

INTER-AMERICAN DEVELOPMENT BANK  
MULTILATERAL INVESTMENT FUND

**BOLIVIA**

**SUSTAINABLE ORGANIC QUINOA PRODUCTION IN THE  
BOLIVIAN HIGHLANDS**

**(BO-M1060)  
(BO-T1225)**

**DONORS MEMORANDUM**

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## ABBREVIATIONS

ADU	Agricultural demonstration unit
AUS	Partnership Trust Fund for Poverty Reduction in Latin America
CABOLQUI	Cámara Boliviana de Exportadores de Quinoa y Productos Orgánicos [Bolivian Chamber of Royal Quinoa and Organic Products Exporters]
CPTS	Centro de Promoción de Tecnologías Sostenibles [Sustainable Technologies Development Center]
ha	hectare
INE	National Statistics Institute
IPU	Industrial production unit
PROINPA	Promoción e Investigación de Productos Andinos [Andean Products Research and Development]
PSI	Private Sector Investment Programme
PSR	Project Status Report
QED	Quality for Effectiveness in Development Matrix
RDE	Royal Danish Embassy
USAID	United States Agency for International Development

## PROJECT DESCRIPTION

Quinoa is a native grain and staple food of the ancient civilizations of the South American Andes grown primarily in Bolivia, Peru, and Ecuador. Its nutritional qualities are significant, and it is adaptable and resistant to different temperatures and climatic conditions, including frost and droughts. In recognition of its nutritional value, capacity to improve global food security, and potential to reduce hunger and poverty, the United Nations General Assembly declared 2013 the “International Year of Quinoa.”

Bolivia is the largest quinoa producer in the world: in the last 10 years, no crop has outpaced the growth experienced by quinoa. Export volumes have climbed from 2,000 tons/year to 35,000 tons/year, and the value of exports rose from US\$2 million annually to US\$154 million annually as of December 2013. Quinoa has become the appropriate food alternative, and demand for quinoa has grown substantially in the world market.

For several years now, and with the support of the international community, Bolivia has been studying, researching, and helping the quinoa sector explore new technologies for increasing productivity and efficiency, and reducing its environmental impact, in both the farming and processing phases. As a result, a technology package, comprising new techniques and equipment, was created that is now being validated prior to its commercial production. This technology package is expected to increase the productivity of organized small-scale farmers, help standardize the ripening of the crop, and free up time for small farmers, whose physical exhaustion is extreme due to their difficult working conditions. The technology will also reduce pressure on arable lands or lands under threat of degradation due to the unsustainable expansion of quinoa production and will increase the farmers’ resilience to climate change.

The intention of the project is to validate and fine tune the technology package through a practical exercise in an agricultural demonstration unit (ADU) in the community of Ayamaya, the department of La Paz. For its part, the ADU will incorporate as an *empresa plural* (plural enterprise), through a strategic partnership created among the community and the investment partners that contribute the technology, the market, and the financing or venture capital. The establishment of this enterprise falls under several government policies that promote the management and sustainable production of agro-ecosystems, the strengthening of organic quinoa production, and the central role of responsible community participation in the implementation of community-based business models that contribute to comprehensive sustainable development, food security, and food sovereignty in the Plurinational State of Bolivia.

It also aims to improve the agricultural practices of the small farmers who make up the organic quinoa value chain, as well as their coordination with the market through an organic quinoa production traceability system.

The MIF will explore the possibility of securing Climate Fund resources to finance small farmers who adopt agricultural best practices, using the financial instrument that is best suited and provides security for the investment. The total cost of the project is US\$3,997,000. The MIF will contribute US\$1,670,000 through a technical cooperation operation, the Partnership Trust Fund for Poverty Reduction in Latin America (AUS) will

contribute US\$250,000, and the Cámara Boliviana de Exportadores de Quinoa y Productos Orgánicos [Bolivian Chamber of Royal Quinoa and Organic Products Exporters] (CABOLQUI) will provide US\$2,077,000 in counterpart funds. The execution period will be 60 months, and the disbursement period 66 months.

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**I. EXECUTIVE SUMMARY**

<b>Country:</b>	Bolivia
<b>Executing agency:</b>	Cámara Boliviana de Exportadores de Quinoa y Productos Orgánicos [Bolivian Chamber of Royal Quinoa and Organic Products Exporters] (CABOLQUID) <sup>1</sup>
<b>Access Areas:</b>	Markets and Skills, Basic Services, and Green Growth
<b>Agendas:</b>	Linking small producers to high value agriculture markets; Leveraging natural capital; and Adaptation to climate change.
<b>Coordination with other donors/ Bank operations:</b>	This project has involved coordination with the Government of Bolivia and the World Bank because of a loan operation that is being processed to promote the cultivation and consumption of ancestral products, such as quinoa, from the Bolivian highlands. <sup>2</sup> Efforts were also coordinated with the Private Sector Investment Programme (PSI) of the Government of the Netherlands <sup>3</sup> and the Royal Danish Embassy (RDE), both of which will provide counterpart funds.
<b>Direct beneficiaries:</b>	(i) The Ayamaya community and its 200 families; (ii) the Ayamaya Cooperative and its 57 members, who will be co-owners of the plural enterprise; (iii) 3,000 small-scale quinoa farmers making up the supply chain of CABOLQUI's member enterprises; (iv) CABOLQUI's member enterprises; <sup>4</sup> and (v) and the environment, through the sustainable management of 500 hectares (ha) of land.

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<sup>1</sup> <http://www.cabolqui.org/es/>.

<sup>2</sup> On 6 July 2013, a memorandum of understanding was signed by the Plurinational State of Bolivia and the World Bank Group, for the purpose of working together to guarantee that production systems contribute to food security, economic growth, and environmental sustainability.

<sup>3</sup> <http://www.dlvplant-latinamerica.com/es/content/programa-psi.html>.

<sup>4</sup> Eight of its 10 member enterprises intend to participate. In addition, CABOLQUI is reviewing membership applications from other enterprises that wish to join the organization. The member enterprises interested in participating are: Quinoa Foods S.R.L., ANDEAN Valley S.A., Coronilla S.A., Complejo Industrial y Tecnológico Yanapasiñani (City S.R.L.), COMRURAL XXI S.R.L., Empresa Exportadora e Importadora de Productos Ecológicos Andinos (E.I.P.E.A. S.R.L.), Irupana Andean Organic Foods S.A., and Sociedad Industrial Molinera S.A. (SIMSA).



**Indirect beneficiaries:** Other highland communities that will be able to replicate the production and marketing model proposed by the project, and the quinoa sector as a whole, which includes nearly 70,000 small-scale farmers.

<b>Financing:</b>	MIF (technical cooperation funds)	US\$1,670,000	42%
	AUS	US\$250,000	6%
	Counterpart:	US\$2,077,000	52%
	<b>Total project budget:</b>	<b>US\$3,997,000</b>	<b>100%</b>

<b>Execution and disbursement period:</b>	Execution period:	60 months
	Disbursement period:	66 months

**Special contractual conditions:** The following will be conditions for the first disbursement: (i) Bank approval of the agreement signed by CABOLQUI, the Centro de Promoción de Tecnologías Sostenibles [Sustainable Technologies Development Center] (CPTS), and the Ayamaya Cooperative with the endorsement of the Ayamaya community, specifying the roles, commitments, and institutional liaisons appointed for this project; (ii) Bank approval of an agreement or equivalent instrument signed by the RDE, the CPTS, and CABOLQUI, detailing the funds that will be invested as counterpart funds for this project; (iii) Bank approval of the agreement signed by Quinoa Foods (CABOLQUI member) and PSI,<sup>5</sup> confirming approval of the counterpart funds PSI will allocate for the project;<sup>6</sup> (iv) implementation of the Operating Regulations by the CABOLQUI Board of Directors; and (v) selection of the project coordinator, pursuant to Bank procedures.

**Environmental and social review:** This operation was submitted to the environmental and social review process and was classified on 22 August 2013 as a category “B” operation, pursuant to the IDB’s Environment and Safeguards Compliance Policy (Operational Policy OP-703).

**Unit responsible for disbursements:** The MIF at the IDB Country Office in Bolivia.

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<sup>5</sup> The Private Sector Investment Programme is a program of the Kingdom of the Netherlands. <http://english.rvo.nl/>.

<sup>6</sup> CABOLQUI delegated management of these funds to Quinoa Foods, as recorded in the minutes of Cabolqui Assembly meeting 01/14 on 3 February 2014.

## II. BACKGROUND AND RATIONALE

### A. Assessment of the problem to be addressed by the project

- 2.1 Quinoa is a native grain and staple food of the ancient civilizations of the South American Andes, cultivated primarily in Bolivia, Peru and Ecuador. Its nutritional qualities are significant, and superior to any other grain. It is distinguished by its high content of protein, vitamins, amino acids, and minerals, and is also cholesterol and gluten-free. It is an extremely adaptable crop, resistant a wide range of temperatures and climatic conditions, including frost and drought. In recognition of its nutritional value, capacity to improve global food security, and potential to reduce hunger and poverty, the United Nations General Assembly declared 2013 the “International Year of Quinoa.”
- 2.2 Bolivia is the largest producer of royal quinoa<sup>7</sup> in the world; its most important production areas are the departments of Oruro and Potosí, surrounding the Uyuni salt flats, at more than 3,600 meters above sea level. It has eight-month growing period and is usually planted in September. The plant ripens in April, and is harvested and threshed in May and June.
- 2.3 In Bolivia, in the last 10 years, no agricultural product has experienced the growth shown by quinoa. Annual export volumes have risen from 2,000 to 35,000 metric tons, and the value of exports rose from US\$2 million to US\$154 million annually as of December 2013.<sup>8</sup> In the industrialized countries of Europe and North America, quinoa is a “super food” that has captured the interest of the general public, and has gone from being a niche product with limited demand to a flagship product for the most important supermarket chains. Export markets for Bolivian quinoa are: United States of America (61%), Canada (7%), France (6.9%), the Netherlands (6.8%), and Germany (5%).<sup>9</sup>
- 2.4 Within the framework of its National Development Plan “*Bolivia, digna, soberana, productiva y democrática para vivir bien*” [Bolivia, dignified, sovereign, productive, and democratic to live well] and the Ministerial Plan *Revolución Rural, Agraria y Forestal* [Rural, Agrarian, and Forestry Revolution], the Government of Bolivia, through the Ministry of Rural Development and Lands, and with the participation of quinoa farmers, processors, manufacturers, marketers, and exporters, approved the “National Quinoa Policy and Strategy.” Its general objective is to promote and implement technological development in the

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<sup>7</sup> Royal quinoa is differentiated from traditional quinoa by its thicker layer of saponin; it is not sweet, has a higher protein content (more than 17%). The grain is larger and remains intact when cooked. Source: CABOLQUI.

<sup>8</sup> National Statistics Institute (INE) of Bolivia.

<sup>9</sup> Source: INE.

quinoa sector with the objectives of “food security and food sovereignty to live well.”<sup>10</sup>

- 2.5 **The quinoa chain.** In Bolivia, quinoa production has been differentiating rapidly into organic and conventional practices.<sup>11</sup> At the same time, organic quinoa receives a premium price in international markets, higher than the price of conventional quinoa. The quinoa chain comprises primary farmers (around 70,000 organic and conventional farmers), intermediaries, processing enterprises (around 62), manufacturing companies, and exporters. The processing companies clean, remove the saponin,<sup>12</sup> wash, classify, and package the quinoa for final sale, in large quantities or in bulk. The manufacturing companies make high value-added products, including pastas, flours, puddings, and flakes. Eighty percent of primary farmers work alone and 20% are organized into associations or cooperatives. Essentially, this is the result of the distances between farmers, their organizational experience, and the managerial capacity of the organizations. Although there are some quinoa farmer associations, many are organizationally weak, geographically scattered, and have weak product bulking and marketing capacities. Processing and manufacturing companies play a larger role in terms of innovation, traceability, and organic farming.
- 2.6 **Domestic consumption of quinoa.** Indigenous communities maintain the tradition of consuming quinoa. Before selling their output, they make sure to reserve enough to feed their families for the entire year.<sup>13</sup> Most have two ways of growing quinoa: (i) on a family plot, for personal consumption; and (ii) on a community plot, for sale. More recently, the greater purchasing power is enabling the farming population to add fruits and vegetables to their children’s diets, in addition to processed products and others of lower nutritional value. Quinoa consumption has been growing in the country, and that trend is expected to continue, particularly with the appearance of derivative products such as flours, energy bars, pastas, etc. Similarly, as a food security measure, the government has set the goal of increasing quinoa consumption in the country, an initiative CABOLQUI has been supporting with the creation of the aforementioned products.<sup>14</sup>

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<sup>10</sup> Ministerial Resolution 316, June 2010.

<sup>11</sup> By 2012, 96,544 hectares (ha) were planted with quinoa; output was 50,566 metric tons and average yields 0.52t/ha.

<sup>12</sup> Quinoa contains saponins, which produce foam, like soap, when placed in contact with water. Saponins are probably plants’ protection against pathogens, especially fungi, and are found primarily on the outermost parts of the plants. Saponins are removed by a process of friction that removes the outer layers that contain them.

<sup>13</sup> They store about two quintals.

<sup>14</sup> According to 2012 data from INE, per capita consumption in 2008 was 0.35 kg/year and by 2012 it had risen to 1.11 kg/year. It is expected to reach 2 kg/year in 2013.

- 2.7 **CABOLQUI.** In 2005, 10 Bolivian companies that process and export organic quinoa created the Bolivian Chamber of Royal Quinoa and Organic Products Exporters (CABOLQUI) with the aim of finding solutions to common problems, and to work more strategically as an export sector. Over the years, CABOLQUI has improved its operations and gained national and international recognition, becoming the agency of reference in the quinoa sector. Unlike enterprises that purchase quinoa from intermediaries that produce and collect quinoa from scattered small farmers, CABOLQUI's members have their own supplier programs, through which they obtain up to 80% of their raw materials. With these programs, the companies provide farmers with technical assistance, inputs, organic certification, and sometimes even financing. Because this marketing model does not involve intermediaries, farmers that participate in these supplier programs receive up to 80% of the product's export price.<sup>15</sup> This notwithstanding, the supplier programs vary from company to company, they lack adequate standards, create competition and duplication of efforts among member companies, and do not optimize the use of collection infrastructure and other shared resources, which affects their efficiency and positioning as a trade association. For these reasons, CABOLQUI needs further institutional strengthening, so it can work on building loyalty for its chain, traceability of organic farmers in the country, consolidating the different supplier programs, and strengthening organic quinoa's position in the country and in the international market.
- 2.8 **The problem of organic traceability.** Given the rapid increase in demand, quinoa prices have shot up from US\$1,200/ton in 2006 to US\$4,300/ton as of December 2013.<sup>16</sup> Given this demand and intermediaries offering better prices, farmers sometimes break their loyalty agreements with export companies, which prevents the companies from fulfilling their export or local supply contracts. In those cases, exporters must turn to other quinoa suppliers, and take many measures to ensure that the product they purchase meets organic standards. It is therefore very important to have a nationwide, geo-referenced traceability system that keeps track of and registers certified organic producers, thereby building greater confidence in the quality of the product being offered, and speeding up the marketing process.
- 2.9 **Quinoa and climate change.** Global warming has changed the frequency and duration of frosts on the highland plains. This has increased the availability of arid areas, which favors the quinoa sector. In addition, changes in rainfall patterns have modified the availability of both surface and groundwater, which affects harvests and makes year-round production impossible. Wind speeds have also increased, causing wind erosion and further soil deterioration. These changes make adaptation a necessity for the quinoa sector, so that it can take advantage of

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<sup>15</sup> Source: CABOLQUI.

<sup>16</sup> Source: INE.

the land being freed up, and introduce new crops that can prosper and persist under those climatic conditions, in order to introduce agroforestry systems or other water catchment and irrigation alternatives and identify the most resistant seed types for the temperature conditions, precipitation, and soil types, to improve resilience to climate change.

- 2.10 **Quinoa and preservation of natural capital.** As a result of their principles of living in harmony with the land and with nature, indigenous populations have protected and preserved many varieties of quinoa (around 3,000 ecotypes) in natural germplasm banks. These principles are still held and underpin the growth strategy in the country for the production of royal quinoa, to preserve the genetic purity of native species and prohibit hybridization<sup>17</sup> for the purpose of increasing yields. This strategy differentiates Bolivia from other producing countries, and is supported and upheld by the government and the companies associated with CABOLQUI.
- 2.11 **The challenges posed by quinoa production.** The growing demand worldwide for quinoa has led farmers to concentrate their efforts on this crop, without rotation strategies to ensure better building of soil nutrients. Grazing areas and land used for other conventional Andean products<sup>18</sup> are shrinking, and quinoa is even being farmed in wetlands, the main environmental function of which is to store water. In addition, camelids, which have been traditionally a source of organic fertilizer and part of the ancestral diet, are gradually being displaced. In short, areas with potential for growing quinoa are already being used to the utmost and yields are steadily shrinking.<sup>19</sup>
- 2.12 **New option for quinoa production.** Based in observation, consultation, and experimentation with selected quinoa enterprises and farmers, the Sustainable Technologies Development Center (CPTS)<sup>20</sup> and the PROINPA Foundation<sup>21</sup> have prepared a plan and a strategy for diversifying production that could serve as a long-term response for quinoa farmers. It requires coordinated joint efforts and the adoption of new techniques and business organization models, and is based on expanding quinoa farming to arid highland areas and the adoption of agricultural best practices to enhance the farmers' resilience.<sup>22</sup> The technology and business model this project intends to introduce make it possible to incorporate those lands into production or manage them better without harming the ecosystems and

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<sup>17</sup> The process of combining different species or varieties of an organism to create a hybrid.

<sup>18</sup> For example, a quintal of potatoes sells at 80 bolivianos, while a quintal of conventional quinoa sells at 800, and organic quinoa at 1,000.

<sup>19</sup> INE. Source on area under cultivation, yields, and output:  
<http://www.ine.gob.bo/indice/general.aspx?codigo=40104>.

<sup>20</sup> <http://www.cpts.org/>.

<sup>21</sup> <http://www.proinpa.org/>.

<sup>22</sup> Adoption of agricultural best practices such as agroforestry systems, construction of irrigation ditches, crop rotation, and identification of seeds that are resistant to the climate conditions.

without threatening the preservation of local fauna and flora. The strategy could help Bolivia remain the world leader in organic production.

- 2.13 The technology package developed by the two aforementioned Bolivian quinoa research entities uses new and entirely Bolivian techniques and equipment,<sup>23</sup> and is in the process of *validation* prior to its commercial production. The package is expected to increase the productivity of *organized small-scale farmers* from 600 to 1,250 kilograms/hectare (a 108% increase), and will also help standardize the ripening of the crop and the implementation of high-yield practices. The key aspects of this project are implementation of the technology package, coordinated work with farmers, and positioning Bolivia in the quinoa market for the long term.

#### **B. Project beneficiaries**

- 2.14 The project's beneficiaries are: (i) the Ayamaya community and its 200 families, which will learn about the new production model and benefit from the income generated by the Ayamaya Cooperative (see paragraph 2.19); (ii) the Ayamaya cooperative and its 57 quinoa-producing members, which will become co-owners of the plural enterprise; (iii) 3,000 small-scale quinoa farmers who will make up the supplier chains of CABOLQUI's member enterprises; (iv) CABOLQUI's member companies; and (v) the environment, because of the sustainable management of the 500 hectares of land covered by this project.

#### **C. Contribution to the MIF Mandate, Access Framework, and IDB Strategy**

- 2.15 The project will contribute to private-sector development by building the productive capacity of Bolivia's quinoa sector. A new model will be developed that will boost production and the participation of poor highland communities that will—gradually and with technical assistance—move from being passive partners to active owners of the enterprises created for sustainable large-scale production of organic quinoa.
- 2.16 The project contributes to three of the MIF's Agendas: (i) Adaptation to climate change; (ii) Leveraging natural capital; and (iii) Linking small producers to high value agriculture markets. For the first agenda, the project will tap newly liberated natural resources to grow food and will introduce agricultural best practices using techniques and technologies adapted to soil and climate conditions. For the second agenda, the project aims to reduce the environmental impact of quinoa farming, especially soil deterioration and erosion, and the degradation of the quinoa-camelid ecosystem (wetlands and pastures), thus protecting local biodiversity with technology designed for energy efficiency and cleaner production, as well as preserving local varieties of quinoa.

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<sup>23</sup> Some of the equipment was designed with a dual purpose, such as fertilizer machines, used both for fertilizing and irrigating. The technology was designed specifically for quinoa and incorporates best practices for cleaner production that optimize the use of raw materials and inputs, and recycle many of the by-products.

- 2.17 In the case of the third agenda, technical assistance and access to technology will increase quinoa productivity and quality, strengthening the commercial relations between small farmers and the export companies in this value chain. The project will also build small farmers' capacity to obtain organic certification and traceability.
- 2.18 Bolivia was one of the few countries in the region selected to apply to the Climate Investment Funds' Pilot Program for Climate Resilience (PPCR).<sup>24</sup> Based on the activities proposed in the project to improve the farmers' resilience (paragraphs 2.12 and 2.16), efforts will be made to secure PPCR funds to support the farmers in gaining access to financing to adopt new technology and expand their businesses. Access to other climate funds will also be explored.
- 2.19 **Poverty reduction.** The project will be implemented in the Bolivian highlands, the country's main quinoa-producing region. The rural population in that area—estimated at 1.3 million—represents 37% of Bolivia's total rural population and is part of the poorest demographic group in the country (80% poverty incidence, with annual per capita incomes below the national poverty line).<sup>25</sup> In this region small farmers, primarily indigenous people, rely on agriculture (quinoa, other grains, tubers) and livestock (camelids) as their main sources of income.
- 2.20 **Collaboration with the IDB Group.** The 2011-2015 Country Strategy includes actions in two crosscutting areas: climate change adaptation, and inclusion and adaptation to the country's ethnographic reality. By developing technologies that improve agricultural productivity in the highlands, the project covers both areas and also strengthens food security in the country. The project also intends to demonstrate the potential of cultivating organic quinoa on a commercial scale with a plural business model that includes indigenous communities, investors, and CABOLQUI export firms, several of which are led by indigenous entrepreneurs.

### III. PROJECT OBJECTIVES AND COMPONENTS

#### A. Objectives

- 3.1 The *impact* objective of this project is to contribute to increasing the incomes of small-scale organic quinoa farmers, and to reducing deterioration of natural resources associated with quinoa production in the Bolivian highlands. The project *outcome* is to expand the sustainable production of organic quinoa in Bolivia, improving its position in high-value markets based on an extensive farming model that uses technologies adapted to the area.

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<sup>24</sup> <https://www.climateinvestmentfunds.org/cifnet/?q=country/bolivia>.

<sup>25</sup> Annual incomes of between US\$2,000 and US\$3,500.

## **B. The intervention model**

- 3.2 The project will develop an Agricultural Demonstration Unit (ADU) in the Ayamaya community,<sup>26</sup> in the heart of the Bolivian highlands, implementing a two-pronged intervention model: (i) validation of a new technology package (final prototypes) to promote large-scale, sustainable farming of organic quinoa, in extremely arid and sandy soils, and under extreme climatological conditions; and (ii) creation of a plural enterprise made up of the farming community and the investors of technology, market, and capital, which are expected to ensure the business model's sustainability beyond the life of the project.
- 3.3 The Ayamaya community has granted the Ayamaya Cooperative the use of 500 hectares by means of legal instruments that allow their use by the project. The Ayamaya Cooperative has 57 member families, who will work on the community lands granted to them for the project. The Ayamaya Cooperative will receive the dividends that will be distributed to the community (20%), to the Cooperative (20%), and to the members of the Cooperative (the remaining 60%).
- 3.4 **The plural enterprise.** During this operation, the Agricultural Demonstration Unit (ADU) plans to become established as a plural enterprise, as the entity that validates, implements, and benefits from the technology packages developed. It is called a "plural" enterprise because it will be made up of four different types of investment partners: (i) the Ayamaya community, legally represented by its Cooperative (50% of the capital stock), which will contribute the natural resources; (ii) the CPTS, as the technological partner responsible for implementing the infrastructure, preparing the farming area, applying the farming methodologies and technology, and administering the commercial production of organic quinoa (18% of the capital stock); (iii) CABOLQUI, on behalf of its member enterprises, will contribute its experience managing supplier programs associated with the organic certification process, and will cover the costs of transporting the product to the processing plant (5% share); and (iv) a private investor (open to any individual or legal entity aligned with the project's objectives), who will contribute the financial resources needed to establish and operate the plural enterprise (the remaining 27% of the capital stock). This private investor could be a quinoa buyer abroad and/or local partners who have expressed interest; the final decision will be made by the other shareholders. The proposed management of the enterprise is described in the project's Operating Regulations.

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<sup>26</sup> The Ayamaya community was selected because of the availability of sufficient land for the project, the availability of community land that has not been subdivided into plots, easy access, and strategic location.



**Component I: Validation of the technology package and business model  
(MIF: US\$121,319; AUS: US\$250,000; Counterpart: US\$1,458,459)**

- 3.5 The objective of this component is to validate a new technology package<sup>27</sup> consisting of the combination of various practices and processes, which, while not new themselves, are innovative in their systematic combination and scientific measurement. These elements include custom dosing units and planters, irrigation systems adapted for the highlands and quinoa, organic fertilizer and input recirculation and mixing systems, and quinoa harvester and hopper systems. The package is characterized by the implementation of these processes while taking into account a series of specific measures and the planting of crops and plant coverage, accompanied by reforestation with a native tree variety, like the Thola. The technology package will be implemented through the creation and operation of the Agricultural Demonstration Unit (ADU). Validation is defined as a set of tests, measurements, and activities that test the technology and optimize it for replication on a commercial scale under the conditions of the arid highlands. Consideration will be given to determining the best legal structure for creating the plural enterprise and for its purposes, and support will be provided for its legal establishment, operation, and governance. The plural enterprise's operation will initially be the responsibility of the CPTS, and later be passed on to community-based technical personnel who will be trained by and receive the support of CTPS and PROINPA. A management committee made up of the partners will be responsible for the administrative model of the plural enterprise; its arrangement will be validated and fine-tuned during the initial stage of the project. The validation process will have a duration of four years, and will take into account political, social, cultural, and environmental factors. After 10 years, the enterprise will become the property of the Ayamaya Cooperative, to which end the operation will provide assistance and support during the project's five years of execution.
- 3.6 The activities to be carried out include: (i) fine-tuning the final prototypes of the new agricultural technology for quinoa production;<sup>28</sup> (ii) applying methodologies for rehabilitating arid lands, managing rehabilitated lands, and consolidating the use of organic inputs on a commercial scale (for example, new seed varieties, organic fertilizers and pesticides); (iii) applying and systematizing methodologies for soil management and recovery for traditional crops; (iv) implementing the organic certification system; (v) establishing an ADU on the lands of the Ayamaya Cooperative, with the participation of the investors; (vi) establishing the plural enterprise; (vii) validating the ADU's business plan and by-laws; (viii) designing a system for training 30 agricultural technicians and

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<sup>27</sup> The technology package includes new techniques, technologies, and inputs, which have not yet been validated on a real scale in the arid highlands. Details of the package are included in the project's technical files with diagrams, drawings, and statistical data.

<sup>28</sup> Includes planter, harvester, solar dryer, fumigator, tank truck, thresher, electric generator coupling, row crop dosing unit, recirculation and mixing system, bucket elevator, loading hopper, packing hopper.

- 90 agricultural operators in the operation of the ADU, including technical staff from the Ministry of Rural Development and Lands, and universities;<sup>29</sup> and (ix) commissioning a consulting project to calculate the greenhouse gas emissions generated by the project.
- 3.7 Representatives of the communities will receive training in the administrative management of the business, strengthening their skills for negotiating with buyers, and fulfillment contracts in terms of timeliness and quality. Support will also be provided for establishing, effectively operating, and upgrading the ADU and the business model of the plural enterprise for five years.
- 3.8 In addition to testing a new business model, the project will also strengthen CABOLQUI's institutional capacity and its relations with more than 3,000 small farmers who will be the base of suppliers for its member companies.
- 3.9 The MIF's resources will be used to finance the various technical advisory services, consulting projects, and training sessions. The counterpart funds will be used for additional advisory support and training services, and also to procure equipment, machinery, and inputs for implementing the technology package.

**Component II: Ensuring traceability and efficiency in the supply chain  
(MIF: US\$550,000 Counterpart: US\$197,000)**

- 3.10 The objective of this component is to implement an integrated management system in the supply chain that promotes greater transparency and traceability among the nearly 3,000 producers of organic quinoa (2,000 who currently form the supply chain and 1,000 more who will join it) and the CABOLQUI export companies. The geo-referenced system will allow for total traceability of organic quinoa in the country. In addition, good agricultural practices that help improve the farmers' resilience to climate change will be promoted by consolidating a single suppliers program for the small farmers that work with CABOLQUI's member companies, and which will be a new service the organization provides its members.
- 3.11 The specific activities to be carried out include hiring consultants to develop: (i) a geo-referencing system as the basic tool for mapping farmers' plots; (ii) a geo-referenced database of CABOLQUI's suppliers; (iii) a traceability system<sup>30</sup> that registers quinoa production, purchases, and inventories in real time; (iv) a single consolidated supplier program that provides technical assistance to farmers in the CABOLQUI supply chain; and (v) training sessions and workshops (broken down by gender) to enhance exporters' resilience and capabilities to fulfill yields and

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<sup>29</sup> These are possibilities: Universidad Mayor de San Andrés, Universidad Autónoma de San Luís Potosí, and Universidad Técnica de Oruro.

<sup>30</sup> This is a web-based service rather than a physical device.

meet international standards and certifications.<sup>31</sup> The traceability system and the supplier program will provide exporters with better information on the supply chain, which will facilitate the provision and marketing of raw material.

- 3.12 The project is expected to increase the number of producers in the supply chain for CABOLQUI's member companies to 3,000.

**Component III. Strategy for differentiating Bolivian quinoa (MIF: US\$260,000; Counterpart: US\$110,000)**

- 3.13 The objective of this component is to improve the position of Bolivian quinoa in high value markets by creating a single brand that differentiates it from other types of quinoa. Bolivian quinoa varieties stand out because they are grown only in the vicinity of the salt flats where the arid and mineral-rich soils produce a seed that is on third larger than quinoa produced in other parts of the world.

- 3.14 The activities to be carried out under this component are: (i) a consulting project to develop a brand for organic royal quinoa of Bolivia; (ii) a consulting project to design a marketing strategy; (iii) a national event to promote the consumption of quinoa in Bolivia; and (iv) implementation of a national and international marketing campaign to promote consumption of organic quinoa in Bolivia and abroad (using counterpart funds). The MIF's resources will be used to finance consulting projects related to the design, and the counterpart resources to finance events and campaign execution. These activities will supplement the government's current efforts to promote domestic consumption of quinoa, and to obtain a protected geographical indication and appellation of origin for Royal Quinoa of Bolivia.

**Component IV. Knowledge management and systematization (MIF: US\$210,728; counterpart: US\$137,855)**

- 3.15 The objective of this component is to bridge the knowledge gap around economically and environmentally sustainable models for growing organic quinoa. The resources of this component will be used to systematize and disseminate the ADU model so it can be scaled up and replicated in highland communities or other producing countries.

- 3.16 The following audiences have been identified for dissemination and communication of the knowledge and experiences generated by the project: (a) groups of farmers and/or enterprises that produce quinoa and its derivative products under conditions similar to the arid highlands and that are interested in adopting the project's technology package; (b) other nongovernmental organizations and multilateral agencies that can implement similar projects; and

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<sup>31</sup> In addition to Hazard Analysis and Critical Control Points (HACCP) and ISO22000, Bureau Veritas Certification (BRC) can advise enterprises associated with the food supply chain to help them achieve higher levels of quality, security, hygiene, and environmental performance.

- (c) government authorities of Peru and Ecuador interested in adopting the plural enterprise model and the technology package developed by CPTS and PROINPA.
- 3.17 The activities planned for this component are: (i) preparation of manuals and technical notes explaining the technology and the business model; (ii) preparation of audiovisual materials for training and dissemination; and (iii) national and regional workshops to disseminate the outcomes of the ADU model, in order to promote private investments for commercial implementation of industrial production units (IPUs).
- 3.18 The main knowledge product will be a methodological guide for executing agencies, communities, and exporters that details how to replicate the model in other communities. This will be supplemented by: (i) a technical note on the rehabilitation of eroded and degraded lands; and (ii) audiovisual materials for sharing the model with different audiences, such as national and local governments, farmers' associations, and the main buyers.

**C. Project governance and execution mechanism**

- 3.19 The project's executing unit will be set up within CABOLQUI and will consist of its general management, the project coordinator and the administrative/financial officer. The executing unit will receive strategic support from its executive committee, to be comprised of three members of the CABOLQUI Assembly. The project coordinator will be responsible for project execution, ensuring achievement of project objectives and fulfillment of commitments. The coordinator's role and responsibilities, and the project's organizational structure are detailed in the Operating Regulations.

**D. Sustainability**

- 3.20 The project is expected to achieve sustainability once the ADU is validated and successfully adjusted as a viable and profitable enterprise. The ADU has been designed to be market-driven, capable of participating in the value chain, generating income, and becoming a sustainable enterprise. The sustainability and the long-term repercussions of the project and the investment made will be based on the production and export of the quinoa generated by the ADU and other similar entities established in the region, and by the financial continuity established in the ADU's economic projections.<sup>32</sup> To ensure the sustainability of the ADU, the project will be implemented in three phases.
- 3.21 The first phase will be the MIF operation, and will involve the implementation and initial operation of the ADU with the participation of CABOLQUI and the community, which will execute and administer the ADU during the first four agricultural cycles. In parallel, a human resources training and education program on organic quinoa production management will be established in the community.

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<sup>32</sup> The ADU's financial projects are available in the project's technical files and are an integral part of the proposal.

- 3.22 The next two phases will gradually transfer management and control of the enterprise to the community, and will take place outside the scope of the MIF operation. In the second phase (the next four agricultural cycles), the operation and performance of the ADU will be under the shared responsibility of CABOLQUI and the designated members of the community who have been trained for that purpose. During the third phase (subsequent two agricultural cycles), the operation and administration of the ADU will be under the exclusive responsibility of the community representatives, duly trained by the project. CABOLQUI will evaluate its performance and provide the necessary technical assistance.
- 3.23 At the end of these three phases (10 years), the plural enterprise, with all its assets, is expected to become the exclusive property of the community, and will become a sustainable community enterprise run by its own people with its own resources; marketing of its products may or may not continue to be part of the CABOLQUI suppliers program.
- 3.24 One year prior to the end of project execution, a **Sustainability Workshop** will be held with all involved entities in order to identify the measures needed to ensure the continuity of the project's actions once the funds are exhausted.

**E. Lessons learned from the MIF or other institutions for project design**

- 3.25 The project has incorporated lessons learned from the MIF's support to farmers in agricultural markets. First, in order for small farmers to be sustainably incorporated into business models, the project should have a clearly identified value chain approach. This is especially important for ensuring proper targeting of technical assistance and training. In this project, the "value chain" approach means working with farmers, input suppliers, technology suppliers, and exporters, to address critical bottlenecks in this value chain (for example, inputs, production, and traceability). In this regard, the MIF has experience with the Trazar program in Argentina (ATN/MH-79-RG-3) and the Central American coffee appellations of origin program (ATN/ME-10518-RG), which could be leveraged for this project.
- 3.26 Second, better results are obtained when the intervention has clear objectives related to strengthening the management of the value chain, that is, when it also includes improving relations and ties among the chain's stakeholders. The purpose of this project is to strengthen the relationship between suppliers of inputs, farmers, and exporters, in order to increase earnings along the entire chain.
- 3.27 Another objective is for the plural enterprise to adopt the model of Pro-Rural,<sup>33</sup> a foundation created by the Social Entrepreneurship Program. Pro-Rural offers financial services to its members (small farmers' organizations and agricultural

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<sup>33</sup> Operations BO-S1006 – ATN/SF-11205-BO, and SP/SF-08-04-BO.  
<http://www.prorural.org.bo/website/index.php>.

enterprises) using the “shared risk” technology as an instrument of development for members to become active economic partners in their regions. The functionality of this financing arrangement was validated by creating four Rural Investment Funds with quinoa, cocoa, and coffee growers’ associations.

**F. MIF additionality**

- 3.28 The MIF contributes credibility that enables funds to be leveraged from PSI and RDE, in the amount of US\$1.4 million, which ensures better project outcomes and impact. The MIF will also contribute to hiring experts and supporting the participatory process among quinoa farmers and processors, evaluating the technology, and designing and fine-tuning the business model, which will give the business soundness and credibility.
- 3.29 The MIF’s experience in supporting small farmers in the transition to high value markets will be useful. Its experience promoting models that strike a balance between sustainable production and preservation of natural capital to benefit communities also adds value to the project.
- 3.30 Since the project intends to validate a new large-scale production model, the resources available are limited and make the MIF’s financial contribution key to the success of the project. The MIF’s funds will make it possible to hire experts and commission technical assistance to validate the model. To create the plural enterprise, the MIF will have the first option as investor, either with a loan (see paragraph 2.29), capital, or another financial instrument better suited to the structure and financial environment. This will be contingent upon determination of the relevant legal structure that will provide security for the investment as well as exit options, and the fine-tuning of the financial projections.

**G. Project outcomes**

- 3.31 The expected outcomes upon project completion are: (i) a total of 3,000 small-scale organic quinoa farmers belong to the supplier program for CABOLQUI’s companies; (ii) a 60% increase in the per hectare yield of organic quinoa among the farmers belonging to CABOLQUI’s suppliers program; (iii) an annual output of 250 tons of quinoa for the plural enterprise; (iv) 400 hectares of arid lands recovered; (v) 50 hectares of shelterbelts established in the Ayamaya community; (vi) 42% increase in the incomes of the families of the Ayamaya community; (vii) 1,800 plots of quinoa geo-referenced in the CABOLQUI database system; (viii) traceability system for organic quinoa implemented in six associated enterprises and in CABOLQUI; (ix) at least 50% of the farmers that supply CABOLQUI’s companies use good organic agriculture practices and are certified; (x) 38% increase in domestic quinoa consumption; (xi) 20% increase in exports of value-added quinoa products; and (xii) replication of the technology package in at least 1,000 additional hectares.

## H. Project impact

- 3.32 The expected impact by project end is: (i) an annual increase of up to 250,000 tons in the output of organic quinoa; (ii) an increase of up to 15%, adjusted for inflation, in the incomes of quinoa farmers; and (iii) the number of greenhouse gas emissions reduced/generated (tCO<sub>2</sub>e) (to be determined).

## I. Systemic impact

- 3.33 The systemic impact expected for this project is: (i) at least one entity (public or private) adopts the proposed production model and replicates the ADU's technology package in other parts of the country; and (ii) at least two new markets emerge or expand as a result of this initiative. A possible replication could stem from the implementation of the government's National Quinoa Strategy;<sup>34</sup> in addition, the local governments of Oruro and Potosí have expressed interest in adopting it.

## IV. MONITORING AND EVALUATION STRATEGY

- 4.1 **Baseline.** The baseline will be established at the outset of the operation in line with the indicators of the logical framework, and will include data on income, sales, exports, business characteristics, level of education, gender, both for the farmers and CABOLQUI's member companies.
- 4.2 **Monitoring.** The executing agency will be responsible for preparing and reporting to the Bank through the Project Status Report (PSR) system within 30 days after the end of each six-month period, or more frequently, on the dates determined by the MIF, which will inform the executing agency at least 60 days in advance. Within 30 days after the end of the execution period, the executing agency will submit a final PSR to the MIF, focusing on the outcomes, sustainability plan, findings of the final evaluation, and lessons learned.
- 4.3 **Evaluation.** Two evaluations will be conducted with resources from the contribution: a midterm and a final evaluation, both of which will be commissioned directly by the MIF. The midterm evaluation will be conducted 30 months after the first disbursement, or when 50% of the committed resources have been disbursed, whichever occurs first, and will include: (a) the relevance of the project's components and activities for achieving the defined objectives; (b) the progress made with regard to the logical framework indicators, disbursement milestones, and Operating Regulations; (c) outcomes and lessons learned; (d) deviations that may have occurred while executing the project; and (e) recommendations considered necessary for attaining project targets.

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<sup>34</sup> The total extension of arid, nontraditional lands in the Bolivian highlands is estimated at 8 million hectares, of a total of 16.5 million hectares.

- 4.4 Some of the evaluation questions are: To what degree has the technology been accepted by the beneficiaries? To what extent did the technology contribute to reducing costs and time? What capacity did CPTS and PROINPA show in assisting beneficiaries? What other entities, other than the farmers, received training? How effective was CABOLQUI's coordination work and decision-making in facilitating execution? How involved are the community technical teams and other government entities in ensuring due implementation of model and its replicability? Was the business model consolidated? Does it deliver the expected yields and profitability? What aspects need to be improved? What real benefits and impact have been generated for beneficiaries, especially women?
- 4.5 The final evaluation will take place two months before completion of project execution (month 58) or once 90% of the MIF resources have been disbursed, whichever occurs first. In addition to addressing the project's operational performance, the final evaluation will also focus on lessons learned and recommendations for future implementation, which will be disseminated to a target audience to benefit all interested parties. The project does not include an impact evaluation.
- 4.6 The executing agency will organize a Closing Workshop at a suitable time to evaluate outcomes with other participating entities, identify additional tasks needed to ensure the sustainability of the actions initiated by the project, and identify and disseminate the lessons learned and best practices.

## V. COST AND FINANCING

- 5.1 The total project cost will be US\$3,997,000. The MIF will contribute technical cooperation funds in the amount of US\$1,670,000, the Partnership Trust Fund for Poverty Reduction in Latin America (AUS) will contribute US\$250,000, and CABOLQUI will contribute US\$2,077,000 in counterpart funds. The counterpart funds will come from CABOLQUI's member enterprises, the Private Sector Investment Programme, and the Royal Danish Embassy (RDE).<sup>35</sup> The project execution period will be 60 months, and the disbursement period 66 months. There are two reasons why this project will last for five years: (i) first, the project contains many elements and processes for technology adoption by farmers, which do not take place from one year to the next, but often take more than two years; and (ii) the cycle for transforming arid and fallow lands, proposed under the project, through production and final harvest, takes 18 months for the ADU.

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<sup>35</sup> Funds administered by CPTS.



<b>Component</b>	<b>MIF</b>	<b>AUS</b>	<b>Counterpart</b>	<b>Total</b>
<b>I:</b> Validation of the technology package and business model	121,319,000	250,000	1,458,459	1,829,778
<b>II:</b> Ensuring traceability and efficiency in the supply chain	550,000		197,000	747,000
<b>III:</b> Country brand development to differentiate the quinoa	260,000		110,000	370,000
<b>IV:</b> Knowledge management and systematization	210,728		137,855	348,583
Executing unit	251,244		172,348	423,592
Baseline, monitoring, evaluation, and contingencies	165,269		1,338	166,607
<b>Subtotal</b>	<b>1,558,560</b>	<b>250,000</b>	<b>2,077,000</b>	<b>3,885,560</b>
Percentage of financing	42%	6%	52%	100%
Impact evaluation account (5%)	77,928		0	77,928
Agendas	33,512		0	33,512
<b>Total</b>	<b>1,670,000</b>	<b>250,000</b>	<b>2,077,000</b>	<b>3,997,000</b>

## VI. EXECUTING AGENCY

- 6.1 CABOLQUI is a nonprofit organization created in 2005 by a group of quinoa processing, manufacturing, and export companies; its purpose is to find specific solutions to the challenges of the quinoa chain and production complex. Currently, CABOLQUI comprises 10 leading companies, some belonging to indigenous entrepreneurs, and representing 85% of Bolivian organic quinoa grain exports. Its members are focused on exporting quinoa and on developing products with value added for domestic and international consumption. CABOLQUI promotes organic production, social and ecological responsibility, and the development of small farmers, particularly organic farmers.
- 6.2 CABOLQUI will create an executing unit and the structure necessary for executing the activities and managing project resources. CABOLQUI will also be responsible for submitting progress reports on project implementation. The structure of the executing unit and the requirements of the progress reports are detailed in the Operating Regulations.

## VII. PROJECT RISKS

- 7.1 The following risks have been identified:

Risk	Mitigation and control measures
Weak participation by community representatives in the plural enterprise, thereby threatening sustainability.	The project will provide assistance, training, and monitoring to the representatives of the community, which, after 10 agricultural cycles, will become the owner of the plural enterprise. Therefore, transfer of responsibilities to the community will be gradual. The project will provide assistance and support during the five years of project execution, which includes three agricultural cycles.
Weaknesses in the partnership between CABOLQUI and its quinoa supply chain.	The project will strengthen the relationship between CABOLQUI and its suppliers, and will also consolidate more strategic, long-term business partnerships that ensure the supply of sufficient quality raw materials.
Adverse climate changes (droughts) that affect the sector.	The operation includes well drilling and the validation of mechanized irrigation equipment, which will mitigate that risk.
Declining quinoa prices and demand.	No reduction in demand is expected; on the contrary, the export companies report a continuous increase in orders. Nevertheless, given the price increase, prices could stabilize in the future. <sup>36</sup> In the event of a significant decline in prices, the project and the enterprises will accelerate the actions under component III to strengthen the position on the local and international markets and significantly differentiate Bolivian quinoa, in order to obtain a better market position and price.
Reduced interest among financial investors.	CABOLQUI has pre-identified investors interested in participating, such as some quinoa buying firms in the United States and Canada. This notwithstanding, it was agreed that the MIF will have the first option for financial investment.

## VIII. ENVIRONMENTAL AND SOCIAL EFFECTS

- 8.1 The project intends to establish a sustainable quinoa production model that makes use of arid lands in the highlands that are currently considered unproductive. In the long-term, the new model is expected to curb the expansion of the agricultural frontier into protected or environmentally sensitive areas, such as the páramos, *bofedales* (highland wetlands), and pastures for raising camelids. The following benefits are expected from the implementation of the project’s methodologies: (i) rehabilitation of degraded and eroded soils; (ii) mitigation of wind erosion with the creation of shelterbelts; (iii) mitigation of the displacement of llamas from traditional farming areas that have started producing quinoa; (iv) protection and restoration of fragile areas such as natural pastures and wetlands; and (v) reversal of migration from rural areas to large cities due to the generation of economic opportunities in highland communities.
- 8.2 This is an organic production model that uses organic inputs and ecological practices. To control pests, the model will use organic pesticides (based on saponin, a compound found naturally in quinoa and other plants) under an application plan<sup>37</sup> developed by the CTPS. Technical personnel and employees of

<sup>36</sup> [www.washingtonpost.com/blogs/wonkblog/wp/2013/07/11/quinoa-should-be-taking-over-the-world-this-is-why-it-isnt/](http://www.washingtonpost.com/blogs/wonkblog/wp/2013/07/11/quinoa-should-be-taking-over-the-world-this-is-why-it-isnt/).

<sup>37</sup> Pesticide Evaluation Report and Safer Use Action Plan, which was updated in 2011 and approved by USAID.

- the ADU will be trained in the management and application of these biochemicals.
- 8.3 CPTS conducted an environmental impact assessment in 2011 with funds from the United States Agency for International Development (USAID); the conclusion was that the project will not contribute to deforestation, soil degradation, or displacement of other crops and farm activities, nor will it have an environmental impact in protected areas. The study identified the following potential environmental impacts and mitigation measures: (i) uncontrolled expansion of the agricultural frontier: to *mitigate* this risk the ADU will operate on degraded and/or unproductive lands where plant coverage is nonexistent or of very low density; (ii) loss of biodiversity and plant coverage due to the establishment of farming areas: to *mitigate* this risk and facilitate the passage of animals, shelterbelts of thola, a native prairie species, will protect the crops; and (iii) compaction and loss of soil structure: to *mitigate* this risk, consideration is being given to extending the duration of the rotation period so the planted plots can rest.
- 8.4 Lastly, it should be noted that the aforementioned environmental impact assessment included consultations with the impacted communities and evaluated the seriousness of the potential impacts on indigenous populations. It determined that the project would not have adverse impacts.

## IX. MILESTONE FULFILLMENT AND SPECIAL FIDUCIARY ARRANGEMENTS

- 9.1 **Results-based disbursements and fiduciary arrangements.** For the procurement of goods and the contracting of consulting services, the executing agency will be governed by the IDB's procurement policies (documents GN-2349-9 and GN-2350-9). Since the diagnostic needs assessment of the executing agency (<http://mif.iadb.org/projects/prjrissummary.aspx?proj=BO-M1060>) found *high* risk in the area of procurement, the project team determined that, as provided in Appendix 4 of the aforementioned policies, the executing agency, a private sector entity, will use the private sector methods detailed in Annex 1 of the Operational Guidelines for Technical Cooperation Projects (document OP-639). Contracts and procurement for the project will be subject to *quarterly ex post* review. In addition, the executing agency will hire a consultant with project resources to provide procurement support. Before initiating contracting and procurement for the project, the executing agency will submit the project procurement plan for MIF approval. This plan will be updated annually, and whenever a change occurs in the methods and/or goods or services to be procured.
- 9.2 The PROINPA Foundation will be contracted directly for the activities of Component I dealing with research and development of bio inputs. This foundation has the greatest technical expertise in the area of bio inputs for quinoa production, having performed inventories of native species and organisms associated with quinoa production. Given its specialization and know-how,

PROINPA is considered the only entity with the capacity to continue providing technical support to the quinoa sector. Therefore, a fiduciary agreement was reached with CABOLQUI so that, for this operation, PROINPA can be contracted directly for the amount specified in the budget (Annex II).

- 9.3 **Financial management and supervision:** The executing agency will establish and be responsible for maintaining an adequate accounting of project finances, internal control, and filing systems, pursuant to the IDB/MIF's financial management standards and policies. Since the diagnostic needs assessment determined *medium* risk in financial management, supporting documentation for disbursements will be subject to *semiannual ex post* review. Moreover, the executing agency will hire a consultant with MIF funds to provide support in this area.
- 9.4 The IDB/MIF or executing agency will hire independent auditors to conduct the ex post reviews of both the procurement process and the supporting documentation for disbursements. Ex post reviews will include an analysis of the financial reports that the executing agency will prepare annually as part of its financial management. The cost of these services will be covered by the MIF contribution, pursuant to the Bank's procedures.
- 9.5 During project execution, the frequency of ex post reviews of the procurement processes and of the supporting documentation for disbursements, and the need for additional financial reports, may be modified by the MIF on the basis of the findings of the ex post reviews performed by the external auditors.

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

- 10.1 **Access to information.** Pursuant to the Bank's Access to Information Policy, information on this project is considered public.
- 10.2 **Intellectual property.** With regard to the products created with MIF resources, the MIF will obtain a license from CABOLQUI for their unrestricted use, in perpetuity, free of charge, in order to disseminate the knowledge acquired. The technology and methodologies for quinoa production on arid lands was developed by the CPTS using resources from other international entities (USAID and DANIDA).