as the IFC Water and Sanitation Guidelines (if applicable).</p>	<p>Monitor hazardous materials use: The borrower should document risks relating to use of hazardous materials and prepare a hazardous material management plan that indicates how hazardous materials will be managed (and community risks mitigated). This plan could be part of the ESMP.</p>
	<p>Likely to have minor to moderate emission or discharges that would negatively affect ambient environmental conditions.</p>	<p>Management of Ambient Environmental Conditions: The borrower should be required to prepare an action plan (and include it in the ESMP) that indicates how risks and impacts to ambient environmental conditions can be managed and mitigated consistent with relevant national requirements and international standards and guidelines such as the IFC Water and Sanitation Guidelines (as appropriate). The borrower should (a) consider a number of factors, including the finite assimilative capacity of the environment, existing and future land use, existing ambient conditions, the project's proximity to ecologically sensitive or protected areas, and the potential for cumulative impacts with uncertain and irreversible consequences; and (b) promote strategies that avoid or, where avoidance is not feasible, minimize or reduce the release of pollutants, including strategies that contribute to the improvement of ambient conditions when the project has the potential to constitute a significant source of emissions in an already degraded area. The plan should be subject to review by qualified independent experts. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.).</p>
	<p>Transport of hazardous materials (e.g. fuel) with minor to moderate potential to cause impacts on community health and safety.</p>	<p>Hazardous Materials Management: The borrower should be required develop a hazardous materials management plan; details of grievances and any independent health and safety audits undertaken during the year should also be provided. Compliance with the plan should be monitored and reported. Depending on the financial product, this information should be referenced in appropriate legal</p>

		documentation (covenants, conditions of disbursement etc). Consider requirements for independent audits if there are concerns about commitment of borrower or potential outstanding community concerns.
	Project construction activities are likely to lead to localized and temporary impacts (such as dust, noise, traffic etc) that will affect local communities and workers but these are minor to moderate in nature.	Construction: The borrower should demonstrate how the construction impacts will be mitigated. Appropriate management plans and procedures should be incorporated into the ESMP. Review of implementation as well as reporting on the plan should be part of the legal documentation (covenants, conditions of disbursement, etc).
DISASTER SUMMARY	<p>Details</p> <p>The Project should include the necessary measures to reduce disaster risk to acceptable levels as determined by the Bank on the basis of generally accepted standards and practices. Alternative prevention and mitigation measures that decrease vulnerability must be analyzed and included in project design and implementation as applicable. These measures should include safety and contingency planning to protect human health and economic assets. Expert opinion and adherence to international standards should be sought, where reasonably necessary.</p>	<p>Actions</p> <p>A more limited and specific Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p>
ASSESSOR DETAILS	Name of person who completed screening:	Brackmann, Stefanie U. S. (SBRACKMANN@iadb.org)
	Title:	
	Date:	2011-03-07

ENVIRONMENTAL AND SOCIAL STRATEGY (ESS)

WASTEWATER INFRASTRUCTURE IMPROVEMENT PROGRAM TT-L1018

I. INTRODUCTION

1.1 Project Summary:

Project name:	Wastewater Infrastructure Improvement Program
Project number:	TT-L1018
Project Team:	Marcello Basani (WSA/CGY), Team Leader; Rodrigo Riquelme, Lu Shen, Jorge Ducci, Gerhard Knoll, and Catalina Gallego (INE/WSA); Stefanie Brackmann (VPS/ESG); Magda Theodate; Denise Ann Salabie (PDP/CTT); Dale James (CCB/CTT); and Guillermo Eschoyez (LEG/SGO).
Borrower:	Government of the Republic of Trinidad and Tobago (GORTT)
Executing Agency:	Water and Sewerage Authority (WASA)
Financing Plan:	IDB: (OC) US\$ 30,000,000 Local: US\$ 0 Total: US\$ 30,000,000
Safeguards	Policies triggered: OP-703, OP-102, OP-704 Classification: Category B

II. PROJECT DESCRIPTION

- 2.1 **Program objective.** The objective of the proposed program (US\$30,000) is to improve the environmental conditions of T&T, by decreasing the uncontrolled discharge of untreated wastewater into the environment. The specific objective is to improve the existing wastewater management services in priority areas, through: (i) the takeover, refurbishment, upgrade and eventual integration, or decommissioning, of malfunctioning wastewater treatment facilities in T&T; (ii) the strengthening of WASA operational and maintenance performance.
- 2.2 The Executing Agency (EA) for the proposed program will be the Water and Sewerage Authority (WASA), under the Ministry of Public Utilities.
- 2.3 **Program Design.** The program will include two components:
- 2.4 Component 1: Improvement of Trinidad and Tobago's wastewater system. Based on the recommendations stemming from the studies financed through ATN/OC-11932-TT, this component will finance the civil works related to the takeover, refurbishment, upgrade and eventual integration, or decommissioning, of the malfunctioning wastewater treatment facilities in T&T. Selection criteria for priority interventions will include environmental impact as well as economic viability. The component may include the construction of new sewerage sub-systems in Tobago.
- 2.5 Component 2: Institutional strengthening of WASA. This component will address the institutional strengthening needs of WASA, related to (i) the re-integration of

the wastewater division; and (ii) the operation and maintenance of the improved wastewater system. Potential activities under this component include: development of wastewater management plans, asset management (maintenance) programs, staff training programs, public awareness campaigns.

III. ENVIRONMENTAL AND SOCIAL COMPLIANCE STATUS

- 3.1 The Trinidad and Tobago Environmental Management Authority (EMA) is mandated to write and enforce laws and regulations for environmental management, to educate the public about the nation's environmental issues and to control and prevent pollution, as well as conserve nature. Government policy is that any activity likely to have significant effects on the environment, including water and sewerage systems, is to be made subject to an environmental impact assessment before consent is given.¹ During the due diligence process it will be assessed (i) if the works to be financed under this project will require an environmental impact assessments and permits and what the requirements for public consultation are; and (ii) if the project will contribute to capacity strengthening, e.g. with regards to pollution control.
- 3.2 EMA has produced in 2006 Water Pollution Rules² which set standards for discharge of effluent from industrial processes and domestic wastewater treatment plants. However, the majority of the entities currently discharging water pollutants do not comply with these Standards. The Cartagena Protocol entered into force in 2003 and GORTT has ratified the Protocol Concerning Pollution From Land-Based Sources (LBS) Protocol.
- 3.3 Key policies and directives triggered in this project include B.04 (other risks), due to the limited capacity of the EA, B.05 (environmental assessment requirements), B.06 (consultation), B.07 (supervision and compliance), and B.11 (pollution prevention and abatement) of the Environment Safeguards Policy (OP-703), IDB Access to Information Policy (OP-102), and the Natural Disaster Policy (OP-704).
- 3.4 It is not likely that Involuntary Resettlement Policy (OP-710) will be triggered as the project will not include new construction, however this will be assessed during the due diligence process, as well if B.9 of OP-703 (Natural Habitats and Cultural Sites) and the Gender Equality in Development Policy apply.
- 3.5 Based on current limited information, the potential impacts of the project are anticipated to low to medium (see section V) and the team proposes an environmental classification of “B” for the project under OP-703. The risks of this project could be classified as high due to the limited capacity of the EA, a slow bureaucracy and slow communication processes, the readiness of the studies

¹ National Environmental Policy (2005), edited September 2009 by the EMA

² Amendment of the Water Pollution Rules from 2001

which have been delayed,³ the lack of comprehensive overview of the wastewater sector strategy, potential issues of liabilities due to past contamination during the time when the treatment plants were not well managed.

- 3.6 In accordance with the Category “B” classification, the Environmental and Social Strategy (ESS) involves the preparation of an Environmental and Social Analysis (ESA) and the preparation of an Environmental and Social Management Plan (ESMP). In compliance with OP-102, this document will be disclosed in the Trinidad and Tobago local offices and on the IDB external website.

IV. ENVIRONMENTAL AND SOCIAL SETTING

- 4.1 As the details of the specific projects to be financed under this program have not been finalized, the specific environmental and social setting of the areas of the individual projects cannot currently be described. However, as part of the environment and social assessment process, the environmental and social setting for the facilities that will be targeted with the proposed operation will be identified, and this information will be presented in the ESAs that will be prepared during project design. The overall environmental and social context of the water treatment status in the country is presented below to set the overall setting for the program and the potential issues that may arise during development and execution.
- 4.2 **Wastewater Service.** Wastewater infrastructure only covers approximately 30% of Trinidad and Tobago’s population (about 400,000 persons serviced by public or private centralized systems), with the remaining 70% being serviced by septic tanks and pit latrines. Overall, the wastewater sector faces following challenges: (i) limited expansion of the central sewers; (ii) limited financial and human resources; (iii) poor designs; and (iii) poor maintenance. As a consequence, the sewerage system is currently in a state of emergency and in urgent need for rehabilitation.
- 4.3 **The Packaged Orphan Treatment Plants.** Approximately 200 packaged wastewater treatment facilities, or ‘orphaned’ treatment plants, which can be found mainly in Trinidad, are malfunctioning and in some cases, abandoned. Over the last five decades, population growth and housing developments have not been matched with adequate expansion of the central sewerage systems. As a result, the GORTT required residential and industrial land developments to build and operate their own sewers and packaged wastewater treatment plants which were not properly operated or maintained. However, to date these facilities have not

³ In December 2009, the TC “Preparation of Wastewater Rehabilitation Program” (ATN/OC-11932-TT, TT-T1019) was approved. The purpose of the TC is to: (i) prepare an Action Plan to rehabilitate approximately 200 wastewater facilities that are mal-functioning and in some cases abandoned; and (ii) review and provide recommendations for the improvement of the institutional arrangement for the wastewater sector. However, signing of the TC had been delayed due to the change in Government, and the technical studies will be ready only after project approval.

been closed or connected to a central wastewater management system. In 2004 WASA received the mandate to assume responsibility for all sewerage treatment plants and associated lift stations owned by the Ministry of Housing, its agencies and the Urban Development Company of Trinidad and Tobago Limited (UDeCOTT).

- 4.4 Untreated or below-quality-standard effluents from these facilities are often discharged into nearby water courses or upstream of surface water intakes, posing serious public health and environmental risks and increasing the treatment costs to produce potable water. Additionally, the continued disposal of untreated sewage into rivers and coastal waters impacts the quality of aquatic life, posing environmental and ecological threats, as well as an economical threat to the tourism sector.
- 4.5 **Natural disaster and risks.** T&T is located within the Atlantic hurricane belt, and as such is subject to tropical storms and hurricanes. T&T is also located on the Circum-Caribbean Tectonic Belt, which has produced several earthquakes in magnitudes exceeding 7.0 since 1900. T&T is also subject to floods. Actions will be taken to ensure compliance with IDB's Disaster Risk Management Policy (OP-704).

V. ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

- 5.1 A technical assessment will determine how many wastewater treatment facilities will be included in the proposed intervention, their location and what specific kind of work will be financed. By improving wastewater management this operation will contribute to preventing illnesses due to waterborne diseases and improving overall environmental conditions. The program is not expected to have any major large scale, significant and/or irreversible negative environmental or social impacts.
- 5.2 The expected environmental and social impacts and risks will be those typically encountered with the works and activities related to the takeover, refurbishment, upgrade, integration, or decommission of malfunctioning wastewater treatment facilities and construction of new sewerage sub-systems. As part of the ESA process the specific project environmental and social impacts and risks will be assessed.
- A. Construction and Decommission**
- 5.3 Potential environmental impacts during construction are noise, dust, soil, air and water pollution and inadequate solid waste management. This could also include possible disruption of traffic during construction from vehicles.
- B. Operations**
- 5.4 Potential environmental impacts could be linked to inadequate soil, water and solid waste pollution control and prevention measures, air pollution, noise and

odors. These may be more significant in the event that the plants are not well operated and/or maintained.

C. Environmental and social risks

- 5.5 Risk during construction, operation and decommission could occur from: inadequate health and safety management; inadequate management of hazardous materials and solid waste; accidental spills, degradation of soil, flora and fauna and impacts on water quality due to effluent discharge which do not meet effluent standards (see also section 3.5).

VI. ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

- 6.1 The focus of the environmental and social due diligence (ESDD) will be on the potential environmental and social impacts and risks during all phases of the proposed operation. The ESDD will especially focus on water and waste pollution control and the Government's capacity to identify, mitigate and manage the environmental and social aspects and risks. The ESDD will look at the following aspects:
- a. Evaluation to confirm that the program has sufficiently defined project design details and environmental and social baseline information to assess potential impacts, risks, and mitigation requirements. Evaluation to confirm that the program's direct, indirect and cumulative negative environmental and social impacts have been properly identified and evaluated, and that proper mitigation and management measures will be implemented (see below).
 - b. Determination of wastewater effluent and treatment standards applicable to the program. In case they do not meet the international standards a justification of the selected standards will be provided.
 - c. Assessment of compliance with applicable IDB environmental and social policies, including specifically the Environmental and Safeguard Compliance Policy, Access to Information Policy, Disaster Risk Management Policy.
 - d. Assessment of compliance status with the applicable environmental, social, health and safety, and labor legal requirements in Trinidad and Tobago (e.g., laws, regulations, standards, permits, authorizations, applicable international treaties/conventions, etc.).
 - e. Evaluation of the proposed ESMP for the construction, operation and decommission of the wastewater treatment facilities (e.g. confirmation that the plans define the environmental and social control, management, and mitigation measures, monitoring programs, costs, schedule of implementation, designated responsibilities).
 - f. Confirmation that adequate health and safety and contingency plans and procedures will be established and implemented for construction, operation

and decommission (including sub-contractors) to address potential worker health and safety risks associated and project-related accidental events (e.g. spills, fires).

- g. Confirmation that the natural disaster risks have been adequately identified, and that proper mitigation is implemented in the design of the facilities and into the operational plans of the facilities.
 - h. Assessment of WASA's capacity to mitigate and monitor environmental, social, health and safety and labor aspects.
 - i. Evaluation of project-related information disclosure and public consultation activities that have been performed including confirmation that the participation processes of stakeholders has been adequately conducted and that the proposed future actions to provide adequate ongoing information disclosure and public consultation with the local population is in compliance with IDB policies.
- 6.2 Following the conclusion of the ESDD, an ESMR will be prepared, summarizing the conclusions, and outlining the recommendations for the loan documents and the project execution.

INDEX for completed and proposed sector work			
Issues	Description	Expected Dates	References & hyperlinks to technical files
Technical options and design	Pre-feasibility study completed preliminary design studies to be prepared. Final designs completed.	July 2011 March 2012	
Analysis of project economic viability	Survey data required to analyze economic viability of the program Preliminary evaluation to be updated once the preliminary designs are completed.	June 2011 August 2011	
Financial management/fiduciary issues and control environment	No special fiduciary issues are anticipated. Preparation/conclusion of financial analysis. Identification of Procurement Unit. Review of lessons learned will be included in the program	August 2011	
Institutional analysis/personnel, procedures other aspects of implementation capacity	Preparation/conclusion of institutional analysis. Review of lessons learned will be included in the program.	June 2011	
Stakeholders and political environment	Maintain close communication with stakeholders in WASA and the Government on the program. Consultation meetings will be held as part of the Project Risk Management.	May - August 2011 May 2011	
Social and environmental safeguards	Preparation/conclusion of ESA Review of aspects specific to the operation, additional baseline evaluation, budget	August 2011	
Data collection and analysis for reporting on results	Identification of proposed indicators to measure impact of program	July-August 2011	
Preparation of Operating Regulations	Preparation of the Operating Regulation for the operation	November 2011	
Other key issues, such as donors, gender, sustainability, country/sector issues	N/A	N/A	