

TC Document

I. Basic Information for TC

▪ Country/Region:	REGIONAL
▪ TC Name:	Support for virtual community: data sharing and pool procurement among water utilities in the Caribbean
▪ TC Number:	RG-T4645
▪ Team Leader/Members:	Lewis, Gilroy Francis (INE/WSA) Team Leader; Machado, Kleber B. (INE/WSA) Alternate Team Leader; Mendoza Benavente, Horacio (LEG/SGO); Cox, Kambiri Shannon (INE/WSA); Rodrigues Carlos Antonio (INE/WSA); Ortega Oropeza Leticia (INE/WSA); Lee Lee Sergio Kyu Chul (INE/WSA); Sasaki, Keisuke (INE/WSA) Lee Sergio Kyu Chul (INE/WSA); Sasaki, Keisuke (INE/WSA) Lee Sergio Kyu Chul (INE/WSA); Sasaki, Keisuke (INE/WSA); Leticia Ortega (INE/WSA)
▪ Taxonomy:	Research and Dissemination
▪ Operation Supported by the TC:	N/A
▪ Date of TC Abstract authorization:	12 Nov 2024.
▪ Beneficiary:	Barbados, Bahamas, Guyana, Jamaica, Suriname, Trinidad & Tobago and Belize
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	OC Strategic Development Program Window 3 - Transitory Emerging Need for Sustainable Development in the Caribbean(W3B)
▪ IDB Funding Requested:	US\$140,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	Dec 2024
▪ Types of consultants:	Individuals; Firms
▪ Prepared by Unit:	INE/WSA-Water & Sanitation
▪ Unit of Disbursement Responsibility:	INE/WSA-Water & Sanitation
▪ TC included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy CA-631 (2024-2030):	Economic integration; Environmental sustainability; Institutional capacity and rule of law; Social inclusion and equality

II. Objectives and Justification of the TC

- 2.1 **Objectives.** The general objective is to support building resilience of water utilities in the Caribbean through a virtual community with a network effect. The specific objectives are (i) to allow for the participating utilities to continue sharing information on the virtual community while the platform is expanded to other Caribbean utilities; and (ii) to enable pilot pool procurement with the participating utilities.
- 2.2 **Context.** The water and sanitation (W&S) sector in the Caribbean is fragmented. While many utilities face similar challenges, there are limited tools to foster information sharing, particularly on specific and technical aspects, like specifications, performance, and availability of materials utilized for the provision of water service. Connecting the Caribbean water and sanitation utilities into a virtual community where

they can share information of parts and materials in real time could have significant benefits, such as saving money and time when procuring parts and materials, provide each other with expedited mutual aid in the event of a natural disaster or other supernatural casualty emergency need for parts, equipment, or materials. The future of the water and sanitation sector is a networked ecosystem where utilities are working together to improve resiliency, save money, and make smarter decisions.

- 2.3 This TC builds on the IDB regional TC RG-T3467 (ATN/OC-17510-RG) “Support for Implementation of the Regional Strategic Action Plan for Governance and Building Climate Resilience in the Water Sector in the Caribbean (RSAP)”, that provided for cooperation among development partners working in the water sector in the Caribbean. The TC also builds on the IDB regional TC RG-T4032 (ATN/CF-19280-RG) “Data Sharing Platform for Water Utilities in the Caribbean” where an innovative pilot was conducted for Caribbean water utilities¹ to be able to share and access information on spare parts and supplies in real time that will help them with decision making, as well as potentially carve a way for pool procurement in the Region through a technology platform by H2bid, powered by AURSI. Under the TC RG-T4032 (ATN/CF-19280-RG), the feasibility of pool procurement was assessed for the seven participating utilities and the study recommended that: (i) It is essential to have a devoted collaborator or host in order to successfully manage the process of pool procurement efforts; (ii) The importance of regional collaboration and alignment is emphasized by the fact that in order for pool procurement to be successful, there must be a significant amount of regional cooperation and alignment among the water utilities that are participating; (iii) A staged Approach to Implementation In light of the fact that the water utilities have varied degrees of preparation and capacities in terms of procurement; (iv) The Caribbean water and sanitation sector has the potential to leverage the transformative benefits of pool procurement in order to improve resource management, enhance service delivery, and contribute to the region's sustainable development. AURSI is an innovative virtual parts community for public utilities. The platform is provided through a partnership with AURSI. The AURSI platform is the only virtual community with a network effect connecting utilities (electricity and water) in real time to share information about parts and materials and expedite mutual aide. AURSI is based on a database where each utility's material standards information is entered, cross-referenced, and made accessible to other utilities.
- 2.4 **Justification.** As highlighted in the One Caribbean framework, the Caribbean is highly vulnerable to tropical storms and hurricanes, which will increase in frequency and intensity due to climate change, along with higher temperatures, intense and prolonged droughts, severe rainfall, and increased flooding. W&S utilities are not exempt and following any such event, the resiliency and recovery of W&S services are

¹ Participants included the seven Caribbean utilities: Water & Sewerage Corporation (WSC), The Bahamas; Barbados Water Authority (BWA), Barbados; Belize Water Services Limited (BWSL), Belize; Guyana Water Inc. (GWI), Guyana; National Water Commission (NWC), Jamaica; N.V. Surinaamsche Waterleiding Maatschappij (SWM), Suriname and Water and Sewerage Authority (WASA), Trinidad and Tobago.

key to the overall recovery of the affected area. It is worth mentioning that the vision of One Caribbean is addressing such challenges under a regional approach. One of the expected results of One Caribbean is “Improved disaster preparedness and greater access to resilient infrastructure across the region.”

- 2.5 To facilitate a critical mass of utilities in the platform to enable Pool Procurement, financing is required to extend the use for the 7 utilities in the virtual community piloted under RG-T4032 (ATN/CF-19280-RG) and to pilot pool procurement following the recommendations from the feasibility study conducted under RG-T4032 (ATN/CF-19280-RG). Additionally, the extended use of the platform will facilitate synergies with the Caribbean Water Utility Insurance Collective (CWUIC) response program. Essentially, pooled procurement fosters a more resilient and efficient water sector by enhancing collaboration, reducing costs by aggregating demand, ensuring a stable supply of essential parts and supplies, and in conjunction with Component 1 - Response Program of CWUIC, facilitate mutual aid and support during emergencies, ensuring that critical supplies are available when needed. The potential cost savings of the utility companies in the long run for using pool procurement can see savings like the health sector of 50–75% compared to uncoordinated purchases². The cost savings will be assessed in the pilot as pool procurement increases purchasing power because procurement costs are spread over a greater volume and variety of products. It may also increase efficiency through the sharing of resources and streamlining of procurement processes. and utilities will need to agree on the goods to be procured.
- 2.6 This project also has potential for long-term sustainability. Currently, Caribbean water utilities help each other during times of emergency caused by natural disasters to restore water supply services. This virtual community will enhance this cooperation by facilitating acquisition of the parts needed for the restoration of services. It is expected that after demonstration of the pool procurement and mutual aid capabilities on the platform, utilities will conduct internal assessment and include in their annual budget for the subscription costs to remain connected in the virtual community.
- 2.7 **Gender and Diversity.** When access to water is limited or nonexistent, women are primarily responsible for finding and bringing it home (72% women and girls compared to 28% men and boys), both for family consumption and to fulfill their obligations, housework, and care. In addition, limited access to water also affects women’s health and reproduction especially for girls and women during menstruation. Water scarcity also affects people with disabilities, making it even more difficult to meet their hygiene and personal needs. Due to this and their gender roles related to domestic and care work, women and girls are the main users and managers of water in the household. Therefore, during the workshop awareness courses and actions regarding water use, gender considerations must be included, allowing for more efficient and rational management at the household level. To address this situation, a workshop will be held that will include at least one talk on gender perspective concepts and the inclusion of

² Msh.org (2022). The Why of Pooled Procurement - An Evaluation of Pros and Cons. [Link](#)

diversity, and why it is so important to incorporate these concepts into the project cycle. Additionally, the registration of participant data will be disaggregated by gender and disability status.

- 2.8 **Beneficiary countries.** All CCB countries plus Belize in regular status with the Bank are eligible to participate in this TC. It is expected that the TC can support at least seven countries: Barbados, Bahamas, Guyana, Jamaica, Suriname, Trinidad & Tobago and Belize.
- 2.9 The prioritization of TC resources has been directed to countries in the Caribbean whose W&S sector has been mainly affected by extreme hydroclimatic events and have the opportunity to use the data sharing and pool platform³ as facilitator for improving infrastructure resiliency. Resources will be allocated based on needs determined by the project team. This support will be formalized with letters of request and no objection from the country liaison offices identified as beneficiaries, which will be requested by the Bank before starting activities in the corresponding country (§4.1).
- 2.10 **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 improvement of the resilience of W&S utilities especially against natural disasters, in consideration of the climate change through expediting of mutual aid via a virtual community, sharing data and pool procurement. The TC is also aligned with the operational focus(s) areas of: (i) Sustainable, Resilient, and Inclusive Infrastructure with an Emphasis on Regional Integration; (ii) Climate Action (iii) Institutional Capacity, Rule of Law, and Citizen Security and (iv) Regional Integration.
- 2.11 The TC is aligned with the country strategies of the beneficiary countries: (i) Barbados (GN-2953-1) Promote private sector engagement that encourages greater productivity, as well as in resilient infrastructure investments; (ii) Bahamas (GN-3198-1) Strengthen the country's resilience to disaster and climate change; (iii) Guyana (GN-3187) Improved quality of resilient infrastructure; (iv) Jamaica (GN-3138) Improve the coverage and quality of water and sanitation infrastructure; (v) Suriname (GN-3065) Reduce inequalities in access to utilities; (vi) Trinidad and Tobago (GN-3071) Enhancing the Digital Delivery of Service through promoting digitalization of operation processes, and adoption of smart water infrastructure

³ The pilots are not intended to be for individual countries, each pilot will be for conducting pooled procurement for goods that are used/agreed by at least 4 out of 7 utilities. Each utility has various states of readiness: (i) BWS participation in the pool procurement must be approved by the Board of Directors; (ii) No impediments were identified to prevent GWI from participating in pool procurement. There is an opportunity for a section on pool procurement to be added to the Tender Board (2008) guidelines for GWI which must be approved by the Board of Directors; (iii) Updated guidelines are required to be prepared and approved by the WSC's Board for their participation in pool procurement; (iv) NWC has regulatory requirements and ministerial approvals that would be required to allow their participation in pool procurement; (v) No impediments were identified to prevent SWM from participating in pool procurement; (vi) No impediments were identified to prevent WASA from participating in pool procurement; (vii) BWA's participation in pool procurement will be based on the requirements to have the justification completed for the addition of the successful vendor in their registry.

technologies and related information and communication technologies; (vii) Belize (GN-3086) Support the reactivation of key economic sectors through the continued provision of services, improving their resilience to natural hazards and climate change.

- 2.12 The TC aligns with IDB Group ONE Caribbean (Partnering for Caribbean Development Framework) (GN-3201-5) in the key priority area “Climate adaptation, disaster risk management and resilience” and with the crosscutting area of “Digital Transformation”. The project is aligned to the priority area(s) of Climate adaptation, disaster risk management and resilience and the crosscutting area of Digital Transformation of the ONE Caribbean (Partnering for Caribbean Development Framework) (GN-3201-5). Specifically, the objective of the project to support building resilience of water utilities in the Caribbean through a virtual community with a network effect, will support the realization of ONE Caribbean's thrust towards the establishment of a responsive regional emergency response mechanism to respond swiftly to high-impact disasters and support improved infrastructure resilience in the Region.
- 2.13 The TC further aligns with the Sustainable Infrastructure for Competitiveness and Inclusive Growth IDB Infrastructure Strategy (GN-2710-5), particularly the priority area “Promote the ongoing improvements in infrastructure governance to enhance efficiency in the delivery of infrastructure services” by promoting technological innovation to foster efficiency and access, and is also consistent with: (i) the Water and Sanitation Sector Framework’s Dimensions of Success (GN-2781-13) with its line of action 5 “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.

III. Description of Activities/Components and Budget

- 3.1 **Component I: Virtual community.** This component will finance the subscription and the capacity to upload information on the platform as well as exchange information with other utilities and suppliers for the 7 utilities on the H2bid platform.
- 3.2 **Component II: Enable Pool procurement.** This component will finance the following activities: (i) coordinating and conducting of a pool procurement pilot among the participating utilities. The pilot will be for conducting pooled procurement for goods that are used/agreed by at least 4 out of 7 utilities; (ii) conducting a workshop that will include at least one talk on gender perspective concepts and the inclusion of diversity; (iii) development of enhanced policies to create the enabling environment for pool procurement for participating utilities.
- 3.3 The knowledge products generated from Bank-executed activities within this TC will be the property of the Bank and may be made available to the public under a creative commons license. However, at the request of the beneficiaries, in accordance with the provisions of AM-331, the intellectual property of said products may also be licensed

through specific contractual commitments that shall be prepared with the advice of the Legal Department.

- 3.4 The total cost of the TC is US\$140,000 financed by the Bank through the OC Strategic Development Program Window 3 - Transitory Emerging Need for Sustainable Development in the Caribbean(W3B) as presented in the following table:

Indicative Budget			
Activity/ Component	Description	IDB/W3B	Total Funding
Component I	(i) Virtual community	US\$70,000.00	US\$70,000.00
Component II	(i) Enable Pool procurement	US\$30,000.00	US\$30,000.00
	(ii) Workshop on Gender and PWD	US\$5,000.00	US\$5,000.00
	(iii) Development of enhanced policies to create the enabling environment for pool procurement.	US\$15,000.00	US\$15,000.00
Final Evaluation	Final Evaluation	US\$20,000.00	US\$20,000.00
	Total	US\$140,000.00	US\$140,000.00

IV. Executing Agency and Execution Structure

- 4.1 Since this is a Research & Dissemination (RD) TC, this operation will be executed by the IDB in accordance with OP-619-4 Annex 2, The Water and Sanitation Division (INE/WSA), will be responsible for all aspects of this TC, including disbursements, under the supervision of Gilroy Lewis (gilroyl@iadb.org) Sr. Sector Specialist at INE/WSA. Activities developed in any country in the region will be coordinated with the respective INE/WSA specialist in Country Offices (COF); and, if necessary, when activities are developed in a specific country, a request or no-objection letter from the respective liaison entity will be obtained prior to the beginning of such activities⁴. The Bank has experience in successfully executing a regional TC of this type ATN/OC-17510-RG and 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 execution and disbursement period will be 36 months. 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

⁴ The letter from the Ministry of Finance, Economic Development and Investment of Belize has already been received and is included in the Annex.

(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.

- 4.3 **Direct Contracting of H2bid:** It is proposed in the TC for IDB to engage in a direct contract with H2bid for Components 1(i) and 2 (i) as AURSI is proprietary to H2bid. In accordance with GN-2303-33 this is a Single Source procurement because it is the only qualified firm for the assignment, as AURSI is proprietary to H2bid and it is a natural continuation of previous work that started under RG-T4032. H2bid is a for-profit enterprise incorporated in the state of Delaware, USA. H2bid provides cloud-based solutions to water and sanitation (wastewater) utilities to help utilities save money, increase efficiency, and/or improve climate resiliency. H2bid's services include (1) a service that connects vendors and water/wastewater utilities to increase competition for public procurement opportunities (H2bid.com), and (2) a service that connects utilities into a virtual community with a network effect to share parts and materials information, while enabling expedited mutual aid in an emergency (h2bidparts.com). H2bid Parts is powered by the AURSI platform, which is provided via a partnership with AURSI. The AURSI platform also facilitates cooperative purchasing among utilities to get group pricing and save money on parts and materials.
- 4.4 The AURSI platform has been used for these purposes successfully for over 23 years by utilities in America. There are over 120 water, sanitation, and electric utilities using the AURSI platform in America and the list is growing as utilities are recognizing the value of sharing parts and materials information and communicating in real time, being able to quickly locate and request assistance from other utilities for specific parts and materials in an emergency, and the cost savings from cooperative purchasing. The specific advantage to the Bank in hiring H2bid, and not another firm, is that there is no other platform that connects utilities together in a virtual community (with a network effect) to share parts and materials information in real time, expedite mutual aid, and facilitate cooperative purchasing as will be done in this assignment. The AURSI platform is one-of-a kind. Another company would have to develop such a platform which would be risky, time consuming, significantly more expensive (likely costing millions of dollars), and with no guarantee that the Bank would get a finished product that worked. Additional benefits will be increased capacity building among the participating utilities, access to a broader network of expert peers (including American utilities that are already on the platform), each utility will be able to store and update their parts and materials in an online database, the ability to engage in efficient digital procurement with their own vendors for parts and materials, access to a wider network of vendors, the ability to share information about surplus materials available to other utilities, and the ability to share specifications (preventing utilities from having to "recreate the wheel" by hiring consultants to write the same specifications), and the ability to discover new materials in use by other utilities and contact current users and make due diligence inquiries prior to purchasing the new items.

V. Project Risks and Issues

- 5.1 The main risk associated with this TC is that of ensuring meaningful participation by participating utilities. However, the partnerships and collaboration already developed

through RG-T4032 (ATN/CF-19280-RG), CWWA and CAWASA should guarantee interest from the key stakeholders; CWWA has proven its capacity to convene relevant sectorial stakeholders to similar venues, and with CAWASA provide a mechanism for utilities to support each other in times of natural disasters. Additionally, the TC will finance a final evaluation of the operation and thereby determine its success. Another potential risk is on cybersecurity as the AURSI solution is a cloud-based platform. These concerns will be addressed with H2bid and additionally with the support of the ITE Department a web scan will be performed on the AURSI platform in an intent to find any vulnerabilities from the datacenters that they use.

VI. Exceptions to Bank policy

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

VII. Environmental and Social Aspects

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

Required Annexes:

[Request from the Client_82443.pdf](#)

[Results Matrix_49546.pdf](#)

[Terms of Reference_81862.pdf](#)

[Procurement Plan_73395.pdf](#)