

TC Document

I. Basic Information of the TC

▪ Country/Region:	MEXICO
▪ TC Name:	Apoyo para el Desarrollo del Sector de Agua y Saneamiento en Zonas Rurales
▪ TC Number:	ME-T1458
▪ Team Leader/Members:	Riquelme, Rodrigo (INE/WSA) Líder del Equipo; Machado, Kleber B. (INE/WSA) Jefe Alterno del Equipo de Proyecto; Barrios Nunez, Uriel (CID/CME); De Gyves Sandoval, Alejandro (CID/CME); Gordon, Paola Lisette (INE/WSA); Grunwaldt, Alfred Hans (CSD/CCS); Leslie Crespín (INE/WSA); Leticia Ortega Oropeza (INE/WSA); Lopez, Liliana M. (INE/WSA); Miranda Monroy, Edna (CID/CME); Sanmartín Baez, Alvaro Luis (LEG/SGO); Suber, Stephanie Anne (INE/ENE)
▪ Indicate if: Operational Support, Client Support, or Research & Dissemination	Apoyo al Cliente
▪ Date of TC Abstract authorization:	10 May 2022.
▪ Beneficiary:	Mexico's National Water Commission (CONAGUA) and water boards from states
▪ Executing Agency:	Inter-American Development Bank
▪ Donors providing funding (amount and Fund's name):	OC SDP Ventanilla 2 - Infraestructura(W2B)
▪ IDB Funding Requested:	US\$250,000.00
	US\$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	October 2022
▪ Types of consultants (firm or individual consultants):	Firm and individual consultants
▪ Prepared by Unit:	INE/WSA-Agua y Saneamiento
▪ Unit of Disbursement Responsibility:	CID/CME-Representación México
▪ TC Included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2020-2023:	Inclusión social e igualdad; Productividad e innovación; Integración económica; Sostenibilidad ambiental; Igualdad de género; Diversidad

II. Description of the Green Climate Fund Program (GCF) requested by the Government

- 2.1 On the 23rd of 2021, the Ministry of Finance of Mexico requested the IDB to support the preparation of a federal rural program co-funded by the GCF. This TC will support the preparation of this GCF program. The objective of the federal program is to enhance the resilience of marginalized rural communities in Mexico to the effects of climate change by implementing systemic solutions for water and sanitation access and building subnational capacities for the implementation of climate adaptation measures. The components of the program are **Component 1: Community participation, engagement, and co-development**. This component will identify, engage, and foster community engagement, co-design, co-creation, and co-development to ensure water security in remote rural communities. **Component 2:**

Climate-resilient Infrastructure co-construction: This component will finance the construction of integrated water and sanitation systems. **Component 3: Capacity Development.** This component has the main aim to ensure the communities have the necessary human capacity to foster the sustainability of the water and sanitation systems and to create a community that is climate resilient. **Component 4: Sustainability of the interventions:** This component aims to provide a systemic view of the entire process to ensure the solutions are sustainable and can be replicated.

III. Objectives and Justification

- 3.1 Mexico has become the second largest destination for foreign direct investment in the region, after Brazil. Nonetheless, per capita economic growth has been weak (1.5% on average since 1996) and poverty rates are high (42% in 2018). This is partly the result of gaps in access to social services, labor market deficiencies, and weak investment growth, all against a backdrop of persistent regional disparities¹. Before COVID-19, the country had made little progress in reducing poverty over the last 10 years. In 2020 poverty affected 44% of the population, with extreme poverty affecting 8.5% of the population. Moreover, 17.9% of the population lacks access to basic services in the household². Efforts to improve access to social services have led to moderate improvements in indicators that reflect the multiple causes of poverty (compared to purely monetary measures). Socioeconomic conditions vary between rural and urban areas in the country. In 2019 more than 24 million people in Mexico lived in rural areas³. In southern and central Mexico, poverty stands at 55% and 45% of the population, respectively, while in the North it is 25%.
- 3.2 Gaps in Water and Sanitation (W&S) services, among others, affect people of all ages but have the greatest impact on the low-income population, women, children, the elderly, indigenous, and Afro-Mexican communities. Worldwide, women and children spend more than 125 million hours daily collecting water, in containers that can weigh up to 20 kg⁴. In Central America, between 53% and 68% of women are responsible for collecting water, but their participation in local governance is only 27%⁵. In Mexico, various studies have recorded the difficulties faced by women to form part of local water management committees, where their participation can vary from 1% to 26%, mostly as members, treasurers, or secretaries⁶. There is no concrete data on how limited access to water affects indigenous and Afro-descendant women in Mexico, so it is necessary to include these categories in the data collection that is carried out. In addition to this, climate events tend to exacerbate inequality as they have a greater impact on vulnerable groups. These populations suffer from the lack of critical social infrastructure, such as W&S infrastructure, and they have also lagged behind in terms

¹ IDB. (2019). [IDB Group Country Strategy \(2019-2024\)](#).

² CONEVAL. (2021). Resultados de pobreza en México 2020.

³ [The World Bank. \(2019\). Rural Population in Mexico. Data Bank.](#)

⁴ Monje, Andrea; Nuñez, Anamaria y Subiza, Dolores (2016). ¿Tiene género el agua? Infografía. Disponible: <https://publications.iadb.org/publications/spanish/document/%C2%BFTiene-g%C3%A9nero-el-agua.pdf>

⁵ CEPAL (2020). Participación de CEPAL en el “Webinar Agua, género y clima en América Latina y el Caribe: mejores datos para mejores estrategias de adaptación”. Eventos. Disponible: <https://www.cepal.org/es/eventos/participacion-cepal-webinar-agua-genero-clima-america-latina-caribe-mejores-datos-mejores>.

⁶ Gómez, Brenda; Romero, Alejandro y Vizcarra Ivonne (2018). Visibilización de la participación femenina en los Comités Comunitarios de Agua Potable de Toluca, Estado de México. Sociedad y Ambiente. 5 (15), 67-92p.

of adaptation measures to face the effects of climate change. A report by Minority Rights Group⁷ highlighted that by 2020, most of the indigenous population were still living in small peasant communities where they made up most of the population, typically located in the poorest, least developed parts of the country. Indigenous women were particularly marginalized in many communities. This pattern could be seen across a broad range of socioeconomic indicators, including education, employment, and income. On the other side, most Afro-Mexicans still live in poverty, often in isolated rural communities with negligible sanitation, health, or education services. Because most Afro-Mexicans live in the poorest regions of Mexico, they lack adequate primary and secondary education and are largely absent from institutions of higher education. In July 2018, the UN Committee on the Elimination of Discrimination against Women⁸ expressed concern at ongoing discrimination and stereotyping against groups including Afro-Mexican women, as well as at practices such as forced evictions affecting them.

- 3.3 Changes in regional migration patterns have transformed Mexico into a host country for migrants. By 2020, it has become the second most significant origin country in the world with around eleven million⁹. This could pose additional challenges in terms of access to services and increase the vulnerability to climate change of the migrant population. Mexico's geography makes it vulnerable to extreme weather events, such as tropical cyclones and floods, which threaten the country's aging W&S infrastructure.
- 3.4 Regarding climate change, the National Water Commission (CONAGUA)¹⁰ pointed out that in 2020 the increasing temperature trend was observed again. From 2004 to the present, national average temperature anomalies have been registered above the 1981-2010 climatological average. In 2020, a national average temperature of 22.4°C was recorded and an anomaly of 1.4°C above the average, in this way it was located together with 2017 and 2019 as the warmest year according to the historical record since 1953. Also, in 2020, for the second consecutive year, the total annual rainfall was deficient at the national level. The 722.5 mm of annual rainfall represented 2.7% below the annual average (1981-2010), which is 742.2 mm, and was classified as the 21st driest year according to records from 1941. In the last 50 years, (i) average temperatures in the country have increased by approximately 0.85°C above the climatological normal and equivalent to the global increase reported by the Intergovernmental Panel on Climate Change (IPCC)¹¹; (ii) projections of mean annual rainfall is set to decrease between 10 and 20%; (iii) between 13 and 18% increase in total annual precipitation on extreme rainfall days; (iv) sea level rise of between 0.5 to 0.7m on the Pacific coastline, and 0.4 to 0.7m on the Atlantic coastline by 2090, relative to 1986-2005; (v) the saltwater intrusion into coastal aquifers from rising seas will further deplete freshwater supply; and, (vi) intensity and frequency of tropical cyclones will increase in both the Gulf of Mexico and East Pacific, causing greater devastation and potential loss of life.
- 3.5 Due to its geographical position in the southern part of the northern hemisphere, between two oceans, as well as its topography, and its socioeconomic situation,

⁷ [Minority and Indigenous Trends 2021.](#)

⁸ [Committee on the Elimination of Discrimination against Women reviews report of Mexico.](#)

⁹ McAuliffe, M. and A. Triandafyllidou (2021). World Migration Report 2022. International Organization for Migration (IOM), Geneva.

¹⁰ [CONAGUA. \(2021\). El Reporte del Clima en México. Reporte anual 2020.](#)

¹¹ [Intergovernmental Panel on Climate Change \(IPCC\). \(2019\).](#)

Mexico is particularly vulnerable to the impacts of climate change¹². On average, 126 fatalities and losses amounting to almost US\$3 billion occur yearly due to extreme weather events in Mexico. Accumulative, between 1970-2019, 202 disasters were reported in Mexico with 6,655 deaths¹³. It is projected that the impacts of climate change will be distributed in a heterogeneous way in the country, due to the different types of climatic areas¹⁴, the distribution of natural resources, the installed infrastructure, economic development, and the demographic concentration.

- 3.6 The negative consequences of these events tend to be exacerbated through the adverse social conditions in rural areas with widespread poverty and environmental degradation. Water stress and inadequate sanitation are sources of vulnerability in rural areas of Mexico that are being exacerbated by climate change. Although in recent years the access to potable water (85%) and sanitation services (74.2%) in rural areas has increased¹⁵, challenges remain. The impacts caused by climate change on the natural dynamics of ecosystems and watersheds pose new challenges to be faced by all stakeholders, which cannot be served if the environmental dimension of the problem and the care of critical ecosystems for the hydrological cycle are ignored. This involves the design and implementation of actions such as drought prevention and management, and water security planning, which consider balancing the extraction of water with the available supply in a sustainable manner. Most indigenous, Afro-Mexicans and marginalized communities are implementing creative adaptative strategies to cope with climate change and its stresses. However, in many cases, the environment is changing too quickly or too dramatically to enable them to adapt. Under this context, the objectives of this Technical Cooperation (TC) are: (i) to develop all the necessary climate change studies to support the submission of the Funding Proposal (FP) to the Green Climate Fund (GCF). A Funding Proposal is a document that is submitted by entities who want to get access to GCF resources for climate change projects and programs. Funding Proposals can be submitted to the GCF at any time or as a response to a Request for Proposals (RFP). Funding Proposals that are submitted to GCF are subject to a review process, culminating in a decision by the GCF Board as to whether to support the project: (i) to develop the socio-economic studies for the rural federal program; and (ii) to design an execution scheme for the program
- 3.7 **Strategic Alignment.** The TC and the Program it supports are aligned with the IDB country strategy with Mexico 2019-2024, (GN-2982) under the objective of “Improve Health Services” and the outcome “Improved rural access to water and sanitation services”; and also, with the cross-cutting issue of climate change. The products of this TC will provide direct inputs for these strategic lines of action.
- 3.8 The objectives of this TC, and the Program that it supports, are consistent with the Second Update to the Institutional Strategy (UIS) 2020-2023 (AB-3190-2) and align with the development challenges of (i) Social inclusion and equality: by progressively guaranteeing the human right to W&S - with special emphasis on the most vulnerable

¹² SEMARNAT e INECC. (2018) [Sexta Comunicación Nacional y Segundo Informe Bienal de Actualización ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático.](#)

¹³ [WMO. \(2021\). WMO Atlas of Mortality and economic losses from weather, climate, and water extremes \(1970-2019\).](#)

¹⁴ [Monterroso, A. & Conde, C. \(2015\) Exposure to climate and climate change in Mexico. Geomatics, Natural Hazards and Risk, 6:4, 272-288, DOI: 10.1080/19475705.2013.847867.](#)

¹⁵ Situación del Subsector Agua Potable, Alcantarillado y Saneamiento. (2019). CONAGUA.

populations; (ii) Productivity and Innovation: by strengthening research and development activities around the co-development of climate-resilient infrastructure and more comprehensive water and sanitation solutions as a whole. This will be done through the implementation of highly efficient solutions and appropriate technologies that will have significant impacts on the performance of the infrastructure; (iii) Regional economic integration: by engaging partners and crowding reimbursable and non-reimbursable financing, enhancing domestic resource mobilization, and enabling and strengthening market channels related with water circular economy. It also aligns with the cross-cutting area of (i) Gender equality and diversity. The program emphasizes the need to focus on indigenous and Afro-Mexican people, by strengthening the measures to increase water and sanitation access, prevent destruction from hydrometeorological phenomena, and adapt to climate change in order to reduce vulnerability. It also will provide the space needed for an increment in the gender balance between men and women within water committees in rural communities; (ii) Climate change and environmental sustainability; through solutions that mitigate water stress and alternatives to unlock climate vulnerable infrastructure and contribute to achieving Mexico's NDC through using low carbon technologies and solutions.

- 3.9 The TC and the operation are consistent with the Vision 2025. Reinvesting in the Americas. A decade of Opportunity. It states the importance to promote social progress in a way that fosters (i) access to and the quality of public services, in particular health, education, water, sanitation, and electricity. This 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.
- 3.10 Finally, the TC will contribute to the Corporate Results Framework 2020-2023 (GN-2727-12) through the product, "Households with access to new or improved water services", and they are aligned with the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Development (GN-2710-5), particularly with the priority area of "Supporting the construction and maintenance of social and environmentally sustainable infrastructure to contribute to increasing the quality of life". The TC will be financed with resources from the Strategic Program for the Development of Infrastructure financed by Ordinary Capital "OC SDP Window 2 – Infrastructure (W2A)" (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, and the Water and Sanitation Sector Framework's Dimensions of Success (GN-2781-13) for universal access and improve service and social and environmental sustainability. Finally, this TC aligns with The Ordinary Capital Strategic Development Program (GN-2819-14) since it proposes priority areas, and emerging needs with respect to alignment with institutional priorities.

IV. Description of activities/components and budget

- 4.1 **Component 1. Climate Change Studies, participatory methodologies, and stakeholder consultations to Support the FP to be submitted to GCF (\$160,000).** The objective of this component is to develop the scope of component 1 of the federal rural program. Among its main activities and products, this component will conduct all

the required activities to estimate climate change impacts on adaptation and mitigation of the federal rural program. This will include appraisals on the resilience capacity of new/rehabilitated infrastructure from a program representative sample and its impact on water security, and mitigation estimates for new infrastructure and its impact on greenhouse emissions. This component will also include the design of a methodology for a Social Network Analysis (SNA) to map and measure the relationships between individuals, groups, and organizations within the communities and to identify key stakeholders, value chains for technology development, application, operation, and maintenance.

- 4.2 **Component 2. Socioeconomic studies (\$50,000).** The objective of this component is to obtain the socioeconomic impact of the federal rural program. This component will include the development of socioeconomic studies from a representative sample of interventions. These studies will include the following products: surveys, beneficiary estimates, construction and operation costs, economic model, and social rate of return estimate. All of these products will include a data disaggregated by gender and diversity (afro-descendants and indigenous people). Also, this component will provide the expected estimations of social and health, and economic co-benefits, including a gender and diversity sensitive analysis.
- 4.3 **Component 3. Design of Execution Scheme (\$40,000).** The objective of this component is to develop an execution scheme including organization, institutional framework, and operational issues. This component will include the development of an execution scheme for federal rural program. Based on previous programs and its lessons learned, an innovative execution scheme will be developed. The scheme will include all the relevant institutional stakeholders and other relevant parties including Conagua, State Water Commissions (CEAs), municipalities, water boards, indigenous and Afro-Mexican groups, and civil society, among others. The main product of this component will be a consolidated operation manual.
- 4.4 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 as follows:

Indicative Budget (in US\$)

Activity/Component	Description	IDB Funding	Total Funding
Component 1: Climate Change Studies, participatory methodologies, and stakeholder consultations	Consulting services on climate change adaptation and mitigation on new/refurbished infrastructure and technology options.	160,000	160,000
Component 2: Socio-economic studies	Consulting services on socio-economic studies, include data disaggregated by gender and diversity (afro-descendants and indigenous people) .	50,000	50,000
Component 3: Design of execution scheme	Consulting services for the design of the executing scheme including multi-stakeholders' analysis and an operation manual.	40,000	40,000
Total		250,000	250,000

- 4.5 Supervision of this TC will be the responsibility of the Project Team Leader assigned by INE/WSA in collaboration with staff from COF Mexico. The Bank Country Offices' staff where project activities are undertaken, will liaise with and monitor the progress

of the consultants with IDB HQ. Monitoring of the TC will be carried out by the project team.

V. Executing agency and execution structure

- 5.1 **Executing Agency:** The Federal Rural Program (Rural chapter form PROAGUA federal program) will be executed by Conagua. However, due to federal budgetary reasons in the country (the federal government budget policy does not allocate any line that could be assimilated with a donation), the TC will be executed by the IDB, in accordance with Appendix 10 of the Operational Guidelines for Technical Cooperation Products (GN-2629-2), through INE/WSA, which will be responsible for all aspects of this TC, including disbursements. The tendering documents will be agreed upon with Conagua and the execution will be co-supervised with Conagua's International Cooperation office. This office is the official counterpart for international agencies in Conagua and has been working with IDB in several operations for the last 20 years. The operational scheme for TCs is usually based on agreements made on a case-by-case basis which includes person responsible for communication, meeting schedules, approval flow and time frame.
- 5.2 The execution and disbursement period will be 36 months, respectively. The UDR will be established in the IDB Country Office of Mexico. The Bank will contract individual consultants, consulting firms, and other services in accordance with current Bank procurement policies and procedures. Specifically, Section AM-650 of the Administrative Manual "Complementary Workforce" will be applied in the case of individual consultants, the Policy for the Selection and Contracting of Consulting Firms for Bank-executed Operational Work (GN-2765-4), and its Operational Guidelines (OP-1155-4) for hiring consulting services of intellectual nature and the Corporate Procurement Policy (GN-2303-28) for other services.
- 5.3 Monitoring will be carried out by the Bank's technical team with the support of the Country Office and individual consultants, through the review of the progress and final reports prepared by the consultants contracted to carry out the activities of this TC. This will be a permanent process through the execution of the TC. The progress will be promptly reported in the Bank's system (Convergence) with details on product achievement, technical notes, and press cuts. This will be done at least each semester.

VI. Project Risks and Issues

- 6.1 The risks of implementation of this TC are low. The major risk during the execution of this TC is the potential delay in execution of the consulting services due to a lack of coordination between Conagua, states, municipalities, and water boards. Several lessons learned about coordination in rural projects have been acquired by IDB and Conagua which will mitigate these main risks. These could be mitigated with a closer coordination between local Conagua units (Consejos de Cuenca) and Municipalities (these lessons were clearly developed on 3133/OC-ME PCR report).
- 6.2 The TC does not present fiduciary management risks since it will be implemented by the Bank. For this same reason, no financial audit is required.

VII. Exceptions to Bank policy

- 7.1 This TC does not contemplate any exception to Bank policy.

VIII. Environmental and Social Strategy

- 8.1 In accordance with the guidelines of the Policy Environment and Safeguards Compliance (OP -703) the proposed operation was classified as Category C.

Anexos Requeridos:

[Solicitud del Cliente - ME-T1458](#)

[Matriz de Resultados - ME-T1458](#)

[Términos de Referencia - ME-T1458](#)

[Plan de Adquisiciones - ME-T1458](#)