

TC Document

I. Basic Information for TC

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| ▪ Country/Region: | GUYANA |
| ▪ TC Name: | Support for preparation of Guyana Climate Resilient Water and Sanitation Infrastructure Improvement Program |
| ▪ TC Number: | GY-T1200 |
| ▪ Team Leader/Members: | Lewis, Gilroy Francis (INE/WSA) Team Leader; Grunwaldt, Alfred Hans (CSD/CCS) Alternate Team Leader; Sasaki, Keisuke (INE/WSA) Alternate Team Leader; Carlos Rodrigues (INE/WSA); Ortega Oropeza Leticia (INE/WSA); Garcia Merino, Lucio Javier (INE/WSA); Catacoli Jimenez, Ruth (VPS/ESG); Ramjag, Leticia A (CCB/CGY); Guerrero Rivera, Marilyn Ivette (INE/WSA); Lee Lee Sergio Kyu Chul (INE/WSA); Payen, Patricia Yamilee (VPC/FMP); Luis Mora (CSD/CCS); Barandiaran Salcedo, Doris Melissa (RMG/ESR); Hoepel, Lucas A (VPC/FMP); Vila Saint Etienne, Sara (LEG/SGO); Machado, Kleber B. (INE/WSA); Williams, Derise Avione (VPC/FMP); Romero Villamizar, Laura (VPS/ESG) Lee Sergio Kyu Chul (INE/WSA); Payen, Patricia Yamilee (VPC/FMP); Luis Mora (CSD/CCS); Barandiaran Salcedo, Doris Melissa (RMG/ESR); Hoepel, Lucas A (VPC/FMP); Vila Saint Etienne, Sara (LEG/SGO); Machado, Kleber B. (INE/WSA); Williams, Derise Avione (VPC/FMP); Romero Villamizar, Laura (VPS/ESG) |
| ▪ Taxonomy: | Operational Support |
| ▪ Operation Supported by the TC: | GY-L1087 |
| ▪ Date of TC Abstract authorization: | 17 May 2024 |
| ▪ Beneficiary: | Co-operative Republic of Guyana through Guyana Water Incorporated.(GWI) |
| ▪ Executing Agency and contact name: | Inter-American Development Bank (IDB) |
| ▪ Donors providing funding: | Japan Special Fund(JSF) |
| ▪ IDB Funding Requested: | US\$1,100,000.00 |
| ▪ Local counterpart funding, if any: | US\$0 |
| ▪ Disbursement period (which includes Execution period): | 36 months for disbursement and execution |
| ▪ Required start date: | Oct 2024 |
| ▪ Types of consultants: | Individuals; Firms |
| ▪ Prepared by Unit: | INE/WSA-Water & Sanitation |
| ▪ Unit of Disbursement Responsibility: | CCB/CGY-Country Office Guyana |
| ▪ TC included in Country Strategy (y/n): | Yes |
| ▪ TC included in CPD (y/n): | Yes |
| ▪ Alignment to the Institutional Strategy: Transforming for Scale and Impact 2024-2030 | Social inclusion and equality; Productivity and innovation; Institutional capacity and rule of law; Persons with Disabilities; Environmental sustainability; Gender equality; Diversity; Gender equality and diversity |

II. Description of the Associated Loan (GY-L1087)

- 2.1 The technical cooperation (TC) will give support to preparation and execution of the first operation “Climate Resilient Water Infrastructure Improvement Program” (GY-L1087) under a Conditional Credit Line for Investment Projects (CCLIP) (GY-O0013), which has as general objective to improve quality, reliability and environmental sustainability of potable water services contributing towards achieving Sustainable Development Goal (SDG) 6.1 using climate resilient strategies encompassing both mitigation and adaptation measures. The specific

objectives of the GY-L1087 program are to: (i) improve access to potable water services, compliant with World Health Organization (WHO) standards through new water infrastructure; (ii) reduce water losses; (iii) improve management capabilities of Guyana Water Inc (GWI).

- 2.2 The project will focus on the design and construction of new transmission and treatment water infrastructure to meet increased water demands for expanding housing development on the East Bank of Demerara (EBD), implementation of a Non-Revenue Water (NRW) reduction plan within the project area on the EBD and on the lower East Coast of Demerara (ECD), as well as the implementation of a digital transformation plan for GWI.
- 2.3 The first operation of the CCLIP is expected to be jointly co-financed with Japan International Cooperation Agency (JICA) under Cooperation for Economic Recovery and Social Inclusion (CORE) program. The Government of Guyana is the borrower on the loan while the Program will be executed by GWI. A prefeasibility study on the program will be financed and conducted by this TC and will inform on the full scope and on the beneficiaries for this first operation which are preliminarily estimated at 36,000 persons.
- 2.4 The CCLIP and first operation is currently under preparation and is expected to be approved in May 2025. As a result of a change in location for the construction of the WTP from its initial location in Hope ECD to Diamond EDB, there was an immediate need to conduct all the due diligence studies which also includes the preparation of the environmental and social studies for the program. The major shortcoming identified was a lack of information at the prefeasibility level which defined the scope of the program to both finalize the project profile and to conduct the environmental and social studies. The TC will finance the preparation of the required studies to prepare the CCLIP and first operation as well as prepare the studies for the second operation.

III. Objective and Justification of the TC

- 3.1 **Objectives.** The general objective of the TC is to contribute to the preparation of climate resilient water and wastewater infrastructure programs in Guyana. The specific objectives of the TC are to: (i) support the preparation of the operation Climate Resilient Water Infrastructure Improvement Program, Guyana (GY-L1087 under a Conditional Credit Line for Investment Projects (CCLIP) (GY-O0013)); (ii) support the preparation of necessary studies for the proposed second operation under the CCLIP to improve operation efficiency and expand access to sewerage services to unserved areas in Georgetown, Guyana.
- 3.2 **Context.** GWI is the public utility in charge of providing water and sewerage services in the country. By Dec 2022, GWI recorded a 52% metered coverage with 28 Water Treatment Plants servicing 53% of customers and more than 250 water wells across the country servicing the remaining customers. The GWI's strategic plan 2021-2025 which is supported by the IDB, highlights the need to be able to improve sanitation services, provide twenty-four (24) hour supply with 5 Meters pressure and with 100% WHO standard water quality. The plan elaborates the need to achieve 2025 targets by constructing new water treatment infrastructure, more district metered areas with 100% metered customers in the designated areas, aggressive leak detection and repairs to reduce water losses and achieve NRW reduction of 55% nationwide.

- 3.3 The East Bank corridor is currently a fast-growing zone of infrastructure development and there is an expected new water demand for over 9000 new connections following the establishment of new residential communities and new commercial and industrial zones. The GY-L1087 program in preparation stage will include the construction of a new water treatment plant at Diamond using the East Demerara Water Conservancy (EDWC) as its source of supply. The EDWC is currently being used to supply the Shelterbelt Water Treatment Plant (WTP) in Georgetown and is being considered for the Hope WTP on the upper East Coast. On the East Bank of Demerara an average potentiometric declination of 0.48m/year was observed from monitoring of 4 production wells¹. Given the concerns about the stress of groundwater aquifers in the project area, the program will utilize the EDWC as a surface water source for the new Diamond WTP.
- 3.4 In Georgetown, the capital city of Guyana, raw sewage is collected and discharged into the Demerara River. Many of the sewers in the urban areas receive rainfall runoff from roads and hard surfaces in addition to the wastewater. These combined flow sewers are frequently overloaded during periods of heavy rain resulting in the flooding of some properties and giving rise to overflows leading to environmental and health problems.
- 3.5 **Gender and Diversity.** According to International Labour Organization (ILO) data (2022)², the percentage of women employed in electricity, gas, and water services companies in Guyana is only 16.59%. According to the Global Gender Gap Index³ in Guyana (i) the Women's Labor Force Participation Rate is 42.33% while that of men is 78.94%; (ii) women's income is around 63% of men's; (iii) regarding high-level officials and executives, women's participation is around 40% while men's is 60%. According to government data, there are at least 50,000 persons with disabilities (PWD) in Guyana, accounting for 6.4% of the total population⁴. In LAC, the unemployment rate for PWD is 20% higher than for Persons Without Disabilities⁵. Given that women are the primary clients of Water Sanitation and Higiene (WASH) services, integrating a more diverse workforce into the design, operation, and maintenance of supply systems can help better understand and respond efficiently to their priorities and needs. Therefore, a gender and PWD institutional diagnosis will be developed within GWI, and a gender and PWD action plan (GDAP) will be proposed.
- 3.6 **Justification.** GWI is covering its operational expenses with the exception of the electricity costs which is borne by the Government of Guyana. There are opportunities to increase the operating efficiency of GWI as NRW levels nationwide was reported as 62% by Dec. 2023. While the past programs with support from the IDB represented crucial steps in improvement, several gaps still exist. The TC will leverage innovation in the water sector utilizing new technologies and tools available such as digital transformation to improve service delivery and improve management of water resources to ensure water sustainability while adopting climate resilient best practices.

¹ Kazuyoshi Osawa (2010). Technical Report for Sustainable Use of Groundwater Project.

² Based on ILO data. [Link](#)

³ WEF (2022). *Global Gender Gap Report 2022*. Ginebra, Suiza: Autor

⁴ NCD Guyana Web Site. [Link](#)

⁵ Bietti, María F. (2023). *Personas con discapacidad e inclusión laboral en América Latina y el Caribe: Principales desafíos de los sistemas de protección social*. Santiago, Chile: ECLAC, p. 29. [Link](#)

- 3.7 . The TC will finance the necessary preparatory studies to advance to the next steps in project preparation and will include the conducting of a prefeasibility study to inform the scope of the GY-L1087 program. Additionally, the TC will finance capacity building activities for GWI in the water and sanitation sector with specific focus in hydraulic modelling and wastewater management and the TC will also partner and provide financial support to the University of Guyana final year students on their research thesis to promote more innovative research studies in the water and sanitation sector. For the wastewater project which will be included later under the CCLIP, there is an urgent need to conduct studies related to improvement of wastewater management to advance and inform investment priorities in this sector as well as the need to strengthen institutional capacity.
- 3.8 **Strategic Alignment.** The TC is consistent with the IDB Group Institutional Strategy: Transforming for Scale and Impact (CA-631) and is aligned with the objective: (i) Address climate change by supporting the preparation of the first climate resilient operation under the CCLIP and the preparation of supporting studies for the potential second operation. The TC is also aligned with the operational focus(s) areas of: (i) Sustainable, resilient, and inclusive infrastructure, by including considerations for climate sustainability and resilience across the prefeasibility and concept design options and plans for potable water and sewerage infrastructure; (ii) Institutional Capacity and the Rule of Law, and Citizen Security by financing a digital transformation plan for GWI that incorporates innovative technologies and management information systems to increase revenue and improve operational efficiency; (iii) Gender Equality and diverse population groups by developing a gender and PWD diagnosis to address gender and promote diversity in GWI.
- 3.9 This TC is aligned to the IDBG Country Strategy 2023-2026 (GN-3187-1) with the Government of Guyana, under the Strategic Objective – 1.1 Improved quality of resilient infrastructure. The TC is funded by the Japan Enhanced Initiative for Quality Infrastructure, Resilience against Disaster and Health, (JEI), which is part of the Japan Special Fund (JSF) and is aligned with JEI focused sector of “Quality Infrastructure”. Further, the TC is aligned with the Sustainable Infrastructure for Competitiveness and Inclusive Growth IDB Infrastructure Strategy (GN-2710-5), particularly the priority area “Support the construction and maintenance of an environmentally and socially sustainable infrastructure”, and is consistent with: (i) the Water and Sanitation Sector Framework’s Dimensions of Success (GN-2781-13) to promote universal access to quality water and sanitation services with equity, inclusion, and affordability and also, with the action lines “The design of policies and programs incorporates disaster and climate change risk management and promotes water security” and “Drive innovation in the sector”; (ii) the Climate Change Sector Framework Document (GN-2835-13) with line of action 1, “Adapt and build climate resilience”; and (iii) the Gender and Diversity Sector Framework Document (GN-2800-13) on the provision of quality public services that promote gender equality or the empowerment of women, and projects that support social inclusion of PWD. The TC further aligns with IDB Group ONE Caribbean (Partnering for Caribbean Development Framework) (GN-3201-5), particularly with the crosscutting areas of “Institutional Strengthening” and “Digital Transformation”.

IV. Description of Activities/Components and Budget

- 4.1 **Component I: Support for preparation of water infrastructure improvement.** Considerations for climate adaptation and mitigation will be incorporated across the

prefeasibility and concept design options and plans. This component will finance the following activities needed to prepare the first operation under the CCLIP: (i) preparation of the Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP) & Environmental and Social Management System (ESMS) documents for the GY-L1087 program; (ii) preparation of prefeasibility, concept designs for the WTP inclusive of intake structure along with the main transmission network for the program area as well as the preparation of the design build bidding documents (iii) preparation of due diligence studies needed to support the loan operation such as, technical, socioeconomic, institutional and financial; (iv) preparation of a digital transformation plan for GWI and identify priority activities to be conducted in the loan operation; (v) development of a GDAP to address gender issues and promote diversity within GWI.

4.2 Component II: Support for preparation of new wastewater infrastructure improvement. Considerations for climate adaptation and mitigation will be incorporated across the prefeasibility and concept design options and plans. This component will finance the following activities to define actions for the proposed second operation under the CCLIP: (i) preparation of a national wastewater master plan inclusive of a 15-year investment plan; (ii) preparation of feasibility study inclusive of condition assessment of the physical infrastructure and preparation of conceptual designs and design build bidding documents for the construction of a wastewater treatment plant, expansion of sewerage network in Georgetown inclusive of pump stations and interlinks; and (iii) preparation of the ESIA, ESMP & ESMS documents for the WWTP.

4.3 Component III: Institutional strengthening and research support. This component will finance capacity building activities for GWI and also partner with the University of Guyana to promote innovative research studies in the water and sanitation sector. The following activities will be financed: (i) training in hydraulic modelling and network reticulation; (ii) support for research and training in the water and wastewater sector; (iii) capacity building in wastewater management operation and maintenance; (iv) prepare communication toolkit on climate resilient Infrastructure and adaptation and mitigation strategies; and (v) support for Japan - Caribbean Community CARICOM Friendship Year 2024 public event workshop.

4.4 All knowledge products derived from this Technical Cooperation will be the Bank's intellectual property.

V. Budget

5.1 The total cost of the TC is US\$1,100,000 financed by the Japan Enhanced Initiative for Quality Infrastructure, Resilience against Disaster and Health (JEI) according to the detail presented in the following table:

Indicative Budget

| Activity/Component | IDB/JEI | Total Funding |
|--------------------|---------|---------------|
|--------------------|---------|---------------|

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| Component I: Support for preparation of water infrastructure improvement | US\$375,000.00 | US\$375,000.00 |
| (i) Prepare the ESIA, ESMP & ESMS documents for the GY-L1087 program | \$60,000 | \$60,000 |
| (ii) Develop a prefeasibility study, concept designs for Diamond WTP and transmission network inclusive of bidding documents | \$50,000 | \$50,000 |
| (iii) Develop a digital transformation plan for GWI | \$160,000 | \$160,000 |
| (iv) Conducting of due diligence studies for GY-L1087 program | \$80,000 | \$80,000 |
| (v) Conduct a gender and persons with disability diagnosis within GWI | \$25,000 | \$25,000 |
| Component II: Support for preparation of second operation on wastewater infrastructure improvement | US\$575,000.00 | US\$575,000.00 |
| (i) Development of a national wastewater master plan inclusive of a 15-year investment plan | \$400,000 | \$400,000 |
| (ii) Preparation of feasibility study, condition assessment, preliminary designs and bidding documents for WWTP and expansion of sewerage network for Georgetown | \$100,000 | \$100,000 |
| (iii) Preparation of the ESIA, ESMP & ESMS documents for the WWTP | \$75,000 | \$75,000 |
| Component III: Institutional strengthening and research support | US\$150,000 | US\$150,000 |
| (i) Training in hydraulic modelling and network reticulation | \$20,000 | \$20,000 |
| (ii) Support for research and training in the water and wastewater sector | \$25,000 | \$25,000 |
| (iii) Capacity building in wastewater management operation and maintenance | \$40,000 | \$40,000 |
| (iv) Prepare communication toolkit on climate resilient Infrastructure and adaptation and mitigation strategies | \$30,000 | \$30,000 |
| (v) Japan-CARICOM Friendship Year 2024 public event workshop | \$35,000 | \$35,000 |
| Total | US\$1,100,000.00 | US\$1,100,000.00 |

VI. Executing Agency and Execution Structure

- 6.1 The Bank will execute this TC, as requested by the Beneficiary country through the Water and Sanitation Division (INE/WSA). The IDB will be responsible for the selection and contracting of consulting firms and individual consultants in accordance with the Bank's current procurement policies and procedures for Bank-executed operations. This execution arrangement is justified under OP-619-4 Annex 2 due to: (i) the Bank's experience in the implementation of technical support in the areas of water and sanitation that will contribute more effectively to the achievement of the TC objectives in a timely manner; (ii) likewise, execution by the Bank helps to ensure that the lessons learned from the activities carried out are properly disseminated within the region.

- 6.2 The beneficiary of this TC will be the Co-operative Republic of Guyana, represented by the Guyana Water Incorporated who was established in 2002 under the Water and Sewerage Act of Guyana and serves as the Public Supplier of water and sewer services in Guyana under a license issued by the government and functions under the ministerial control of the Ministry of Housing and Water. 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, based in Trinidad & Tobago, who will have the support of the Bank's Country Office in Guyana (CCB/CGY) and the INE/WSA team.
- 6.3 The execution and disbursement period will be 36 months. The IDB will be responsible for the selection and contracting of consulting firms, individual consultants. and non-consulting services in accordance with the Bank's current procurement policies and procedures for Bank-executed operations. All procurement to be executed under this Technical Cooperation have been included in the Procurement Plan (Annex IV) and will be hired in compliance with the applicable Bank policies and regulations as follows: (a) Hiring of individual consultants, as established in the regulation on Complementary Workforce (AM-650) and (b) Contracting of services provided by consulting firms in accordance with the Corporate procurement Policy (GN-2303-33) and its Guidelines. The TC does not present fiduciary management risks as it will be implemented by the Bank. Therefore, no financial audit is required.

VII. Project Risks and Issues

- 7.1 There are no major risks identified that could affect the execution of the TC. The major challenge will be the timely availability of resources to execute the consultancies for the ESIA and due diligence analysis. There is also a risk where the information required to conduct the studies may not be produced by the beneficiary on time. To mitigate this, the Bank will work closely with the beneficiary and share the list of information required to conduct the studies in advance to allow for its timely collection.

VIII. Exceptions to Bank Policy

- 8.1 This TC does not contemplate any exceptions to Bank policy.

IX. Environmental and Social Classification

- 9.1 This TC will finance feasibility and pre-feasibility studies of investment projects with associated environmental and social studies, whose terms of reference and deliverables will be consistent with the applicable requirements of the Bank's Environmental and Social Policy Framework (ESPF). Considering that the project for which the pre-feasibility studies will be prepared may have substantial direct,

indirect and/or cumulative environmental and social impacts the Environmental and Social Risk Rating (ESRR) is substantial.

Required Annexes:

[Request from the Client_39657.pdf](#)

[Terms of Reference_50413.pdf](#)

[Procurement Plan_50916.pdf](#)