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MULTILATERAL INVESTMENT FUND

**MEXICO**

**PROADAPT MONTERREY – INCREASING WATER RESILIENCE  
(ME-T1348)**

**PROADAPT FACILITY  
(RG-X1167)**

**DONORS MEMORANDUM**

This document was prepared by the project team consisting of: Svante Persson (CSD/CCS), Alberto Bucardo (MIF/CME), Rodrigo Riquelme (INE/WSA), Maria Eugenia de la Peña (INE/WSA), Lorena Mejicanos (MIF/CSA), Juan Pedeflous (GCL/GCL), German Zappani (FMP/CME), Ariel Rodriguez (VPC/FMP), Gmelina Ramirez (CSD/CCS), Vivian Ramirez (MIF/IC).

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**PROJECT SUMMARY**  
**PROADAPT MONTERREY – INCREASING WATER RESILIENCE**  
**(ME-T1348)**

In the period 1996-2005, Latin American and Caribbean countries represented 10.5% of the global water footprint (WF), with Mexico recording the second highest WF in the region. The WF is an indicator that defines the total volume of fresh water used (evaporated or incorporated) to produce a company's goods and services, or the volume consumed by an individual or community. Specifically, the city of Monterrey in the state of Nuevo León is located in a semiarid region characterized by dry and semidry climates, which leave it highly vulnerable to water scarcity and water shortages.

According to estimates from the Monterrey Metropolitan Water Fund (FAMM), the Monterrey Metropolitan Area (MMA) firm water supply is 13 m<sup>3</sup>/s,<sup>1</sup> which not enough to meet projected needs in the coming years. Another consideration is that, historically, no systematic efforts have been made to reduce demand for water, and therefore manage it properly.

This project seeks to narrow the future gap between water supply and demand, focusing on shrinking the WF of Monterrey's SMEs through the reduction of water consumption and the amount of pollutants discharged. To accomplish this: (i) a conceptual framework will be developed for correctly measuring the WF; (ii) capacity will be developed at firms to reduce WF while facilitating the adoption of solutions and best practices; (iii) a framework of incentives will be created to encourage sustainable water use; and (iv) the culture of water conservation will be strengthened in the region.

The expected final outcome will be a reduction in cubic meters of water used by the firms, a reduction in cubic meters of grey WF (pollutants no longer discharged into the network of the Monterrey Water and Drainage Services (SADM)), and a positive substantial change in water management and the community's attitude toward the region's natural water resources.

The project will have an execution period of 36 months, and a total budget of US\$1,035,347. Of that amount US\$435,678 will be provided by the MIF, US\$100,000 by the PROADAPT program, cofinanced with the Nordic Development Fund (NDF), and US\$499,669 by the local counterpart. The project will be executed by the Instituto para la Protección Ambiental [Environmental Protection Institute] (IPA), an affiliate of the Chamber of Industry and Transformation (CAINTRA), in close collaboration with the Office of the Deputy Secretary for Environmental and Natural Resource Protection of the State of Nuevo León.

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<sup>1</sup> Cubic meters per second.

## **ANNEXES**

Annex I	Results Matrix
Annex II	Budget Summary

## **APPENDICES**

Proposed resolution

## **INFORMATION AVAILABLE IN THE TECHNICAL DOCUMENTS SECTION OF THE MIF PROJECT INFORMATION SYSTEM**

Annex III	Itemized budget
Annex IV	Diagnostic needs assessment (DNA) of the executing agency (includes due diligence and integrity analysis)
Annex V	Project status reports (PSR) and fulfillment of milestones and fiduciary agreements
Annex VI	Procurement plan
Anexo VII	Operating Regulations for Innovation

## ABBREVIATIONS

ASU	Arizona State University
CAALCA	Centro del Agua para América Latina y el Caribe [Water Center for Latin America and the Caribbean]
CAINTRA	Cámara de la Industria y la Transformación [Chamber of Industry and Transformation]
CONAGUA	Comisión Nacional del Agua [National Water Commission]
DNA	Diagnostic needs assessment
FAMM	Fondo del Agua Metropolitano de Monterrey [Monterrey Metropolitan Water Fund]
FEMSA	Fomento Económico Mexicano [Mexican Economic Advancement]
IPA	Instituto de Protección Ambiental de Nuevo León (Environmental Protection Institute of Nuevo León)
ITESM	Instituto Tecnológico y de Educación Superior de Monterrey [Monterrey Institute of Technology and Higher Education]
MMA	Monterrey Metropolitan Area
NDF	Nordic Development Fund
PLAC	Programa de Liderazgo Ambiental para la Competitividad [Environmental Leadership for Competitiveness Program]
PROFEPA	Procuraduría Federal de Protección al Ambiente [Federal Environmental Protection Enforcement Agency]
SADM	Servicios de Agua y Drenaje de Monterrey (Monterrey Water and Drainage Services)
SME	Small and medium-sized enterprise
WF	Water footprint

**PROJECT INFORMATION**  
**PROADAPT MONTERREY – INCREASING WATER RESILIENCE**  
**(ME-T1348) (RG-X1167 / ATN/NV-13706-RG)**

<b>Country and geographic location:</b>	Mexico, State of Nuevo León, city of Monterrey		
<b>Executing agency:</b>	Instituto de Protección Ambiental de Nuevo León [Environmental Protection Institute of Nuevo León] (IPA)		
<b>Focus area:</b>	Inclusive Cities		
<b>Coordination with Bank operations:</b>	The project will be cofinanced with resources from the PROADAPT facility (RG-X1167 / ATN/NV-13706-RG) Water and Sanitation Division (INE/WSA)		
<b>Project beneficiaries:</b>	750 small and medium-sized enterprises in the metropolitan area of the city of Monterrey, Nuevo León.		
<b>Financing:</b>	Technical cooperation	US\$435,678	42%
	Investment:	US\$000,000	
	Loan:	US\$000,000	
	Other:	US\$000,000	
	<b>Total MIF contribution:</b>	US\$435,678	42%
	Local counterpart:	US\$499,669	48%
	Cofinancing (NDF):	US\$100,000	10%
	<b>Total project budget:</b>	US\$1,035,347	100%
<b>Execution and disbursement period:</b>	36 months for execution, and 42 months for disbursements.		
<b>Special contractual conditions:</b>	As conditions precedent to the first disbursement, the following will be completed to the Bank's satisfaction: (i) engagement of a project coordinator; and (ii) approval of the first annual work plan.		
<b>Environmental and social impact review:</b>	This operation was prescreened and classified according to the requirements of the IDB's Environment and Safeguards Compliance Policy (Operational Policy OP-703) on 15 July 2017. Given the limited impact and risk, the proposed category for this project is "C."		
<b>Unit with disbursement responsibility:</b>	MIF staff at the Bank's Country Office in Mexico (COF/CME)		

## I. THE PROBLEM

### A. Description of the problem

- 1.1 Mexico is naturally vulnerable to changes in climate due to: (i) its geographical location in the intertropical zone of the northern hemisphere, which places two-thirds of the country in arid or semiarid zones, while one-third is subject to flooding; (ii) its exposure to tropical cyclones on its three coastal margins; (iii) the elevation differences within its territory; and (iv) the precipitation distribution and runoff differences over the course of the year and throughout the country. Currently, an estimated 15% of Mexico's territory, 68% of its population, and 71% of its GDP are highly exposed to the risk of direct adverse impacts from climate change.<sup>2</sup> That natural vulnerability has worsened in recent years, particularly in terms of water scarcity.
- 1.2 Monterrey's water problem can be summarized as follows: (i) surface water and groundwater are being polluted by industrial discharge and seepage of toxic materials, posing problems for agriculture, the drinking water supply, and the sustainability of natural ecosystems; (ii) groundwater may be overexploited in the city, if demand rises and the necessary precautions are not taken, leading to deeper and deeper wells being dug, and old aquifers being accessed that contain naturally-occurring toxins such as arsenic or fluoride; and (iii) warming leading to droughts has a direct impact on water reserves. According to the Monterrey Water and Drainage Services (SADM), total water consumption for the Monterrey Metropolitan Area (MMA) is 13.3 m<sup>3</sup>/s, 11% of which is consumed by the industrial and commercial sectors. Additionally, some companies have concessions with the National Water Commission (CONAGUA), the federal institution regulating the use of Mexico's national waters. The state of Nuevo León's water sector presents medium-to-high levels of vulnerability to climate change, which in turn impacts the vulnerability of biodiversity, forestry, ranching, and farming. Additionally, Tropical Cyclone Alex in 2010 demonstrated the consequences and risks of climate change for the state of Nuevo León.<sup>3</sup>
- 1.3 The water footprint (WF) is an indicator that defines the total volume of fresh water used (evaporated or incorporated) to produce a company's goods and services, or the volume consumed by an individual or community. In the period 1996-2005, Latin American and Caribbean countries represented 10.5% of the global WF, with Mexico recording the second highest WF in the region.<sup>3</sup> The city of Monterrey in the state of Nuevo León is located in a semiarid region characterized by dry and semidry climates, which leave it highly vulnerable to water scarcity and water shortages.<sup>3</sup> The last drought event was recorded in 2011-2012 and was regarded as the most severe of the past 50 years. Pressure on water resources is growing; an estimated 77% of available water is used for consumption purposes, whereas only 40% of available water would be used, if water resources were managed in an integrated and

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<sup>2</sup> Agua y Cambio Climático en México 2007-2012: Análisis y Recomendaciones a Futuro [Water and Climate Change in Mexico 2007-2012: Analysis and Recommendations for the Future]. Colin A. Herron. CONAGUA and Premia. 2012. World Bank, cited in CICC, 2009.

<sup>3</sup> Monterroso Rivas A. I. 2012. Contribución al Estudio de la Vulnerabilidad al Cambio Climático en México [Contribution to the Study of Climate Change Vulnerability in Mexico]. Doctoral thesis. Doctoral Program in Geography. Facultad de Filosofía y Letras. UNAM. Mexico.

sustainable manner.<sup>4</sup> Moreover, CONAGUA predicts a reduction in Mexico's available water resources due to the effects of climate change, as well as greater variability in traditional patterns of rainfall, soil moisture, and runoff, increasing the likelihood of a drinking water shortage.

- 1.4 According to estimates from the Monterrey Metropolitan Water Fund (FAMM), the MMA firm water supply is currently 13 m<sup>3</sup>/s (at 97% reliability). Current water consumption is 13.3 m<sup>3</sup>/s, and the projected demand by 2050 is calculated at a range of 19.3 to 23 m<sup>3</sup>/s, indicating a future deficit in the supply of clean drinking water. If this trend continues, the deficit will tend to increase gradually as the population grows, so finding safe sources and easy access to water supply is imperative, as is reducing the State's and private sector's WF and building a more resilient city. Historically, no effective work has been done in Nuevo León to reduce demand for water or manage it properly. In 2014, slightly more than 71% of the water concessioned by CONAGUA in Nuevo León was used for agriculture, followed by public water supply (24%) and industrial use (4%);<sup>5</sup> additionally 29% of the water is unaccounted for due to leaks, metering and reading errors, and illegal taps or unregulated settlements.
- 1.5 The private sector, and especially small and medium-sized enterprises (SMEs), have an impact on water quality and quantity, due to their heavy use and high levels of pollutants discharged into the SADM network. Polluted water cannot be treated properly, which has a negative impact on bodies of water with which it comes into contact. In the MMA, public water consumption practices are inadequate, rainwater is hardly ever exploited, and there is still great potential for reusing treated wastewater.
- 1.6 The principal target population of this project is 750 SMEs located in the MMA that have been identified as having heavy water consumption and high levels of pollutant discharge. Additionally, given the few product and service offerings aimed at reducing the WF, the project will also work with SMEs in the construction and water and sanitation sectors. Lastly, this project seeks to build the city's resilience as a response to climate change by intelligently managing its water resources.

## **II. THE PROPOSED INNOVATION**

### **A. Project description**

- 2.1 The project's main objective is to strengthen the water resilience of small and medium-sized enterprises (SME) through conservation and reduced use in the city of Monterrey. The specific objective is to reduce the water footprint (WF) at SMEs with the highest levels of water consumption and/or pollutant discharge in the city of Monterrey. The project is aligned with the Inclusive Cities area, as it will support strengthening climate resilience and maintaining a sustainable water system that contributes to improved quality of life in the city of Monterrey.

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<sup>4</sup> CONAGUA, 2015b.

<sup>5</sup> That 4% refers to water supplied under concession, but some water from the public supply is also used by industry, mainly SMEs. CONAGUA, 2015a.



- 2.2 The project involves reviewing and adapting WF reduction to the model of the Environmental Leadership for Competitiveness Program (PLAC),<sup>6</sup> under which the firms will perform a detailed assessment of their activities and processes to find alternatives for reducing unnecessary consumption of various inputs and services, as well as for reducing waste, discharges, and emissions that affect the environment. Measuring the WF will be added to this model. The firms will be identified and selected based on their records and according to each one's water consumption and amount of pollutants discharged into the water and drainage network. These firms will be invited to participate in the project voluntarily. Only businesses registered with the state government may participate in the project. They must also have a large WF<sup>7</sup> and agree to implement the measures to shrink it in a letter of commitment. Firms preselected to reduce their WF will be determined based on three characteristics: (i) high water consumption;<sup>8</sup> (ii) high industrial discharge;<sup>9</sup> and (iii) high waste discharge.<sup>10</sup> The next step will be training courses for the firms taught by personnel hired for that purpose; the firms will also receive support for implementing and monitoring WF reduction plans, and a guide will be developed for WF offsetting activities, such as reforesting the watershed.
- 2.3 The project's innovation lies in reducing the WF of SMEs through linkages with the state government, academia, the private sector, and civil society. To achieve this, a pilot project will be conducted for virtual, digital monitoring of water, so that the public and decision-makers can see water savings add up in real time. Arizona State University (ASU) will participate as a project partner and perform the pilot study on the operation of automatic WF measurement sensors with the involvement of Centro del Agua de Monterrey [Monterrey Water Center], which will adopt ASU's methodology. ASU's "Future H<sub>2</sub>O" will develop a platform to analyze SMEs' efficiency in Monterrey, Mexico, based on data feed from smart sensors (water use and/or quality) collected on a real-time data analysis platform, allowing distributors to see their impact on water scarcity across the supply chain. ASU is currently partnering with the city of Phoenix on a similar platform targeting a different sustainability objective: improving water collection and allocation for use in the commercial, large-scale industrial, and institutional sectors for more accurate predictions and managing the sectors' demand. Though the project will not deploy the SME data, it will enable efficiency management by linking with Phoenix's test bed, and provide new field knowledge on how these systems might be scaled up to solve challenges to ensuring urban water sustainability in Monterrey. ASU is

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<sup>6</sup> The PLAC model is a federal program aimed at reducing firms' environmental impact that has been implemented at the national level by the IPA since 2011. Saving water is one component of this program, which will be broadened to meet the objectives of this project. The training and monitoring mechanism will also be modified, to make the commitments and gains of the participating firms more explicit.

<sup>7</sup> Above average for its sector and firms of similar size. Calculated based on SADM data.

<sup>8</sup> Firms in the cellulose and paper, chemical industry, beverages, slaughterhouse, textile, and tanned leather sectors with consumption ranges from 0.00012 to 0.01285 m<sup>3</sup>/s.

<sup>9</sup> Includes aluminum, arsenic, copper, mercury, nickel, lead, zinc, chromium, cadmium, and cyanide. The preselected sectors and firms are mainly metalwork, ceramic, and chemical. The concentration of metals in water ranges from 3,000 mg/l to 1,886 mg/l.

<sup>10</sup> Includes physical/chemical parameters, biochemical oxygen demand, chemical oxygen demand, fats and oils, total nitrogen, total phosphorus, methylene blue active substances, total suspended solids and calcium hardness. The preselected sectors include the food industry, self-service stores, and paper and cellulose with a concentration of those pollutants ranging from 3,000 mg/l to 48,095 mg/l.

participating in the project as a strategic partner and service provider in conducting the automatic sensors pilot study.

- 2.4 For this project, the executing agency will design a methodology with the main goal of developing and implementing projects for reducing water consumption and pollutant discharge from Monterrey's industrial sector. The project's implementation mechanism will have the following steps: (i) firms willing and able to participate in the project will be selected, prioritizing those with high water consumption and pollutant discharge levels not in compliance with the established parameters; the Department of Sustainable Development of the Government of the State of Nuevo León, acting through the Office of the Deputy Secretary for Environmental and Natural Resource Protection, will support the project by providing lists of firms fitting this description (consumption and pollutant discharge); (ii) firms will be invited to participate, and working groups formed by sector, line of business, or activity, according to the analysis of the institutions involved in the project; those groups will include between 15 and 20 firms, and each will assign two people with decision-making authority and familiarity with the production process to take part in training to identify areas of opportunity for developing projects to reduce water consumption and pollutant discharge; (iii) each group will have an established training session calendar, and seven sessions are planned for each group, during which a methodology will be developed around good manufacturing practices in efficient water use; (iv) along with each group's training, visits to participating firms with the instructors will be encouraged, to identify areas of opportunity for implementing the methodology, and thereby develop the greatest number of water-saving projects at each firm. The methodology will help shrink each participating firm's WF by conducting a comparison study following design and implementation of the water-saving projects to determine a final WF, and particularly to calculate consumption or pollutant discharge savings and meet the program objective of reducing the WF and pollutant discharge of the city of Monterrey.
- 2.5 **Component 1: Creating the water footprint model** (MIF US\$20,022, Counterpart US\$3,178). The objective of this component is to develop a methodology for estimating WF that can be adjusted to the specific conditions of participating firms, based on existing standard methodologies, and includes both consumption and pollutant discharge. An announcement inviting the firms to participate voluntarily in the project will be drafted and disseminated, based on the registry kept by the Government of the State of Nuevo León; firms will then be selected based on eligibility criteria. Activities include: (i) identifying and selecting participating firms; (ii) reviewing and adapting the PLAC model; (iii) designing eligibility criteria.
- 2.6 **Component 2: Building capacity at firms** (MIF US\$70,799, Counterpart US\$327,471). This objective is to build capacity in the business sector to reduce its WF by facilitating the adoption of methodologies, effective practices, and support for developing improvement plans. The activities planned for this component are: (i) developing and printing training materials; (ii) training instructors; (iii) teaching training courses and providing materials; (iv) providing advisory support for the development, implementation, and monitoring of WF reduction plans by developing a guide for implementing water offsetting activities; (v) reviewing reports and measuring results; (vi) recognizing firms; and (vii) holding events to bring providers and users together, promoting a sustainable solutions market for efficient water use among SMEs.

- 2.7 **Component 3: Promoting water culture and strengthening the regulatory and incentive framework** (MIF US\$164,477, Counterpart US\$74,523). The objective is to raise the business sector's awareness regarding better water use and how it impacts water availability and quality, while also developing a state regulatory framework establishing guidelines to encourage firms to reduce their WF. Firms located in the city will be encouraged to provide their employees with information on practices to reduce water use at home. Social networks will be the main tools used for implementing the campaign. The activities are: (i) establishing the water culture baseline; (ii) designing the communications campaign; (iii) promoting the project; (iv) measuring progress and impact indicators; (v) reviewing national and international laws and regulations; and (vi) drafting the proposed regulation for comprehensive WF reduction, including best practices and recommendations for offsetting.
- 2.8 **Component 4: Piloting water footprint measurement** (NDF US\$100,000). The objective is to design and implement a pilot for measurement and automated monitoring of the WF at a small group of selected firms, in order to formulate recommendations for improving and refining the WF reduction methodology. This component will test the automated methodology's viability, and in any case extend it to a greater number of firms in the city. The activities are: (i) installing meters and sensors; (ii) creating a virtual, digital model for measurement; (iii) monitoring and supervision of implementation of the digital model of the Water Center for Latin America and the Caribbean (CAALCA) and the Monterrey Institute of Technology and Higher Education (ITESM); (iv) collecting and analyzing data; and (v) drafting a report with conclusions and recommendations.
- B. Results, measurement, monitoring, and project evaluation**
- 2.9 The main project indicators are: (i) the number of firms with WF reduction programs implemented; (ii) cubic meters of water saved by the firms; (iii) cubic meters of grey WF reduced (pollutants no longer discharged into the SADM network); (iv) average water cost savings per firm. The program will be monitored regularly by the executing agency and participating SMEs. The effectiveness of the water culture campaign will be measured by progress in the baseline set at the start of the project.

### **III. ALIGNMENT WITH THE IDB GROUP, SCALABILITY, AND PROJECT RISKS**

- 3.1 The proposed project is aligned with the IDB country strategy with Mexico 2013-2018 in its priority area of regional development, which includes reducing vulnerability to climate change while also strengthening business competitiveness. Specifically, in its sector note for Mexico (October 2013), the Bank proposes integrated water resource management as one of its areas of action in this sector. Currently, the IDB is financing the Water Center for Latin America and the Caribbean (CAALCA), located at the Monterrey Institute of Technology and Higher Education (ITESM), and financed the creation of the Monterrey Metropolitan Water Fund (FAMM). The IDB can create synergies with these stakeholders for the project and is working with the Monterrey Water and Drainage Services (SADM) to reduce the amount of water lost to leaks and leverage the wastewater treated for other uses. It is also coordinating with the IDB's future investment in the SADM for nonrevenue water and water reuse (technical cooperation operation ME-T1326). The project is aligned with the IIC's strategy in Mexico to make SMEs more profitable and

competitive, which will contribute to creating new economic opportunities by promoting a market for climate change resilience products and services in the region.

- 3.2 The model developed by this project may be replicated in other cities of Mexico and Latin America and the Caribbean facing similar challenges due to the impact of climate change, as well as rising demand for water resources. To facilitate the scale potential: (i) a system will be implemented for project monitoring and evaluation; (ii) lessons learned and recommendations for future projects will be documented; (iii) a new national regulation will be formulated on the subject. Additionally, successful implementation of this project is expected to lead to future collaborations with the IDB, integrating it into other Bank programs.
- 3.3 **Project risks.** The main execution and sustainability risks are as follows: (i) no incentives for SMEs to reduce their WF. This risk will be mitigated through the involvement of the state authorities and a project promotion and communications campaign offering technical assistance to participating SMEs; (ii) little connection with products, processes, and services that contribute to improving efficient water use and pollutant treatment by SMEs. This risk will be mitigated by events for users and providers of products and services. There will also be strong support from partners, unions, and the executing agency to raise awareness and provide training on the need and business opportunities; (iii) force majeure events such as natural disasters impacting project implementation as planned and on schedule. Although this risk cannot be fully mitigated, information, resilience, and adaptation measures will be taken to do so.

#### IV. BUDGET

- 4.1 The project has a total cost of US\$1,030,490. Of that amount, US\$100,000 (10%) will be cofinanced by the Nordic Development Fund (NDF) (through the PROADAPT facility), US\$435,678 (42%) will be contributed by MIF, and US\$494,812 (48%) by the counterpart. The instrument to be used is technical cooperation.

Project components	MIF	NDF	Counterpart	Total
Component 1: Creating the water footprint model	20,022	0	3,178	23,200
Component 2: Building capacity at firms	70,799	0	327,471	398,270
Component 3: Promoting water culture	164,477		74,523	239,000
Component 4: Piloting water footprint measurement	0	100,000	0	100,000
Project administration	129,780	0	89,640	219,420
Final evaluation	17,400	0	0	17,400
Ex post reviews	23,200	0	0	23,200
Contingencies	10,000	0	0	10,000
<b>Grand total</b>	<b>435,678</b>	<b>100,000</b>	<b>494,812</b>	<b>1,030,490</b>
<b>% Financing</b>	<b>42%</b>	<b>10%</b>	<b>48%</b>	<b>100%</b>

## V. EXECUTING AGENCY AND OTHER PARTICIPATING INSTITUTIONS

- 5.1 The executing agency and entity responsible to the MIF is the Instituto para la Protección Ambiental [Environmental Protection Institute] (IPA). The IPA is affiliated with the Chamber of Industry and Transformation (CAINTRA) of Nuevo León. The IPA will collaborate with the Office of the Deputy Secretary for Environmental and Natural Resource Protection of the State of Nuevo León, which is responsible for sustainable management of water resources in the state. With a base of 4,000 CAINTRA-member firms, the IPA's institutional mission is to support these firms, the majority of them SMEs, in improving their environmental performance through programs, training, and consulting services. The IPA has successfully implemented projects with the MIF, as well as other government agencies.
- 5.2 IPA project ATN/MH-6742-ME, "Mentoring Model for the Implementation of Environmental Management Systems," was approved in 1999 for US\$395,000, and concluded satisfactorily in November 2003. Project ATN/ME-9787-ME, "Support for SME Competitiveness through Environmental Good Practices," was approved in 2006 for US\$100,000, and concluded in August 2010, also with acceptable results. Since 2011, the IPA has been involved, in collaboration with the Federal Environmental Protection Enforcement Agency (PROFEPA), as operator of the Environmental Leadership for Competitiveness Program (PLAC), a voluntary PROFEPA program that trains micro, small, and medium-sized enterprises to improve their environmental performance, generating economic and environmental savings. In 2016, implementation of the program at the national level had led to savings equivalent to US\$53 million, with an investment of just US\$500,000. One environmental outcome has been water savings of 6 million m<sup>3</sup> per year.
- 5.3 During execution, the project will involve collaboration with the following organizations: (i) **Fundación FEMSA** is the vehicle for channeling social investments of Fomento Económico Mexicano [Mexican Economic Advancement] (FEMSA). Since its founding in November 2008, Fundación FEMSA's mission has been to make social investments that generate long-term positive impacts directly in the communities where it works, through collaboration with high-level stakeholders in every sector to multiply benefits. Fundación FEMSA currently focuses its efforts on projects for access to water and sanitation, watershed conservation, and education in nutrition, and early childhood development. It also promotes applied scientific research to generate knowledge, so that solutions can be developed on a solid foundation. FEMSA will contribute financial resources for this project (US\$298,169); (ii) **Department of Sustainable Development of the Government of the State of Nuevo León, acting through the Office of the Deputy Secretary for Environmental and Natural Resource Protection**, is the state agency responsible for promoting integrated water management in the state of Nuevo León and regulating companies' pollutant discharge into the Nuevo León water and drainage network. This agency will contribute its knowledge and public leadership to the project; (iii) **Monterrey Metropolitan Water Fund (FAMM)** is the result of a partnership between members of the public and private sectors, academia, and civil society that share a common vision for the future: contributing to protect surface and groundwater sources that supply water for over four million people living in Monterrey and its metropolitan area, thereby contributing to the region's sustainable development and well-being. FAMM will contribute to the project through its network

of contacts, and as coordinator for water issues in the city of Monterrey; (iv) **Water Center for Latin America and the Caribbean (CAALCA)** was established in 2008 as a joint initiative of ITESM, Fundación FEMSA, and the IDB, focused on creating a center for applied research on sustainable water use in Latin America and the Caribbean. CAALCA's mission is to contribute to sustainable water resources in Latin America and the Caribbean, through research, innovation, knowledge transfer, training, and support for decision-making in the public and private sectors, to improve society's quality of life. CAALCA contributes its knowledge, and will collaborate with Arizona State University (ASU) in implementing the virtual measurement model; (v) **Monterrey Institute of Technology and Higher Education (ITESM)** is one of Latin America's most highly respected universities, particularly in the areas of business, innovation, and technology. With its original campus in Monterrey, Nuevo León, Mexico, ITESM has grown to have a presence throughout Mexico, with over 30 national campuses, 4 specialized schools, and 13 international locations. The FAMM, Department of Sustainable Development, CAALCA, and ITESM will contribute their experience in the design and execution of this project.

**A. Execution structure and mechanism**

- 5.4 IPA will establish an execution unit and the necessary structure to carry out the project activities and manage project resources effectively and efficiently. IPA will also be responsible for delivering status reports on project implementation. Details on the structure of the execution unit and status report requirements can be found in Annex I of the technical files for this operation.
- 5.5 **Governance.** A Monitoring Committee will be comprised of Fundación FEMSA, the Department of Sustainable Development of the Government of the State of Nuevo León, the Monterrey Water and Drainage Services (SADM), FAMM, the National Water Commission (CONAGUA), and MIF staff at the IDB Country Office in Mexico. The Monitoring Committee members will sign a coparticipation agreement for project execution. The Committee's role is to monitor the project, offer recognition to firms, provide information, and oversee project execution. Monitoring will be done via reports generated by the executing agency, which will include progress and the deliverables of consultants involved in the initiative, to be delivered in the agreed time frame. The Committee will meet quarterly and monitor project implementation, adjusting the strategy as necessary.

**VI. SPECIAL FIDUCIARY ARRANGEMENTS**

- 6.1 **Results-based disbursements and fiduciary arrangements.** The executing agency agrees to the standard MIF arrangements regarding results-based disbursements, the Bank's procurement policies,<sup>11</sup> and financial management<sup>12</sup> specified in Annexes V and VI.

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<sup>11</sup> Link to [Policies for the Procurement of Works and Goods Financed by the IDB](#).

<sup>12</sup> Link to [Financial Management Guidelines for IDB-financed Projects](#).

## **VII. ACCESS TO INFORMATION AND INTELLECTUAL PROPERTY**

- 7.1 In accordance with the IDB Access to Information Policy, the project information is not considered confidential, so this document is public.