

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

MEXICO

**COMPREHENSIVE DEVELOPMENT PROGRAM FOR WATER AND SANITATION
UTILITIES II (PRODI-II)**

(ME-L1295)

LOAN PROPOSAL

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REQUIRED LINKS	
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OPTIONAL LINKS	
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ABBREVIATIONS

AWP	Annual work plan
CDP	Comprehensive development plan
CEA	Comisión Estatal de Agua y Saneamiento [State Water and Sanitation Commission]
CONAGUA	Comisión Nacional del Agua [National Water Commission]
CONAPO	Consejo Nacional de Población [National Population Council]
ECAM	Energy Performance and Carbon Emissions Assessment and Monitoring
EIRR	Economic internal rate of return
ESMF	Environmental and social management framework
ESMR	Environmental and social management report
GHG	Greenhouse gases
ICAP	Institutional Capacity Assessment Platform
INEGI	National Institute of Statistics and Geography
IWA	International Water Association
O&M	Operation and maintenance
OPM	Operations and Procedures Manual
NAFIN	Nacional Financiera
NDC	Nationally determined contribution
PND	Plan Nacional de Desarrollo [National Development Plan]
PNH	Plan Nacional Hídrico [National Water Plan]
PRODI	Comprehensive Development Program for Water and Sanitation Utilities
PROME	Water Utilities Efficiency Improvement Project
PROSSAPYS	Program for the Sustainability of Water Supply and Sanitation Services in Rural Communities
SDG	Sustainable Development Goal
SFP	Civil Service Department
SHCP	Department of Finance and Public Credit

PROJECT SUMMARY

MEXICO COMPREHENSIVE DEVELOPMENT PROGRAM FOR WATER AND SANITATION UTILITIES II (PRODI-II) (ME-L1295)

Financial Terms and Conditions				
Borrower:			Flexible Financing Facility ^(a)	
United Mexican States			Amortization period:	20 years
Executing agency:			Disbursement period:	5 years
National Water Commission (CONAGUA)			Grace period:	6 years ^(b)
Source	Amount (US\$)	%	Interest rate:	SOFR-based
IDB (Ordinary Capital)	100,000,000	100	Credit fee:	(c)
			Inspection and supervision fee:	(c)
Total	100,000,000	100	Weighted average life:	13 years
			Approval currency:	U.S. dollars
Project at a Glance				
Project objective/description: To assist in improving the quality of water and sanitation service in Mexico, in communities of 50,000 to 900,000 inhabitants, by boosting the efficiency of participating utilities. The specific objectives are to strengthen the operational and financial capacity of the utilities by implementing short- and medium-term comprehensive actions and projects.				
Special contractual conditions precedent to the first disbursement of the loan proceeds: The first disbursement of the loan proceeds will be subject to compliance, to the Bank’s satisfaction, with the following conditions: (i) The Bank will have received evidence that the mandate and program execution contract for the supervision and administration of the program between the borrower, the National Water Commission (CONAGUA), and Nacional Financiera, S.N.C., a development banking institution (NAFIN), has been signed and is in force; and (ii) the program’s Operations and Procedures Manual (OPM) is in force, including an environmental and social management framework (ESMF) (see paragraph 3.3) under terms previously agreed upon with the Bank.				
Exceptions to Bank policies: None.				
Strategic Alignment				
Challenges: ^(d)		SI <input checked="" type="checkbox"/>	PI <input checked="" type="checkbox"/>	EI <input type="checkbox"/>
Crosscutting themes: ^(e)		GE <input checked="" type="checkbox"/> and DI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/> and ES <input checked="" type="checkbox"/>	IC <input checked="" type="checkbox"/>

^(a) Under the terms of the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency, interest rate, commodity, and catastrophe protection conversions, subject in all cases to the final amortization date and the original weighted average life. The Bank will take operational and risk management considerations into account when reviewing such requests.

^(b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

^(c) The credit fee and the inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with applicable policies.

^(d) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

^(e) GE (Gender Equality) and DI (Diversity); CC (Climate Change) and ES (Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. PROJECT DESCRIPTION AND RESULTS MONITORING

A. Background, problem to be addressed, and rationale

- 1.1 **Status of water resources in Mexico.** Water availability is critical in many parts of the country. This situation has been exacerbated by population growth, urbanization, inefficient use of water, and scarcity in certain periods due to climate variability and climate change. As of 2017, according to the National Water Commission (CONAGUA),¹ average water stress² countrywide was 19.5% and average available freshwater³ per capita was 3,656 m³/inhabitant/year.¹ The trends indicate that, by 2030, water stress will stand at 22% and average available freshwater per capita will be 3,285 m³/inhabitant/year. While these figures are not considered alarming, they entail low water availability and high water stress in close to half of the national territory, including regions of high social and economic importance.⁴ Demand for water has been rising in tandem with an exponential growth of the country's population, which expanded fourfold from 1950 to 2015. As of 2020, Mexico's population was estimated at 126.01 million,⁵ with an additional 22.1 million projected by 2050.⁶ Moreover, in recent years, the population has gone from being predominantly rural to predominantly urban. According to data from the Instituto Nacional de Ecología y Cambio Climático [National Institute on Ecology and Climate Change], most of the country will become drier and droughts will be more frequent due to climate change, resulting in reduced availability of water for its various uses.⁷ These conditions could give rise to a much more serious water scarcity, deepening poverty and impacting the quality of life of the population.⁸
- 1.2 **Sector institutional framework.** Mexico's waters are national property under the Mexican Constitution, and they are administered by the federal government through the National Water Commission (CONAGUA). CONAGUA may authorize water use or development by private parties pursuant to concession agreements, or by state and municipal governments under allocations. The National Waters Law provides the principles and policies governing water resource control and management, regulates the development, preservation, and sustainability of these

¹ [Estadísticas del Agua en México](#). CONAGUA. 2018 edition.

² Water stress measures the percentage of available renewable freshwater that is used. The United Nations has established a water stress scale as follows: low (<10%); moderate (10.1% – 20%); medium-high (20.1% – 40%); high (40.1% – 100%); very high (>100%).

³ Average available freshwater is the average base amount of freshwater available per inhabitant. If the available water is less than 1,700 m³/inhabitant/year, water stress is considered to be present, potentially leading to frequent scarcity. When the available water is less than 1,000 m³/inhabitant/year, problems may arise for food production and economic development.

⁴ Six of the 13 hydrologic-administrative regions into which the country is divided, accounting for 66.5% of the population (82.17 million inhabitants), have average available freshwater of 1,700 m³/inhabitant/year or less and are thus under water stress. Hydrologic-Administrative Region XIII Aguas del Valle de México, where 23.55 million people reside, has a water stress level of 141.4% and average available freshwater equal to 144 m³/inhabitant/year. By 2030, these figures are estimated to stand respectively at 148.2% and 130 m³/inhabitant/year. http://sina.conagua.gob.mx/publicaciones/EAM_2018.pdf.

⁵ <https://www.inegi.org.mx/programas/ccpv/2020/>.

⁶ http://www.conapo.gob.mx/work/models/CONAPO/Mapa_Ind_Dem18/index_2.html.

⁷ Atlas Nacional de Vulnerabilidad al Cambio Climático. INECC. 2019 edition.

⁸ Access to water has an impact on health, education, equity (gender, regional, and ethnic), and economic and social development of countries (Sustainable Development Goals, United Nations, 2015).

resources, and establishes CONAGUA's authority to promote efficient water use, among the agency's other duties. The states have created State Water Commissions (CEAs), which are decentralized public agencies with separate legal status and their own assets. The purpose of the CEAs is to support the federal government in managing water as a resource, assist the municipios in developing water and sanitation services, and support the efficient use of water for productive purposes (primarily agriculture). In turn, the municipios are responsible for delivering water and sanitation services. Accordingly, municipios with sufficient administrative capacity have created their own water and sanitation utilities, while others have joined other municipios to create intermunicipal utilities or have availed themselves of a state agency to deliver the service on behalf of the municipio. The utilities are decentralized municipal or state government agencies with separate legal status and their own assets. They are responsible for water and sanitation service delivery throughout the municipal territory. In other cases, in the absence of a utility, the municipal government delivers the service directly. The water and sanitation service rates are set as determined in each state law; thus, rates may be approved by utility boards, municipal councils, or state congresses.

- 1.3 **Status of water and sanitation services.** As of 2015, 94.4% of the population had piped water in the home or on the property, and 91.4% of the population had a connection to the sanitary sewer network or a septic tank.¹ However, only 66.9% of the population receives water on a daily basis. Moreover, this percentage drops to 61% if the population that has water every day, separate sanitary facilities, and connection to a sanitary sewer network or septic tank is taken into account.⁹ In general, despite the progress made in terms of access to water service, no major improvements have been seen in terms of service quality. This is attributed to the limited management capacity of utilities, as reflected in their low physical efficiency¹⁰ and commercial efficiency¹¹ levels. On average, physical efficiency levels are at 55.8%; this means that 44.2% of the water goes unbilled and much of it is lost due to leaks in the distribution networks. The collection rate¹² is low, averaging 72.1% of billing;¹³ the ratio of operating expenses to collection averages 127%;¹³³ and house metering coverage does not exceed 57%.¹³³ As a result, the financial sustainability of the utilities is limited. In terms of impacts on the population, service quality is as important as service access, and the burden is proportionally greater for poorer households, which are forced to replace network water access with more expensive and more distant alternatives.¹⁴ In Mexico, there are approximately 160 mid-sized utilities, i.e. utilities serving communities of 50,000 to 900,000 inhabitants. While in terms of number they account for only 9% of the country's total, the water they produce accounts for 40% of the nationwide total and they have 43% of the potable water intakes. Thus, it is estimated that they serve a similar proportion of the country's inhabitants. In these communities,

⁹ Data from 22 states. IDB analysis of the [2016 National Household Survey](#).

¹⁰ The ratio of water billed to water produced.

¹¹ The ratio of amount collected to amount billed.

¹² The ratio of annual amount collected to annual amount billed.

¹³ Internal IDB analysis of the PRODI I program.

¹⁴ [Water and Sanitation Sector Framework Document](#).

95% of the population has piped water on the property, and 88.8% has a connection to the sanitary sewer network.¹⁵

- 1.4 **Performance of utilities serving mid-sized cities.** The situation of utilities in mid-sized cities reflects the national context, with low efficiency levels evidenced by physical losses from distribution networks, commercial losses (unbilled customers, inaccurate metering of water use, or illegal connections), and operational inefficiencies (asset management, energy efficiency, staff training, and preventive maintenance). The utilities also have shortcomings in information management (registry of users, billing systems, management software and hardware). Lastly, low payment collection rates in some cases, resulting from low metering levels and obsolete business systems with outdated rates, due to factors including the absence of a rate structure that reflects the actual costs of operation, have had an impact on quality of service. Data from the PIGOO¹⁶ show the following on utilities serving urban settlements of between 50,000 and 900,000 inhabitants: (i) in 21 of the 35 utilities that reported service continuity data, service interruptions last 10 or more hours a day; (ii) only 16 of the 29 utilities that reported commercial efficiency¹⁷ had a level of more than 70%; (iii) only 7 of the 35 utilities that reported nonrevenue water¹⁸ had a level of less than 30%; (iv) at only 38 of the 64 utilities that reported household metering does this type of metering account for at least 50% of the connections; and (v) only 11 of the 69 utilities that reported the indicator for employees per connection have 4 or fewer employees per thousand connections. These data are very different from those in other countries around the world.¹⁹ In terms of the financial condition of the utilities, it is estimated that, on average, US\$69 of every US\$100 spent on operating water and sanitation systems is recouped through revenue from rate collection,²⁰ the deficit being covered with contributions from national and subnational (state and municipal) governments.
- 1.5 One of the main recommendations of the World Health Organization (WHO) to stop the COVID-19 pandemic continues to be proper hand-washing.²¹ In this context, CONAGUA and the utilities were the main parties responsible, to the extent of their capabilities and authority, for ensuring acceptable continuity and quality of drinking water and sanitation services for the entire population, particularly the most vulnerable.²² During the emergency, utilities subsidized rates, suspended cut-offs of water, reconnected free of charge, and supplied water trucks

¹⁵ 2010 Population and Housing Census. National Statistics and Geography Institute (INEGI).

¹⁶ Programa de Indicadores de Gestión de Organismos Operadores [Utility Management Indicators Program].

¹⁷ Defined as volume of paid water divided by volume of billed water.

¹⁸ Nonrevenue water is defined as the drinking water entering a distribution system that is not registered on users' household meters, mainly due to their inaccuracy, leaks from the distribution network, or fraudulent consumption (unauthorized connections).

¹⁹ [In countries such as Brazil, Chile, and Poland, service continuity is 24 hours a day; nonrevenue water is 39% in Brazil, 33% in Chile, and 15% in Poland; the number of employees per thousand connections is 2.15 in Brazil and 8.7 in Poland.](#)

²⁰ Vazquez-Ahued, F. and Rodriguez, R., Mexico Water Companies, Moody's Investors Service.

²¹ WHO 2021. Actions for consideration in the care and protection of vulnerable populations from COVID-19.

²² Daily Gazette 2020. Agreement establishing extraordinary transitional measures to ensure the supply of national water for domestic and public urban use to population centers, as part of the comprehensive health emergency service caused by the SARS-CoV2 virus (COVID-19).

for the population without service.²³ These measures have had significant implications for the utilities during the pandemic, since having been declared an essential service, their operation continued, even when staff became infected or died due to the SARS-CoV-2 virus, in addition to the economic (reduction in revenue of up to 50%) and operational implications (such as the 30% to 40% increase in demand for water).²⁴ Due to these circumstances, along with the conditions of the utilities before the pandemic, utilities will be required to make more efficient use of resources, reducing their operating expenses and boosting management efficiency to address the new demands, as well as making investments aimed at upgrading the quality and continuity of the service delivered to users. These considerations reinforce the relevance of this program.

- 1.6 **Previous programs.** To ensure that the country's utilities deliver efficient and reliable water and sanitation services to their users, since 2006 CONAGUA has set a strategy of making the utilities more efficient. Thus, between 2010 and 2014, together with the World Bank, CONAGUA implemented the Water Utilities Efficiency Improvement Project (PROME). While PROME succeeded in elevating some indicators at the participating utilities, CONAGUA concluded that the financed actions did not produce the expected results. The lessons learned from this program include the following: (i) investment planning needs to be strengthened to make investments more strategic; (ii) mechanisms need to be found to sequence investments logically; (iii) systems for generating indicators need to be strengthened, and a reliable baseline is needed, so the impacts of project implementation can be monitored; and (iv) in some utilities, the investments have been very small, making it impossible to obtain tangible results.²⁵ These lessons were taken into account when formulating the PRODI program.
- 1.7 **Comprehensive Development Project for Water and Sanitation Utilities (PRODI).** In November 2015, the Bank approved PRODI for US\$200 million, with the objective of improving the quality of water and sanitation service in communities of preferably 50,000 to 900,000 inhabitants through the execution of short- and medium-term actions by the utilities responsible for service delivery, to promote their operational and financial sustainability through comprehensive development. Specifically, the program sought to help utilities reduce their operating costs, boost revenue collection, and recover flows, thereby freeing up resources for investment in infrastructure. The interventions were different for each utility and were prioritized on the basis of impacts and costs, in accordance with the respective comprehensive development plan (CDP).²⁶ The actions planned and agreed-upon by CONAGUA and the states were implemented either directly by the utilities or by the municipal or state governments based on their respective capacity and the agreement between the parties. This program developed 107 CDPs with an original target of 65, demonstrating the program's high level of drawing power. At the same time, 179 training workshops were held, with an

²³ Maiescuerra, V. et al., The Water, Sanitation, and Hygiene Sector and Its Response to COVID-19; Initiatives in Latin America and the Caribbean, UNICEF.

²⁴ [ANEAS 2020. Agua y COVID-19. Agua y Saneamiento.](#)

²⁵ PROME diagnostic assessment and impact of results on the participating utilities in the 2010-2013 period, and strengthening proposal. IMTA. 2015.

²⁶ Planning document that makes it easier to identify the specific challenges faced by the utilities in reaching financial sustainability and prioritizing the actions to be implemented.

original target of 15. With respect to the actions stipulated under the program, 311 actions were taken to improve business management, reduce physical losses, and reduce electricity expenses. The foregoing was achieved by using 17.15% of the resources, since the rest was canceled. Nonetheless, it is estimated that some of the relevant targets were partially achieved for the sector in Mexico. It is estimated that at least 10 utilities improved their business efficiency by over 65%. With respect to loss reduction, the interventions related to improving commercial systems and leak control were estimated to impact 10 utilities to control their physical and commercial leaks to levels below 40%. Lastly, with respect to improving energy efficiency, it is estimated that at least 10 utilities reduced their expensed on electricity consumption to less than 20% of operating expenses.

- 1.8 **Comprehensive Development Program for Water and Sanitation Utilities II (PRODI II).** A new federal government administration took office in December 2018 and performed an evaluation of all existing programs with multilaterals. In February 2019, the Government of Mexico decided to cancel the remaining PRODI funds due to budgetary adjustments in the SHCP. Specifically, the budgetary provision for CONAGUA was cut by a total of 16%, impacting all federalized programs.²⁷ This did not allow CONAGUA to comply with the program's disbursements in the agreed upon time frames, which led to the cancellation process. In September 2019, the Government of Mexico decided to resume the program following an analysis of the benefits (including support, transparency, and knowledge products such as AquaRating²⁸) accruing to the sector as a result of the efficiency improvement actions implemented in close collaboration with the Bank. Consequently, it was agreed to prepare a new program aimed at improving the efficiency of the utilities, taking into account the experience gained and lessons learned from PRODI so as to maximize the program's benefits and include elements that are important for the Government of Mexico.
- 1.9 The preparation of PRODI II was postponed one year due to reprogramming activities between the SCHP and CONAGUA. During this period, SHCP officials also changed in the departments related to public credit and international affairs. With respect to the financial agent, the SCHP designated Nacional Financiera (NAFIN) for this role in the program. Lastly, on 10 January 2022, CONAGUA formally ratified the IDB financing for PRODI II from the SHCP.
- 1.10 **Lessons learned.** The Bank has maintained an active dialogue with CONAGUA, the utilities, and the CEAs with a view to identifying and systematizing lessons learned from PRODI I (loan 3591/OC-ME). These lessons include: (i) a planning framework is needed to guide the actions to be implemented; accordingly, the program will make having a CDP a requirement; (ii) financing isolated actions makes it impossible to show impacts on efficiency; accordingly, the program will incentivize packages of actions rather than isolated actions; (iii) even though the program serves mid-sized utilities, it is difficult for the smallest utilities within this group to obtain funds for the program counterpart; accordingly, the program will

²⁷ Evolution of the Budget exercised by CONAGUA
<http://sina.conagua.gob.mx/sina/tema.php?tema=presupuestoinvertido>.

²⁸ Tool for assessing the performance of utilities developed by the Bank and the International Water Association (IWA). [AquaRating](#).

differentiate the counterparts²⁹ based on the size of the utility or its characteristics; (iv) an indicator monitoring tool is needed in order to monitor the program; accordingly, the program will support CONAGUA in strengthening its information systems; (v) since the investment needs in large utilities may be too big to be covered by the program, it is advisable to foster changes in practices that achieve impacts; accordingly, the program will encourage the use of the AquaRating tool, making it possible to affect utilities not only through investments but also by improving their practices; and (vi) with regard to support from the private sector,³⁰ the healthier utilities should be encouraged to obtain loans to finance profitable interventions; accordingly, the program will support utilities that decide to explore options for entering into energy efficiency, nonrevenue water, or commercial management contracts with the private sector.

- 1.11 **Intervention strategy.** With a view to helping to reduce the impact on water resources through a more efficient use of water and improving the quality of the service delivered to the population, the program envisages demand-driven interventions in utilities serving communities of 50,000 to 900,000 inhabitants by financing actions grouped into comprehensive packages and aimed at reducing physical losses, boosting energy efficiency, and improving commercial management.^{31 32} These packages will be prioritized according to their benefit-cost analysis and will be framed in an existing CDP or a CDP to be specifically formulated for each utility. CONAGUA will provide incentives (additional resources) to encourage the utilities to commit to these packages. The CDP is intended to be the utility's governing document for achieving comprehensive development. It will contain a diagnostic assessment and describe the investments to be made by the utility within a period of five years, outlining actions grouped into packages and setting out indicators and expected benefits for each action. The program will support financing new CDPs with program resources, and utilities that already have a CDP³³ will finance an update of their respective plans with the support of consultants who will participate in training workshops. In order to ensure that the program acknowledges the particular characteristics of the participating utilities, use of the AquaRating³⁴ tool will be recommended in the case of utilities

²⁹ The differentiated counterparts are listed in the federal operating rules of the PROAGUA program and will be reflected in the final version of the OPM.

³⁰ The private sector may participate under proven modalities, such as performance-based contract arrangements to reduce nonrevenue water or through energy service companies (ESCOs) for the execution of energy efficiency programs.

³¹ The actions to be financed are similar to those of PRODI I; however, PRODI II has created packages of actions out of the PRODI I actions.

³² Evidence of the effectiveness of installing household meters may be seen in Da Silva, Nilce Regina, Estudo Metodológico para Avaliação de Submedição de Hidrômetros Domiciliares em Sistemas de Água, Master's thesis, Universidade de Brasília, publication, [PTARH-DM-2008](#). Evidence of the effectiveness of interventions to control nonrevenue water may be seen in [European Bank](#) Documentation of best practices in non-revenue water management in selected Mediterranean countries: Algeria, Israel, Jordan, and Morocco, 2013 and in Rizzo, Alex, Pearson, David, Stephenson, Matthew, and Harper, Neil; Apparent Loss Control: A practical Approach; International Water Association (IWA), Water 21 seventh article, IWA Task Force, June 2004. Evidence of the link between household metering and financial sustainability may be seen in Lentini, E.; Desafíos de los operadores de áreas urbanas de más de 300.000 habitantes, [IDB, 2015](#).

³³ There are 107 existing CDPs, accounting for more than half of the eligible utilities serving 50,000 to 900,000 inhabitants.

³⁴ [AquaRating](#).

serving communities of 500,000 to 900,000 inhabitants, and an additional incentive will be offered to all other utilities interested in using this tool.

- 1.12 **Technical cooperation.** To strengthen the design and implementation of PRODI II, a technical cooperation operation was approved for US\$500,000 (ATN/OC-18160-ME)³⁵ and will focus on: (i) strengthening the intellectual and organizational capital of the utilities, the CEAs, and CONAGUA; (ii) conducting operational, financial, and socioenvironmental efficiency studies; (iii) improving the information systems for technical, operational, and regulatory monitoring and evaluation; (iv) incorporating the concepts of innovation, circular economy, and integrated watershed management into the water and sanitation services, including an analysis of effluents and reduction of greenhouse gas (GHG) emissions; and (v) developing a labor competence standard and Mexican standard to improve staff management at utilities.
- 1.13 **Context of vulnerability to climate change.** Due to its geographic location and socioeconomic context, Mexico is vulnerable to climate change. Over the past decade, the country has faced countless extreme hydrometeorological events such as floods, hurricanes, and droughts. Between 1980 and 2012, the economic losses associated with events of this type rose threefold, reaching an annual average of about 21 billion Mexican pesos as a result not only of an increased frequency of events but also of greater exposure. Some of the projected impacts of climate change are: (i) water resources: the country will tend to be drier, with more frequent droughts and a resulting increase in water consumption; (ii) floods: increased risk of floods due to a projected rise in both the intensity and frequency of extreme precipitation events; (iii) storms and hurricanes: increased intensity in cyclones from the northwest, the Pacific, and the Atlantic. With regard to vulnerability, the Atlas Nacional de Vulnerabilidad al CC [National Atlas of Vulnerability to Climate Change] (ANVCC) indicates that at least 50% of the country's states already have high to very high vulnerability to water stress and this vulnerability is trending upward, particularly in the case of states in the northeast and the Yucatan peninsula.
- 1.14 **Greenhouse gases (GHG).** Mexico is the world's 11th largest producer of GHG.³⁶ According to the National Inventory of Greenhouse Gas and Compound Emissions, the country's emissions in 2015 totaled 683 million tons of CO₂ equivalent. If this trend prevails, the Government of Mexico estimates that by 2020 this amount will increase by 28% to 1 billion tons of CO₂ equivalent. In the water and sanitation sector, energy efficiency projects in pumping equipment represent a great opportunity for reducing GHG. The savings will depend on volume pumped and on energy intensity per cubic meter,³⁷ and it can be shown that the economic and environmental costs involved are considerable and worth reducing. The actual reductions in GHG per economic activity can be recorded and estimated with the help of various software tools. One of these is the Energy Performance and Carbon Emissions Assessment and Monitoring (ECAM) tool developed by the German

³⁵ The technical cooperation operation was approved in August 2020 and expires on 6 February 2023. To date, 6.51% of the resources have been disbursed and were used in the preparation of INFOAPAS information systems that will centralize the utilities' management information.

³⁶ [World Economic Forum](#).

³⁷ Rosenblum Environmental Engineering. Greenhouse Gas Emissions from Water Supply Operations: Current Inventory and Potential Reductions, 2007.

Agency for International Cooperation (GIZ), which helps water and sanitation utilities quantify their GHG emissions and thus determine their share of the country's nationally determined contribution (NDC) in mitigation.

- 1.15 **Gender diagnostic assessment.** CONAGUA³⁸ has been awarded a bronze certification under the Mexican Standard on Equality and Nondiscrimination in the Workplace. This means that CONAGUA applies the following six principles in its internal projects and programs: (i) equality practices and prevention of discriminatory acts; (ii) equal-opportunity work environment; (iii) continuous improvement in labor equality and nondiscrimination; (iv) teamwork; (v) decent employment; and (vi) accessible facilities for persons with disabilities and older adults. To comply with the standard, CONAGUA has created: (a) an ethics committee; (b) a measurement of the work environment and organizational culture; (c) an annual transformational improvement program; (d) a gender liaison network implementing projects at the national level; (e) mechanisms for equal-opportunity hiring for men and women; (f) adaptation of facilities to make them accessible to persons with disabilities; and (g) action plans to address the recommendations of the equality audits. CONAGUA also works in coordination with the Instituto de la Mujer de México [Mexico's Women's Institute] (INMUJERES) through its PROIGUALDAD program, which seeks to incorporate a gender approach into State institutions, particularly along two lines related to water resources: (i) fostering women's access to water resources; and (ii) supporting the cleanup and supply of water for human consumption and domestic use in rural areas, where women are responsible for supplying water for the household. CONAGUA recognizes the need to maintain this progress and continue to narrow its equality gaps in terms of staff and infrastructure. Thus, it has decided to obtain a recertification under the aforementioned standard, introducing actions to provide breastfeeding rooms in its national offices (at present there are only three: CDMX, Oaxaca, and Yucatán), grant paternity leaves that exceed the legal requirement, and increase the percentage of women on the payroll and in executive positions, which in the latter case is currently 30% ([optional link 6](#)).
- 1.16 **Priorities and strategies of the Government of Mexico.** The PND-2019-2024³⁹ envisages the comprehensive preservation of rivers, streams, and ponds, which will have been recovered and cleaned up. It also envisages that wastewater treatment and proper waste management will be common practice throughout the national territory, and that environmental awareness and the need to care for the environment will have become more entrenched in society. The PNH-2020-2024⁴⁰ addresses the need to progressively guarantee human rights to water and sanitation, especially for the most vulnerable population, and states that efforts will be focused on institutionally strengthening the utilities that provide water and sanitation services. Guidelines will be proposed to improve the financial condition of the utilities as well as to help them professionalize and retain their staff, while civil society representation in the utilities' governing bodies will be promoted. In addition, providers of municipal and community services will be encouraged to

³⁸ Information provided by CONAGUA's Office of Innovation and Institutional Strengthening in the course of preparing this loan operation.

³⁹ [PND 2019-2024](#).

⁴⁰ [PNH 2019-2024](#).

contribute to the enjoyment and exercise of human rights as well as to meeting the Sustainable Development Goals (SDGs).

- 1.17 **Strategic alignment.** The program is aligned with the IDB Group Country Strategy with Mexico (2019-2024) (document GN-2982) through the strategic objective of improving the quality and sustainability of water services, since the proposed operation will help to improve water and sanitation services by boosting the efficiency of providers and improving their institutional framework. In addition, the program is consistent with the second Update to the Institutional Strategy 2020-2022 (document AB-3190-2) and is aligned with the challenges of: (i) social inclusion and equality, since the program will assist in improving the delivery of basic water and sanitation services, especially to the most vulnerable population groups, which generally lack quality water services; and (ii) productivity and innovation, since it will promote efficiency and innovation at the utilities by implementing business innovation plans and promoting smart technologies to measure efficiency. Furthermore, the program is aligned with the crosscutting areas of: (i) gender equality and diversity, since it seeks to help improve working conditions and increase equal employment opportunities for men and women and persons with disabilities; (ii) institutional capacity and rule of law, since it will support institutional strengthening of the utilities to improve the quality of water and sanitation service, while also contributing to management accountability and transparency; and (iii) climate change and environmental sustainability, since it is expected to help reduce GHG emissions in the potable water production and wastewater treatment processes⁴¹ by implementing service management and operational improvements at the utilities, while also helping to reduce the vulnerability of mid-sized city communities to the impacts of climate change in terms of water availability, particularly in states that are more prone to extreme droughts. In all, 51.94% the operation's resources are invested in climate change adaptation and mitigation measures pursuant to the [joint multilateral development bank methodology](#) and contribute to the IDB target of increasing finance for climate change-related projects to 30% of the approved volume in 2022. The program is also aligned with the IDB Infrastructure Strategy: Sustainable Infrastructure for Competitiveness and Inclusive Growth (document GN-2710-5) in the priority area of "supporting the construction and maintenance of sustainable social and environmental infrastructure" to help to improve the quality of life. The operation is included in the 2022 Operational Program Report (document GN-3087). Lastly, the program is consistent with the dimensions of success and lines of action of the Water and Sanitation Sector Framework Document (document GN-2781-13) in terms of universal access to high-quality water and sanitation services and social and environmental sustainability. The program is also aligned with the IDB's Vision 2025 as it promotes modernization, innovation, and enhanced management, as well as the efficiency of water and sanitation service providers.
- 1.18 **Gender actions.** Based on the gender diagnostic assessment, it was decided to contribute to the gender policy improvement undertaken by CONAGUA's Office of Innovation and Institutional Strengthening. This will be done through the following actions: (i) support CONAGUA's recertification process under the Mexican standard on equality and no discrimination in the workplace, including monitoring actions to promote an increased share of women in decision-making positions,

⁴¹ These effects can be assessed through the ECAM or AquaRating tools for the utilities that use them.

- workplace violence and harassment prevention, improvements in the work environment, and equitable compliance with wage standards, etc.; (ii) design four gender action plans for utilities, taking the requirements under the standard as a basis and including similar actions to those listed in the preceding point; (iii) introduce gender criteria into the program's water and sanitation federal operating rules to be complied with by the utilities; and (iv) build content for a training module on gender issues (gender awareness, violence prevention, importance of gender in water management, etc.) to be included in the Escuela del Agua para Prestadores de Servicio de APyS [Water School for Water and Sanitation Service Providers] and at CONAGUA, etc.⁴²
- 1.19 **Climate change.** In line with the above-described context of Mexico's vulnerability to climate change and the country's GHG emissions situation, the program will finance training activities to help the utilities to: (i) quantify GHG emissions and determine their share of the NDC;⁴³ and (ii) design interventions in energy efficiency and physical loss reduction. In terms of adaptation to climate change, the program also helps to boost the systems' resilience to extreme climate events by developing contingency preparedness plans ([optional link 7](#)).
- 1.20 **Innovation and productive local development.** This program voluntarily includes the use of the AquaRating tool, a rating system that comprehensively assesses the performance of the utilities, and the ECAM tool. In addition, technical cooperation funds will be used to implement efficiency-driven innovation plans at some of the program's participating utilities. Coordination arrangements will be made with IDB Lab to incorporate productive actions into the program, such as providing for the participation of private businesses to improve water and sanitation service delivery, including management models and innovative technologies. The program will promote the development of skills through training programs on the implementation of the ECAM and AquaRating tools, promoting women's participation. It will also foster the use of smart metering and satellite leak detection systems. A consolidated market for household metering already exists, allowing the private sector to participate under an arrangement that rewards billing increases.
- 1.21 **Consistency with the Bank's Public Utilities Policy.** The proposed program and the national sector objectives are consistent with the principles of the Bank's Public Utilities Policy (document GN-2716-6) and meet the conditions of financial sustainability and economic evaluation. At the same time, the statements of income of the utilities included in the sample show they have sufficient operating revenue to cover their operation and maintenance (O&M) costs. In addition, the program's actions will have an impact in terms of boosting operating revenue and reducing operating costs for the utilities, thus directly improving their financial sustainability (see paragraph 1.31). The works to be financed through the program are also viable from the socioeconomic standpoint (see paragraph 1.29). To ensure that the program is in line with the principles of this policy, the Operations and Procedures Manual (OPM) will establish that, in order to analyze financial

⁴² The first three actions will be implemented with technical cooperation funds associated with the operation and the fourth action will be implemented with resources from program component 1.

⁴³ The NDCs set out the climate policies of the countries and the actions they intend to take to reduce emissions and adapt to climate change in a number of sectors: for example, decarbonizing energy supply through shifts to renewable energy, energy efficiency improvements, better land management, urban planning, and low-carbon transport. UNFCCC.

sustainability, a CPD for the utility must be submitted showing that the utility has sufficient revenue to fully cover its O&M costs ([optional link 4](#)).

B. Objectives, components, and cost

- 1.22 **Objective.** The program's general objective is to assist in improving the quality of water and sanitation service in Mexico, in communities of 50,000 to 900,000 inhabitants, by boosting the efficiency of participating utilities. The specific objectives are to strengthen the operational and financial capacity of the utilities by implementing short- and medium-term comprehensive actions and projects.
- 1.23 **Component I: Institutional support (US\$1 million):** This component will support actions to help CONAGUA, the CEAs, and the utilities create specialized technological tools to support management that are needed to carry out the investments under component II. Thus, it will support: (i) the institutional strengthening of the utilities with a gender, climate change, and sustainable infrastructure approach;⁴⁴ (ii) consolidation and implementation⁴⁵ of water management support tools; and (iii) gender actions to enable CONAGUA to maintain its equality and gender certification.
- 1.24 **Component II. Investment in efficiency-related individual actions and comprehensive action packages in support of utilities (US\$98.7 million):** This component will finance packages stemming from the Comprehensive Development Plan (CDP), which is a rapidly produced planning document that facilitates the identification of the utilities' specific challenges, in order to prioritize actions through the structuring of investment packages. These packages are divided into three main categories: (i) physical water loss reduction, with actions such as the procurement and installation of specialized equipment to reduce nonrevenue water, for hydraulic optimization and flow control, an inventory of water infrastructure, and the detection and elimination of leaks, etc.; (ii) increased energy efficiency to reduce costs, considering actions such as the diagnostic assessment of energy efficiency; procurement and installation of equipment to reduce energy consumption; and the automation of pumping equipment; and (iii) commercial management to increase utilities' revenue with actions mainly involving the procurement and installation of micrometers; rate studies; preparation and updating of registries of users, updated of business systems, and reduction of the past-due portfolio. Financing will also be provided for individual actions like those listed above in order to help the utilities gradually achieve their objectives.
- 1.25 **Audit, monitoring, and evaluation (US\$300,000):** CONAGUA and the Bank will conduct the audit, monitoring, and evaluation of the program with the support of NAFIN and the participating utilities.

⁴⁴ The programs will cover sector governance issues, technical issues such as energy efficiency, nonrevenue water, commercial efficiency, climate change mitigation and adaptation, the importance of a gender approach in water management, and women's leadership in the companies.

⁴⁵ The tools include AquaRating, ECAM, and others, and are intended to bring about a change in practices at the utilities with a view to boosting their efficiency. CONAGUA plans to link the implementation of AquaRating to the devolution of water-use rights. Within the framework of the program, the primary aim will be to bring about an improvement in the utilities' practices associated with operational and commercial efficiency. Technical cooperation operation ME-T1424 has available resources specifically allocated to support AquaRating issues in Mexico.

C. Key results indicators

- 1.26 **Expected outcomes.** The program's most significant indicators and expected outcomes are shown in Table 1. The Results Matrix is available in Annex II.

Table 1. Key indicators

Outcome indicator	Unit of measure	Baseline	Target
Number of households with drinking water service for an average of more than 14 hours a day in cities participating in the program	Number of households ⁴⁶	0	2 million
Reduction in the average cost of electric energy per m ³ produced at participating utilities	%	0	10.3
Increase in the average annual collection rate (collected/billed) at participating utilities	%	0	12.7
Reduction in the average nonrevenue water rate at participating utilities	%	0	12.5

- 1.27 **Beneficiaries.** The direct beneficiaries of this program will be the utilities that primarily serve communities of 50,000 to 900,000 inhabitants. It is estimated that over the life of the program, two million households will benefit. The program will indirectly help to mitigate unequal access to safe drinking water, since improved efficiency at the utilities will lead to greater service availability and quality. CONAGUA, the CEAs, and the utilities will also be program beneficiaries inasmuch as their technical capacities will be strengthened in various areas.
- 1.28 **Technical viability.** The proposed technical solutions satisfy the need to improve water service for the segment of utilities selected. The projects and interventions identified in the CDPs fully comply with the technical requirements for works of this type. Studies of engineering configurations and options were performed and compared to find the most feasible option. The parameters for the size of the facilities are in line with national and international engineering recommendations. The options were costed and compared to evaluate the economically feasible solution, with cost values in line with local and regional prices. The technologies involved are widely known in Mexico and fully mastered by the utilities. Moreover, the utilities have the necessary procedures and practices to operate and maintain new assets during their service life. These will be strengthened by the activities to be conducted under this program ([optional link 2](#)).
- 1.29 **Economic viability.** A cost/benefit analysis was done on the program's project sample. Given the types of projects to be financed (small, low-cost, and standardized), the sample analyzed is considered representative of the universe of interventions. Of the 16 evaluated projects, 15 are socioeconomically viable, with economic internal rates of return (EIRR) of between 9% and 191.2% ([optional link 1](#)). Given the nature of the program, conducting a cost/benefit analysis on each project carried out within the CDP will be an eligibility criterion, and only projects with an EIRR of over 12% will be financed by the program. The methodology to be used for the cost/benefit analysis will be described in the OPM. Lastly, for utilities in the sample, the average payment made by water service users is, for an average

⁴⁶ The baseline and target values are preliminary estimates. They will be defined during the operation's launch workshop.

household, between US\$5.4 and US\$12.6 a month, representing between 0.6% and 1.1% of average household income. In almost all cases there is a discounted rate for low-income households, such that they pay a monthly amount of between US\$2.7 and US\$4.4, representing between 1.3% and 1.4% of average household income. In cases in which there is no discounted rate, the monthly amount represents up to 3.5%. These values are acceptable by international standards.

- 1.30 **Institutional viability.** Based on the Institutional Capacity Assessment Platform (ICAP) as applied to CONAGUA, the programming and organization, execution, and internal and external control capabilities have a satisfactory level of development, creating a low level of risk for the activities to be carried out by the executing agency. CONAGUA's capacity and execution experience is supported by a number of IDB-financed programs.⁴⁷ CONAGUA also has a complete, reliable, and up-to-date database enabling it to monitor projects effectively and control the technical and financial aspects of the program.
- 1.31 **Financial viability.** The six utilities included in the sample have in the past fiscal year been covering their O&M costs with revenue from operations; however, this coverage has been limited in the case of some of these utilities.⁴⁸ The management indicators for these utilities exhibit inefficient values, such as low collection rates⁴⁹ and high nonrevenue water levels.⁵⁰ The program's actions will focus on improving the management of the utilities, and the financial assessment conducted on the basis of the CDPs indicates that these actions will have an impact in terms of boosting operating revenue⁵¹ and reducing O&M costs⁵² at the utilities, thereby enhancing their financial independence. The requirement that a CDP be prepared for each beneficiary utility will be included in the OPM and will be an eligibility criterion. This CDP will include financial viability studies demonstrating that sufficient funds will be generated to cover the O&M costs of systems related to the program ([optional link 3](#)).

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 **Modality.** The program is a global multiple-works operation, since it will finance physically similar works that are independent from one another. A representative sample has therefore been selected from among the universe of interventions (see paragraph 2.3). The program will be executed following the Operations and Procedures Manual (OPM), which establishes the project eligibility and selection criteria (see paragraph 3.3) and the program cycle.
- 2.2 **Eligibility and prioritization criteria.** CONAGUA will determine whether the utilities meet the following conditions to be eligible: (i) the utility serves primarily

⁴⁷ PRODI (loan 3591/OC-ME) is to close in June 2021; PROSSAPYS I, II, III and IV (loan 3133/OC-ME) were completed in 2018.

⁴⁸ The %EBITDA/operating revenue ratio of the utilities in the sample ranges from 2% to 34%.

⁴⁹ The collection rate of the utilities in the sample ranges from 52% to 91%.

⁵⁰ The nonrevenue water rate of the utilities in the sample ranges from 32% to 55%.

⁵¹ For example, the actions envisaged in the CDPs in terms of performance of rate studies, recording and updating of user registries, updating of commercial systems, and actions to reduce the past-due portfolio.

⁵² For example, the actions envisaged in the CDPs in terms of leak detection and elimination, and procurement and installation of equipment to lower energy consumption.

communities of 50,000 to 900,000 inhabitants;⁵³ (ii) is a decentralized agency; and (iii) the utility has not concessioned any of the assets used for the delivery of water and sanitation services, in whole or part. Priority will be given to utilities' actions that are progressing as established in their CDP. Individual actions not included in the CDP and described in Component II will require that the utility: (i) participate in the program through one or more actions included in the CDP; and (ii) submit a request to CONAGUA justifying the action to be carried out. Utilities meeting the eligibility criteria must, in turn, satisfy the following requirements: (i) a coordination agreement will be signed between the state and federal governments; (ii) the utility will formally apply to join PRODI II; (iii) the utility will sign a participation agreement for PRODI II with a commitment to adhere to the CDP, ensuring the sustainability of the investments to be made; (iv) the utility will provide all the information necessary for program monitoring and evaluation; and (v) in addition, the utilities that serve populations of over 500,000 inhabitants will perform a comprehensive evaluation of their performance under the AquaRating standard. The actions supported each year will be included in the CDP, which will be formalized through the signing of a participation agreement; these actions will have an internal rate of return (IRR) of more than 12%, as applicable. No specific interventions or packages of works evaluated as being in environmental category A will be financed, under the terms established in the OPM.

- 2.3 **Representative sample.** The program will be implemented as a global multiple-works operation. Accordingly, a representative sample was selected, comprised of investment actions to be implemented by utilities serving communities of between 50,000 and 900,000 inhabitants and representing 33% of the total investment amount under the program. The remaining actions under the program will be similar to those included in the sample. The utilities selected for the evaluation were chosen according to a set of criteria that includes population, geographic area, socioeconomic level, rates, number of employees per 1,000 connections, physical efficiency, and commercial efficiency. As a result, utilities serving the following cities will be evaluated: Hermosillo (north, 812,229 inhabitants), Ensenada (northwest, 522,768 inhabitants), Irapuato (center, 463,103 inhabitants), Nuevo Laredo (northwest, 373,725 inhabitants), Río Verde (center, 94,191 inhabitants), and Xalapa (south, 424,755 inhabitants). The interventions will be of the type described in the procurement plan ([required link 4](#)), which includes energy efficiency improvement (pumping system improvement), physical loss reduction (leak detection and repair), and commercial management improvement (development of user registry, billing systems, and household metering). The program will not finance specific interventions or works packages subject to environmental category A.
- 2.4 **Program cost and financing.** The total cost of the program will be US\$100 million from the Bank's Ordinary Capital resources. Table 2 shows the breakdown of projected costs:

⁵³ Eligibility criteria for populations outside the range of 50,000 to 900,000 inhabitants will be included in the OPM. The total investment in these communities may not exceed 10% of the amount of the program.

Table 2. Program costs (US\$ thousands)
(indicative figures)

Category / Component	IDB	%
I. Components	99,700	99.7
<i>1. Institutional support</i>	<i>1,000</i>	<i>1.0</i>
Training workshops and exchange of experience	405	0.495
Gender actions	595	0.495
<i>2. Investment in efficiency-related individual actions and comprehensive action packages in support of utilities⁵⁴</i>	<i>98,700</i>	<i>98.7</i>
Comprehensive energy efficiency packages	8,342	8.342
Comprehensive business management packages	8,342	8.342
Comprehensive packages to reduce physical water losses	8,342	8.342
Individual energy efficiency actions	30,429	30.429
Individual business management actions	25,660	25.660
Individual physical loss actions	17,585	17.585
II. Monitoring and evaluation	300	0.30
Monitoring	0.15	0.15
Evaluation	0.15	0.15
Total costs	100,000	100%

2.5 **Disbursement schedule.** The tentative disbursement schedule is shown in Table 3, with a five-year execution and disbursement period.

Table 3. Tentative disbursement schedule (US\$ millions)

Source	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026
IDB	5	20	25	25	25
Percentage	5%	20%	25%	25%	25%

2.6 **Review of disbursements.** Based on the Bank's experience implementing PROSSAPYS I, II, III, and IV and PRODI I, CONAGUA has effective controls and recordkeeping to identify the expenses of each program or operation. Accordingly, disbursements will be subject to ex post review. Moreover, in reliance on the country systems and on controls established by the Department of Finance and Public Credit (SHCP) and CONAGUA, this operation will also apply the simplified expense reporting system, i.e., disbursement requests will be supported by the accounting records of the transfers to the states, the coordination agreements, and the technical and execution annexes signed by CONAGUA annually with each state. CONAGUA will keep the details of each contract in its database.

⁵⁴ The costs for Component 2 are indicative.

B. Environmental and social risks

- 2.7 In accordance with the Environment and Safeguards Compliance Policy (Operational Policy OP-703), the proposed program was classified as category “B” operation, as it is expected to cause only short-term, localized adverse environmental risks and impacts, such as air pollution; noise generation; solid and liquid waste; potential contamination of bodies of water; risk of work-related and road accidents; and temporary impacts on the road system and blocking of street-fronting residences and businesses due to ditch digging and installations, for which there are applicable mitigation measures, primarily during the construction and/or equipment installation phase. Since this program is a multiple-works operation, a representative sample has been evaluated (see paragraph 2.3). As part of program preparation, an environmental and social analysis ([ESA](#)) was performed to identify the most significant socioenvironmental characteristics, impacts, and risks associated with the set of works and efficiency actions envisaged by the utilities included in the representative sample. This [ESA](#), which includes an environmental and social management plan (ESMP), confirmed that the planned interventions and their potential impacts can be mitigated through standard measures and good socioenvironmental practices. In addition, an environmental and social management framework ([ESMF](#)) was formulated for the program, setting out the specific control and management measures to be considered in the planning and execution stages of future investments envisaged under the program.
- 2.8 The program will not cause any physical displacement of population (thus excluding Operational Policy OP-710, Involuntary Resettlement) and will not affect critical natural habitats, these being exclusion criteria. Similarly, the program will not give rise to gender-based risks or exclusion. However, the Gender Equality in Development Policy (Operational Policy OP-761) will be applied in crosscutting fashion to all program actions to promote equal participation in benefits and development opportunities within the program. While the sample does not include indigenous populations, the potential application of the Indigenous Peoples Policy (Operational Policy OP-765) is considered in the event that cities with an indigenous population component are included in the program.
- 2.9 The program has been deemed to be of moderate risk, since most of the works are minor interventions that in some cases may require that avenues and streets be temporarily and partially closed off. Due to the nature of the projects, which are focused on improving water efficiency through equipment replacement and correction of flaws, potential temporary impacts have been identified that would affect commercial activities, transportation routes, and/or entrances to homes and social infrastructure. Most of the impacts are expected to be positive.
- 2.10 A meaningful consultation process was carried out, consisting of a mapping of key actors and the preparation and approval by CONAGUA and the relevant utility of a consultation protocol that was applied onsite at the utility for the city of Irapuato in the state of Guanajuato. This experience made it possible to improve the consultation methodology. In view of the health emergency faced by the country (COVID-19), the methodology was adapted to a virtual process that was successfully applied in the other five cities in the sample: Rio Verde, San Luis Potosí; Nuevo Laredo, Tamaulipas; Xalapa, Veracruz; Hermosillo, Sonora; and Ensenada, Baja California. With the support of the executing agency (CONAGUA), technical options and procedures to organize a culturally appropriate event and

achieve the participation of key actors were agreed upon with each of the utilities. There is a record of participants and there are recordings of the consultation meetings. Participants in the process included direct beneficiaries represented by members of municipal water and sanitation advisory boards, representatives of service users and neighborhood councils, regional and municipal authorities, and specialists from the utilities. Satisfactory outcomes were achieved, leading to recommendations such as: improve communication between the utilities and users; effectively enforce the workplace safety and health program and the waste management procedures; improve the customer care arrangements; and promote women's participation in consultations, meetings, and citizen committees. These recommendations have been included in the ESMP and have been considered in the program design. Versions of the [ESA](#), ESMP, and [ESMF](#) approved by the Bank and by CONAGUA have been published. The final versions of these documents have been published along with the [consultation report](#).

C. Fiduciary risks

- 2.11 CONAGUA has many years of operating experience with both the IDB and the World Bank and has the support of NAFIN as financial agent. NAFIN has carried out international operations as a financial agent of the federal government for more than 50 years, including operations with the IDB, so it is highly familiar with the Bank's policies and procedures. The level of development of its fiduciary systems, as reflected in the risk matrix, is considered to be satisfactory. Consequently the level of risk for program execution is deemed to be low. In addition, the results of the ICAP show that CONAGUA has a sufficient level of development and so represents a low risk for program execution. Ex post review is recommended for disbursements and procurement, except when the procurement plan states otherwise for specific processes.
- 2.12 **Sustainability.** In both the National Development Plan (PND) and the National Water Plan (PNH), the current administration envisages efficiency goals, requiring that the inclusion of resources for purposes aligned with PRODI II be considered as part of the budget. In addition, CONAGUA has a specific budget line item for the program, which will allow it to have funds available for the program each year as soon as the federal expenditure budget is approved. Moreover, this will allow the program to continue even if there is no associated loan, as in the case of the Program for the Sustainability of Water Supply and Sanitation Services in Rural Communities (PROSSAPYS).

D. Other risks

- 2.13 The following medium- and high-level risks were identified, along with their respective mitigation measures:

Table 4. Other risks

Risk type	Risk description	Rating	Mitigation measures
Monitoring and accountability	Unreliable data for monitoring	Medium	The CDP will establish a baseline for each utility. Adaptation of CONAGUA's information system (INFOAPAS) to facilitate program monitoring.
Public management and governance	Lack of coordination among participating actors	Medium	The roles of each participant will be defined in the program OPM. Coordination will be reinforced through monitoring meetings.
	Political interference in human resources management by participating actors (staff turnover)	High	The CDP determines actions aimed at institutionalizing processes. The OPM clearly defines the roles of each participating actor.
Macroeconomic and fiscal sustainability	Failure by the SHCP to make a budget allocation to CONAGUA for the program	Medium	Program prioritization by CONAGUA. Existence of a specific allocation for the program in the CONAGUA budget.
Development	Lack of continuity in CDP implementation by the utilities	Medium	The capacities of CONAGUA and the CEAs for proper monitoring will be strengthened. The comprehensive packages of actions will be promoted, increasing budgetary support for this purpose.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Execution mechanism.** The executing agency will be CONAGUA, and the CEAs and utilities will participate in accordance with the criteria to be established for such purposes. NAFIN has been designated by the Department of Finance and Public Credit (SHCP) as the financial agent for the program through a mandate contract and will be the official representative in dealings with the Bank. Among its duties under the mandate contract and as set out in the OPM, NAFIN will be responsible for submitting disbursement requests and program reports on physical progress and finances to the Bank. These reports will be prepared by CONAGUA.
- 3.2 CONAGUA will be the institution responsible for technical coordination of the program, and it will be in charge of contracting auditors and consultants for program evaluations. The mechanisms for coordination between the actors and the commitments of each are established in the OPM.
- 3.3 **Special contractual conditions precedent to the first disbursement of the loan proceeds:** The first disbursement of the loan proceeds will be subject to compliance, to the Bank's satisfaction, with the following conditions: (i) The Bank will have received evidence that the mandate and program execution contract for the supervision and administration of the program between the borrower, the National Water Commission (CONAGUA), and Nacional Financiera, S.N.C., a development banking institution (NAFIN), as the borrower's financial agent, has been signed and is in force; and (ii) the program's Operations and Procedures Manual ([OPM](#)) is approved and in force, including an environmental and social management framework

(ESMF) under terms previously agreed upon with the Bank. These conditions are critical for ensuring proper program execution and coordination (between the financial agent and the executing agency) as well as for ensuring detailed guidelines on operational issues.

- 3.4 **Operations and Procedures Manual.** The program will be executed according to the provisions of the OPM, which will establish the eligibility criteria for beneficiaries and projects, and the criteria for allocating resources to the utilities or the CEAs. The OPM will also include the strategy for mitigating any adverse environmental and social impacts caused by project implementation, together with monitoring and oversight measures ([optional link 5](#)).
- 3.5 **Procurement of works, goods, and services.** All procurement of works, goods, and nonconsulting services and the selection and contracting of consulting services for the program will comply with Policies for the procurement of goods and works financed by the IDB (document GN-2349-15) and the Policies for the selection and contracting of consulting services financed by the IDB (document GN-2350-15), in the framework of the harmonized procurement documents agreed upon between the Bank and the Government of Mexico. For purposes of loan execution, CONAGUA will provide the Bank with the consolidated procurement plan for all of the states for each budget period (12 months). This plan will specify the review method to be used for the respective procurement processes. In February 2013, the Bank's Board of Executive Directors accepted the increased use of Mexico's public procurement system (adoption of the Mexican public procurement system), pursuant to the provisions of the updated country strategy (document GN-2595-3). The system may be used once the corresponding implementation agreement with the Government of Mexico has been signed.
- 3.6 **Procurement plan.** The procurement plan contains: (i) procurement list; (ii) procurement methods for goods; (iii) amounts, source of financing, and estimated time frames; and (iv) method for Bank supervision. Any proposed review of the procurement plan is to be submitted to the Bank annually or as required for approval. The procurement plan can be found in the following link: ([required link 4](#)).
- 3.7 **Disbursements and advances of funds.** Disbursements will be made in the form of advances or reimbursement of funds into a specific bank account held by the financial agent, in accordance with transfers made by CONAGUA to the states, based on its liquidity needs.
- 3.8 **Retroactive financing.** The Bank may retroactively finance, as a charge against the loan proceeds, up to US\$10 million (10% of the proposed loan) in eligible expenditures⁵⁵ incurred by the borrower prior to the loan approval date in any of the investment categories, provided that requirements substantially similar to those established in the loan contract have been fulfilled. Such expenditures will have been incurred on or after 20 March 2020 (project profile approval date), but in no case will expenditures be included if incurred more than 18 months prior to the loan approval date.
- 3.9 **Program financial and accounting management.** CONAGUA will be responsible for the program's financial management, for which it will: (i) keep separate accounts and budgets for management of the loan proceeds, reflecting

⁵⁵ These actions are essentially all those that are aligned with the program objectives and are directly related to improvements in commercial and energy efficiency and reduction of physical losses.

the amounts transferred to the states, as specified in the execution agreements; (ii) maintain an auxiliary system for administering, recording, and authorizing payments for works contracts and procurement of goods and consulting services; (iii) deliver the program's financial reports in a timely manner, and make available to the Bank and to the external auditors any accounting, financial, or other information the Bank may require; (iv) maintain records of disbursement requests; and (v) maintain an effective record-keeping system for supporting documentation for eligible expenditures, for verification by the Bank and the external auditors. The executing agencies at the state or municipal level, as the case may be, will meet the conditions described in the OPM and will: (i) prepare and deliver, in a timely manner, accounts of the use of program resources and any other information CONAGUA requires to submit its reports, through NAFIN, to the Bank; (ii) employ supervision mechanisms, including site visits to constructed works; and (iii) retain the original supporting documentation on the use of program funds in an accessible records system.

- 3.10 **Financial reports.** Through the financial agent, CONAGUA will deliver the program's audited financial statements 180 days after the end of the year and the last statement 180 days after the date of the last disbursement, in accordance with the terms of reference agreed upon with the Bank and the Civil Service Department (SFP). Given the decentralized nature of the program, and consistent with the previous operation, it is recommended that the period for delivery of the audited financial statements be extended to 180 days after the close of the fiscal period. The last such report will be delivered within 180 days after the date stipulated for the last loan disbursement. The cost of audits may be financed with the loan proceeds. CONAGUA will also deliver audited financial reports and procurement reports on an annual basis, within 60 days after the end of each calendar year.

Audits. The audit reports will be provided by an external audit firm acceptable to the Bank and designated by the SFP in accordance with the terms of reference. The costs of the financial audit will be covered by CONAGUA in all cases.

B. Summary of arrangements for monitoring results

- 3.11 **Monitoring and evaluation plan.** CONAGUA will prepare reports on the progress and outcomes of the activities for which it is responsible. The monitoring and evaluation system will include: (i) the procurement plan; (ii) the multiyear execution plan; (iii) annual work plans (AWPs); (iv) annual verification of fulfillment of targets set in the Results Matrix; and (v) semiannual reports containing: (a) activities carried out during the period, progress on execution, problems arising and how they were solved; (b) evaluation of the Results Matrix, procurement plan, AWP, and risk analysis; and (c) analysis of the project monitoring report (PMR), for which fulfillment of output indicator targets and Results Matrix outcomes will be evaluated. Execution during this period and planning for the following six-month period will be evaluated ([required link 2](#)).
- 3.12 A consulting firm acceptable to the Bank and engaged by the borrower will conduct a midterm evaluation once 50% of the loan amount has been committed, and a final evaluation once 90% has been committed, based on the targets and indicators agreed upon with the Bank in the Results Matrix, and including an ex post economic evaluation. The terms of reference and selection process will be approved in advance by the Bank ([required link 2](#)).

Development Effectiveness Matrix		
Summary		ME-L1295
I. Corporate and Country Priorities		
Section 1. IDB Group Strategic Priorities and CRF Indicators		
Development Challenges & Cross-cutting Issues	-Social Inclusion and Equality -Productivity and Innovation -Gender Equality and Diversity -Climate Change -Institutional Capacity and the Rule of Law	
CRF Level 2 Indicators: IDB Group Contributions to Development Results	-Households with improved access to water and sanitation (#)	
2. Country Development Objectives		
Country Strategy Results Matrix	GN-2982	Improve the quality and sustainability of water services
Country Program Results Matrix	GN-3087	The intervention is included in the 2022 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution		8.1
3.1 Program Diagnosis		2.5
3.2 Proposed Interventions or Solutions		1.6
3.3 Results Matrix Quality		4.0
4. Ex ante Economic Analysis		9.0
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		1.5
4.2 Identified and Quantified Benefits and Costs		3.0
4.3 Reasonable Assumptions		2.5
4.4 Sensitivity Analysis		2.0
4.5 Consistency with results matrix		0.0
5. Monitoring and Evaluation		9.5
5.1 Monitoring Mechanisms		4.0
5.2 Evaluation Plan		5.5
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood		Low
Environmental & social risk classification		B
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: Budget, Treasury, External Control, Internal Audit. Procurement: Information System.
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	Technical Cooperation for US\$500,000 (ME-T1424) to strengthen the design and implementation of PRODI II.

Evaluability Note: The general objective is to contribute to improving the quality of the water and sanitation service in populations of 50,000 to 900,000 inhabitants in Mexico, by increasing the efficiency of the participating Organismos Operadores (OO). The specific objectives are to strengthen the operational and financial capacity of the OOs by implementing comprehensive actions and projects in the short and medium term.

The documentation presents a solid diagnosis. It is noted that in the next decade there will be an increase in the degree of pressure on water resources, while the average natural availability of water will be reduced. Within this context, the OO — who manage the provision of drinking water and sanitation services in the municipal territories, will play an important role in promoting a more efficient use of water resources. The diagnosis identifies and quantifies the challenges faced by OOs in terms of low management capacity, low levels of physical and commercial efficiency, and low levels of collection rates.

To mitigate the problems identified, the Program will implement two components: 1) Institutional support, which focuses on strengthening the OOs, CONAGUA, and the State Water Commissions; and 2) Investment in actions and comprehensive efficiency packages in support of OOs, focused on reducing physical losses, energy efficiency, and commercial management. The proposed solution is clearly linked to the identified problems and needs. The results matrix (RM) reflects the objectives of the program and shows a solid vertical logic. The RM includes SMART indicators at the level of products and results with their respective baseline values, targets, and means to collect the information.

The program is conceived as a global multiple-works operation. Three Cost-Benefit analyzes are performed for a sample of 33% of the total amount, for typical projects such as Non-Revenue Water, Commercial Efficiency, and Energy Efficiency. Costs and benefits are appropriately identified and quantified. The assumptions made are reasonable and supported with administrative data from the projects analyzed. Of the 16 projects analyzed, 15 have a positive Net Present Value (NPV) with a range of internal rate of economic return (IRER) that varies between 9% (Commercial Efficiency) and 191.2% (Energy Efficiency). Sensitivity analyzes are performed under alternative scenarios, modifying the main variables that can affect costs and benefits; these modifications do not present significant alterations to the NPV or IRER.

The monitoring and evaluation plan proposes an evaluation using an ex-post cost-benefit analysis and a reflexive evaluation.

The risks identified in the risk matrix seem reasonable and are classified as Low (4), Medium (4), and High (1) risk. Risks rated Medium and High include a risk management strategy, description of the respective activities, and date or trigger.

RESULTS MATRIX

Project objective	The general program objective is to assist in improving the quality of water and sanitation service in Mexico, in communities of 50,000 to 900,000 inhabitants, by boosting the efficiency of participating utilities. The specific objectives are to strengthen the operational and financial capacity of the utilities by implementing short- and medium-term comprehensive actions and projects.									
OUTCOMES										
Indicator	Unit of measure	Base-line	Year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/Mean of verification
SPECIFIC OBJECTIVE 1: STRENGTHEN THE OPERATIONAL AND FINANCIAL CAPACITY OF THE UTILITIES BY IMPLEMENTING SHORT- AND MEDIUM-TERM COMPREHENSIVE ACTIONS AND PROJECTS.										
OUTCOME 1: HOUSEHOLDS WITH BETTER-QUALITY WATER AND SANITATION SERVICE										
1.1 Households with drinking water service an average of more than 14 hours a day in cities participating in the program	Number of households	0	2022					2,000,000	2,000,000	Comment: The baseline and target values are preliminary estimates. They will be determined during the operation’s launch workshop. MV: Analytical document from utilities annual report
OUTCOME 2: CONAGUA CONTRIBUTES TO EQUALITY AND NONDISCRIMINATION IN THE WORKPLACE										
2.1 Fulfillment of requirements by CONAGUA for obtaining a bronze certification under Mexican Standard NMX-R-025 on Equality and Nondiscrimination in the Workplace	%	100	2020					100	100	Comments: <u>Numerator:</u> Min 70 points required + 2 equalization, inclusion, and affirmative action measures required; <u>Denominator:</u> Min 70 points certified + 2 equalization, inclusion, and affirmative action measures certified. The requirements and certification process are described in detail in Mexican Standard NMX-R-025-SCFI-2015. MV: Pro-Gender agency certification
OUTCOME 3: WATER AND SANITATION UTILITIES REDUCE THEIR WATER LOSSES										
3.1 Reduction in the average nonrevenue water rate at participating utilities	%	0	2022					12.5%	12.5%	Comment: The nonrevenue water rate will be measured at each utility before it enters the program and at program end. The baseline and final values of the nonrevenue water average for the utilities may be calculated to measure the percentage reduction in nonrevenue water. Progress may be monitored at all participating utilities. MV: Annual operating reports by the utilities.

Indicator	Unit of measure	Base-line	Year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/Mean of verification
SPECIFIC OBJECTIVE 1: STRENGTHEN THE OPERATIONAL AND FINANCIAL CAPACITY OF THE UTILITIES BY IMPLEMENTING SHORT- AND MEDIUM-TERM COMPREHENSIVE ACTIONS AND PROJECTS.										
OUTCOME 4: WATER AND SANITATION UTILITIES BOOST THEIR FINANCIAL EFFICIENCY										
4.1 Reduction in the average cost of electric energy per m ³ produced at participating utilities	%	0	2022					10.3%	10.3%	<p>Comment: The cost of electric energy per m³ produced will be measured at each utility before it enters the program and at program end. The baseline and final values of the average cost of electric energy per m³ produced may be calculated to measure the percentage reduction in cost. Progress may be monitored at all participating utilities.</p> <p>MV: Annual operating reports by the utilities.</p>
4.2 Increase in the average annual collection rate (collected/billed) at participating utilities	%	0	2022					12.7%	12.7%	<p>Comment: The annual collection rate will be measured at each utility before it enters the program and at program end. The baseline and final values of the average collection rate may be calculated to measure the percentage increase in the collection rate. Progress may be monitored at all participating utilities.</p> <p>MV: Annual operating reports and financial statements by the utilities.</p>
OUTCOME 5: UTILITIES REDUCE THEIR GREENHOUSE GAS EMISSIONS										
5.1 Average annual reduction in greenhouse gas emissions by participating utilities	%	0	2022					5	5	<p>Comment: CO₂ emissions (in tons) will be measured using the ECAM tool at each utility before it enters the program and at program end. The baseline and final values of the average annual CO₂ emissions may be calculated to measure the percentage reduction in CO₂ emissions. Progress may be monitored at all participating utilities.</p> <p>MV: Results of applying the ECAM tool.</p>

OUTPUT INDICATORS											
COMPONENT 1: INSTITUTIONAL SUPPORT											
Output	Unit of measure	Associated outcomes	Cost (US\$ thousands)	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/Mean of verification
1. In-person and virtual training workshops for the utilities' staff with a gender approach and a climate change and sustainable infrastructure perspective conducted	Workshop	1, 3, 4.1, 4.2, and 5.1	0.9	0	3	10	5	5	3	26	MV: Workshop schedule and attendance lists
2. Gender actions implemented ¹	Action	2	0.1	0	3	3	3	3	3	15	MV: Special report by the utilities
COMPONENT 2: INVESTMENT IN COMPREHENSIVE EFFICIENCY PACKAGES IN SUPPORT OF UTILITIES											
2.1 Comprehensive energy efficiency packages implemented.	Package	1, 4.1 and 5.1		0	0	0	0	1	4	5	MV: Annual operating reports by the utilities
2.2 Comprehensive commercial management packages implemented.	Package	1 and 4.2		0	0	0	0	1	4	5	MV: Annual operating reports by the utilities
2.3 Comprehensive physical water loss reduction packages implemented.	Package	1 and 3		0	0	0	0	1	4	5	MV: Annual operating reports by the utilities
2.4 Individual energy efficiency actions implemented. ²	Action	1, 4.1 and 5.1		0	8	5	5	5	2	25	MV: Annual operating reports by the utilities
2.5 Individual commercial management actions implemented. ³	Action	1 and 4.2		0	6	5	5	4	1	21	MV: Annual operating reports by the utilities
2.6 Individual physical loss actions implemented. ⁴	Action	1 and 3		0	4	4	4	2	1	15	MV: Annual operating reports by the utilities

¹ Includes, without limitation, gender plans at utilities, support for recertification under the standard, and training in specific gender issues.

² Includes, without limitation, diagnostic assessments of energy efficiency and procurement and installation of equipment to lower energy consumption.

³ Includes, without limitation, installation of household meters, rate studies, and updating of user registries.

⁴ Includes, without limitation, installation of bulk meters, studies and actions for nonrevenue water reduction and leak detection, and actions aimed at addressing the pandemic, such as ensuring water quality and access to drinking water for vulnerable populations.

Country: Mexico

Division: WSA

Operation: ME-L1295

Year: 2022

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Executing agency: National Water Commission (CONAGUA)

Operation name: Comprehensive Development Program for Water and Sanitation Utilities II (PRODI II)

I. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

1. Use of country system in the operation.¹

<input checked="" type="checkbox"/> Budget	<input type="checkbox"/> Reports	<input checked="" type="checkbox"/> Information system	<input type="checkbox"/> National competitive bidding (NCB)
<input checked="" type="checkbox"/> Treasury	<input checked="" type="checkbox"/> Internal audit	<input type="checkbox"/> Shopping	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Accounting	<input checked="" type="checkbox"/> External control	<input type="checkbox"/> Individual consultants	<input type="checkbox"/> Other

2. Fiduciary execution mechanism

<input checked="" type="checkbox"/>	Specific features of fiduciary execution	The executing agency will be CONAGUA, acting through the Office for the Strengthening of Utilities (GFOO), the Office of International Cooperation, and the Office of Financial Resources. Execution of the program is decentralized at the national level, with the participation of local departments, utilities, and municipios as well as CONAGUA. It will also have the support of Nacional Financiera (NAFIN), in its role as financial agent designated by the Department of Finance and Public Credit (SHCP).
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3. Fiduciary capacity

Fiduciary capacity of the executing agency	In April 2020, an institutional assessment of CONAGUA was carried out, using the Institutional Capacity Assessment Platform (ICAP) and project risk management tools. This assessment concluded that the project's fiduciary risk is low. A risk was identified as potential delays in procurement processes, and to mitigate this risk, workshops and training on procurement would be conducted.
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4. Fiduciary risks and risk response

Risk taxonomy	Risks	Risk level	Risk response
Human resources	Lack of knowledge of Bank policies	Medium-low	Workshops and training on procurement.

¹ Any system or subsystem that is subsequently approved may be applicable to the operation, in accordance with the terms of validation by the Bank.

5. Policies and guidelines applicable to the operation: document OP-273-12, Financial Management Guidelines for IDB-financed Projects and the procurement policies set forth in documents GN-2349-15 and GN-2350-15.

6. Exceptions to policies and guidelines: Not applicable

II. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE LOAN CONTRACT

Conditions precedent to the first disbursement. Not applicable
Exchange rate: For purposes of Article 4.10 of the General Conditions, the parties agree that the applicable exchange rate will be as indicated in paragraph (b)(ii) of said article. For such purposes, the agreed upon exchange rate will be the rate in effect on the day when the borrower, executing agency, or any other individual or legal entity delegated the authority to incur expenses makes the respective payments to a contractor, supplier, or beneficiary.
Audited financial reports on the program: The executing agency will submit financial reports using procedures agreed upon annually 180 days after the close of the fiscal year, in accordance with the terms of reference agreed upon between the Bank and the executing agency.

III. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

<input checked="" type="checkbox"/>	Bidding documents	<p>For procurement of works, goods, and nonconsulting services conducted in accordance with the procurement policies (document GN-2349-15), subject to international competitive bidding (ICB), the Bank's standard bidding documents or those agreed upon between the Mexican government and the Bank for the procurement item in question will be used. For national competitive bidding (NCB), the harmonized standard bidding documents agreed upon between the Mexican government and the Bank will be used. Moreover, the selection and contracting of consulting services will be undertaken pursuant to the policies for the selection of consultants (document GN-2350-15). Processes in excess of US\$500,000 on the international market will use the standard request for proposals issued by the Bank, or the one agreed upon between the Mexican government and the Bank for the specific selection; for processes under US\$500,000 on the national market, the harmonized standard request for proposals agreed upon between the Mexican government and the Bank will be used. Contracts for consulting services with individual consultants will be prepared using the harmonized model contract for individual consultants agreed upon between the Mexican government and the Bank. The harmonize standard documents between the Mexican government and the Bank are available at the following website: https://compranetinfo.hacienda.gob.mx/uncp/credito/normace.htm.</p> <p>The project sector specialist will be responsible for reviewing the technical specifications and terms of reference for procurements during the preparation of selection processes. This technical review may be done on an ex ante basis and is independent of the procurement review method.</p>
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<input checked="" type="checkbox"/>	<p>Use of country systems</p>	<p>In February 2013, the Bank's Board of Executive Directors accepted the increased use of Mexico's public procurement system (adoption of Mexico's public procurement system), as set forth in the country strategy update (document GN-2595-3), which may be used once the corresponding implementation agreement is signed with the Mexican government.</p> <p>The scope of use of Mexico's federal procurement system will be for all contracts for amounts up to the threshold established by the Bank for applying ICB for the procurement of works (US\$15 million) and goods and services (US\$3 million). The Bank policies set forth in documents GN-2349-15 and GN-2350-15 will apply for amounts exceeding these thresholds. The use of the system does not include the following: (i) consulting services contracts; (ii) PEMEX contracts; (iii) contracts entered into under regulations of state and municipal governments; and (iv) direct contracting between public entities (intergovernmental contracts). The federal system's provisions on the exclusion of foreign nationals and the degree of national integration are also not applicable.</p>
<input checked="" type="checkbox"/>	<p>Direct contracting and single-source selection</p>	<p>The following direct contracting and single-source selection have been identified:</p> <p>AquaRating certification: AquaRating is a performance evaluation standard for water and sanitation service providers using indicators and management practices. This standard was developed by the IDB and the International Water Association, establishing an international benchmark based on information verified by independent and accredited external auditors, through the certification of the results obtained by water and sanitation utilities. Consulting firms may be contracted directly for the certification of the AquaRating results for up to the amount of US\$30,000 per participating water and sanitation utility using the tool. The following specialized firms are currently identified as being qualified to perform the work: "Verificadores Internacionales Mexicanos S.A. de C.V." and "Certificadora Mexicana Internacional S.A de C.V.," both Mexican firms; however, there may be other domestic and international firms that are certified, which will be identified when the contracting is required. The selected consulting firm will be contracted by single-source selection since it is a specialized service with an exceptional value for this service, since the firm will: (i) have received training from the IDB on the standard; (ii) have undergone a rigorous review by AquaRating's senior management; (iii) have solid experience in audit processes with water utilities; (iv) have accreditation and sufficient capacity to undertake an audit process with water utilities. These conditions are aligned with the consulting policies (document GN-2350-15), clause 3.11, paragraph (c) for very small services for contracting under US\$100,000; and (d) when only one firm is qualified or has experience of exceptional value for the services.</p>

<input checked="" type="checkbox"/>	Recurrent expenditures	The recurrent expenditures required to implement the project, approved by the Project Team Leader and financed with project resources, will be undertaken following the administrative procedures of the executing agency. These procedures will be reviewed and accepted by the Bank, provided they do not violate the principles of economy, efficiency, and competition. The planned recurrent expenditures are for per diems, transportation, and overhead.												
<input checked="" type="checkbox"/>	Advance procurement/retroactive financing	The Bank may retroactively finance from the proceeds up to US\$10 million (10% of the proposed loan amount) in eligible expenditures incurred by the borrower prior to the approval of the loan to finance activities planned under Components 1 and 2 of the project, provided that requirements substantially similar to those established in policies on procurement and consulting services indicated in the loan contract have been met and provided that each provider or contractor awarded a contract has been served with the integrity provision notification, included in the package of contracts subject to retroactive financing. This notification will inform them that the IDB can investigate any suspected Prohibited Practices with respect to the contract that has been awarded to them. The Bank will be supported by an individual consultant to verify that the anticipated procurement processes meet requirements analogous to those set forth in IDB policies. Retroactive financing from the loan proceeds may only include those expenditures incurred during the 18 months prior to the loan approval date. All expenditures made as of the loan approval date may be retroactively financed to the extent that they meet requirements substantially similar to those established in the loan contract. (See documents GN-2349-15, GN-2350-15, and the Bank policy on recognition of expenditures, retroactive financing and advance procurement (document GN-2259-1).												
<input checked="" type="checkbox"/>	Procurement supervision	<p>The supervision method will be ex post, except in cases where ex ante supervision is warranted. Ex post reviews will be conducted annually in accordance with the project supervision plan, subject to changes during execution. The ex post review reports will include at least one physical inspection visit (the inspection verifies the existence of the procurement, leaving verification of quality and compliance with specifications to the sector specialist), selected from the procurement processes subject to ex post review (10%). The thresholds for ex post review are as follows:</p> <table><tr><th>Procurement method</th><th>Works US\$</th><th>Goods/services US\$</th><th>Consulting services US\$</th></tr><tr><td>NCB</td><td>15,000,000</td><td>3,000,000</td><td>Firms 500,000</td></tr><tr><td>Shopping</td><td>500,000</td><td>100,000</td><td>Individuals 100,000</td></tr></table>	Procurement method	Works US\$	Goods/services US\$	Consulting services US\$	NCB	15,000,000	3,000,000	Firms 500,000	Shopping	500,000	100,000	Individuals 100,000
Procurement method	Works US\$	Goods/services US\$	Consulting services US\$											
NCB	15,000,000	3,000,000	Firms 500,000											
Shopping	500,000	100,000	Individuals 100,000											
<input checked="" type="checkbox"/>	Records and files	The basic original documentation for confirmation of expenditures to the Bank and the procurement files will remain with CONAGUA and the utilities.												

Main procurement items

Procurement description	Selection method	New procedures/Tools	Estimated date	Estimated amount (US\$)
Goods				
Procurement and installation of micrometers	National competitive bidding (NCB)		to be confirmed	12,000,000
Works				
Rehabilitation of distribution networks, detection and repair of water works, procurement and installation of macrometers	National competitive bidding (NCB)		to be confirmed	to be confirmed
Consulting services, firms				
Training programs, consolidation and implementation of management support and self-evaluation tools, update of user registry	Quality and Cost-based Selection (QCBS)		to be confirmed	to be confirmed
AquaRating certification	Single-source selection		to be confirmed	200,000
Consulting services, individuals				
Comprehensive development plans	Individual consultant selection (3CV)		to be confirmed	500,000

To access the procurement plan: See [required link 4](#).

IV. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

<input checked="" type="checkbox"/>	Programming and budget	The disbursements for this operations will have budgetary implications stemming from the Federal Budget and Fiscal Responsibility Act.
<input checked="" type="checkbox"/>	Treasury and disbursement management	For this operation, disbursements from the loan proceeds are expected to use the “reimbursement of expenditures” modality. CONAGUA will execute the loan proceeds charged to the federal budget as it would for the PROSSAPYS, the backing for PRODI II expenditures that will be recognized by the IDB; it will be based on the transfers of resources to the state finance departments and/or utilities for execution of the technical and execution annexes signed between CONAGUA and the states and/or utilities, less 5% of the total for potential refunds and/or ineligible expenses.
<input checked="" type="checkbox"/>	Accounting, information systems, and reporting	Specific accounting standards: The Government Accounting Act, and Government Accounting System, partially based on International Financial Reporting Standards. Project accounting will be input into the national systems at the federal level in CONAGUA, and at the state level in each of the participating utilities

		<p>and/or municipios. Cash flows will be done based on the technical and execution annexes with the state governments and/or utilities that will be signed annually. Each federative entity and/or utility is responsible for recording and accounting for the transfers received as well as the expenditures of each project.</p> <p>The CONAGUA resources transferred to the utilities and/or states or municipios will be deposited in bank accounts exclusively for PRODI II.</p> <p>Accounting method and currency: Cash basis. Reports will be submitted in local currency (Mexican pesos) and United States dollars.</p> <p>Reports for rendering of accounts: List of transfers made to the states and utilities in accordance with the operating regulations and with the verification of the external verification entity.</p>
<input checked="" type="checkbox"/>	Internal control and internal audit	Internal control and internal audit: The internal audit functions are the responsibility of the Internal Control Agency attached to the Civil Service Department, which is responsible for ensuring fulfillment of the regulatory provisions applicable to this operation.
<input checked="" type="checkbox"/>	External control and financial reports	External audit: The borrower and executing agency will select and contract the services of an eligible auditor acceptable to the Bank, in accordance with the terms of reference previously agreed upon with the Bank.
<input checked="" type="checkbox"/>	Financial supervision of the operation	Financial supervision will be done annually on an ex post basis, however, continuous monitoring of the executing agency is expected, both virtually and onsite, to the extent possible.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/22

Mexico. Loan ___/OC-ME to the United Mexican States
Comprehensive Development Program for Water and
Sanitation Utilities II (PRODI-II)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the United Mexican States, as borrower, for the purpose of granting it a financing to cooperate in the execution of a Comprehensive Development Program for Water and Sanitation Utilities II (PRODI-II). Such financing will be for the amount of up to US\$100,000,000 from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on __ _____ 2022)