

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ECUADOR

INVESTMENT PROGRAM FOR RURAL DEVELOPMENT IN CHIMBORAZO

(EC-L1121)

LOAN PROPOSAL

This document was prepared by the project team consisting of Nancy Jesurun-Clements (INE/RND) and Fernando Orduz (TSP/CEC) Project Team Co-leaders (double booking). Members: Cristina Villalba (CAN/CEC); Rafael Poveda (CAN/CEC); Patricio Crausaz (FMP/CEC); Marco Alemán (FMP/CEC); Juan Carlos Páez (VPS/ESG); Javier Jiménez (LEG/SGO); Luis Hintze (RND/CEC); Barbara Coello (SCL/SPH); Leonardo Corral (SPD/SDV); Heath Henderson (SPD/SDV); and Elizabeth Chávez (INE/RND).

This document is being released to the public and distributed to the Bank's Board of Executive Directors simultaneously. This document has not been approved by the Board. Should the Board approve the document with amendments, a revised version will be made available to the public, thus superseding and replacing the original version.

CONTENTS

PROJECT SUMMARY

I.	DESCRIPTION AND RESULTS MONITORING	1
A.	Background, problems addressed, and rationale	1
B.	Objectives, components, and cost	6
C.	Cost and financing	8
D.	Key results indicators	8
II.	FINANCING STRUCTURE AND MAIN RISKS	9
A.	Financing instruments	9
B.	Technical and economic viability and sustainability	9
C.	Environmental and social safeguard risks	11
D.	Fiduciary risks	12
E.	Other risks	12
III.	IMPLEMENTATION AND ACTION PLAN	12
A.	Program execution and administration	12
B.	Monitoring and evaluation arrangements	14

ANNEXES	
Annex I	Summary Development Effectiveness Matrix (DEM)
Annex II	Results Matrix
Annex III	Fiduciary Agreements and Requirements

ELECTRONIC LINKS	
REQUIRED	
1.	Annual work plan for the first 18 months http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37718344
2.	Monitoring and evaluation plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37721097
3.	Procurement plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37724417
4.	Environmental and Social Management Report http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37705967
OPTIONAL	
1.	Program Operating Manual http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37738626
2.	Institutional Capacity Assessment Report of the GADPCH http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37728773
3.	Program execution plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37718322
4.	Chimborazo Land Use Management and Development Plan 2012 (PDOT 2012) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37718550
5.	Economic assessment report – Irrigation component http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37729859
6.	Economic assessment report – Roads component http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37729888
7.	Microwatershed protection subcomponent http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37728865
8.	Ecuador Water Resource Forum. CAMAREN Consortium April 2011 http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37723173
9.	Ecuador – Agricultural Sector Policy Note 2012 http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37028825
10.	List of references used in the document http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37728691
11.	Assessment of Existing Irrigation Designs. Consultant: Ximena Hidalgo, Engineer http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37736370
12.	Assessment of Existing Road Designs. Consultant: Juan Carlos Ulloa, Engineer http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37736840

13. Impact Evaluation Plan
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37735865>
14. Initial inventory of irrigation projects
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37736225>
15. Preliminary PMR
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37773760>

ABBREVIATIONS

COOTAD	Código Orgánico de Organización Territorial, y Autonomía y Descentralización [Code of Territorial Organization, Autonomy, and Decentralization]
COPLAFIP	Código Orgánico de Planificación y Finanzas Públicas [Public Planning and Finance Code]
GAD	Gobierno Autónomo Descentralizado [Decentralized Autonomous Government]
GADPCH	Gobierno Autónomo Descentralizado de la Provincia de Chimborazo [Decentralized Autonomous Government of the Province of Chimborazo]
ICB	International competitive bidding
INCOP	Instituto Nacional de Compras Públicas [National Public Procurement Institute]
IRR	Internal rate of return
NCB	National competitive bidding
NPV	Net present value
O&M	Operation and maintenance
PDOT	Plan de Desarrollo y Ordenamiento Territorial de Chimborazo [Chimborazo Land Use Management and Development Plan]
PIDD	Proyecto de Inversiones de Desarrollo de Chimborazo [Chimborazo Development Investment Project]
SINFIP	Sistema Nacional de Finanzas Públicas [National Public Finance System]
SINFO	Sistema de Información Financiera del GADPCH [GADPCH Financial Information System]
SNCP	Sistema Nacional de Contratación Pública [National Public Procurement System]

PROJECT SUMMARY

ECUADOR INVESTMENT PROGRAM FOR RURAL DEVELOPMENT IN CHIMBORAZO (EC-L1121)

Financial Terms and Conditions			
Borrower: Decentralized Autonomous Government of the Province of Chimborazo (GADPCH) Guarantor: Republic of Ecuador Executing agency: Decentralized Autonomous Government of the Province of Chimborazo (GADPCH)		Flexible Financing Facility*	
		Amortization period:	20 years
		Original WAL:	12.75 years
		Disbursement period:	4 years
		Grace period:	5.5 years
Source	Amount (US\$ millions)	Interest rate:	LIBOR-based
IDB (OC)	15.0	Inspection and supervision fee:	**
Local	3.8	Credit fee:	**
Total	18.8	Currency:	U.S. dollars from the Bank's Ordinary Capital
Project at a Glance			
Project objective: The general objective of the program is to increase sustainable agricultural productivity, generate value added, and provide market access for rural families in the province of Chimborazo. The program will have the following components: Component 1. Construction, improvement, and rehabilitation of irrigation systems (US\$7.3 million), with three subcomponents: Subcomponent 1.1: Irrigation infrastructure; Subcomponent 1.2: Support for irrigation user boards; Subcomponent 1.3: Protection of microwatersheds; and Component 2. Improvement and rehabilitation of roads (US\$8.4 million).			
Special contractual conditions: As conditions precedent to the first disbursement, the borrower, through the executing agency, will present evidence of: (i) the appointment of the general program coordinator (paragraph 3.1); (ii) the entry into effect of the GADPCH's organizational chart, showing general coordination of the program and the matrix reporting lines thereto of the different functional areas (paragraph 3.1); and (iii) the entry into effect of the program Operating Manual previously agreed upon with the Bank (paragraph 3.2).			
Exceptions to Bank policies: None			
Project consistent with country strategy: Yes [X] No []			
Project qualifies as: SEQ [] PTI [X] Sector [X] Geographic [] Headcount []			

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

** 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 applicable policies.

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problems addressed, and rationale

- 1.1 **Background information on the sector.** The province of Chimborazo is the second poorest in Ecuador, with a poverty rate of more than 70%. Of a total population of 452,000, 48% of the inhabitants live in rural areas. It is estimated that 65% of the provincial population is indigenous. Chimborazo is among the three provinces in Ecuador with the highest rates of chronic childhood malnutrition, at 61.6%, which is higher than the national average of 45%. The incidence is higher in urban fringe and rural areas, making it one of the most urgent problems facing the [province](#). The province is primarily agricultural, with a total of 471,444 hectares used for farming. Of that area, 50.6% is used to grow crops and forage, with [the mains crops being](#) potatoes, vegetables (onions, carrots, lettuce, beets), barley, corn, and grain legumes. The province has significant livestock production, primarily sheep, pigs, and beef cattle, which account for 38%, 9%, and 5% of national production, respectively. The province's location gives it competitive potential, since it is near major commercial and consumer centers such as Guayaquil, Quito, and Cuenca.
- 1.2 Despite this agricultural potential, the sector's share of provincial production is 12.5%, which is low considering that more than 50% of the economically active population is engaged in this activity. The 2012 Chimborazo Land Use Management and Development Plan ([PDOT 2012](#)) analyzes the problems in the rural sector, and identifies inadequate production infrastructure and services, particularly in terms of irrigation and roads, whose deteriorating conditions and insufficient coverage have been noted in various assessments and evaluations conducted by the province, the IDB, and the World Bank, as being the most serious problems facing agricultural productivity, food security and quality, and market access in Chimborazo ([references](#).)
- 1.3 The province is experiencing a progressive deterioration of the sector's production capacity, with low crop yields, soil erosion and desertification, and growing pressure as the agricultural frontier encroaches on the páramo ecosystem. [Crop yields](#) are generally lower than the national average, particularly for the province's most significant crops in terms of volume. These low yields stem from water availability problems, improper practices in water use and distribution, water losses, ineffective crop production techniques and management, lack of familiarity with crops sold in high-value markets, poor quality seeds, excessive subdivision of land (83.6% of production units are from one to five hectares in size), and agricultural activities on steep slopes (58% of the land in the province has a slope of more than 50 degrees).
- 1.4 **Irrigation.** According to the 2009 Chimborazo Water Resource Survey, available at the offices of the Decentralized Autonomous Government of the Province of Chimborazo (GADPCH), 32% of the cultivated agricultural land (nearly 106,000 hectares) is irrigated, with 145,000 producers using 1,124 irrigation systems, of which four are public and the rest are community systems. The

community irrigation systems are organized under irrigation user boards that have legal capacity and a board of directors legally recognized and regulated by the [National Water Act](#). The duties and responsibilities of these boards include the management of the system, the operation, maintenance, and distribution of water, and the fee collection system, which must be based on the aforementioned law. It is estimated that nearly 70% of the community systems are deficient in terms of infrastructure and need to be rehabilitated. In general, the irrigation user boards are organizationally weak in terms of the management of water and agricultural production, and as a result users are unable to pay sufficient rates to cover the management, operation, and maintenance (O&M) required by law. Women have traditionally been the ones who have been responsible for water management at both the household and community level. However, their participation in discussion and decision-making processes regarding this resource has been modest, which has in turn limited water management in the community setting.

- 1.5 More than 85% of the irrigated area in the province uses low technology [surface irrigation](#), similar in proportion to the rest of the country. As a result of water shortages, especially during the summer season, as well as the high levels of water loss in the irrigation systems, from the point of intake through distribution on the field, the operating efficiency of most traditional irrigation systems is very low.¹ Given the high percentage of water volume (around 80%) used for irrigation, it is essential to implement methods that will make it possible to efficiently irrigate more surface area with the same volume and will ensure the sustainable use of soil, water, and labor resources in agricultural activities. In most of the irrigation systems, the allocated volume of water does not equitably reach all users, due to significant losses caused by distribution in unlined, open ditches that are highly vulnerable to landslides and abuse of water usage. The water that supplies the irrigation projects comes primarily from the Andean páramos, where there is considerable human intervention and [alteration](#), which has a direct impact on the quality and quantity of available water. This situation requires a community organization and training system that is formalized by [provincial decree](#) in order to protect the microwatersheds and address the growing demand for this resource.
- 1.6 **Road infrastructure.** The province has 4,553 km of roads, including 492 km under national jurisdiction and 4,061 km under provincial and cantonal jurisdiction, which means that the GADPCH, in coordination with other levels of local government, is responsible for the administration of 89.2% of the roads in the province. According to the [Road Survey for the Province of Chimborazo \(2012\)](#), there are 18.9% asphalt roads, 2.4% hydraulic cement roads, 4.1% cobblestone roads, 1.5% paver-surfaced roads, 38.3% gravel roads (surface comprised of granular material), and 34.8% roads with natural dirt surfacing.

¹ Less than 20%, SENAGUA (National Water Secretariat, 2008).

- 1.7 One of the biggest road-related problems in Chimborazo is the limited conditions and coverage of the provincial road system. The majority of the existing rural roads in the province (75%) were built without any technical support or assessment of the impacts on people or on the environment. In general, they have been built with grades that exceed the established design standards, and they are narrow, most no wider than a single four-meter-wide lane. The road surfaces do not provide safe conditions and deteriorate whenever it rains. They generally have no drainage system, which accelerates damage. In winter, rainwater damages the roads, resulting in warping and potholes that adversely affect speed and normal vehicular traffic on the different roads.
- 1.8 Since 2005, through loans from various sources such as the World Bank, Banco del Estado, and the national government, the GADPCH has invested in 50 improvement projects on segments of the provincial road system, from dirt roads to asphalt-paved roads, investing US\$42 million in the province's 10 cantons. The Provincial Road Plan calls for the same type of work on up to 84 sections of road, most of which have final studies. The Pallatanga–Guamote road and the Penipe beltway, which are included in this operation, are part of this road plan ([see map](#)).
- 1.9 The GADPCH's multiyear road investment plan for the period 2013-2021 calls for the asphalt paving of 425.3 km of provincial roads, averaging approximately 53 km/year, and expects to complete all improvement work by 2021. In 2004, using proceeds from the loan (1282/OC-EC) Rural Transportation Infrastructure Program, a survey of rural roads was conducted, and short and medium-term investments were prioritized. A total of 903 projects were identified for routine and periodic maintenance work and the reconstruction and rehabilitation of sections of the provincial road system, for a total amount of US\$67.9 million. This program is currently being implemented with funds from the provincial treasury. To execute this program, the GADPCH invested US\$16.8 million in 2012 and plans to invest US\$6 million in 2013:

Table I-1. Road Investment Summary by Canton and Period

SUMMARY OF ROAD INVESTMENTS IN THE PROVINCE, 2005 -2013										
YEAR 2005	YEAR 2006	YEAR 2007	YEAR 2008	YEAR 2009	YEAR 2010	YEAR 2011	YEAR 2012	YEAR 2013	TOTAL	
398,457.48	1,121,696.37	4,151,414.98	13,776,214.46	2,963,975.86	8,134,376.88	20,548,939.27	16,801,329.46	6,000,000.00	73,896,404.76	
SUMMARY OF ROAD INVESTMENTS BY CANTON, 2005 -2012										
ALAUZI	CHAMBO	CHUNCHI	COLTA	CUMANDA	GUANO	PALLATANGA	PENIPE	GUAMOTE	RIOBAMBA	TOTAL
3,376,711.87	3,542,264.39	3,581,640.59	8,243,612.19	5,325,602.43	6,943,923.98	1,631,211.50	1,221,010.48	15,008,228.31	19,022,199.02	67,896,404.76

- 1.10 Since 2004, the GADPCH has been performing force account maintenance work throughout the road system, using its own funds, personnel, and equipment, as well as road improvement and rehabilitation work with external financing and funds from the national treasury. The GADPCH is performing routine maintenance work on 220 km of provincial roads through service contracts with clustered

microenterprises, known as Road Conservation Associations, which creates temporary jobs. In addition, the GADPCH has started to hire support engineers to strengthen its capacity to supervise the road work and respective inspections. Starting in 2013, among the new areas of responsibility transferred to the province, the GADPCH issued a decree to charge a vehicle registration fee intended to defray maintenance work on the provincial road system. The GADPCH expects to collect US\$400,000 per year for this purpose, which represents 13% of maintenance costs in 2012.

- 1.11 **Legal and institutional framework for provincial rural development.** Article 263 of the Constitution confers exclusive areas of responsibility to the provincial Decentralized Autonomous Governments (GADs) in areas such as irrigation, productive and agricultural development, and road systems. To execute these constitutional provisions, Articles 41 and 42 of the Code of Territorial Organization, Autonomy, and Decentralization (COOTAD) specify the exclusive duties and responsibilities of the GADs, including: to promote productive and agricultural activities; to plan, construct, and maintain the provincial road system; to execute works in watersheds and microwatersheds; to plan, construct, operate, and maintain irrigation systems; and to arrange for international cooperation in order to discharge its responsibilities. Article 176 of the COOTAD establishes the possibility that the central government may provide guarantees to obtain loans contracted by the GADs, so long as they have the ability to pay established by law. Article 125 of the Public Planning and Finance Code establishes the borrowing limits for the GADs, and Article 126 specifies what financing can be used for, such as infrastructure investment projects.
- 1.12 **Government's strategy in the sector.** Since 2008 the province has focused its efforts on its productive development, establishing roads and irrigation as the fundamental pillars of its strategy in order to accelerate agricultural growth and improve the rural population's standard of living. The GADPCH, by preparing the participatory budget with the involvement of the cantons, parishes, and communities in the province, has prioritized the investment and pre-investment projects for the provincial road and irrigation systems. Using this methodology, it has developed a significant number of studies on roads and on the comprehensive improvement of irrigation systems, prioritized by potential beneficiaries.
- 1.13 The 2012 Land Use Management and Development Plan (PDOT) was prepared with the participation of social, economic, and political stakeholders in the province, including indigenous communities, campesino organizations, urban neighborhoods, parish boards and assemblies, canton civic committees, vulnerable sectors, and development workers. It presents the current assessment of socioeconomic conditions and problems in the agricultural productive sector that justify the investments, the participatory decision-making process on provincial public investments, and the criteria for prioritizing interventions for provincial development. One of the fundamental parts of the 2012 PDOT is the pillar of

- productive development, which is aimed at increasing the profitability of agricultural, livestock, handicraft, and tourist activities by supporting infrastructure, commerce, and productive management and practices. The provincial decree on the development, promotion, design, and implementation of public policies to ensure the equality, equity, and nondiscrimination against women was adopted in 2012.
- 1.14 Starting in 2008, the GADPCH began to execute the Chimborazo Development Investment Project (PIDD) with US\$15.3 million in financing from the World Bank and US\$10.5 million in counterpart funds. This project, which is currently in its last year of execution, supports investments in 48 irrigation systems and 54 km of rural roads, demonstrating the rapid socioeconomic impact of these interventions. The midterm evaluation of the PIDD shows a 10% increase in agricultural production and a 15% increase in high-value crops; 12% to 87% increases in the products that are marketed; a 50% reduction in travel times on the restored roads; and coverage of O&M costs through the collection of fees by 70% of the beneficiary irrigation boards. The [analysis of the status of the PIDD](#) as of May 2013 shows a 50% reduction in gravity-fed irrigation, a 10% to 54% increase in the number of users with sprinkler irrigation, a 50% reduction in short-cycle crops, in return for 100% increases in permanent crops, thus taking advantage of expanded production cycles and financial improvements, reflecting the users' commitment to implement modern field irrigation methods and improve cropping patterns.
- 1.15 Despite the investments recently made in roads and irrigation, Chimborazo still has serious deficiencies in the coverage of support infrastructure and productive practices. Gaps in these areas are measured in the 2012 PDOT and in the [World Bank's PIDD](#) status reports.
- 1.16 **Consistency with the Ninth General Increase in the Bank's Resources.** The program is consistent with the lending targets: (i) support for the development of small and vulnerable countries; (ii) poverty reduction and equity enhancement, by gearing its activities to the agricultural production of small producers; (iii) infrastructure for competitiveness and social welfare, by improving the conditions of the rural road system; and (iv) support for climate change initiatives, environmental sustainability, and sustainable energy, by promoting climate change adaptation through better management of water resources. The program supports the sector priority of environmental protection, responses to climate change, renewable energy, and food security by promoting improvements in agricultural productivity and rural development. It contributes to the regional development goals of increasing the annual growth rate of the agricultural GDP and its output "farmers given access to improved agricultural services and investments," and increasing paved road coverage. The program is consistent with the Bank's 2012-2017 country strategy with Ecuador (document GN-2680) by contributing to the strategic objectives of: (i) promoting productive activities that improve living conditions for the rural population and generate value added; and (ii) maintaining and expanding the national multimodal transportation and mobility system. In

support of these objectives, the design of the program was a joint collaboration between the Bank's Environment, Rural Development, and Disaster Risk Management Division and its Transport Division (double-booking).

- 1.17 **Program design.** The design of the components is based on the experiences and lessons learned from implementation of the PIDD and evidence of the effectiveness and impact of similar interventions in other parts of the world ([references](#)). The PIDD's approach will be continued, expanding coverage to those locations in the province with the greatest needs, taking a comprehensive approach aimed at improving roads, irrigation, and production and strengthening the capacity of users to improve irrigation management. This will be supplemented by activities that strengthen the production management of the user boards, with a more comprehensive approach of sustainable productivity, in terms of improved soil fertility, microwatershed protection, value added, and market access.
- 1.18 The beneficiaries will be mostly indigenous rural communities with high poverty rates that have productive potential. They include 2,720 small farmers using [19 irrigation systems](#) and more than 3,000 campesino families in areas served by the two roads to be improved in the cantons of Pallatanga, Guamote, Alausí, and Penipe. The role of women in the rural economy and their access to the benefits of the investment will be emphasized.
- 1.19 The group of strategic irrigation and roads projects was selected by conducting the analysis and participatory review of alternatives as required by provincial law. Although direct complementarity between individual projects in the two areas is not required, the investments reflect the priorities and contribute to the 2012 PDOT. Irrigation investments will have a community focus. Infrastructure will be installed to the entrance of each farm. Beneficiaries will be responsible for improvements on their land and will be offered technical assistance for efficient use of water. The user boards will contribute a minimum cash amount of 5% of the project loan as well as labor, participate in the execution and supervision of the project, and are completely responsible for project management and O&M, pursuant to law.

B. Objectives, components, and cost

- 1.20 The general objective of the program is to increase sustainable agricultural productivity, generate value added, and provide market access for rural families in the province. This objective is expected to be achieved through investments in irrigation, road improvement, and productive strengthening. Financing will be provided for the following: (i) rehabilitation and modernization works; (ii) technical assistance services; and (iii) training, under the following components:
- 1.21 **Component 1. Construction, improvement, and rehabilitation of irrigation systems (US\$7.3 million)**
- 1.22 **Subcomponent 1.1. Irrigation infrastructure.** The rehabilitation and modernization of 19 small irrigation systems will be financed. Rehabilitation and

- upgrade work will be performed on the waterworks that comprise an irrigation system, such as water intakes, sediment traps, and primary, secondary, and tertiary pipes. The construction projects include the improvement and rehabilitation of channel linings, water intake structures, distribution boxes, prefabricated channels, pedestrian bridges over channels, culverts under channels, sand separators, concrete covers, divisions/distributors, walls, conveyance pipes, pressure relief valves, aqueducts, and water level controls. Additional environmental investments are included where required, such as soil conservation works and mitigation measures during construction.
- 1.23 The 19 projects have the same objective of optimizing the use of water, reducing water loss, and achieving equity among the various communities where agriculture is the main source of income. These projects are located in 6 of the 10 cantons in the province, as illustrated on the [map](#). In most of the projects, the method used to distribute irrigation water, which traditionally corresponds to classic gravity-fed methods (ditches, flooding, or overflow), will be replaced by pressurized pipe distribution, using the sprinkler method. Consequently, the implementation of these projects largely seeks to improve the intake conditions, sediment removal, and conveyance of water to the plot of land where the water will be dispersed by sprinklers. The goal is to reduce water losses from seepage in order to provide satisfaction to the users of each irrigation system.
- 1.24 **Subcomponent 1.2. Support for irrigation user boards.** The program will include technical support for the user boards, which is aimed at: improvement of the organizational, financial, administrative, and O&M capacity of the systems, modernization for efficient water management, soil fertility problems, production and supply management planning, improvement of diet, and commercial ties. Support will be provided on technical aspects of field irrigation and planting techniques for various crops, including optimization of the use of improved quality seeds, fertilizer application with dosage per crop, proper planting densities, chemical soil analysis, integrated pest and disease management, and high-value crops.
- 1.25 **Subcomponent 1.3. Protection of microwatersheds.** The program will finance the development of plans to protect the priority microwatersheds where the sources of water for the 19 irrigation systems are located; training for effective and efficient community management of the recharge area and use of water, to maintain and restore conditions of climate change adaptation and to increase access to water through improved modern and ancestral techniques and practices; and works to reestablish the vegetation cover in the communities targeted by the program, in order to preserve moisture and minimize the work currently done by families to obtain water and firewood.
- 1.26 **Component 2: Improvement and rehabilitation of roads (US\$8.4 million).** Two road projects will be financed: (i) the improvement of the Cuatro Esquinas–San Juan–Rodeo section of the Pallatanga–Guamote road, with a total length of

34.4 km and a cost estimate of US\$6.2 million, including inspection, complemented by the 4.5 km Rodeo–Vaquería Buschud section, rehabilitated with counterpart funds; and (ii) rehabilitation of the Penipe beltway, with a total length of 14.1 km and a cost estimate of US\$2.2 million, including inspection. Given the GADPCH's proven ability (see paragraphs 1.9 and 1.10) to perform maintenance work, the funds provided under this component will primarily be used to finance road projects and the respective inspections.

C. Cost and financing

- 1.27 The total estimated cost of the program is US\$18.8 million, of which US\$15 million will be financed by the Bank from the Ordinary Capital, under the Flexible Financing Facility, with the remainder to be financed by the borrower.²

Table I-2. Cost and Financing (US\$ millions)

Investment Category	IDB	Local	Total	%
I. Component 1. Construction, improvement, and rehabilitation of irrigation systems	6.69	0.60	7.29	38%
I.1 Irrigation infrastructure	5.87	0.28	6.15	33%
I.2 Support for irrigation boards	0.53	0.32	0.85	4%
I.3 Protection of microwatersheds	0.29	0	0.29	1%
II. Component 2. Improvement and rehabilitation of roads	7.66	0.72	8.38	45%
III. Execution, monitoring, and evaluation	0.65	2.48	3.13	17%
Total	15.00	3.80	18.80	100%

D. Key results indicators

- 1.28 The direct beneficiaries will be 2,720 families of small and medium-sized producers who use the irrigation systems, plus over 3,000 families in the areas served by the improved roads. Assuming an average of six people per family, around 34,320 people will directly benefit from the program. The irrigation investments and training in efficient water management and production practices are expected to bring about gains in productivity and income and better nutrition through changes in technology, diversification, and a longer harvest season. Road investments are expected to improve access to markets and services, lead to greater use of factors of production, the sale of products throughout the entire year, and household savings as a result of lower costs. The results indicators include: (i) efficient water conveyance; (ii) launch of comprehensive microwatershed management; (iii) sustainable irrigation management; (iv) improved cropping patterns; (v) increased participation of women in the management of irrigation systems; and (vi) improvement in travel times and costs, which will facilitate access to markets.

² This amount may include the cash contribution provided by the beneficiaries for at least 5% of their investment project, and the beneficiaries also contribute manpower for the construction of the projects.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 The program is structured as a specific investment loan for up to US\$15 million, to be executed in four years according to the following disbursement schedule:

Table II-1. Disbursement Schedule

Source	Year 1	Year 2	Year 3	Year 4	Total
IDB (80%)	37.3%	44.7%	10.0%	8.0%	100.0
Local (20%)	9.7%	20.1%	48.0%	22.2%	100.0
Total	31.8%	39.7%	17.7%	10.9%	

B. Technical and economic viability and sustainability

- 2.2 **Technical viability of irrigation component.** The technical viability of 19 irrigation systems was evaluated using prefeasibility, feasibility, and final design studies prepared with individual consultants contracted by the user boards and by the GADPCH, with the finding that 11 of these projects, totaling US\$4.2 million, have adequate studies and designs in place and represent a low technical risk. Studies for the rest of the proposed investment, at US\$2 million, must still be completed or updated. A consulting firm will be contracted for these projects, using resources from the project ATN/OC-13714-EC, in order to obtain final technical studies that will cover the following subjects: (i) basic engineering such as hydrology, geology-geotechnics, assessment of the existing system, hydraulics, structures; (ii) analysis of alternatives, including the dissemination of information and prioritization by the beneficiary; (iii) economic studies; (iv) environmental viability; and (v) updated budget, construction methodology, timelines, and bidding terms and conditions. Considering that 67% of the investment in the irrigation component is for a group of projects with low technical risk and that the other projects will have final quality studies, the component is considered technically viable.
- 2.3 **Technical viability of road component.** As part of its development plan, the GADPCH has prepared final studies for the Cuatro Esquinas–Tipín–Rodeo section of the Pallatanga-Guamote road, which were conducted through two individual consulting contracts for the 18.2 km Cuatro Esquinas–San Juan de Tipín section, and the 16.2 km San Juan de Tipín–Rodeo section. This study considers technical aspects such as: (i) road design, including traffic, design speed, and minimum radiuses and grades based on the classification of road types used by the Ecuadorian Ministry of Transportation and Public Works; (ii) hydrology, hydraulics, and infrastructure; (iii) geology and geotechnics; (iv) major engineering works; (v) road safety; and (vi) budgets and schedules. The technical review of the studies identified the need to fine-tune the studies prior to contracting for the work, in order

- to standardize the design criteria for the pavement structure, to supplement the traffic studies and origin-destination surveys for the final economic evaluation, and studies on major road engineering works related to the expansion and rehabilitation of two bridges. With an investment of US\$6.2 million, representing 74% of the road component, this project is considered technically viable.
- 2.4 The Penipe beltway project, with an estimated cost of US\$2.2 million, consists of the rehabilitation and improvement of the surface of several sections of road that serve the parishes located in the area of the Tungurahua Volcano. The final studies will be commissioned using funds from the GADPCH, with terms of reference technically agreed upon with the Bank.
- 2.5 **Economic viability of irrigation component.** A [cost benefit analysis](#) was conducted on a sample of 6 of the 19 selected irrigation projects that together represent nearly 50% of the total investment amount and 25% of the irrigated land and beneficiaries. The benefits revolve around an increase in the value of agricultural output resulting from the increased water supply and improved production practices in the irrigated areas. The first benefit will be a roughly 50% improvement in the volume of water available to irrigate crops. Improvements in water supply and cropping systems will result in productivity gains of 26% to 48%. The yields for a typical farm were evaluated, based on the production matrix model known as the [Corazón de Jesús system](#),³ which was identified as being representative of the sample through a socioeconomic analysis and an analysis of the characteristics of the six projects to be evaluated.
- 2.6 The yield per hectare was measured when water supply was increased and in other scenarios, and the effects in terms of benefits from increased productivity resulting from training and technical assistance were incorporated. The results reflect conservative scenarios that show significant levels of economic benefits that support the program rate of return. In the base scenario, an economic internal rate of return (IRR) of 36% with a net present value (NPV) of US\$4.2 million and a 3.1 year investment recovery period were obtained, assuming a useful life of 20 years. Scenarios that assume training and a 30% potential increase in production, with the current mix of crops, yield an IRR of 46% and a NPV of US\$11 million. An analysis was conducted on the sensitivity of the results to increased investment and O&M costs, lower crop yields, and higher production costs, finding that even in the worst downside scenarios, the results are still robust.
- 2.7 **Economic viability of road component.** A [cost-benefit analysis](#) was conducted on the Pallatanga-Guamote section, which represents 74% of the component's total

³ The Corazón de Jesús system, with 198 families, has the following distribution of crops per cultivated area: 16% broad beans; 1% shell beans; 12.7% corn, 9% potatoes, and the rest herbs and vegetables, with no perennial crops. The system uses cropping patterns similar to those in the canton of Riobamba and grows the province's most traditional crops. The average crops grown in Riobamba are 21% potatoes, 20% dry sweet corn, 12.4% fresh sweet corn, 9.26% fresh broad beans, and other crops such as lettuce, fresh peas, alfalfa, and barley in smaller percentages.

value and directly benefits some 10,000 people. The expected benefits of the investment include reduced travel times and vehicle O&M costs, an increase in cultivated areas with better yields, and the resulting economic surpluses. The analysis yielded an NPV of US\$4.3 million and an IRR of 19%. A sensitivity analysis was conducted with a 20% increase in costs, resulting in an NPV of US\$4.2 million and an IRR of 18%. When benefits are decreased by 20%, the resulting NPV is US\$3.4 million and the IRR drops to 18%. These results illustrate the viability and soundness of the investment.

- 2.8 **Sustainability.** The GADPCH has demonstrated its capacity to take on the execution of investment projects similar in scale to this program, and to assume responsibility for maintenance of the road works within its jurisdiction. The GADPCH has agreed to use own resources to cover more than 20% of the program's total cost, and to provide its own employees to execute the program. The mandatory 5% cash contribution that must be provided by the beneficiaries invests the irrigation users in the program. The PIDD showed that 70% of the participating irrigation boards are willing to take care of their irrigation systems, responsibly perform the respective maintenance work, and invest in improvements to modernize field irrigation and improve cropping patterns (see paragraph 1.14). Based on the comments in the PIDD and the additional work to support production that is included in this program, the individuals benefiting from irrigation and technical support are expected to improve their agricultural practices, with optimized water use and better inputs and cropping patterns.

C. Environmental and social safeguard risks

- 2.9 The program will have an overall positive environmental and social impact by improving the conditions of road and irrigation infrastructure in the province, helping to increase agricultural production as a result of the availability of water and transit of people and products on the roads to be rehabilitated. The irrigation component will benefit a predominantly indigenous population, which currently has major organizational weaknesses in the administration and management of water, poor management and negotiation capacity, nutritional deficiencies, and limited access to services and markets. Strengthening the irrigation boards will make it possible for women to participate in these boards on more equal footing.
- 2.10 During execution, the program may have the following negative environmental and social impacts, which will be of low magnitude, short duration, and local in scale: (i) negative impact on air quality due to uncontrolled emissions of particulate matter into the atmosphere from excavations or rock materials used in road construction work; (ii) noise in neighborhoods near the projects caused by the construction equipment and machinery; (iii) pollution of surface bodies of water due to potential erosion that will carry soil into irrigation channels or ditches; (iv) generation of liquid, solid, and gaseous waste; (v) temporary interruptions in vehicular traffic; and (vi) irrigation interruptions. These impacts will be managed by implementing simple and routine preventive and control measures as defined in the Ecuadorian

technical environmental regulations. The [Environmental and Social Management Report](#), which includes an analysis of the typical associated social-environmental implications and verified compliance with the Bank's social and environmental policies, contains more detailed information on these impacts, as well as the management, monitoring, and supervision measures that will be carried out and followed throughout execution of the program. In accordance with the Bank's Environment and Safeguards Compliance Policy (OP-703), this program was classified as a category "B" operation.

D. Fiduciary risks

- 2.11 The institutional capacity assessment of the GADPCH found that it has sufficient human resources, materials, information systems, organization, execution, and control of planned activities to assume management of the program, and an overall risk level of medium. To execute the PIDD, the GADPCH used the World Bank's procurement and financial reporting policies. These policies do not differ substantially from the IDB's policies, so the institution would have the required experience, thereby mitigating the potential fiduciary risk due to delays or complications in the procurement of works.

E. Other risks

- 2.12 The project risk management tool was used, which identified three medium or low development risks: (i) potential delays during execution; (ii) early deterioration or under-utilization of the works; and (iii) adverse climate factors that would negatively influence the expected progress of the works. The GADPCH has the relevant capacity, experience, and knowledge to minimize delays and mitigate these risks.

III. IMPLEMENTATION AND ACTION PLAN

A. Program execution and administration

- 3.1 The borrower will be the Decentralized Autonomous Government of the Province of Chimborazo (GADPCH), which will act as the executing agency with the sovereign guarantee of the Republic of Ecuador for payment obligations.⁴ Based on its experience with the PIDD, the GADPCH will be directly responsible for: (i) fulfilling the program's contractual conditions; (ii) planning, preparing, organizing, executing and monitoring program work plans and activities; (iii) managing the relationship and requesting and substantiating disbursements of loan proceeds for program execution; and (iv) preparing the required information and reports. To perform these functions, the GADPCH will appoint a general program coordinator, who will be supported by regular staff from the institution's

⁴ In accordance with the Guarantees Required from the Borrower Policy (OP-303), for loans to subnational entities, the guarantee on payment obligations may be the only guarantee required, i.e., not the guarantees on the local counterpart contribution or contractual obligations.

- planning, financial, legal, and public and technical procurement units. To reflect this matrix relationship, the GADPCH will modify its current organizational chart. **As conditions precedent to the first disbursement, the borrower, through the executing agency, will present evidence of: (i) the appointment of the general program coordinator; and (ii) the entry into effect of the GADPCH's organizational chart, showing the general coordination of the program and the matrix reporting lines thereto of the different functional areas.**
- 3.2 **Program Operating Manual.** The procedures for program administration and execution will be established in a program [Operating Manual](#) establishing responsibilities, policies, and procedures, such as: (i) procurements and contracts; (ii) management and execution tools and procedures; (iii) responsibilities and requirements for financial-accounting information and physical monitoring; (iv) criteria for selecting the beneficiary irrigation systems, including technical and economic viability ($IRR > 12\%$), and financial, environmental, and social sustainability; (v) criteria for selecting the production support models for technical assistance to the irrigation user boards; (vi) financial obligations of the beneficiaries for the investment and O&M of irrigation systems; and (vii) environmental and social considerations. **As a condition precedent to the first disbursement, the borrower will present evidence of the entry into effect of the program Operating Manual, previously agreed upon with the Bank.**
- 3.3 **Procurement.** Works, goods, and consulting services financed in whole or in part by the loan proceeds will be procured pursuant to the Bank's procurement policies as set forth in documents GN-2349-9 and GN-2350-9. The procurements planned under this program will be included in the procurement plan agreed upon by the executing agency and the Bank and will be carried out in accordance with the bidding methods and ranges established in that plan. The procurement plan contains: (i) the contracts for each type of procurement; (ii) the proposed methods to be used for procurement; and (iii) the procedures used by the Bank to review procurement methods, including ex ante and ex post reviews. The executing agency will update these plans annually to coincide with the programmed annual evaluations and before the end of each calendar year, along with the annual work plan, or whenever there are material changes, covering the subsequent 12 months of program execution. Any proposed change and/or revision of the procurement plan will be submitted to the Bank for approval. The initial procurement plan will cover the first 18 months of execution.
- 3.4 **Financial management.** The financial management of the program will be carried out using the borrower's systems, which were evaluated as satisfactory. The parameters of the budget execution record and the accounting records of the operations defined in the program execution plan, the annual work plan, the procurement plan, and the financial reports will be established and recorded in the SINFO, the GADPCH's financial management tool.

- 3.5 Program accounting will be conducted in accordance with national government accounting policies and will use the accrual method. The financial statements required by the Bank will be prepared based on the modified cash method, using the accounting information generated by the SINFO in the “budget execution module” report of the program. Disbursements will be made as advances, based on the expected liquidity needs for executing the activities over a four-month period, and will be deposited into a designated account at the Central Bank of Ecuador. This period may be modified based on the quality of actual vs. planned execution. The GADPCH will submit the disbursement request to the Bank in advance, along with anticipated cash flow needs with a 12-month horizon. At least 80% of the advanced funds will be substantiated in the next request. The supporting documentation will be reviewed on an ex post basis by the Bank and/or consultants and by external auditors. Any expenditures that are not eligible for Bank financing will be reimbursed using the local contribution or other resources, depending on the type of ineligibility.
- 3.6 **External audit:** Each year the executing agency will submit the program’s audited financial statements pursuant to the Financial Management Policy for IDB-financed Projects (document OP-273-2). The external audit will be conducted by level one independent auditors acceptable to the Bank (international auditing firms) based on terms of reference previously agreed upon with the Bank. The costs of the audit will be financed with funds from the local contribution. The external audit will also include the integrated ex post review of procurement and disbursement processes.

B. Monitoring and evaluation arrangements

- 3.7 The program has a [monitoring and evaluation plan](#). The administrative monitoring and control of the project will focus on monitoring and documenting compliance with procedural rules in administrative, financial, accounting, and legal areas, based on national and Bank guidelines and the guidelines established in the program Operating Manual and the loan contract.
- 3.8 The monitoring and evaluation plan includes indicators of the program’s economic, social, and environmental performance. The GADPCH will send the Bank a status report on the program activities no later than 60 days after the end of each six-month period. These reports will cover fulfillment of the output indicators and the status of outcomes in the results matrix. Any problems encountered will be identified, and corrective measures will be presented. No later than 30 November of each year, the GADPCH will submit to the Bank the annual work plan, the procurement plan, and the programmed cash flow for the following year.
- 3.9 The GADPCH will select and contract consulting services to perform: (i) a midterm evaluation of performance when 50% of the resources have been disbursed and substantiated, or 22 months into execution, whichever occurs first. This evaluation will focus on analyzing the progress achieved, as well as coordination and execution considerations, and recommendations will be made in order to reach the

proposed targets and achieve the sustainability of the investments; and (ii) a final evaluation, no later than 90 days before the date of the last disbursement, with a final report no later than 30 days after the final substantiation of disbursements. This evaluation will determine the degree of fulfillment of the targets and outcomes established in the results matrix, the executing agency's performance, any factors that may have affected implementation of the program, and specific, practical recommendations regarding the expected outcomes and the design of future operations.

- 3.10 During the last year of program execution, an impact evaluation is proposed in order to identify and quantify improvements in productivity, agricultural income, connectivity with health and education services, and nutrition. The evaluation reports, support documentation and statistical information, and the proposed methodology for this evaluation can be found in the monitoring and evaluation plan and will be available so that the evaluation can be conducted at that time.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	Aligned		
Lending Program	i) Lending to small and vulnerable countries, ii) Lending for poverty reduction and equity enhancement, and iii) Lending to support climate change initiatives, renewable energy and environmental sustainability.		
Regional Development Goals	i) Paved road coverage (Km/Km ²), and ii) Annual growth rate of agricultural GDP (%).		
Bank Output Contribution (as defined in Results Framework of IDB-9)	i) Km of inter-urban roads build or maintained/upgraded, and ii) Farmers given access to improved agricultural services and investments.		
2. Country Strategy Development Objectives	Aligned		
Country Strategy Results Matrix	GN-2680	i) Foment productive activities that improve living conditions for the rural population and that generate value added, and ii) Maintain and expand the national multimodal transportation and mobility system.	
Country Program Results Matrix	GN-2696	The intervention is included in the 2013 Country Program Document.	
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
	9.7		10
3. Evidence-based Assessment & Solution	10.0	33.33%	10
4. Ex ante Economic Analysis	10.0	33.33%	10
5. Monitoring and Evaluation	9.1	33.33%	10
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		
IV. IDB's Role - Additionality			
The project relies on the use of country systems (VPC/PDP criteria)	Yes	Financial Management: Budget, Treasury, Accounting and Reporting, External Control and Internal Audit. Procurement: Information System, Shopping Method, and Contracting individual consultant.	
The project uses another country system different from the ones above for implementing the program			
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality	Yes	Indicators to establish the increased participation of women in trainings and water user associations have been included to enhance their empowerment.	
Labor			
Environment	Yes	Efficient water use is promoted and management plans for watersheds are introduced.	
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	With US\$750,000 of TC resources for preparation, technical development and readiness for implementation is being supported.	
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	Yes	The ex-post impact evaluation will shed light on how improved access to irrigation and road infrastructure can lead to higher productivity and food security.	

The program's objective is to increase sustainable agricultural productivity, generate value added and market access for rural households in the province of Chimborazo. It aims to achieve this objective through investments in irrigation, road improvement and productive strengthening.

The POD contains a solid diagnosis of the problem and its contributing factors focused on current deficiencies of irrigation and transport infrastructure in the province in general and in specific targeted communities. The proposed interventions are supported by an analysis of the empirical evidence on their effectiveness and applicability to the context of the program. The POD and results matrix establish the vertical logic of the program. Impact, outcome, and output indicators are SMART and have baselines and clear targets.

The economic analysis includes a cost-benefit analysis for the irrigation component and one for the road rehabilitation component with reasonable assumptions, which in turn are validated in the sensitivity analysis.

The Monitoring and Impact Assessment Plan is adequate, and according to the guidelines in the matter. The proposed evaluation is non-experimental and the Plan includes all requirements that justify its score in the appropriate section of the DEM.

The risk analysis includes program development risks and mitigation measures.

RESULTS MATRIX

General objective	To increase sustainable agricultural productivity, generate value added, and provide market access for rural families in the province of Chimborazo.			
Specific objectives	<div>1. To improve and strengthen the integrated irrigation system in the province, in order to increase the output of rural families in Chimborazo and make it more efficient and sustainable.</div> <div>2. To improve the road system in the cantons of Pallatanga, Guamate, and Penipe in the province of Chimborazo, in order to provide adequate road connectivity across the province and boost economic exchange.</div>			
Impact indicators (Ex post)		Baseline	Target	Comments
<p>Impact indicator 1: Agricultural productivity. Difference between the percentage change in the average yields per hectare of representative categories of crops grown by the beneficiary producers.</p> <p>Where:</p> <p>R_i = Production volume / ha for beneficiaries of investments in irrigation, and</p> <p>R_r = Production volume/ ha for beneficiaries of investments in the road system</p>		<p>2013 / 2014</p> <p>Productivity indicators in tons/ha for each category and baseline</p> <p>e.g., tons/ha of potatoes = 6.0 beneficiaries of irrigation (2007)</p>	<p>Extended crop year 2017/2018</p> <p>$R_i = 7.2$</p> <p>$R_r = 6.54$</p>	<p><u>The baseline</u> is indicative and will be verified in the initial survey, e.g., tons/ha of potatoes = 6.0 for beneficiaries of irrigation (2007 Platform Program). A 20% increase in productivity is expected for beneficiaries of irrigation, with a 9% increase expected for beneficiaries of road improvements.</p> <p>Average in the province in metric tons/ha (2011): Potatoes 2.97; Barley 0.50; Yellow carrots 6.52; Red onions 5.04; Dried sweet corn 0.35; Fresh broad beans 1.64; Dried fava beans 0.43; Dried shell beans 0.33; Wheat 0.39. Milk: 6.16 lit/cow/day. 2012 PDOT (IDBDOCS 37715912)</p> <p><u>Means of verification:</u> Surveys of beneficiary and nonbeneficiary agricultural households conducted in June 2013 and May 2018</p>

OUTCOMES

Indicators	Unit of measure	Baseline		Intermediate Targets				End Target		Source / means of verification	Comments
		Value	Year	1	2	3	4	Value	Year		
EXPECTED OUTCOME 1: Increase in efficiency in flow rate and in irrigation.											
N _i = Number of farmers with better irrigation services (Household with 6 family members)	Farmers						16,320	16,320	2017	Program files and reports	This indicates the program’s contribution to the regional development goals of increasing the annual growth rate of the agricultural GDP and the output “farmers given access to improved agricultural services and investments.” The direct beneficiaries will be 2,720 families of small and medium-sized producers that use irrigation.
Volume of water delivered to the headland of the field vs. captured water volume	Average efficiency coefficient in 19 systems	0.35 There are individual indicators for the 19 systems	2013				0.35	0.70	2017	Physical measurements of the respective volumes	The measurements must be taken using similar methodologies and acceptable volumes. The maximum volume is the volume of use and consumption determined by SENAGUA. Periodic information will be obtained in order to monitor the indicator in each of the 19 systems.
Hectares actually irrigated: Irrigated ha. / irrigable ha. (2,569 has.)	Hectares	1,307 hectares irrigated = 51% of irrigable hectares	2013			200	532	2,039 hectares irrigated = 79% of irrigable hectares	2017	Irrigation user board reports Program files	“Hectares actually irrigated” refers to coverage in terms of the surface area that is actually being irrigated. “Irrigable hectares” refers to coverage of the surface area that could be irrigated. Following the interventions, a 28% increase in the surface area that is actually irrigated is expected by 2017.

Indicators	Unit of measure	Baseline		Intermediate Targets				End Target		Source / means of verification	Comments
		Value	Year	1	2	3	4	Value	Year		
EXPECTED OUTCOME 2: Comprehensive management of microwatersheds has begun											
Implementation of management plans for the tributaries that feed irrigation systems has begun	Management plans	0	2010			11	4	15	2017	Program records	There are 19 irrigation systems in the program but only 15 identified tributaries of the microwatersheds.
EXPECTED OUTCOME 3: Sustainable irrigation management has been implemented.											
Number of systems that charge rates that cover their operation and maintenance costs	Irrigation systems	0	2013			10	9	19	2017	Report on the financial sustainability of the irrigation systems	As part of the support provided to the user boards with their management plans, technical assistance will be offered in the preparation of business plans and financial sustainability.
Water management plans prepared by the user boards are approved and in execution	Plans	0	2013		10	9		19	2017	Program records	
Families that use production systems with improved practices	Families	0	2013			300	516	816	2017	User board reports and program files	At least 30% of the 2,720 beneficiary families adopt production systems with improved management practices for: (i) soil; (ii) irrigation; and (iii) seeds, based on technical training and production models.
EXPECTED OUTCOME 4: Increased participation of women on irrigation user boards											
Number of user boards on which the number of women on such boards has increased	Irrigation user boards	0	2013				15	15	2017	User board reports and program files	The baseline will be established with each user board at the beginning of the program. Technical cooperation resources will be used to hire a consulting firm to streamline gender empowerment topics in training activities and productive development.

Indicators	Unit of measure	Baseline		Intermediate Targets				End Target		Source / means of verification	Comments
		Value	Year	1	2	3	4	Value	Year		
EXPECTED OUTCOME 5: Improved road connectivity of local users and producers with local provincial markets.											
N _r = Number of farmers with better access roads. (household with 6 family members)	Farmers	0					18,000	18,000	2017	Program files	This indicates the program’s contribution to the regional development goals of increasing the annual growth rate of the agricultural GDP and the output “farmers given access to improved agricultural services and investments.” The direct beneficiaries will be 3,000 families of small and medium-sized producers in the area served by the improved roads.
Vehicle operating costs on the improved roads in the cantons of Pallatanga, Guamote, and Penipe	US\$/km	US\$0.211	2013					Costs are being calculated. Savings of 20% are expected.	2017	Report assessing vehicle operating costs	The typical vehicle used as a unit of measurement is a pickup truck. Values in US\$/km for the baseline and the targets depend on the cost analysis. Based on initial estimates, 20% savings are expected. The contract for the consulting services to review total costs using a polynomial formula is currently being processed.
Travel time on the Pallatanga–Guamote road	minutes	255	2013				178	178	2017	Program files	

OUTPUTS

Outputs	Unit of measure	Baseline		Intermediate Targets				End Target		Source / means of verification	Comments
		Value	Year	1	2	3	4	Value	Year		
COMPONENT 1: CONSTRUCTION, IMPROVEMENT, AND REHABILITATION OF IRRIGATION SYSTEMS											
Subcomponent 1: Irrigation infrastructure											
Irrigation systems optimized, rehabilitated, and/or expanded	Irrigation systems	0	2013		10	9		19	2016	Certificate of acceptance of works	The systems selected on a preliminary basis are described in detail in the annual work plan.
Inspection of irrigation works completed	Inspection reports	0	2013		10	9		19	2016	Final inspection reports	Each construction project has its own inspection. The final report must be presented for delivery of the works.
Subcomponent 2: Support for irrigation user boards											
Model farms with production support for managing irrigated crops	Farms	0	2013	1	6	9	3	19	2017	GADPCH reports with physical evidence of the hectares incorporated	Farms with production support models for irrigated crops, in operation.
Irrigation user boards trained in the technical management of crops and irrigation frequencies	Irrigation user boards	0	2013		10	9		19	2016	GADPCH reports on user board training	
Irrigation user boards trained in food diversity					3	5	2	10	2017	GADPCH reports on user board training	Training on food diversity will be offered to half of the beneficiary user boards. It will be included as a milestone in the PMR.
Subcomponent 3: Protection of microwatersheds											
Management plans for the irrigation systems and water recharge area have been formulated	Management plans	0	2013		14	5		19	2016	Program files at the GADPCH	
Practices and techniques for the management of the water recharge area in 11 prioritized systems	Irrigation systems	0	2013			11		11	2016	GADPCH files: Report on execution in 11 prioritized systems	This consists of training plans and implementation of modern and ancestral techniques and practices, to ensure effective and efficient community management of the

Outputs	Unit of measure	Baseline		Intermediate Targets				End Target		Source / means of verification	Comments
		Value	Year	1	2	3	4	Value	Year		
have been implemented											water recharge and use area, in order to maintain and restore climate change adaptation conditions and increase access to water.
Forest and fruit plants for the agroforestry systems (600 ha) established	Plants	0	2013		240,000			240,000	2016	Certificate of delivery of plants purchased and planted	The estimate was based on a unit cost of US\$0.30 per plant, which will cover around 600 ha.
COMPONENT 2: IMPROVEMENT AND REHABILITATION OF ROADS											
Cuatro Esquinas-San Juan-Rodeo section of the Pallatanga-Guamote road, improved	km	0	2013				34.4	34.4	2017	Certificate of acceptance of works	
Inspection of the Cuatro Esquinas-San Juan-Rodeo section of the Pallatanga-Guamote road, completed	Inspection report	0	2013				1	1	2017	Final inspection report	Each construction project has its own inspection. The final report must be presented for delivery of the works.
4.5 km Rodeo-Vaquería Bushcud section of the Pallatanga-Guamote road, rehabilitated	km	0	2013				4.5	4.5	2017	Certificate of acceptance of works	This construction project will be contracted and financed by the Ministry of Transportation and Public Works using local funds. The inspection of this construction project will be the responsibility of GADPCH and the Ministry and is not part of this operation.
Penipe beltway, rehabilitated	km	0	2013		14.1			14.1	2015	Certificate of acceptance of works	
Inspection of the Penipe beltway project, completed	Inspection report	0	2013		1			1	2015	Final inspection report	Each construction project has its own inspection. The final report must be presented for delivery of the works.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country:	Ecuador
Project number:	EC-L1121
Name:	Investment Program for Rural Development in Chimborazo
Executing agency:	Decentralized Autonomous Government of the Province of Chimborazo (GADPCH)
Prepared by:	Marco Andres Alemán and Patricio Crausaz, FMP/CEC

The institutional assessment for fiduciary management of the program was based on: (1) the fiduciary context of the country; (2) the institutional capacity assessment of the Decentralized Autonomous Government of the Province of Chimborazo (GADPCH); (3) the results of the fiduciary risk evaluation of GADPCH; (4) the work meetings with the project team; and (5) the meetings with the staff of the various coordination offices and units of the GADPCH. Based on this assessment, fiduciary agreements in the areas of procurement and financial management were prepared for program execution.

I. FIDUCIARY CONTEXT OF THE COUNTRY

- 1.1 National Procurement System: The National Public Procurement System (SNCP) was approved in August 2008 by means of the SNCP Act. The most significant changes introduced include the creation of the National Public Procurement Institute (INCOP) to act as the lead agency for public procurement processes in Ecuador. The INCOP, with the Bank's support, conducted an assessment of the SNCP using the OECD/DAC methodology, which found a medium level of development. The final assessment report was approved by the Ecuadorian government and published on its public procurement portal. On 25 February 2013 the Bank's Board of Executive Directors approved the use of the National Public Procurement System, based on the Validation Report and the Technical Agreement approved and signed by the IDB and the government through the INCOP. The implementation of the system initially includes seven projects financed by the Bank that are currently in execution, which is why this program is not included in the first phase. However, once the system has been in use for 12 months, an evaluation will be conducted to decide on the inclusion of other projects, which may include this one.

Financial management system:

- 1.2 The National Public Finance System (SINFIP) includes a set of standards, policies, instruments, processes, activities, records, and operations that must be used by the institutions and agencies in Ecuador's public sector, including the central government, the decentralized autonomous governments, the State-owned enterprises, and the public financial system, to manage public revenues,

expenditures, and financing on a scheduled basis, in accordance with the national development plan and public policies currently in force. The Ministry of Finance regulates the SINFIP and has the following powers and duties: (a) to issue policies, manuals, instructions, guidelines, classifications, catalogues, glossaries, and other tools that must be used by entities in the public sector for the design, implementation, and operation of the SINFIP and its components; (b) to harmonize, standardize, and consolidate accounting practices in the public sector; and (c) to approve or deny guarantees by the Republic of Ecuador for debt contracted by public sector agencies and institutions. Accordingly, the Decentralized Autonomous Governments (GADs) adopt the Ministry of Finance's decisions as a mandatory guideline for exercising the administrative and financial autonomy conferred to them by the Code of Territorial Organization, Autonomy, and Decentralization (COOTAD), which ensures uniformity and standardization in the use of principles on public accounting, budget management, treasury, and financing at the various levels of subnational government. However, each GAD has the power to implement any information technology tool deemed appropriate to implement budget execution, keep accounting records of its transactions, and generate the respective financial statements and reports; it also has the authority to supplement the decisions of the Ministry of Finance with its own internal rules and policies. The Decentralized Autonomous Government of the Province of Chimborazo (GADPCH) has operated under this system since the new Constitution was enacted in 2008.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 2.1 The executing agency for the program will be the GADPCH. Program management will be the responsibility of GADPCH officials in the following coordination offices: (a) planning management; (b) financial management; (c) administrative and human resource management; (d) public works management; (e) irrigation management; (f) productive development management; (g) environmental management; (h) social management; and (i) the public procurement unit. The management team's work will be supervised by a general program coordinator, to whom they will report within the organizational matrix. The GADPCH demonstrates significant organizational development and has the necessary elements for assuming responsibility for the execution of the program. The institutional capacity assessment confirms that it has sufficient capacity and a medium level of risk in financial management and a low risk level in the area of procurement management.
- 2.2 In addition, the GADPCH has experience in the execution of investment projects with multilateral financing based on its implementation of the Chimborazo Development Investment Project (PIDD) under a World Bank loan, which is currently in its final phase. The World Bank's procurement policies and financial reporting requirements are substantially the same as the Bank's, so the GADPCH staff that will be in charge of the program are considered to have sufficient expertise and training to manage it. In regard to the procurement management unit, it is important to point out that the last procurement review conducted by the

World Bank did not reveal the existence of any findings or observations related to the procurement processes that were carried out, and external audits of this project have received unqualified opinions.

- 2.3 The GADPCH uses the National Public Procurement System, and its financial management follows the technical guidelines of the Ministry of Finance and the Office of the Comptroller General, as well as the provisions of the Public Planning and Finance Code (COPLAFIP) and the COOTAD; it also uses the SINFO information system, the parameters of which are established based on the budget classifications and official chart of accounts defined in the SINFIP. In addition, the GADPCH has an internal auditing unit that reports to the Office of the Comptroller General and conducts its activities according to the technical rules and regulations issued by that apex control agency.

III. FIDUCIARY RISK EVALUATION AND MITIGATION MEASURES

- 3.1 Based on the available information on the program, the work meetings held with the project teams, and the risk workshop that was conducted with the participation of the principal stakeholders, the fiduciary risks included in the respective risk matrix were identified. In terms of fiduciary management, the most relevant risks are the following:

a) Potential delays and/or complications in the procurement of works

- 3.2 Factors: (i) lack of familiarity on the part of the personnel responsible for preparing precontractual documents with the required standards and specific procurement policies of the IDB; and (ii) delay in issuance of the statements of no objection from the lender.

Impact: Delays in execution

- 3.3 Mitigation measures: (i) training of the executing agency's personnel who will be in charge of procurement; (ii) use of standard documents to carry out procurements; (iii) the first three shopping processes will be supervised on an ex ante basis; the following processes will be reviewed by the executing agency on an ex post basis; and (iv) preparation of a program Operating Manual that provides details on all internal procedures, requirements, and controls.

b) At-risk management capacity and project execution

- 3.4 Factors: (i) work overload among personnel; (ii) new hires in the process of learning; (iii) change in authorities and priorities; (iv) staff turnover.
- 3.5 Impact: Delay in program execution and failure to achieve the program objectives.
- 3.6 Mitigation measures: (i) specify in the program Operating Manual the composition of the management team and the criteria for selecting technical and administrative personnel who will support the current regular staff of the GADPCH; (ii) include in the GADPCH organizational chart the matrix reporting lines of the members of the management team who report to the general coordinator; (iii) specify the responsibilities, duties, and authority levels that each

member of the team will have in order to ensure the efficient execution of the program.

IV. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF THE CONTRACTS

1. Present evidence of the approval and entry into effect of the program Operating Manual.
2. Present evidence of the approval of the modified organizational chart that includes the required matrix reporting lines.

V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

1. Procurement execution

- 5.1 The procurement plan agreed upon by the executing agency and the Bank will specify the procurement processes initially included in the program, which will be carried out according to the bidding methods and ranges established therein. The procurement plan contains: (i) the contracts for each type of procurement; (ii) the proposed procurement methods; and (iii) the procedures used by the Bank to review the procurement methods. The executing agency will update the procurement plan annually to coincide with the programmed annual evaluations and before the end of each calendar year, along with the annual work plan, or whenever there are material changes, covering the subsequent 12 months of the program execution period. Any proposed change and/or revision of the procurement plan must be submitted to the Bank for approval. The public procurement unit of the GADPCH and the project team leader are responsible for the approval of the procurement plan and for keeping it updated during execution of the program.
- 5.2 The program provides for the procurement of works, goods, and consulting services pursuant to the provisions of the policies set out in documents GN-2349-9 and GN-2350-9, respectively. All procurement processes will be carried out pursuant to the procurement plan approved by the Bank.
- 5.3 The thresholds currently in effect for Ecuador are as follows:
Procurement of works, goods, and nonconsulting services:
- 5.4 Any of the methods described in the procurement policies may be used for the procurement of works, goods, and nonconsulting services, provided that such method has been identified for the respective procurement in the procurement plan that has received the Bank's no objection.
- 5.5 The threshold for determining the use of international competitive bidding (ICB) will be made available to the GADPCH at the website <http://www.iadb.org/procurement>. Below this threshold, the selection method will be determined based on the complexity and characteristics of the procurement, which will be reflected in the procurement plan that has received the Bank's no objection.

Procurement of consulting services:

- 5.6 Any of the methods described in the policies on consultants may be used for the selection and contracting of consulting services, provided the method has been identified for the respective procurement in the procurement plan approved by the Bank.
- 5.7 The threshold that determines whether the short list is to include international consultants¹ will be made available to the GADPCH at the website <http://www.iadb.org/procurement>. Below this threshold, the short list may be completely comprised of national consultants from the borrower's country.

2. Initial procurement plan

- 5.8 The procurement plan is attached to the Proposal for Operations Development document as an annex. In addition, the Procurement Plan Execution System (SEPA) will be used to plan and monitor procurements financed by the loan proceeds.

3. Procurement supervision

- 5.9 Given the executing agency's fiduciary context and the level of risk associated with the operation (low), the following initial thresholds were established for ex post supervision, which will apply to:
- a) Contracts for works, goods, and nonconsulting services are subject to the shopping method (initially the first three contracts will be reviewed with the executing agency). The processes identified in the procurement plan as international competitive bidding (ICB) or national competitive bidding (NCB) will be subject to ex ante review.
 - b) Consulting contracts for individual consultants (initially the first three contracts will be reviewed with the executing agency); in the case of consulting firms, the contracts will not exceed US\$100,000.
- 5.10 The type of supervision may vary during program execution, taking into consideration the implementation of the mitigation measures and the degree of strengthening of the executing agency.

4. Special provisions

A) Special measures. No special measures are established.

B) Other procedures: There are no other procedures.

5. Records and files

- 5.11 The executing agency will keep the records updated and the files duly organized so that they can be reviewed by the Bank, according to the following guidelines:
- a. The file containing documentation related to program procurements will be kept in a single file or folder, which can be easily differentiated from the

¹ For the procurement of consulting firms, the current threshold is for amounts greater than or equal to US\$200,000; for lesser amounts, the short list may be entirely comprised of national consulting firms.

procurements financed by the local counterpart or with resources other than program resources.

- b. The documents will be kept and stored properly ordered, paginated, and numbered, so that they can be clearly and immediately located and identified and are available at all times for auditing purposes.

VI. AGREEMENTS AND REQUIREMENTS FOR FINANCIAL MANAGEMENT

1. Programming and budget

- 6.1 The programming of activities and management of the program budget will follow the procedures and time frames established in the COPLAFIP and COOTAD, as well as the rules and classifications issued by the Ministry of Finance. Program planning, monitoring, and budgeting will be the joint responsibility of the project planning, monitoring, and evaluation and participatory budgeting unit, and the budget unit of the GADPCH. With the participation of all of the involved areas and under the direction of the general coordinator, these units will be in charge of preparing, monitoring, and updating the program execution plan, the annual work plans, and the annual and multiyear program budgets, as well as submitting them to the Bank, with the frequency and in the manner established in the Operating Manual. The budget unit will be responsible for ensuring that the program budget is an integral part of the GADPCH's general budget, and that the budget items required for the execution of the planned activities are available at the appropriate time. It will also be responsible for ensuring the correct configuration of the SINFO financial management system so that it can perform budget execution and monitoring functions, clearly identifying the program, its components, and the sources of financing to which the execution costs will be charged.

2. Accounting and information systems

- 6.2 The program accounting records will be kept according to the government accounting rules and procedures and the consolidated chart of accounts for the public sector issued by the Ministry of Finance. To this end, all program transactions will be recorded according to the accrual principle, and these transactions will be an integral part of GADPCH's general accounting. The SINFO information system that has been used by GADPH for years will be used to keep the accounts. The system has the capacity to produce the following statements: (a) balance sheet; (b) income and expenses; and (c) statement of budget execution of the program based on the consolidated chart of accounts and investment categories for the public sector, distinguishing balances by source of financing, etc. To ensure that the SINFO is able to produce financial reports based on the modified cash method required by the IDB—the “cumulative investment statement” and the “cash flow statement”—the system will be supplemented by a report generator specifically configured for this purpose. The GADPCH accounting unit will be responsible for keeping updated program accounting records at all times, as well as for issuing and signing financial statements and reports, and guaranteeing the completeness, sufficiency, and competency of the

documentation supporting the program transactions. It will also be responsible for the physical and digital safeguarding of the accounting file. The accounting unit will prepare and submit the financial statements and reports and explanatory notes required by the IDB in the manner and with the frequency defined in the Operating Manual, and will act as the focal point and counterpart of the external auditing team. The accounting unit will also be responsible for preparing the annexes “expense statement,” “disbursements and local contribution control,” and “reconciliation of bank resources” for disbursement requests submitted to the IDB.

3. *Disbursements and cash flow*

- 6.3 The Bank will disburse the loan proceeds using the “advance of funds” modality. The monetary value of each advance will be calculated based on the programming of the cash flow necessary to execute the program activities planned for four-month periods (three advances per year). The programmed cash flow must be consistent with the annual work plan and procurement plan that were approved by the Bank, and will cover a rolling horizon of 12 months. The GADPCH treasury unit will be responsible for preparing the cash flow programming for the program and keeping it updated, and for preparing the disbursement request form to be submitted to the IDB with the required frequency. At the GADPCH’s request, and when there are demonstrated efficiencies, the Bank may also directly pay suppliers and contractors on behalf and by order of the borrower. Disbursement requests will be signed by the officer(s) designated by the Prefect of Chimborazo for this purpose in the IDB’s list of authorized signatures.
- 6.4 In order to receive disbursements from the IDB and make payments to contractors, the GADPCH will ask the Ministry of Finance to open a special account at the Central Bank of Ecuador, as stipulated in the COPLAFIP. The GADPCH treasury unit will make payments to contractors by bank transfer, using the Central Bank’s inter-bank payment system.

4. *Internal control and internal audit*

- 6.5 The internal control of the program will be the mutual responsibility of all of the GADPCH’s coordination offices and administrative and technical units that will be involved in the execution of the program. The financial coordination unit will be responsible for ensuring the proper separation of powers and duties, and for ensuring that the principle of “two pairs of eyes” is implemented and respected in the preparation and approval of program transactions. The Prefect of Chimborazo will have ultimate responsibility for the proper functioning of the program’s internal control system.
- 6.6 Internal auditing of the program will be conducted by the GADPCH auditing unit, which will follow the internal auditing rules and policies of the Office of the Comptroller General for this purpose. This unit will include specific actions in its annual work plans to be carried out under the program. Its main role will be to periodically evaluate potential control risks and weaknesses in the program management system, and recommend and monitor the implementation of corrective measures to mitigate the identified risks. To this end, the internal

auditing unit will report its findings and recommendations to the Prefect of Chimborazo and to the general program coordinator.

External control and reports

- 6.7 The external control of the program will be conducted by an external audit firm acceptable to the Bank. This firm will be contracted through a competitive process, based on terms of reference mutually agreed upon by the GADPCH and the Bank. The firm will conduct the annual external audit of the following financial statements and reports: (a) “balance sheet”; (b) “income and expenses”; (c) “statement of budget execution”; (d) “cumulative investment statement”; and (e) “cash flow statement” of the program. The firm will also perform an annual comprehensive ex post review of procurements and disbursements. The annual report on the audited financial statements and the report on the comprehensive ex post review of procurements and disbursements will be submitted to the IDB no later than 120 days after the end of the respective fiscal period.

5. Fiduciary supervision plan

Supervision activity	Supervision Plan			
	Nature and scope	Frequency	Responsibility	
			Bank	Third party
OPERATIONAL	Review of status report	Semiannual	Fiduciary and sector team	
	Portfolio review with the executing agency	Based on requirements of the Ministry of Finance	Fiduciary and sector team	Ministry of Finance
FINANCIAL	Updating of cash flow and disbursement programming	Quarterly, with each request for advance	Fiduciary and sector specialist	Executing agency
	Inspection visits	Quarterly during the first year of the program / Annually thereafter	Fiduciary specialist	Executing agency
	Financial audit and ex post review of procurement processes and disbursements	Annual	Fiduciary specialists in the Country Office	Executing agency / External auditor
PROCUREMENT	Ex ante review of procurement processes	During program execution for procurement processes that exceed the established amounts	Project team leader, with support of procurement specialist	Executing agency
	Updating of procurement plan	Annual	Project team leader, with support of procurement specialist	Executing agency
COMPLIANCE	Fulfillment of conditions precedent	Once - Q3 2013	Fiduciary team	
	Budget allocation	Annual; January of each year	Fiduciary specialist	Executing agency
	Delivery of audited financial statements	Annual	Fiduciary specialist	Executing agency

6. *Execution mechanism*

- 6.8 The executing agency will be the Decentralized Autonomous Government of the Province of Chimborazo (GADPCH), with the participation of its project management team and officials from the institution's coordination offices and technical and administrative units, as described in this document and as established in the program Operating Manual.
- 6.9 The project management team will be responsible for planning, coordinating, executing, and monitoring the activities and consolidating the program information; it will therefore be responsible for financial planning and will prepare cash flows and schedule disbursement requests, as well as the procurement plan and any reports and documents required for the execution of the program. The GADPCH team in charge of program management will be responsible for monitoring the program in general and for performing the applicable controls to ensure the proper use and transparency of the funds. The program Operating Manual will provide detailed information on the program execution mechanism.

7. *Procurement table*

- 6.10 This table can be found at [[LINK](#)].

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/13

Ecuador. Loan ___/OC-EC to the Autonomous Decentralized
Government of the Province of Chimborazo
Chimborazo Rural Development Investment Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Autonomous Decentralized Government of the Province of Chimborazo, as Borrower, and the Republic of Ecuador, as Guarantor, for the purpose of granting the former a financing aimed at cooperating in the execution of the Chimborazo rural development investment program. Such financing will be in the amount of up to US\$15.000.000, from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on ____ 2013)