PUBLIC
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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

MEXICO

CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS

(ME-X1021)

AND

FIRST PROGRAM FOR THE FINANCING OF RURAL SECTOR PRODUCTION RESTRUCTURING AND INVESTMENT PROJECTS

(ME-L1145)

LOAN PROPOSAL

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ELECTRONIC LINKS

REQUIRED

1. Monitoring and evaluation plan
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38886962

OPTIONAL

1. Cost/benefit analysis
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38894833
2. Mexico's financial sector: Structure and recent performance
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38891809
3. Credit demand analysis
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38892604
4. Operating Regulations (draft)
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38889248
5. Program workflow
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38889247
6. Macroeconomic context in Mexico
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38891804
7. Environmental and social management plan
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38889243
8. FIRA: Structure, legal mandate, and recent performance
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38891930
9. Banco del Ahorro Nacional y Servicios Financieros, S.N.C. (BANSEFI)
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38899720
10. Romero, H. et al. Market study and design of a strategy and financial mechanisms to finance projects for energy efficiency and rational use of water in the Mexican countryside. Basel Agency for Sustainable Energy, July 2013.
    http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38899724
11. Magallón, D. Design of a comprehensive program to finance projects for energy efficiency and rational use of water in the Mexican countryside. Basel Agency for Sustainable Energy, October 2013.
    http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38899705
12. Safeguard Screening Form
    http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38899705

ABBREVIATIONS

BANSEFI	Banco del Ahorro Nacional y Servicios Financieros, S.N.C.
CCLIP	Conditional credit line for investment projects
CNBV	Comisión Nacional Bancaria y de Valores [National Banking and Securities Commission]
FAO	Food and Agriculture Organization
FEFA	Fondo Especial para Financiamientos Agropecuarios [Special Fund for Agricultural Financing]
FIRA	Fideicomisos Instituidos en Relación con la Agricultura [Agricultural Trust Funds]
FN	Financiera Nacional de Desarrollo Agropecuario, Rural, Forestal y Pesquero [National Finance Company for Agricultural, Rural, Forestry, and Fisheries Development]
IFC	International Finance Corporation
LIBOR	London Interbank Offered Rate
Mex$	Mexican pesos
OC	Ordinary Capital
PND	Plan Nacional de Desarrollo [National Development Plan]
PSDAP	Programa Sectorial de Desarrollo Agropecuario y Pesquero [Sector Program for Agricultural and Fisheries Development]
SMEs	Small and medium-sized enterprises

PROJECT SUMMARY

MEXICO
CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (ME-X1021)

FIRST PROGRAM FOR THE FINANCING OF RURAL SECTOR PRODUCTION RESTRUCTURING AND INVESTMENT PROJECTS (ME-L1145)

<table>
<tr><th colspan="4">Financial Terms and Conditions</th></tr>
<tr><td colspan="2" rowspan="4">Borrower: Banco del Ahorro Nacional y Servicios Financieros, Sociedad Nacional de Crédito (BANSEFI)
Guarantor: United Mexican States
Executing agency: Fideicomisos Instituidos en Relación con la Agricultura [Agricultural Trust Funds] (FIRA)</td><td colspan="2">Flexible Financing Facility*</td></tr>
<tr><td>Amortization period:</td><td>25 years</td></tr>
<tr><td>Original weighted average life:</td><td>15.25 years</td></tr>
<tr><td>Disbursement period:</td><td>48 months</td></tr>
<tr><td>Source</td><td>Amount (US$)</td><td>Grace period:</td><td>5.5 years</td></tr>
<tr><td>IDB (OC) ME-X1021</td><td>300 million</td><td>Inspection and supervision fee:</td><td>**</td></tr>
<tr><td>IDB (OC) ME-L1145</td><td>50 million</td><td>Interest rate:</td><td>LIBOR-based</td></tr>
<tr><td>Total IDB (OC) ME-L1145</td><td>50 million</td><td>Credit fee:</td><td>**</td></tr>
<tr><td colspan="2"></td><td>Currency:</td><td>U.S. dollars from the Ordinary Capital (OC)</td></tr>
<tr><th colspan="4">Project at a Glance</th></tr>
<tr><td colspan="4">Project objective/description: The objective of the conditional credit line for investment projects (CCLIP) is to promote private investment in production-restructuring, investment, and enterprise- and export-development projects that will increase productivity or promote more efficient use of natural resources, primarily in Mexico’s rural sector, through long-term financing to help increase the supply of credit for such investments under favorable terms.
The objective of the first program under the CCLIP is to increase investments of agricultural enterprises and companies linked to the agroindustrial sector in projects that promote more efficient use of water and energy, respectively, through long-term financing to help increase the supply of credit for such investments under favorable terms.
Related operations. The first program will be coordinated with two technical cooperation operations and an investment grant (ME-T1265 for US$430,000; ME-T1266 for US$570,000; and ME-G1006 for US$1 million, respectively) from the Clean Technology Fund, which will support FIRA in preparing and executing the energy-efficiency subcomponent of the first program under the CCLIP.</td></tr>
<tr><td colspan="4">Special contractual conditions. As a special contractual condition precedent to the first disbursement for the first program, the borrower will provide evidence, to the Bank’s satisfaction, of: (i) the formal appointment of the program coordinators at BANSEFI and FIRA; (ii) the entry into effect of the Operating Regulations agreed upon with the Bank; and (iii) the contract between BANSEFI and FIRA setting forth the conditions for transferring resources and their responsibilities in executing the first program, including those specified in the loan contract and the Operating Regulations (paragraph 3.8).</td></tr>
<tr><td colspan="4">Exceptions to Bank policies: None.</td></tr>
<tr><td colspan="4">Project qualifies as: SEQ [ ] PTI [ ] Sector [ ] Geographic [ ] Headcount [ ]</td></tr>
</table>

* Under the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, and currency and interest rate conversions. When considering such requests, the Bank will take into account operational and risk-management considerations.

** The credit fee and 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 the relevant policies.

I. DESCRIPTION AND RESULTS MONITORING

A. Background

1.1 **Growth and productivity of Mexico's rural sector.** The Mexican economy has grown in the past three decades, but not as fast as other emerging economies. A major reason for this difference is that Mexico's total factor productivity shrank at an average annual rate of 0.7% over this period, while that of other emerging economies grew.[1]

1.2 The rural sector has been no stranger to the productivity problems that have affected the country as a whole. Rural productive activity has expanded, as suggested by trends in the real value of production in the primary sector[2] and in the food-manufacturing, beverage, and tobacco industries. As shown in Table 1, "Total factor productivity and contribution to economic growth in Mexico," average annual growth in these sectors for the 1990-2011 period was 1.6%, 2.7%, and 3.4%, respectively—less than the 3.6% growth reported for the economy as a whole. A major reason for the difference in performance from sector to sector, as well as within a single sector, is related to productivity differentials. For example, Table 1 shows productivity differentials not only between the primary, secondary, and tertiary sectors, but also between the various subsectors within the primary sector.

1.3 **Degradation of natural resources in the rural sector.** Another major challenge in the sector that affects productivity and growth is the degradation of natural resources. The rural sector—especially the agricultural subsector—accounts for a relatively high share of natural resource usage. The sector uses 80% of surface water and 70% of groundwater.[3] While Mexico is under some hydrological pressure, 8 of its 13 hydrological regions are experiencing high or very high pressure for water resources;[4] these regions are primarily in northern, northwestern, and central Mexico. Fifty percent of all agricultural enterprises are located in high-pressure areas.[5] While the sector is not a leading energy consumer, its consumption has been growing at a relatively fast rate. Between 2002 and 2012, energy consumption in the sector grew at an average annual rate similar to that of the transportation sector (3.3%), and well above rates in the industrial sector (1.6%) and the residential, commercial, and public sector (0.7%).[6]

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1 See 2013-2018 National Development Plan (PND), Federal Executive Branch, Mexico, 2013, p. 71.

2 Primary GDP includes farming, livestock raising, forestry, fishing, and hunting.

3 See "Diagnóstico del Sector Rural y Pesquero: Identificación de la Problemática que Atiende Procampo" [Diagnostic Assessment of the Rural and Fishing Sector: Identification of the Problems Addressed by Procampo], Food and Agriculture Organization (FAO), March 2012, p. 94.

4 Pressure is considered high if the total volume of water under concession is more than 40% but less than 100% of all renewable water, and pressure is very high if this percentage exceeds 100%.

5 Agricultural statistics from irrigation districts, 2007-2008 crop year; and Mexican National Statistics and Informatics Institute (INEGI), 2007 Agriculture and Forestry Census.

6 Project team calculations based on the National Energy Balance Sheets 2002-2012, Department of Energy.

1.4 **Low levels of financial intermediation and investment in rural areas.** As noted in the 2013-2018 National Development Plan (PND), credit is severely lacking for equipment investment projects[7] in the rural sector that would help incorporate new technologies, and this is holding back rural productivity and sustainable development.[8] Two recent studies show that credit constraints are widespread in the sector and that this has a significant effect on the number of investments. These studies also suggest that eliminating these restrictions would increase both the number of rural producers making investments and the magnitude of their investments.[9]

1.5 **Public policy and development banking in Mexico.** The government, aware of the challenges of low productivity and inefficient use of natural resources, has pursued public policies aimed at overcoming them. For example, the 2013-2018 PND promotes more efficient energy usage (objective 4.6, strategy 4.6.2) by adopting new technologies and implementing best practices. To make water usage more efficient, the government has laid the foundations for promoting investment in this area, as evidenced in the Law on Sustainable Development (Articles 81, 83, 168, and 169), the Law on National Waters (Article 1), the 2007-2012 Sector Program for Agricultural and Fisheries Development (PSDAP) (objective 3, strategy 3.5; and objective 4, strategy 4.3), the 2013-2018 PND (objectives 4.2 and 4.10), and the 2013-2018 PSDAP (objective 4, strategy 4.1). With the private sector facing limited access to investment credit, particularly in rural areas, the PND and the 2013-2018 PSDAP call on the national development banking system to work with sector authorities and other relevant public-sector actors to promote financing for private investment, particularly in the rural sector (objective 4.2, strategy 4.2.4; and objective 1, strategy 1.4, respectively).

B. Problem to be addressed and program rationale

1.6 **Problems to be addressed and purpose of the conditional credit line for investment projects (CCLIP).** Mexico's rural sector faces two major challenges for sustainable development. First are the low levels of productivity[10] of rural producers and enterprises, largely as a result of low levels of financial

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7 Gross fixed capital formation in agriculture, as a proxy indicator of capital investment, has leveled off as a share of GDP and has grown at a slow rate. Its share of GDP, aside from being relatively low, stagnated between 0.06% and 0.07% from 2003 to 2012. Over the same period, it grew at an average annual rate of only 1.3%. See Trends in gross fixed capital formation.

8 See op. cit. in footnote 1, p. 82.

9 See Inessa Love and Susana M. Sánchez, "Credit Constraints and Investment Behavior in Mexico's Rural Economy," The World Bank, Policy Research Working Paper 5014, August 2009; and José Jorge Mora Rivera, Jesús Arellano González, and Edgar Mendoza Flores, Determinantes de la inversión en la agricultura mexicana [Determinants of investment in Mexican agriculture], Centro de Estudios Económicos, El Colegio de México, May 2011.

10 Productivity is a multidimensional problem influenced by institutional conditions ranging from the system for assigning property rights to regulations limiting or promoting competition in different markets, as well as dynamics in the business environment, among other factors. Here the financial component, in particular, is taken to be a determining factor of productivity.

intermediation, which make it difficult to adequately allocate productive resources for the most efficient, cost-effective uses. Secondly, the inefficient use of natural resources, while resulting from low levels of financial intermediation, is itself a problem affecting the sector.[11] The CCLIP, to be taken out by BANSEFI and executed by FIRA, will support the government's efforts along these lines[12] by attacking the low levels of term funding in the financial sector and, in particular, the rural sector.

1.7 **The first program under the CCLIP**, and the only one being submitted for approval, by mandate of the authorities will be aimed at providing credit for investment projects to promote the efficient use of water and energy.

1.8 **Problem addressed by the first program.** Paragraphs 1.9 through 1.15 identify the aspects of the problem addressed by the first program under the CCLIP, which is a lack of credit for investment in processes and equipment that promote more efficient use of water and energy. Subsequent paragraphs will describe: (i) the imperfect nature of Mexico's financial market and the severity of these imperfections in the rural sector; (ii) the divergence between the social costs of water and energy resulting from excess demand and/or overexploitation; (iii) the resulting suboptimal allocation of resources for efficient water and energy usage, in the absence of public intervention; (iv) possible interventions that could mitigate this excess demand for and/or overexploitation of resources, and their viability; and (v) the validity of the alternative proposed in the first program.

1.9 **Low levels of financial intermediation.** Mexico has low levels of financial intermediation. Domestic credit to the private sector as a percentage of gross domestic product (GDP), at 27.5% in 2012, is much lower than in comparable economies in the region, such as Brazil, Colombia, and Chile—and is lower, in fact, than in less developed economies such as Paraguay, El Salvador, and Guatemala.[13] This indicator, moreover, does not reflect the length of repayment periods. Indeed, most loans have relatively short repayment periods because bank deposits are concentrated in very short-term instruments.[14] By July 2013, 60% of bank deposits were payable on demand,[15] limiting the banking system's

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[11] For more information on the problems affecting Mexico's rural sector, see: (i) "Diagnóstico del Sector Rural y Pesquero: Identificación de la Problemática que Atiende Procampo" [Diagnostic Assessment of the Rural and Fisheries Sector: Identification of the Problems Addressed by Procampo], FAO, March 2012; and (ii) "Propuesta de Políticas Públicas para el Desarrollo del Sector Rural y Pesquero en México, Informe Final" [Proposed public policies for development of the rural and fishing sector in Mexico, final report], FAO and Department of Agriculture, Rural Development, Fisheries, and Foods, Mexico, March 2013.

[12] The programs to be approved under the CCLIP will be used to address challenges related to productivity and inefficient use of natural resources, which stem partly from low levels of term-based financial intermediation.

[13] See World Bank, http://datos.bancomundial.org/indicador/FS.AST.PRVT.GD.ZS.

[14] The average term of a loan in the system is approximately two years, according to project team estimates based on data from the National Banking and Securities Commission (CNBV).

[15] Project team estimates based on CNBV data, 2013.

ability[16] to offer enough credit with terms consistent with the cash flows of producers' and enterprises' investment projects.[17]

1.10 **Financial intermediation in the rural sector.** Low levels of financial intermediation are the result of multiple factors, including the inherent information asymmetry in these markets, high transaction costs, and availability of collateral (*inter alia*).[18] Due to the severity of these problems in the rural sector, intermediation levels are particularly low and repayment periods in this sector are relatively short. Evidence of these problems, especially with regard to investment credit, is found in the report of the Interagency Group on Rural Development in Mexico, which states, "The problem is revealed in the fact that only 2% of the Mex$1.8 billion placed in the first quarter of 2010 went to the agricultural sector, and 86% of this amount was for short-term financing."[19] These problems are also described in paragraphs 1.25 to 1.27, with the finding that only 7% of agricultural producers gain access to credit, most of it short-term credit.

1.11 **Price distortions.** A second problem affecting the rural sector is distortions in the price system. One of the strongest outcomes in the economics literature, it should be recalled, is the negative correlation between price and quantity demanded of a good or service. When private purchase costs are lower than social costs, levels of demand and/or exploitation are excessive. In the particular case of productive resources, when prices to producers and/or enterprises are lower than those that would result from a match between social and private costs, resources are overexploited and/or overused. Against this backdrop, the price system does not effectively alert to the relative scarcity of resources, resulting in suboptimal levels of resource usage and investment.

1.12 **Distortions in the water and energy markets.** As noted in the cost/benefit analysis, the water and electricity markets in rural areas have significant price distortions. Electricity rates for the pumping of water for agricultural purposes (rate 09) are implicitly subsidized at approximately 47.4% of the actual cost of

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16 The transformation of maturities is a task inherent to the financial system, but the extreme concentration of very short-term deposits severely hinders this transformation.

17 For example, a survey of 86 financial institutions by the International Finance Corporation found that specialized finance companies and small banks, which represent an important niche for serving small and medium-sized enterprises with energy-efficiency projects, reported a need for funding that matches the repayment periods of the loans provided to these projects. See op. cit. in footnote 5, p. 28.

18 Some of the obstacles hindering intermediation in the rural sector are: (i) higher risks than in other sectors, particularly in terms of climate risk, marketing risk, and concentration of risk by activity and geographic area, as well as a lack of tools for managing these risks; (ii) greater limitations in terms of collateral and its enforcement, due to a lack of capital or the nature of land ownership; (iii) high transaction costs due to geographic dispersion and small scales; and (iv) low economies of scale in production (driving up operating costs, *inter alia*).

19 Análisis de los Problemas de Desarrollo del Medio Rural de México, Informe de la Reunión de Expertos [Report of the Meeting of Experts: Analysis of Development Problems in Rural Mexico]; Economic Commission for Latin America and the Caribbean, FAO, and Inter-American Institute for Cooperation on Agriculture, July 2010, p. 13.

generating and distributing energy (67.6 centavos per kilowatt-hour).[20] The social cost of electricity, including externalities, is some Mex$30 per kilowatt-hour, 22 times the price paid by users. These distortions, as noted above, result in excess demand for and overexploitation of water and energy in the rural sector.

1.13 **Suboptimal resource allocation in the absence of intervention.** Against this backdrop—with a financial system facing severe problems in the rural sector in terms of information, transaction costs, and limited collateral, and a severely distorted price system in the energy and water markets—private operations cannot effectively allocate resources in a way that would result in optimal levels of investment in equipment and processes that promote more efficient use of water and energy. This partly explains the prevalence of highly inefficient irrigation systems in the agricultural sector—surface irrigation systems in particular—as well as the use of old, energy-inefficient equipment in companies linked to the agroindustrial sector, as noted in Romero, H. et al., July 2013 and Magallón, D., October 2013.

1.14 **Intervention options.** Three types of mitigating actions can be taken in response to these problems, especially with regard to excess demand for and/or overexploitation of energy and water. First, the solution suggested by theory is to close the gap between the cost of providing these inputs and the prices paid for them (if necessary, using a taxation and/or subsidy system). Second, a less efficient strategy than the first one would be to introduce a strict system of usage fees. Lastly, a middle-ground strategy would be to adopt processes and equipment that are more efficient in the use of water and energy. Given the specific challenges of implementing each of these options, and the scope of the proposed program, the authorities deem the latter option the most viable in the short term.

1.15 **Scope and validity of the alternative proposed in the first program under the CCLIP.** In a context of low levels of financial intermediation, and in view of the preceding paragraph, the authorities have decided to steer investment credit toward processes and equipment that promote more efficient use of natural resources.[21] This option is valid because it falls under the IDB's objectives, is aligned with the country strategy, and has been selected by the client as the desired action.

1.16 **Importance of investment in efficient water usage and energy efficiency, and its potential.** As may be concluded from the preceding paragraph, investments in efficient water usage and energy efficiency are critical to ensuring the sustainability of natural resources. These investments have great potential in the rural sector. In the energy sector, for example, a recent study by the International Finance Corporation (IFC)[22] found significant opportunities for investment and

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[20] Federal Electricity Commission, 2010. http://www.cfe.gob.mx/negocio/conocetarifa/Paginas/Tarifas.aspx.

[21] These investments have other benefits, in addition to the natural resource savings identified as an important objective in its own right, as they promote the growth of rural productivity.

[22] Market Study of Sustainable Energy Finance in Mexico, Final Report, IFC, October 2012.

financing over the next 15 years in energy-efficiency measures for agricultural pumping; in energy management of micro, small, and medium-sized enterprises; and in cogeneration in the food-processing and sugar industries.[23]

1.17 In addition to these areas of potential, the IFC study found opportunities for investment and financing in energy efficiency for the agroindustrial sector, especially in the states of Jalisco, Nuevo León, and México, as well as in the Federal District. The study estimated these opportunities in the ranges of US$3.079 billion to US$6.49 billion for investment and US$1.237 billion to US$2.222 billion for financing.

1.18 The potential for investment in efficient water usage is evidenced by the fact that out of the 85% of hectares annually available for farming, only 28% are served by irrigation systems, accounting for 60% of the total annual value of production.[24]

1.19 **The challenge of financing investment in sustainable equipment (for efficient water usage or energy efficiency) in the rural sector.** While barriers in gaining access to investment credit in the rural sector are challenging enough, this challenge is exacerbated when projects for investment in sustainable equipment are financed. First, such equipment generally costs more than standard or older equipment. As a result, an investor seeking to purchase this equipment needs access to additional funds (via financing, grants, or both). If the equipment purchase is financed, its higher cost means that medium- or long-term credit is needed to prevent cash-flow considerations from discouraging the investor from investing. Second, many potential investors are unaware of the risks and returns associated with projects related to energy efficiency or efficient water usage, or they lack the capacity and knowledge needed to structure their technical and financial proposals for these projects in order to secure financing. Lastly, financial intermediaries use a collateral-based lending approach in financing such projects (asset-based finance), even though these projects generate cash flows that could serve as the basis for loan repayment (cash flow-based finance).

1.20 **Characteristics of demand.** On the demand side of credit, it is important to consider the characteristics of producers and enterprises, especially those that operate on a small scale, since their technical, administrative, and business-management capacities may limit their ability to structure technically sound, bankable investment projects, in addition to the fact that they have limited collateral due to low levels of capitalization, as noted in the 2013-2018 PND.

1.21 **Technical support.** The funding to be provided—combined with the technical assistance that Fideicomisos Instituidos en Relación con la Agricultura [Agricultural Trust Funds] (FIRA), the executing agency for the programs to be approved under the CCLIP, provides to rural producers and enterprises with its

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[23] See Opportunities for investment and financing in energy efficiency and cogeneration in Mexico's rural sector.

[24] See op. cit. in footnote 1, p. 82.

own resources and those of third parties, as well as FIRA's guarantee facilities for mitigating the credit risks of these economic agents and their investment projects—will help overcome the obstacles to matching up supply and demand for credit for such investments. Without the long-term funding provided by the CCLIP and its first program, this support in the form of technical assistance and guarantees provided by FIRA would not be enough to match up supply and demand for financing for investments to promote the more efficient use of natural resources.

1.22 **FIRA's mandate** is to promote comprehensive financing for producers in the agricultural, forestry, fisheries, and food sectors and in rural areas through specialized financial products with technical assistance and risk mitigation, in order to boost their productivity and living standards with an orientation toward regional development, environmental sustainability, and gender equity. Among the special programs for comprehensive financing being pursued by FIRA is an irrigation modernization program, which will be linked to the water-usage subcomponent of the first loan under the CCLIP being submitted for approval (see also paragraphs 1.38 and 3.4).

1.23 **Other evidence.** Evaluations by Mexican government agencies of the outcomes of programs and projects related to efficient water usage and energy efficiency reveal that these investments have resulted in significant water and energy savings (see Monitoring and evaluation plan). In addition, in investment finance programs similar to the first proposed program under the CCLIP that have been pursued by development banks in other countries in the region, beneficiary units gained access to credit on more advantageous terms than comparable nonbeneficiary units[25] and achieved significant development impacts.[26]

1.24 **Beneficiaries of the CCLIP and the first program, and the problems facing them.** The CCLIP will support the financing of production-restructuring and investment projects of producers and enterprises operating in rural areas that are aimed at: (i) boosting their productivity; or (ii) using natural resources more efficiently. The beneficiaries of the first program under the CCLIP will be agricultural enterprises[27] and companies linked to the agroindustrial sector of all sizes that are interested in financing projects for investment in efficient water usage and energy efficiency, respectively. While these beneficiaries face common

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[25] See Marcela Eslava, Alessandro Maffioli, and Marcela Meléndez (2012), "Second-tier Government Banks and Access to Credit: Micro-Evidence from Colombia," IDB Working Paper Series IDB-WP-308.

[26] See Marcela Eslava, Alessandro Maffioli, and Marcela Meléndez (2011), "Government-Owned Banks and Firm Performance: Micro Evidence from Colombia," IDB Discussion Paper.

[27] Agricultural enterprises include individuals and entities (producers' associations and cooperatives) devoted to agricultural activity.

barriers in making such investments,[28] those barriers are not of equal magnitude for all of them, as will be described below.

1.25 As for agricultural producers, the estimated 5,325,223 rural producers are stratified into three groups: subsistence, transitional, and entrepreneurial. The subsistence group consists of 3,888,764 producers (73% of the total) who produce for their own consumption and for local markets. Their food poverty rate is 81.8%, and they average 4.5 years of schooling, with 24.7% of them never having attended school. Only 1.9% of them have access to bank credit, primarily short-term credit. They have an average of 7.2 hectares of arable land, US$2,318 in productive assets, and US$1,376 in annual sales revenues.

1.26 The transitional group consists of 970,725 producers (18.2% of the total) who produce for domestic markets. Their food poverty rate is 25.5%, and they average 5.8 years of schooling, with 14% of them never having attended school. Only 10.7% of them have access to bank credit, primarily short-term credit. They have an average of 35 hectares of arable land, US$15,554 in productive assets, and some US$9,312 in annual sales revenues.

1.27 Lastly, the entrepreneurial group consists of 465,764 producers (8.8% of the total) who produce for domestic and export markets. Their food poverty rate is 9.2%, and they average 8.4 years of schooling, with 6.6% of them never having attended school. Only 44.7% of them have access to bank credit, primarily short-term credit. They have an average of 147.3 hectares of arable land, US$72,868 in productive assets, and US$78,724 in annual sales revenues. Notably, all three groups of producers described here overexploit natural resources due to poor production practices and the use of obsolete equipment and systems, resulting in the inefficient use of natural resources.[29]

1.28 Mexico has some 7,000 companies linked to the agroindustral sector. While 70% of them have access to credit or would likely be eligible for credit, particularly short-term credit, a significant percentage operate with inefficient equipment due to a lack of knowledge about the energy they could save by using modern equipment, or due to a lack of confidence in the ability of such equipment to generate savings.[30]

1.29 In addition to the characteristics described above, the program is expected to be implemented in such a way that its beneficiary profile will be very similar to that of FIRA's current portfolio.

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[28] These barriers range from a lack of income and assets to a lack of schooling and administrative and managerial capacities, all of which has an impact on their ability to gain access to credit.

[29] See op. cit. in footnote 8, items (i) and (ii) for more information on the stratification, characteristics, main problems, and needs of these three groups.

[30] See Romero, H. et al. "Estudio de Mercado y Diseño de una Estrategia y Mecanismos Financieros para Financiar Proyectos de Eficiencia Energética y Uso Racional de Agua en el Campo en México" [Market Study and Design of Financial Mechanisms to Finance Projects for Energy Efficiency and Rational Use of Water in the Mexican Countryside], Basel Agency for Sustainable Energy, July 2013.

1.30 **Sector strategy in Mexico.** Chapter IV of the 2013-2018 PND, titled "México Próspero" [Prosperous Mexico], underscores the importance of promoting the productivity and competitiveness of the rural sector in order to reduce poverty, contribute to regional development, and ensure food security while encouraging the sustainable use of natural resources. The proposed CCLIP is aligned with the PND in that it aims to support the rural sector in gaining access to investment credit that can help boost its productivity or promote more efficient use of natural resources.

1.31 **The Bank's support, lessons learned, complementarity, and value added.** The Bank has gained experience in Mexico's financial sector through the multiple and diverse operations it has carried out with a variety of public financial intermediaries. As for operations targeted to rural areas, the Bank has structured two financing operations aimed at combating the marginalization of rural production (loans 2656/OC-ME and 2838/SX-ME) with Financiera Nacional (FN), a first-tier public financial institution. The main lesson learned from these interventions is the importance of combining multiple funding sources and instruments to make it viable to finance private investment projects in this market segment, and this lesson has been incorporated into the proposed program. Also, the proposed first program under the CCLIP will complement loan 3302/OC-ME, which will provide funding to FN in order to help boost primary sector productivity through improved access to financing by eligible rural economic units to make investments in productive assets and adopt technology and technical models. Unlike loan 3302/OC-ME, the proposed operation focuses on providing credit to finance private investment projects aimed at promoting initiatives in efficient water usage and energy efficiency through a second-tier public financial institution.

1.32 **Strategic alignment of the program.** The program will contribute to the lending priorities of the Ninth General Increase in the Resources of the Inter-American Development Bank (document AB-2764) by financing projects to support climate-change mitigation and adaptation and environmental sustainability. The program will also contribute to the regional targets on: (i) institutions for growth and social welfare; and (ii) protecting the environment and responding to climate change, by providing funding to banks to finance investment projects of agricultural enterprises and projects to mitigate and adapt to climate change. The program is also aligned with the principles of additionality, completeness, and evaluability set forth in the Support to SMEs and Financial Access/Supervision Sector Framework Document (document GN-2768-3). Lastly, the program is aligned with the Bank's country strategy with Mexico 2013-2018 (document GN-2749), which seeks to promote sustained growth in productivity in rural areas by increasing the level of finance available to the real economy. In particular, the strategy aims to strengthen bank lending to the nonfinancial private sector through public financial intermediaries in priority areas such as micro, small, and medium-sized enterprises; energy; energy efficiency; and the agricultural sector.

1.33 The program will also be coordinated with activities currently under way with FIRA. These activities include technical support through two regional technical-cooperation operations (ATN/OC-12718-RG and ATN/FI-13401-ME) to develop a financing strategy for promoting energy-efficiency investments in companies linked to the agroindustrial sector, and to design and implement an environmental and social risk management system as part of FIRA's lending process, respectively. Resources for the first program will also be coordinated with two nonreimbursable technical-cooperation operations, for US$430,000 (ATN/TC-14513-ME) and US$570,000 (ME-T1266), and a US$1 million investment grant (ME-G1006) to FIRA, which will be financed with resources from the Clean Technology Fund. These technical cooperation operations and the investment grant will support the preparation and execution of the energy-efficiency subcomponent of the first program under the CCLIP, which will be a pilot initiative aimed at promoting the financing of energy-efficiency investment projects of companies linked to the agroindustrial sector. Moreover, these support initiatives are expected to overcome market barriers that stand in the way of such projects and to yield lessons for similar programs in the future, which may or may not be supported by concessional funds.

C. Objective, components, and characteristics

1.34 The objective of the CCLIP is to promote private investment in production-restructuring, investment, and enterprise- and export-development projects that will increase productivity or promote more efficient use of natural resources, primarily in Mexico's rural sector, through long-term financing to help increase the supply of credit for such investments under favorable terms. The amount of the CCLIP will be US$300 million.

1.35 The objective of the first program under the CCLIP is to increase the investments of agricultural enterprises and companies linked to the agroindustrial sector in projects to promote more efficient use of water and energy, respectively, through long-term financing to help increase the supply of credit for such investments under favorable terms.

1.36 The demand for credit for projects related to efficient water usage and energy efficiency has been estimated at US$124 million and US$188 million, respectively. The former estimate is based on an analysis of recent trends in FIRA's portfolio and FIRA's projections for the next two years, and the latter estimate was extrapolated from the results of a market study of some 7,000 companies in Mexico's agroindustrial sector, which was conducted during project preparation. The resources provided through the first program under the CCLIP are expected to help meet 24% and 10.6% of these needs, respectively; and some 900 irrigation modernization projects and some 100 energy-efficiency projects are expected to be financed under the first program (for more information, see Credit demand analysis).

1.37 On the basis of these estimates, the first program—the only one being submitted for approval—will be for US$50 million and will have a credit component with two subcomponents:

a. One subcomponent for up to US$30 million to fund projects for investment in technologies related to efficient water usage—such as drip irrigation, spray irrigation, center-pivot irrigation, and microspray irrigation—by producers, producer associations, and agricultural enterprises of all sizes, for a maximum amount to be specified in the program's Operating Regulations; and

b. Another subcomponent for at least US$20 million to fund a pilot program to finance energy-efficiency investment projects—such as efficient engines, efficient boilers, compressed air systems, refrigeration and freezing systems, and electricity cogeneration—by companies of all sizes in the agroindustrial sector, for a maximum amount to be specified in the program Operating Regulations.

1.38 The funding provided through the first program will be complemented by technical-assistance resources and guarantee facilities managed by FIRA to overcome the barriers to demand for credit described in paragraphs 1.20 and 1.21. FIRA—with its 1,134 employees, 136 regional offices, 5 technology development centers, 2,890 qualified specialists, and 505 accredited agencies, as well as its Special Irrigation Modernization Program[31]—is already supporting rural producers in identifying, structuring, financing, and managing investment projects in efficient water usage that are similar to those sought through this program. FIRA also has two "National Guarantee Funds" (FONAGA and FONAGA Verde)[32] that help to alleviate the lack of collateral among producers and enterprises interested in financing projects that promote the efficient use of resources, and which encourage financial intermediaries to finance projects whose risks and returns are not well known to them.

1.39 Given the need for technical assistance in energy efficiency, the Bank is working through a regional technical-cooperation operation (ATN/OC-12718-RG) to support FIRA in strengthening its institutional capacities and strategic partnerships with relevant market actors in order to promote the structuring of energy-efficiency investment projects of companies linked to the agroindustrial sector. These efforts will be strengthened through the two technical cooperation operations and the investment grant described in paragraph 1.33. The resources will be used to structure a pilot program for financing to stimulate development of the energy-efficiency market among such companies, including efforts to build the capacities

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[31] See http://www.fira.gob.mx/Nd/PagTecnificacion.jsp and "Acuerdo por el que se dan a conocer las Reglas de Operación del Programa de Fomento a la Agricultura de la Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación" [Agreement announcing the operating rules of the Agriculture Development Program of the Department of Agriculture, Rural Development, Fisheries, and Food], Official Gazette, Mexico, December 2013.

[32] Guarantees for the sustainable development of the agriculture, forestry, fishing, and rural sectors. FIRA, in http://www.fira.gob.mx/Nd/PagFonaga.jsp.

of relevant actors to develop technically sound and bankable projects, promote these investments, design and implement incentives for the demand for credit, develop effective methods for monitoring and validating outcomes, and design and implement risk management instruments such as insurance policies and performance guarantees, results-based payment systems for equipment suppliers, and technical verification standards that encourage end beneficiaries and financial intermediaries to undertake and finance such projects, respectively.

D. Key outcome indicators

1.40 The main outcomes of the first program under the CCLIP, in terms of impacts, will be percentage-based reductions in water and energy consumption per ton or hectare by beneficiary units vis-à-vis comparable nonbeneficiary units; and reduced greenhouse gas emissions associated with energy-efficiency projects financed with program resources. The outcomes will be total investments in efficient water usage and energy efficiency with support from program resources and an increase in the average repayment period for loans issued with program resources. The outputs will be the number of companies and enterprises per year that gain access to credit with program resources in order to finance investment projects in efficient water usage and energy efficiency, respectively (see Annex II).

1.41 In addition to direct outcomes in terms of water and energy savings, the promoted investments in efficient water usage and energy efficiency are expected to generate a powerful demonstration effect in the market and help reduce the risk perceptions that potential investors and financial intermediaries may have regarding the risks and returns on this type of project due to a lack of familiarity, laying the foundation for the program to be scaled up in the future.

1.42 The economic analysis is based on a cost/benefit analysis. The Bank's usual discount rate of 12% is applied to the net benefits. All projects have an evaluation horizon of 10 years. An exchange rate of Mex$13 to the U.S. dollar is used. Projects related to efficient water usage by agricultural enterprises and energy-efficiency projects of food-processing companies are analyzed. The cost/benefit analysis includes a sensitivity analysis in view of variations in benefits (water and energy savings) and costs (maintenance, labor, inputs, etc.). These analyses show that all interventions for efficient water usage and energy efficiency that are promoted by the program are profitable and robust, and that the program as a whole is sustainable and beneficial to Mexico.

II. FINANCING STRUCTURE AND MAIN RISKS

2.1 **Financing instruments.** The CCLIP, in the amount of US$300 million from the Bank's Ordinary Capital, will be for 10 years and will finance global credit loans. Use of this instrument is justified because the conditions set forth in document GN-2246-4 are satisfied. The executing agency has approved and disbursed two similar loans with financial institutions: one issued by Banco de México in 1994 for

Mex$24.371 billion, which was fully repaid on time and in due form in 2013, and which brought the balance of financing to Mex$86.238 billion at the end of last year; and another loan for approximately US$50 million with the French Development Agency, which has been executed smoothly thus far, and whose projected outcomes in terms of financing for eligible projects are expected to be attained by late 2014. Moreover, the institutional analysis indicates that FIRA should have no significant future problems in the intervention areas to be covered under the CCLIP (i.e., financing for productivity or sustainable use of natural resources), which are a focus of its regular operations and are among the priorities set forth in the Bank's country strategy and program for Mexico. For these reasons, authorization is sought to sign a CCLIP with BANSEFI, as the borrower, so that it may channel funds through FIRA, as the executing agency, in order to fund investment projects to promote productivity or the sustainable use of natural resources in rural areas.

2.2 The first global credit loan program, in the amount of US$50 million, under the CCLIP is aligned with its intervention areas and is included in the Bank's current work program with Mexico. Table 3, below, presents the costs of the first program.

Table 3. Costs of the first program (US$ million)

Investment component	IDB	Total
Credit	50	50
Percentage	100%	100%

2.3 **Fiduciary risk.** An analysis of the fiduciary capacities of BANSEFI and FIRA (see Annex III) reveals that both entities have the capacity to conduct the financial-management activities. Fiduciary risk is low.

2.4 **Environmental and social risks.** The loan provides resources to fund second-tier lending operations. Its environmental and social impacts and risks, therefore, will occur at the subloan level and cannot be predicted. In accordance with Directive B.13 of the Environment and Safeguards Compliance Policy (document GN-2208-20 and Operational Policy OP-703), this operation does not require classification. In executing the operation, however, FIRA will be governed by an exclusion list of sectors ineligible for financing, as well as by other requirements related to environmental and social management that will be included in the Operating Regulations (see Environmental and social management plan).

2.5 **Development risk of the first program.** Due to barriers related to knowledge and information, the energy-efficiency subcomponent of the first program could face initially low demand for resources, despite the fact that enterprises surveyed during program preparation expressed interest in this type of project. To mitigate this risk, technical cooperation operation ME-T1266 includes resources for

promotion, training, and technical-assistance activities through FIRA, providers of energy services, and suppliers of energy-efficiency equipment.

III. Implementation and Management Plan

A. Summary of implementation arrangements

3.1 The borrower will be BANSEFI, and the executing agency will be the public development trust fund Fondo Especial para Financiamientos Agropecuarios [Special Fund for Agricultural Financing] (FEFA), which is part of FIRA.

3.2 The United Mexican States will be the guarantor of the loan contract to be signed between the borrower and the Bank.

3.3 BANSEFI is an entity of the federal government, with legal status and its own budget. Its purpose is to support the institutional development of the popular savings-and-loan sector and to promote the financial culture and savings among people in this sector by offering effective products and services and coordinating support from the federal government and various agencies. In accordance with its organic law, BANSEFI is authorized to grant financing to public development trust funds. It has the administrative and operational capacity to successfully execute the CCLIP and the first program. It is governed by the laws and regulations of the financial system and is subject to the supervision and monitoring of the National Banking and Securities Commission (CNBV). BANSEFI is a solvent institution with good risk-management practices. Also, given its prior experience in executing loans with international financial institutions, such as the World Bank and the IDB, BANSEFI has the capacity to serve as an intermediary for global credit loan programs under the CCLIP (see Institutional analysis).

3.4 FIRA consists of four public development trust funds, with the Department of Finance as trustor and Banco de México as trustee. Proceeds from the BANSEFI loan will be disbursed to FEFA, which is one of the trust funds. The institutional analysis shows that FIRA has the experience and the administrative and operational capacity needed to successfully execute the CCLIP and the first program. Because FIRA acts as a second-tier bank, it is governed by the Federal Law on Parastatals and is subject to monitoring and supervision by the CNBV. Lastly, FIRA is a solvent entity with outstanding risk-management practices (see Institutional analysis).

B. Execution and administration

3.5 The Bank will grant a loan to BANSEFI so that BANSEFI, in turn, can issue a loan to FIRA, which FIRA will use to provide medium-term financing to its authorized financial intermediaries. These intermediaries may then offer subloans under favorable terms to eligible beneficiaries in order to finance eligible investment projects (the subloans may be cofinanced).

3.6 For the programs under the CCLIP, FIRA—as the executing agency—will be responsible for providing the Bank information on: (i) execution and supervision of the appropriate use of subloan resources; and (ii) provision, in due time and form, of the human and technical resources needed to perform this execution and supervision.

3.7 Execution of each program under the CCLIP will require that FIRA's qualification system for financial intermediaries be in place, and that the respective Operating Regulations be approved and put into effect. The first program includes the following features:

a. **Financial-intermediary qualification system.** First-tier institutions regulated by the CNBV and nonbank financial intermediaries authorized and monitored by FIRA may participate as financial intermediaries. These intermediaries will: (i) evaluate the risk of subborrowers and decide whether to grant financing, in accordance with the Operating Regulations and FIRA's regulations; and (ii) assume responsibility, vis-à-vis FIRA, for servicing and repaying the subloans regardless of whether the subborrowers comply in servicing their obligations.

b. **Operating Regulations.** The Operating Regulations: (i) will be consistent with the policies of BANSEFI, FIRA, and the Bank, as well as with Mexico's financial laws and practices; (ii) will reflect the main characteristics of the program; and (iii) may be modified with the Bank's no objection.

3.8 **As a special contractual condition precedent to the first disbursement of the first program, the borrower will provide evidence, to the Bank's satisfaction, of: (i) the formal appointment of the program coordinators at BANSEFI and FIRA; (ii) the entry into effect of the Operating Regulations agreed upon with the Bank; and (iii) the contract between BANSEFI and FIRA setting forth the conditions for transferring resources and their responsibilities in executing the first program, including those specified in the loan contract and the Operating Regulations.**

3.9 For the first program under the CCLIP: (i) the speed of disbursements will be determined by FIRA's demand, as a function of demand from eligible financial intermediaries; and (ii) the disbursement period will be 48 months starting on the effective date of the loan contract.

3.10 **Retroactive financing.** The Bank may use the loan proceeds to retroactively finance eligible expenditures made by FIRA prior to the date of loan approval by the Board of Executive Directors, up to US$10 million (20% of the loan amount), provided that requirements substantially similar to those established in the loan contract have been satisfied. These expenditures must have been made no earlier than 18 September 2013, but under no circumstances may expenditures made more than 18 months before the loan approval date be included. This financing is justified because FIRA, which already has a line of credit for investment projects

in efficient water usage, has identified additional demand for credit for such projects (see Credit demand analysis).

3.11 The borrower will require the executing agency to pledge to submit the program's audited financial statements, within 180 calendar days following the close of the latter's fiscal year and during the original disbursement period and any extensions thereto. These are to be duly audited by an independent auditing firm hired and financed by the borrower or the executing agency and acceptable to the Bank. The last audited financial statements will be presented within 180 days following the end of the original disbursement period or any extensions thereto. The statements will be prepared based on terms of reference previously agreed upon with the Bank and the Civil Service Department.

C. Summary of arrangements for monitoring results

3.12 **Reports.** The program will be monitored by means of semiannual reports prepared by the executing agency and submitted to the Bank within 60 calendar days after the end of each six-month period. These reports will measure the progress of the outcome indicators (see Annex II) and fulfillment of the eligibility criteria at the project and program level.

3.13 **Evaluation.** The borrower and the Bank will conduct a midterm evaluation 24 months after the date of the first disbursement or when 50% of the loan has been disbursed, whichever occurs first. The evaluation will measure progress in the fulfillment of program objectives and outcomes, on the basis of the Results Matrix, and will identify any appropriate corrective action. The executing agency will provide all information needed for the Bank to prepare a project completion report, which will be prepared six months after the last disbursement. Monitoring meetings will be held periodically as well.

3.14 The evaluation plan calls for a quasi-experimental evaluation to be conducted using statistical pairing and a difference-in-differences estimator in order to compare beneficiary enterprises to comparable nonbeneficiary enterprises.

3.15 **Information.** The borrower and the executing agency will compile and retain all information, indicators, and parameters needed to prepare the project completion report and any ex post evaluation that the Bank or the Clean Technology Fund wishes to conduct.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	**Aligned**		
Lending Program	**Lending to support climate change initiatives, renewable energy and environmental sustainability.**		
Regional Development Goals	**i) Percent of firms using Banks to finance investments, and ii) CO2 emissions (kilograms) per $1 GDP (PPP).**		
Bank Output Contribution (as defined in Results Framework of IDB-9)	**i) Climate change pilot projects in agriculture, energy, health, water and sanitation, transport, and housing.**		
2. Country Strategy Development Objectives	**Aligned**		
Country Strategy Results Matrix	**GN-2749**	**Increase the level of Finance to the Real Economy.**	
Country Program Results Matrix	**GN-2756-2**	**The intervention is included in the 2014 Operational Program.**	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability	**Highly Evaluable**	**Weight**	**Maximum Score**
	9.3		**10**
3. Evidence-based Assessment & Solution	**8.4**	**33.33%**	**10**
3.1 Program Diagnosis	**3.0**		
3.2 Proposed Interventions or Solutions	**2.4**		
3.3 Results Matrix Quality	**3.0**		
4. Ex ante Economic Analysis	**10.0**	**33.33%**	**10**
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis	**4.0**		
4.2 Identified and Quantified Benefits	**1.5**		
4.3 Identified and Quantified Costs	**1.5**		
4.4 Reasonable Assumptions	**1.5**		
4.5 Sensitivity Analysis	**1.5**		
5. Monitoring and Evaluation	**9.5**	**33.33%**	**10**
5.1 Monitoring Mechanisms	**2.5**		
5.2 Evaluation Plan	**7.0**		
III. Risks & Mitigation Monitoring Matrix			
Overall risks rate = magnitude of risks*likelihood	**Low**		
Identified risks have been rated for magnitude and likelihood	**Yes**		
Mitigation measures have been identified for major risks	**Yes**		
Mitigation measures have indicators for tracking their implementation	**Yes**		
Environmental & social risk classification	**B.13**		
IV. IDB´s Role - Additionality			
The project relies on the use of country systems			
Fiduciary (VPC/PDP Criteria)	**Yes**	**Financial management: i) Accounting and Reporting; and ii) Internal Audit.**	
Non-Fiduciary			
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality			
Labor			
Environment	**Yes**	**The project promotes the adoption of energy efficient technologies.**	
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**	**FIRA has benefitted from two regional TCs (RG-T1866 y RG-T2166), to: i) support the preparation of a financing strategy to promote the adoption of energy efficiency measures by food processing firms; and ii) design and implement an environmental and social risk management system within FIRA's own credit process.**	
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan			

The objective of this first program under the CCLIP, is to increase investments in agricultural enterprises and food processing companies in projects that promote a more efficient use of water and energy, respectively, by providing long-term loans to facilitate more funding for such investments. For this, the program will fund some 100 projects for energy efficiency (EE) and some 903 projects for efficient use of water (UEA).

The documentation contains a solid and well-structured diagnosis of the problems facing the rural sector in Mexico, with an emphasis on the link between the lack of access to credit for medium and long-term loans, the lack of investment in efficient technologies, and the over utilization and exploitation of natural resources, primarily water, from the agricultural sector. Although some relevant information about the effectiveness of such interventions in other contexts, including Mexico, is provided, the information is only indicative of such effectiveness, but it is not enough to ensure that there is external and internal validity. It would have been beneficial to strengthen this part of the diagnosis.

The results matrix reflects the objectives of the program (outputs, outcomes and impacts) and provides a clear vertical logic. The higher-level indicators are obtained from the cost-benefit analysis. Lower-level indicators reflect the design of the program. The information in the results matrix provides SMART indicators at all levels with their respective baseline values and goals.

The economic analysis is based on savings in the use of water (irrigation technology ventures), electric energy savings and a reduction of greenhouse gas emissions by food processing companies. In general, the assumptions are reasonable, and are based on studies (and data) from recognized institutions or relevant published studies. The sensitivity analysis is done by changing key variables that affect the cost and benefit of the intervention, and identifies "break-even" thresholds for each set of analysis.

The monitoring and evaluation plan proposes a reasonable identification strategy based on quasi-experimental methods. It is recognized that this strategy does not control for self-selection, but this is addressed by using three points in time: one to measure trends before the program, one for the baseline, and one towards the end for the final evaluation. Similarly, the identification strategy will employ a difference-in-difference methodology to try to control for this self-selection. Given the policies of the counterpart in Mexico, it is explained that it is not possible to implement an experimental methodology.

Risks are identified in the Risks Matrix and these are primarily ranked low, although one is classified as medium. These risks are reasonable, and most of them include performance indicators. For the Medium level indicator, steps have been taken to mitigate this risk and it will be possible to follow it over the life of the program.

RESULTS MATRIX

Project objective	The objective of the first program under the CCLIP is to increase the investments of agricultural enterprises and companies linked to the agroindustrial sector in projects that promote more efficient use of water and energy, respectively, through long-term financing to help increase the supply of credit for such investments under favorable terms.

Impact indicator	Unit of measure	Baseline	Target	Comments
1. Annual energy consumption per unit of production of the companies linked to the agroindustrial sector supported by the program is reduced vis-à-vis that of comparable nonbeneficiary companies by 2019.	MWh/ton	0.18	0.155[1]	Indicator is equal to average energy consumption per unit of production of units supported in the baseline year and upon program completion. Observation frequency: first observation: 2009 (for methodological reasons in the evaluation strategy); second observation: 2014 census data; and third observation: 2019 census data. The reduction will be calculated at the end of the program's execution period (2019) using a control group (see Monitoring and Evaluation Plan). Source of data: FIRA records for beneficiary enterprises; 2009, 2014, and 2019 economic censuses (data from 2008, 2013, and 2018, respectively) and 2008, 2013, and 2018 National Energy Balance Sheets (to obtain information on the price of electricity). A technical cooperation operation that complements this program (ME-T1266) includes resources for the impact evaluation of the energy-efficiency subcomponent at the end of the program's execution period (2019).
2. Annual water consumption per farmed hectare of agricultural enterprises supported by the program is reduced vis-à-vis that of comparable nonbeneficiary enterprises by 2017.	Thousands of m^3 per hectare	12.18	10.93[2]	Indicator is equal to average water consumption per farmed hectare of units supported in the baseline year and upon program completion. Average water consumption for a group is defined as $\sum(\tau \times \varepsilon \times \sigma)/N$, where τ is the technology used by a unit (m^3 per hectare); $\varepsilon = (0, 1]$ is the efficiency with which the technology is used; σ is unit size (farmed hectares); and N is group size (total hectares farmed). This sum is calculated for the units in the group for a given period and is then divided by total group size (yielding a weighted average of estimated water consumption). For a productive unit, then, $(\tau \times 1/\varepsilon \times \sigma)$ is estimated water consumption; $\sum(\tau \times 1/\varepsilon \times \sigma)$ is total water consumption for a given group, and $\sum(\tau \times 1/\varepsilon \times \sigma) / N$ is the weighted average.

[1] This target is calculated by dividing the projected energy savings resulting from equipment replacement by total equipment energy consumption. The source for these savings is FIRA-IDB (2013).

[2] This target is based on SAGARPA-FIRCO-IMTA (2010:106), which obtained a weighted average of the reduction in water consumption resulting from the modernization of irrigation in a representative sample of beneficiaries supported by the irrigation modernization program of the Department of Agriculture, Rural Development, Fisheries, and Foods (SAGARPA) in 2009.

Impact indicator	Unit of measure	Baseline	Target	Comments
				The control group is obtained on the basis of information collected from surveys using propensity score matching. Observation frequency: first observation: 2015; and second observation: 2017. The reduction will be calculated halfway through the execution period (2017) based on the results of a second round of surveys to be conducted in 2017. Data sources: Survey of the project's beneficiary enterprises and of comparable nonbeneficiary enterprises in 2015 (to collect historical and current data); survey of the project's beneficiary enterprises and of comparable nonbeneficiary enterprises in 2017; 2007 agricultural census; 2014 and 2017 editions of Estadísticas del Agua en México [Water Statistics in Mexico]; and data from the Instituto Mexicano de Tecnología del Agua [Mexican Water Technology Institute] on efficiency resulting from irrigation technology. A complementary technical-cooperation operation (ME-T1266) includes resources for the aforementioned surveys and the impact evaluation of the irrigation-modernization subcomponent halfway through the program's execution period (2017).
3. Greenhouse gas emissions of companies linked to the agroindustrial sector supported by the program are reduced by 2019.[3]	Thousands of tCO_2e per year	622.7	535.5	Indicator is equal to: [sum (electricity consumption per produced ton of supported unit i in baseline year x production in baseline year) x electricity emission factor in baseline year] – [sum (electricity consumption per produced ton of supported unit i in year t x production in baseline year) x electricity emission factor in year t]. The target is the sum of the annual reductions in emissions from the supported units. Administrative information: Program information system at FIRA, based on information reported by energy service providers and suppliers of energy efficiency equipment, and entered and processed by the consultant hired to support program execution.

[3] This indicator is of a different nature than those listed above, as it measures reductions in CO_2 emissions from beneficiary companies for the purpose of complying with the requirements of the Clean Technology Fund.

Outcome indicators	Unit of measure	Baseline 2014	2015	2016	2017	2018	Target	Comments
1. Annual amount of energy-efficiency investments leveraged with program resources	US$ millions	0	2.6	5.0	10.0	7.4	25	This indicator represents total investment in energy efficiency made with program support. Based on an average investment of US$242,718, FIRA's share of the financing is estimated at 80% of the total investment. This indicator measures the program's total investment flow, including FIRA's financing and the capital provided by the companies linked to the agroindustrial sector (20%). Administrative information: Program information system at FIRA.
2. Annual amount of investments in efficient water usage, leveraged with program resources	US$ millions	0	23.0	18.2	15.7	12.9	69.8	This indicator represents total investment in efficient water usage made with program support. Based on an average investment of US$77,298, FIRA's share of the financing is estimated at 43% of the total investment. This indicator measures the program's total investment flow, including FIRA's financing and the capital provided by SAGARPA's irrigation modernization program (45%) and the agricultural enterprises (12%). Administrative information: Program information system at FIRA.
3. Average repayment period of loans issued with program resources increases vis-à-vis the average repayment period of loans in the system.	Number of months	System 24 months	30	30	33	33	33	This indicator represents the change in the average repayment period of loans issued with program resources from year to year. This indicator is expected to be greater than the average repayment period in the system for loans aimed at eligible investment projects. This would mean that the program has been successful in providing more favorable repayment periods on financing to enterprises and companies tied to rural areas. Administrative information: Program information system at FIRA, based on data collected annually by the consultant to be hired to support program execution.

Output indicators	Unit of measure	Baseline 2014	2015	2016	2017	2018	Target/Cost	Comments
1. Number of companies linked to the agroindustrial sector per year that secure loans with program resources to finance energy-efficiency projects[4.]	Number of companies served	0	11	21	42	29	103 (US$20 million)	FIRA's program information system
2. Number of agricultural enterprises per year that gain access to the investment credit program to finance projects related to efficient water usage[5]	Number of enterprises served	0	298	235	203	167	903 (US$30 million)	FIRA's program information system

[4] The program's beneficiary companies will also receive complementary technical assistance through energy service providers and suppliers of energy-efficiency technology, with support from technical cooperation operation ME-T1266, in order to structure its energy-efficiency investment projects. See paragraph 1.39 of the proposal for operations development (POD).

[5] The program's beneficiary companies will also receive complementary technical assistance through FIRA's irrigation modernization program in order to structure its investment projects related to efficient water usage. See paragraph 1.38 of the POD.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country:	Mexico
Project number:	ME-L1145
Name:	First Program for the Financing of Rural Sector Production Restructuring and Investment Projects
Borrower:	Banco del Ahorro Nacional y Servicios Financieros, S.N.C. (BANSEFI)
Executing Agency:	Fideicomisos Instituidos en Relación con la Agricultura [Agricultural Trust Fund] (FIRA)
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I. EXECUTIVE SUMMARY

1.1 The project objective is stated in the project document; in short, it is to provide resources to BANSEFI so that financing can be provided through FIRA's intermediaries under suitable terms to eligible productive units interested in investing in projects that promote the sustainable use of water and energy.

1.2 The borrower, originally founded in 1949 as Patronato del Ahorro Nacional, was renamed BANSEFI in January 2002 and given the mission of supporting the institutional development of the popular savings-and-loan sector and promoting the financial culture and savings among the members of this sector. Its organic law sets forth the objectives of promoting, managing, and financing projects to serve the needs of the coordinating agencies, the popular savings-and-loan institutions, and the entities and groups of individuals described in the Law on Popular Savings and Loans, which enable it to fulfill its mission throughout the country and allow for the most efficient use of each region's resources; to provide technological support and technical assistance; and to serve as a financial agent of the federal government, *inter alia* (see www.bansefi.gob.mx).

1.3 BANSEFI has also served as a financial agent for a number of IDB operations with the Government of Mexico, and is currently doing so for loan 2512/OC-ME, executed by the National Water Commission.

II. THE EXECUTING AGENCY'S FIDUCIARY CONTEXT

2.1 The program will be executed using a decentralized, global lending arrangement between BANSEFI and FIRA as the executing agency. FIRA will have a direct

relationship with its financial intermediaries, as will these intermediaries, in turn, with the end loan recipients. BANSEFI's and FIRA's institutional capacity was assessed for this operation, and this assessment yielded total weighted scores of 99.26% for BANSEFI and 100% for FIRA, indicating highly developed fiduciary systems and low risk for the program's fiduciary execution. No weaknesses that could compromise project execution were identified. BANSEFI will submit to the IDB a detailed list of disbursements to FIRA, as the executing agency, so that the IDB may recognize these disbursements.

2.2 While its execution capacities are satisfactory, the executing agency has limited recent experience and practice on projects financed by the IDB or even the World Bank, and therefore should receive training on fiduciary matters.

III. Fiduciary Risk Evaluation and Mitigation Actions

3.1 As noted above, the Institutional Capacity Assessment System yielded a total weighted score of 99.26%, signaling a satisfactory degree of development in BANSEFI's fiduciary systems and a low level of risk in fiduciary execution. See the Report of the Institutional Capacity Assessment System (ICAS).

IV. Considerations for the Special Provisions of The Loan Contract

4.1 Conditions precedent to the first disbursement: As a special contractual condition precedent to the first disbursement of the first program, the borrower and the executing agency will provide evidence, to the Bank's satisfaction, of: (i) the formal appointment of the program coordinators at BANSEFI and FIRA; (ii) the entry into effect of the Operating Regulations agreed upon between FIRA and the Bank; and (iii) an agreement between BANSEFI and FIRA setting forth the conditions for transferring resources and their responsibilities in executing the first program, including those specified in the loan contract and the Operating Regulations.

4.2 The exchange rate for accounting purposes will be the rate in effect on the date on which resources are transferred from BANSEFI to FIRA, or as otherwise agreed between the Bank and the borrower.

4.3 The project's annual financial statements will be audited by Bank-eligible auditors in accordance with the terms of reference agreed upon with the Bank.

4.4 **Retroactive financing.** For the sake of continuity in financial and technical support, the Bank may use the loan proceeds to retroactively finance eligible expenditures made by FIRA prior to the date of loan approval by the Board of Executive Directors, up to US$10 million (20% of the loan amount), provided that requirements substantially similar to those established in the loan contract have been satisfied. These expenditures must have been made no earlier than 18 September 2013 (project profile approval date), but under no circumstances may

expenditures made more than 18 months before the loan approval date be included.

V. Agreements and Requirements for Procurement Execution

5.1 Due to the nature of this project, which only entails lending, no contracting is expected to occur. Consulting and nonconsulting services are expected to be contracted only in the complementary technical-cooperation operation ME-T1266, and the Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-9), both of 2011, will apply to this effect. If these policies are amended, the amended versions may apply provided that the executing agency agrees to this in writing.

5.2 Though the ICAS found that FIRA has a dedicated procurement structure and experience in procurement, this experience is in procurement processes governed by Mexican laws and regulations. To prepare it for procurement processes within the framework of the Bank's procurement policies, at least one training event will be held specifically for the contracting of consulting and nonconsulting services, as these are the types of procurement processes to be carried out as part of the complementary technical-cooperation operation ME-T1266.

1. Threshold amounts

Table 1. Threshold amounts

Works			Goods[1]			Consulting	
International competitive bidding	National competitive bidding	Shopping	International competitive bidding	National competitive bidding	Shopping	International advertising – consultants	Shortlist 100% national
> 15,000,000	< 15,000,000 and > 500,000	< 500,000	≥ 3,000,000	< 3,000,000 and > 100,000	< 100,000	> 200,000	< 500,000

5.3 Records and files: Files must be available for any procurement review that the Bank deems appropriate in the framework of the complementary technical-cooperation operation ME-T1266.

VI. Financial Management Agreements and Requirements

1. Programming and budget

6.1 BANSEFI's resources are directly budgeted by BANSEFI and are independent of the federal budget published by the Department of Finance (SHCP). BANSEFI is

[1] Includes nonconsulting services.

responsible for coordinating the programming of resources for transfer to FIRA and for monitoring the technical and financial aspects of the execution of these resources. BANSEFI has a department to serve as financial agent and liaison with international financial organizations, and this department will be responsible for coordinating efforts to monitor the contractual commitments with the Bank. This coordination work will include preparation of progress reports and disbursement requests, justification of expenses to the IDB, preparation of financial statements, and coordination with external auditors.

6.2 FIRA's participation and the eligibility of subloans will be in accordance with BANSEFI's policies and will be set forth in the Operating Regulations.

2. Accounting and information systems

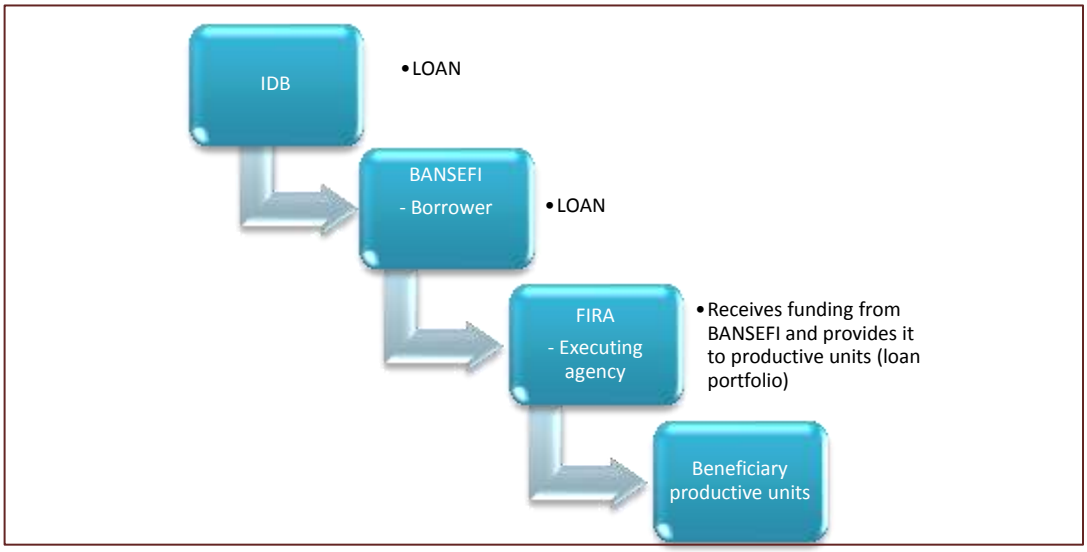
6.3 For financial administration, BANSEFI is governed by the Ley Federal de Presupuesto y Responsabilidad Hacendaria [Federal Law on Budgeting and Financial Responsibility], the Ley General de Contabilidad Gubernamental [General Law on Government Accounting], and other applicable elements of the regulatory framework, as well as the nine general administrative manuals issued by the Civil Service Department (SFP) in conjunction with the SHCP. BANSEFI executes its budget in accordance with the Clasificador por Objeto del Gasto [expenditure classification system] used by the federal public administration, with the following structure: (a) category of expenditure; (b) description; (c) general line item; and (d) specific line item.

6.4 BANSEFI has a multicurrency accounting system that allows it to record and monitor the funds placed with each intermediary. BANSEFI's chart of accounts, financial system, and information system must also comply with the requirements of Mexico's National Banking and Securities Commission (CNBV). In addition, its accounting system enables it to record loans granted and received in the currency used in each operation.

3. Disbursements, cash flow, and simplified justification of expenditures

6.5 The IDB's disbursements to BANSEFI will be made in accordance with BANSEFI's cash-flow needs vis-à-vis FIRA. The operation calls for all disbursements to be made within a 48-month period. Figure 1 below depicts the flow of resources.

Figure 1. Flow of resources



6.6 BANSEFI will provide the Bank with a detailed account of its transfers to FIRA, which will be subject to ex post review. BANSEFI may request disbursements from the IDB in local currency. This will be determined by the executing agency in view of conditions in the financial market at the time it requests the resources.

4. Internal control and internal auditing

6.7 BANSEFI has a person in charge of its Órgano Interno de Control [internal control body] (OIC), designated by the SFP, whose duty is to inspect, monitor, and implement the good governance agenda at BANSEFI on the basis of transparency, accountability, and strict compliance with laws and regulations pursuant to the SFP's requirements and other applicable laws and regulations. In December 2012 the new administration decided to transfer the SFP's functions to other government agencies, and this included moving the OICs to each cabinet-level department or decentralized agency. As a result, the OIC could be brought entirely under BANSEFI from that point forward. Although this change is still being implemented (as of October 2013) and it reduces the OIC's independence, no rule changes that would have an adverse effect on program controls or execution are expected to be made.

6.8 Federal public spending is carried out, controlled, and evaluated in fundamental accordance with the federal budget of expenditures and with the Federal Law on Budgeting and Financial Responsibility and its associated regulations.

5. External control and reports

6.9 **Reports.** The SFP, the IDB, and the World Bank have harmonized their forms for semiannual and annual financial reports. The SFP has issued a document titled "Guía para la Gestión Financiera de los Proyectos Financiados por Organismos Financieros Internacionales" [Financial Management Guide for Projects Financed

by International Financial Institutions], which requires the executing agency to submit the project's semiannual financial reports to the financial agent every six months so that these reports may be forwarded to the IDB in a timely manner. These reports reflect the operation's financial progress at the end of the six-month period and its cumulative progress in each investment category. They also include a detailed account of requests submitted in that period and expenditures pending processing.

6.10 **Audits.** BANSEFI will annually submit the program's financial statements reviewed in accordance with procedures agreed upon with an auditing firm acceptable to the Bank, within 180 days after the end of each accounting period. The auditing firm will be designated by the SFP, with the Bank's no objection. The auditing work will be reviewed in accordance with the terms of reference agreed upon between the IDB, BANSEFI, and the SFP.

6.11 BANSEFI is also audited on an annual basis by the Auditoría Superior de la Federación [Federal Audit Office] and by the CNBV.

6. Financial supervision plan

Table 2. Financial supervision plan

Supervision activity	Supervision plan			
	Nature and scope	Frequency	Responsible party	
			Bank	Third party
Financial	Ex post reviews of disbursement requests	Periodic	Fiduciary team, limited sampling with review of controls	External auditor: review with audited financial statements
	Visit to inspect/analyze internal controls and control environment	Annual	Fiduciary-technical team and fiduciary-financial and procurement team	
	Annual allocation of budgetary resources needed for project execution	Annual	Fiduciary-financial team	Executing agency
Compliance	Submittal of financial statements	Annual	Fiduciary-technical team	External auditor
	Conditions precedent to first disbursement	Once	Fiduciary-technical team	Executing agency

7. Execution mechanism

6.12 As noted above, this first operation will be executed through FIRA, as the executing agency. In view of the borrower's experience and its fiduciary systems' satisfactory level of development, no problems in loan execution are expected.

8. Other agreements and requirements for financial management

6.13 There are no other agreements or requirements for financial management.