

TC Document

I. Basic Information for TC

▪ Country/Region:	REGIONAL
▪ TC Name:	Water and Sanitation Sector Knowledge Generation, Management and Dissemination
▪ TC Number:	RG-T4075
▪ Team Leader/Members:	Machado, Kleber B. (INE/WSA) Team Leader; Maria Perez Urdiales (INE/WSA) Alternate Team Leader; Alvarez Perez, Andreina Marisol (CAN/CAN); Analia Gomez Vidal (INE/WSA); Carlos Guiza (INE/WSA); Centeno Lappas, Monica Clara Angelica (LEG/SGO); Guerrero Rivera, Marilyn Ivette (INE/WSA); Leticia Ortega Oropeza (INE/WSA); Nunez Zelaya, Anamaria (KIC/URC); Nuques, Cynthia M. (INE/WSA)
▪ Taxonomy:	Research and Dissemination
▪ Operation Supported by the TC:	N/A.
▪ Date of TC Abstract authorization:	16 Mar 2022.
▪ Beneficiary:	IDB Borrowing Member Countries
▪ 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):	27 months disbursement. 24 months execution
▪ Required start date:	October 2022
▪ Types of consultants:	Firms and Individuals
▪ Prepared by Unit:	INE/WSA-Water & Sanitation
▪ Unit of Disbursement Responsibility:	INE/WSA-Water & Sanitation
▪ TC included in Country Strategy (y/n):	n
▪ TC included in CPD (y/n):	N
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality; Productivity and innovation; Environmental sustainability; Gender equality

II. Objectives and Justification of the TC

- 2.1 **The objective of this TC** is to provide support for the production, management and dissemination of knowledge that serves to assess needs and priorities, inform practices, advise clients, and contribute to an evidence-based approach to lending in the water and sanitation sector.
- 2.2 **Justification.** Numerous studies suggest inequality and lack of inclusion in access to quality water, sanitation, and hygiene (WASH) services in Latin America and the Caribbean (LAC).¹ Having quality and properly managed infrastructure services is a

¹ Agenda 2030 para Agua Potable, Saneamiento e Higiene en Latino América y el Caribe: Una mirada desde la perspectiva de los derechos humanos. Washington DC. Organización Panamericana de la Salud (OPAS). 2019.

Avances en agua potable, saneamiento e higiene en el hogar 2000-2017. Especial atención a las desigualdades. Nueva York: Fondo de las Naciones Unidas para la Infancia (UNICEF) y Organización Mundial de la Salud (OMS), 2019.

necessary element to reduce inequality and improve social inclusion, as it solves problems of access and insufficient quality that create negative externalities to the well-being and quality of life, such as unmet demands, and expectations of equal opportunities for marginalized groups. Access to water, sanitation and solid waste services are unevenly distributed in the region² and in many cases, these services are provided under low-quality standards with adverse consequences to health,³ economic vulnerability⁴ and the preservation of the environment. The lack of access to WASH services disproportionately affect minorities and vulnerable groups, impacting both biological and cultural factors, accentuated by aspects such as ethnicity, social status, sexual orientation, or disability.⁵ In this context, and recognizing the impact of access to WASH services on quality of life and well-being (health), equity (gender, regional, socioeconomic and ethnic), poverty reduction (education, productivity, employment and income), and the economic and social development of the countries and the preservation of the environment, the Sustainable Development Goals (SDGs) expressly indicate the achievement of universal and equitable access to affordable and safely managed WASH services, as one of the main goals for 2030, essential to realize the human right to the water and sanitation agenda. Achieving this goal is highly ambitious, not only are political coordination and prioritization efforts necessary to commit greater financial resources to those historically invested in the sector, but also the availability of data necessary to assess existing access gaps, devise solutions, design policies and monitor progress.⁶

- 2.3 The sector suffers from a significant dearth of data with most statistics being based on estimates that are barely comparable⁷ and from weak quality research, especially in the LAC region. The bulk of existing data focuses on WASH access at the household level, as little evidence exists on access to WASH services “away from home”, for example in schools, health centers and public places, among others. The foregoing is

Equidad e inclusión social en América Latina: acceso universal al agua y el saneamiento. Serie Reflexiones sobre políticas sociales y ambientales. No 2. CAF. 2013.

- ² Ashraf, Nava, Edward L. Glaeser, and Giacomo A. M. Ponzetto. 2016. "Infrastructure, Incentives, and Institutions." *American Economic Review*, 106(5): 77-82. Devoto, Florencia, Esther Duflo, Pascaline Dupas, William Parienté, and Vincent Pons. "Happiness on tap: piped water adoption in urban Morocco." *American Economic Journal: Economic Policy* 4, No. 4 (2012): 68-99. Ferro, Gustavo, and Emilio Lentini. "Infraestructura y equidad social: Experiencias en agua potable, saneamiento y transporte urbano de pasajeros en América Latina." (2012).
- ³ Galdo, Virgilio, and Bertha Briceño. *Evaluating the impact on child mortality of a water supply and sewerage expansion in Quito: is water enough?* Inter-American Development Bank, 2005. Galiani, Sebastian, Paul Gertler, and Ernesto Schargrodsky. "Water for life: The impact of the privatization of water services on child mortality." *Journal of political economy* 113, No. 1 (2005): 83-120. Patil, Sumeet R., Benjamin F. Arnold, Alicia L. Salvatore, Bertha Briceño, Sandipan Ganguly, John M. Colford Jr, and Paul J. Gertler. "The effect of India's total sanitation campaign on defecation behaviors and child health in rural Madhya Pradesh: a cluster randomized controlled trial." *PLoS medicine* 11, No. 8 (2014): e1001709.
- ⁴ Bobonis, Gustavo J., Paul Gertler, Marco Gonzalez-Navarro, and Simeon Nichter. *Vulnerability and Clientelism*. No. w23589. National Bureau of Economic Research, 2017.
- ⁵ Understanding empowerment in water, sanitation, and hygiene (WASH): A scoping review. Dery, F. et al., (2020), *Journal of Water, Sanitation and Hygiene for Development* 10.1, 2020; A guidance note for leaving no one behind. UNICEF 2021; Including Persons with Disabilities in Water Sector Operations: A Guidance. World Bank. 2017.
- ⁶ Bain, R., R. Johnston, F. Mitis, C. Chatterley, and T. Slaymaker. (2018). "Establishing Sustainable Development Goal Baselines for Household Drinking Water, Sanitation and Hygiene Services." *Water* 10(12).
- ⁷ Datshkovsky, D., Libra, J. and Gómez Vidal, A. (2022). *Water and Sanitation Services in Latin America and the Caribbean: Overview of databases and information gaps*. Washington DC. Inter-American Development Bank. Technical Note No. IDB-TN-2461.

directly related to SDG 6.1⁸, 6.2⁹. In the case of educational centers, it is also related to SDG 4¹⁰ goal 4. a.¹¹, specifically under indicator 4.a.1., which explicitly mentions the need for access to water, basic sanitation facilities, and adequate hygiene in schools¹² for the health and education of children.

- 2.4 Inadequate sanitation in public institutions such as hospitals, health clinics, and schools is one of the main causes of diarrheal disease in LAC.¹³ In the region, 78% of schools have basic levels of sanitation and 61% have basic hygiene levels.¹⁴ Drinking water coverage of rural schools in nine countries, where statistics can be found, sits at 59%, representing a 35-percentage point difference with respect to urban schools (UNICEF and WHO, 2018). Even where schools have access to water services, there is poor availability of hygiene and handwashing materials. There is no representative data available on hygiene facilities in health clinics.¹⁵
- 2.5 Improved access to WASH services in schools tends to increase attendance rates¹⁶ (particularly among girls)¹⁷ and the ability of children to learn.¹⁸ In simple terms, healthier children perform better at school.¹⁹ The positive impact on health is further enhanced by hygiene measures²⁰ and health education and communication (addressing handwashing and menstrual, personal, and food hygiene). Therefore, identifying and generating data to inform, mobilize, and leverage evidence-based knowledge to improve the water and sanitation divisions' interventions in the region is not only necessary, but in full alignment with the Bank's vision of reducing social

⁸ SDG 6.1: By 2030, achieve universal and equitable access to drinking water for all.

⁹ SDG 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

¹⁰ SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

¹¹ SDG 4.1: Build and upgrade educational facilities that are sensitive to the needs of children and persons with disabilities and gender differences, and that offer safe, non-violent, inclusive, and effective learning environments for all.

¹² Indicator 4.1.a: "Proportion of schools with access to: (a) electricity; (b) Internet for educational purposes; (c) computers for educational purposes; (d) infrastructure and materials adapted for students with disabilities; (e) basic drinking water; (f) basic toilet facilities for one sex only; and (g) basic handwashing facilities (according to the definitions of the Water, Sanitation and Hygiene for All indicator)".

¹³ IDB. 2021. Water and Sanitation Sector Framework.

¹⁴ In Honduras, Mexico, and Peru, hygiene infrastructure is absent in 41%, 30%, and 22% of schools, respectively. In Brazil and Costa Rica, 61% and 70% of schools, respectively, have basic hygiene access.

¹⁵ The Joint Monitoring Program estimates that only 15% of health clinics in Paraguay have handwashing facilities, compared with 26% in Honduras and 74% in Peru

¹⁶ In Egypt, water and sanitation interventions in schools reduced absenteeism due to illnesses similar to influenza, diarrhea, conjunctivitis, and influenza by 40%, 30%, 67%, and 50%, respectively (Talaat et al., 2011). Similar results have been found by Trinies et al. (2016) and Nicholson et al. (2014).

¹⁷ In Kenya, WASH interventions in schools reduced the likelihood of absence among girls by 58% (Freeman et al., 2014).

¹⁸ In Brazil, children from households connected to water and sanitation systems complete 0.7 and 0.8 more years of school, respectively, than those lacking the services (Ortiz Correa et al., 2016).

¹⁹ Bleakley (2007) found that de-worming of children in South America had a positive impact on education outcomes. Bundy et al. (2006) found that health programs in schools can increase productivity in adult life, due not only to improved cognitive abilities but also due to their impact on school participation and years of education attained.

²⁰ Studies show that handwashing using soap prevents between 30% and 47% of diarrhea in children (Curtis et al., 2009) and 23% of respiratory infections (Rabie and Curtis, 2006) and that hygiene promotion—including handwashing with soap—is the most cost-effective intervention (Jamieson, Bremen, and Measham, 2006). In Latin America and the Caribbean, Gyorkos et al. (2013) found that health and hygiene education interventions in primary schools in Peru reduced *Ascaris lumbricoides* infections by 58%.

exclusion and inequality, with particular focus on strengthening the capacity of the state and providing inclusive infrastructure and infrastructure services.

- 2.6 Understanding access to quality and resilient WASH as the set of sources inside and outside the home, it is essential to understand the general outlook of access in schools and hospitals. There is a large amount of evidence on the impact of WASH access on policy outcomes in education and health. However, there is not enough information on how access to WASH in educational and health establishments affects the population.
- 2.7 In addition to contributing with new and cutting-edge knowledge, the activities proposed under this TC aim at supporting the exchange, dissemination, and assimilation of knowledge from sources both within and outside the Bank, through the promotion of international events, fora, workshops, and conferences, where the Bank can play a key role in processing and leveraging innovation, new findings and lessons learned both for the benefit of our own specialists and clients, but also for the community at large.
- 2.8 The activities pertaining to each of the three pillars constituting this proposal (research, learning and dissemination) while retaining considerable flexibility, will be guided by the successes, and identified challenges faced by the division in each case. Regarding knowledge creation, the main objective is to increase the number of high quality and analytical rigor publications. To that end, special emphasis will be placed on the collection of basic (and yet non-existent) data at multiple levels (individual, firms and government) to allow the water and sanitation division of the IDB to assess needs beyond qualitative expert accounts and place the region in a global perspective through the generation of comparable data and benchmarking exercises.
- 2.9 When it comes to learning, the division will continue to build upon its impressive track record of identifying and organizing successful events, as attested by the evaluations performed by KIC not only on participants' satisfaction levels, but also in knowledge gains through pre and post evaluations. Finally, the division has shown noteworthy initiative, innovation, and success in its dissemination strategy, evidenced in the popularity of its blog, its presence in high profile international events and the visibility of its work and products among the region.
- 2.10 The TC includes and benefits all 26 countries. It will capture lessons learned and create knowledge for the region., For the activities in component 1, the selection of specific countries will depend on the definition of the concept framework, nonetheless, selected countries will be those with the least data available such as the "Triángulo Norte" countries and the Caribbean; and will complement similar activities being carried out in Costa Rica and Colombia. This support will be formalized with letters of non-objection from the country liaison offices identified as beneficiaries, which will be requested by the Bank before starting activities in the corresponding country.
- 2.11 **Strategic Alignment.** This TC is consistent with the second Update to the Institutional Strategy (AB-3190-2) and is aligned with the development challenges of: (i) **social inclusion and equality** by organizing and supporting knowledge generation, workshops, and dissemination materials to promote universal and sustainable access to quality and affordable WASH services and; (ii) **Productivity and Innovation** as it proposes the development and dissemination of cutting-edge knowledge to support lending instruments for LAC countries. The TC is also aligned with the cross-cutting areas of: (i) **Gender equality and diversity** by including the menstrual hygiene for girls and adolescents in the conceptual framework developed and considered for basic school education and for the design of public spaces and by including the gender

perspective in training materials; and (ii) **Climate change and environmental sustainability**: by including in the conceptual framework for access to WASH services away from home considerations to ensure that WASH infrastructure is resilient, not only to hydroclimatic events exacerbated by climate change, but also to other natural disasters and by organizing workshops and presentations that will address these critical themes. The TC will contribute to the Corporate Results Framework 2020-2023 (GN-2727-12) through the Knowledge and Innovation (Level 3) indicators. The TC will be financed with resources from the “Ordinary Capital Strategic Development Program OC SDP, Window 2- Infrastructure (W2B)” (GN-2819-14). The purpose of this TC is consistent with the objectives and activities pursued by this Program (GN-2819-14), being one of its objectives to improve the performance, quality, and sustainability of infrastructure services, through the systematization and dissemination of new knowledge in the region.

- 2.12 Finally, the TC will contribute to the Vision 2025 strategic goals: (i) **Promote social progress**, through its opportunity of access to and quality of public services; (ii) **Reinforce gender equality, diversity, and inclusion**, through its cornerstone immediate opportunity of gender and inclusion; (iii) **Reinforce climate change action**, through its cornerstone immediate opportunity of climate change.
- 2.13 **Lessons Learned.** The Water and Sanitation Division has extensive experience in supporting LAC countries by generating knowledge, developing workshops, and disseminating knowledge related to infrastructure projects for the provision of WASH services and their efficient management. The team has worked on similar projects through other knowledge TCs ([ATN/OC-16698-RG](#); [ATN/OC-18917-RG](#)) and from those experiences, three important lessons have been learned that are relevant to this project:
- a. Lack of data: One of the most important challenges in our sector has been the lack of reliable, comparable, and consistent data. The team has embarked on a multi-year effort to fill that gap through projects like this one. Considering this challenge, the first step of Component 1 is the mapping exercise that will make it possible to identify the available data on WASH access in school and health centers in the region. This step will identify the opportunities and challenges associated with the available data and develop data collection efforts that fill existing gaps for the desired descriptive and analytical work. Specifically, the use of publicly available data will prevail, but if it does not exist, it will be requested directly to government institutions. It is necessary to emphasize the importance of generating data to study the impact of the high costs of menstrual hygiene products on the health of low-income women, girls and adolescents.
 - b. Data collection during COVID-19: Collecting data during the pandemic has been one of the biggest obstacles to completing projects due to the inability to conduct surveys in person and changing data collection methods to fit those circumstances. To consider this challenge, this TC proposes the collection of data in two complementary ways that allow adjusting to the short- and medium-term needs of this project.
 - c. Events²¹: Due to the continuation of COVID-19, most of the workshops are being planned to be held online. As the situation improves, on-site with a hybrid format

²¹ in case some or any workshops will be held in person, a non-objection letter from the liaison authority with the Bank will be requested prior to the workshop being held.

are possible. WSA Water Week sessions are being planned accordingly. For 2023 the format has not been defined yet.

III. Description of activities/components and budget

- 3.1 **Component 1: Knowledge production, (US\$50,000).** “Access to WASH services away from home from the perspective of inclusion and resilience”: In this component, the objective is to propose indicators focused on WASH to incorporate in the proposal and development of projects focused on health and education. This component will focus on three activities: 1) Conceptual framework of the relationship between access to water, sanitation and hygiene in educational and health institutions: Based on the existing evidence, a conceptual framework will be defined to facilitate empirical work on the impact of access to WASH services in schools and health centers, and the development of indicators to be incorporated in the development of education and health projects with WASH components. Additionally, menstrual hygiene of girls and adolescents, will be considered for basic school education and for the design of public spaces given the impact it has on attendance and safety metrics. 2) Database: Based on the work carried out in the conceptual framework, and in complement with additional initiatives of the division, data collection that captures the existing gaps in terms of access to WASH and menstrual hygiene in educational institutions and health centers will be defined., and 3) Dissemination: A technical note and an event to present the findings from the previous two activities will also be funded by this component (¶2.13).
- 3.2 **Component 2: Knowledge exchange and client outreach, (US\$100,000).** This component rests on three activities with the objective is to expose staff, clients and consultants to quality and up to date knowledge that is relevant to the successful performance of their duties. To this extend, the component will finance: i) presentations by renowned external and internal speakers on innovative or critical topics for the division; ii) participation of IDB staff²² and personnel from utilities and governments in national and international conferences and workshops to learn, exchange knowledge, and foster partnerships and; iii) development of the Water and Sanitation Knowledge Week²³ for 2023 to promote more in-depth learning by Bank staff and key regional decision-makers and stakeholders, such as government officials and staff from utilities, among others.²⁴
- 3.3 **Component 3: Dissemination, (US\$100,000).** There are four key activities in the process of knowledge communications and dissemination: (i) publication²⁵ of knowledge products: editing, translation and design; (ii) Audio and Video (A/V)

²² For the fulfillment of the objectives described in the above components it is necessary to finance Bank staff travel for the purposes of dissemination and assimilation of knowledge and experiences generated through this technical cooperation (GN-2470-2, paragraph 2.11). These travel expenses are not considered regular expenses and will not serve as a supplement to the division's administrative budget. As this is a knowledge activity, resources from administrative budget, supervision plans, or project preparation cannot be used for this purpose.

²³ If necessary, prior to the initiation of activities in a country, the Bank will seek the non-objection from the liaison institution of such country.

²⁴ For activities related to presentations and discussions the results will be measured through satisfaction surveys; and for activities involving learning, such as workshops results will be measured through pre and post questionnaires that gauge content assimilation.

²⁵ Knowledge products will be published by the Bank and will be available in the Bank's website and other of its communication platforms. The Bank will retain all the intellectual property to all products and materials financed by this TC.

products: videos and other A/V products such as presentations and infographics to disseminate²⁶ knowledge and operational knowledge²⁷ through our audiences.; (iii) Media and other editorial products²⁸ such as opinion pieces, scripts, among others, accompanied with design in several languages²⁹; and (iv) media marketing (particularly digital) of knowledge and operational products to reach all audiences both regional and i non-regional.

- 3.4 The total cost of this TC is US\$250,000.00, which will be financed by the IDB through the OC SDP Window 2 - Infrastructure (W2B). The distribution of resources is defined as follows:

Indicative Budget (US\$)			
Activity/Component	Description/Product	IDB/W2B	Total
Component 1. Knowledge Production	Data collection	\$50,000	\$50,000
	Conceptual framework (including menstrual hygiene concepts)		
Component 2. Knowledge Exchange and Client Outreach	Speakers' travel for regular presentations by external and internal speakers	\$100,000	\$100,000
	Conference participation		
	Workshop logistics and organization		
Component 3. Dissemination	Design, editing, translations	\$100,000	100,000
	High level panels		
	Digital marketing		
	A/V productions (including menstrual hygiene concepts)		
Total		250,000	250,000

IV. Executing agency and execution structure

- 4.1 Since this is a research and 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 Kleber Machado (kleberm@iadb.org), Lead 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 an specific country, with the liaison authority in the country and/or sector officials. The Bank has experience in successfully executing regional TCs of this type, such as [ATN/OC-16698-RG](#) and [ATN/CF-17344-RG](#), 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 24 and 27 months, respectively. The Bank will contract individual consultants, consulting firms 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:

²⁶ All video, audios, media products are made following KIC guidelines, in accordance with policies AM-325 and AM-331. They will be available on the corresponding Bank platforms.

²⁷ Including concepts such as menstrual hygiene for girls and adolescents defined in Component I, as well as its importance for health.

²⁸ The publication of articles, as well as any external interventions, follow SCU procedures through KIC and in alignment with policies AM-325 and AM-130.

²⁹ Depending on the audience, media and editorial products are published in English, Spanish, French and/or Portuguese.

(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.

- 4.3 For the fulfillment of the objectives described in the above-mentioned component, it is necessary to finance Bank staff travel for the purposes of enhancing engagements with the countries' authorities and policymakers, mainly through workshops. These travel expenses are not considered regular expenses and will not serve as a supplement to the division's administrative budget. It is worth noting that these expenses are eligible under OC funds, which are regulated by the Bank's technical cooperation policies (GN-2470-2) and explicitly consider the funding of activities that are focused externally and are designed to directly benefit the borrowing member countries.

V. Major issues

- 5.1 The risks of implementation of this TC are low. They refer mainly to possible failures in gathering quality data and low engagement by stakeholders in the proposed activities. On the first risk of failure to gather quality data, efforts will be made to select consultants and data sources with a tracked record of quality and reliability, in addition to a process of quality control for the obtained information. On the second risk of low stakeholder engagement, the division has a history of working successfully with stakeholders, thus providing encouragement to pursue this project in the first place.
- 5.2 Another risk associated with this TC is related to the continuous impact of COVID-19 in the region with the extension of limitations on international travel, restrictions on the availability of key personnel, and difficulties in field work and data measurement. This could cause delays in the completion of activities that would have an impact on the implementation of the TC. To mitigate these risks, the TC will organize as many virtual activities as possible and consider data collection tasks and activities that can be done remotely and on existing databases.

VI. Exceptions to Bank policy

- 6.1 This TC does not involve any exceptions to the Bank's policies.

VII. Environmental and Social Strategy

- 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 (MPAS).

Required Annexes:

[Results Matrix - RG-T4075](#)

[Terms of Reference - RG-T4075](#)

[Procurement Plan - RG-T4075](#)