THE WORLD BANK
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Report No: PAD5068

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF US$300 MILLION

TO THE

PLURINATIONAL STATE OF BOLIVIA

FOR AN

INNOVATION FOR RESILIENT FOOD SYSTEMS (*ALIANZAS RURALES – PAR III*) PROJECT

JULY 28, 2022

Agriculture and Food Global Practice
Latin America And Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective July 22, 2022)

Currency Unit =	Bolivian Bolivianos
6.87 Bolivianos =	US$1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Carlos Felipe Jaramillo
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ABBREVIATIONS AND ACRONYMS

DA	Designated Account
DFIL	Disbursement and Financial Information Letter
DOU	Department Operating Unit
ESCP	Environment and Social Commitment Plan
ESMF	Environmental and Social Management Framework
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GRM	Grievance Redress Mechanism
IFR	Interim Unaudited Financial Report
MDRyT	Ministry of Rural Development and Land
M&E	Monitoring and Evaluation
NCU	National Coordination Unit
PDES	National Development Plan
POM	Project Operational Manual
PPSD	Project Procurement Strategy for Development
RCO	Rural Community Organization
RPO	Rural Producer Organization
SCD	Systematic Country Diagnostic
SEP	Stakeholder Engagement Plan
SIGEP	Government's Integrated Financial Management System
SIGG	Georeferenced Management Information System
WBG	World Bank Group

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name		
Bolivia	Innovation for Resilient Food Systems (Alianzas Rurales - PAR III) Project		
Project ID	**Financing Instrument**	**Environmental and Social Risk Classification**	**Process**
P175672	Investment Project Financing	Substantial	Urgent Need or Capacity Constraints (FCC)

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[✓] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
05-Aug-2022	30-Nov-2027

Bank/IFC Collaboration

No

Proposed Development Objective(s)

Contribute to increased food security, market access and the adoption of climate-smart approaches by targeted project beneficiaries.

Components

Component Name	Cost (US$, millions)
1. Capacity Building and Institutional Strengthening	16.50
2. Support to Community and Productive Alliances	309.30
3. Project Management	25.40

Organizations

Borrower:	Plurinational State of Bolivia
Implementing Agency:	Ministry of Rural Development and Land

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	351.20
Total Financing	351.20
of which IBRD/IDA	300.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	300.00

Non-World Bank Group Financing

Counterpart Funding	51.20
Local Govts. (Prov., District, City) of Borrowing Country	21.80
Local Farmer Organizations	29.40

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028
Annual	18.32	47.32	67.01	71.71	72.90	22.74
Cumulative	18.32	65.65	132.65	204.36	277.26	300.00

INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture and Food

Contributing Practice Areas

Water

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Moderate
7. Environment and Social	Substantial
8. Stakeholders	Moderate
9. Other	
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description
Schedule 2, I.A.(c): Not later than sixty (60) days from the Effective Date, Borrower to complete the staffing of the NCU and DOUs in a manner acceptable to the Bank and as set forth in the Project Operational Manual and the ESCP.

Sections and Description
Schedule 2, I.F.7: No later than forty-five (45) days after the Effective Date, or prior to the signing of any Subproject Agreement, whichever shall occur first, the Borrower shall prepare and disclose in form and substance satisfactory to the Bank: (a) an Environmental and Social Management Framework; and (b) a Resettlement Policy Framework, a Labor Management Procedures and an updated Stakeholders Engagement Plan.

Sections and Description
Schedule 2, I.B.1(c)(ii): For the purposes of carrying out a Community Alliance Subproject under Part 2.(a) of the Project, or a Productive Alliance Subproject under Part 2.(b) of the Project, the Borrower, through MDRyT, prior to the carrying out of any given Subproject, shall transfer, on a grant basis, part of the proceeds of the Loan to the corresponding Eligible RCO or Eligible RPO ("Grant"), pursuant to the terms of an agreement to be entered between MDRyT and the pertinent Eligible RCO or Eligible RPO, under terms and conditions acceptable to the Bank (the "Community Alliance Subproject Agreement" and the "Productive Alliance Subproject Agreement" respectively), which shall include the obligation of each Eligible RCO or Eligible RPO to: (A) provide, promptly as needed, facilities, services and other counterpart resources, necessary or appropriate to carry out the corresponding Subproject; and (B) to co-finance part of the cost of the pertinent Subproject in the specific amounts in cash and in-kind specified in the Project Operational Manual for the different types of Community Alliance Subprojects and Productive Alliance Subprojects (as such amounts may be revised from time to time by mutual agreement between MDRyT and the Bank and reflected in the Project Operational Manual).

Sections and Description
Schedule 2, I.C.1(c)(i): For the purposes of carrying out a Complementary Productive Infrastructure Subproject under Part 2.(c) of the Project, the Borrower, through MDRyT, prior to the carrying out of any given Complementary Productive Infrastructure Subproject, shall enter into an agreement with the corresponding Eligible Department or Eligible Municipality (the "Subproject Agreement"), under terms and conditions acceptable to the Bank, which shall include the obligation of each Eligible Department or Eligible Municipality: (A) to provide, promptly as needed, facilities, services and other counterpart resources, necessary or appropriate to carry out the corresponding Subproject; and (B) to co-finance part of the cost of the pertinent Subproject in the specific amounts in cash and in-kind specified in the Project Operational Manual for the different types of Complementary Productive Infrastructure Subprojects (as such amounts may be revised from time to time by mutual agreement between MDRyT and the Bank and reflected in the Project Operational Manual).

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	Section 5.01: the Project Operational Manual has been prepared in form and substance satisfactory to the Bank and duly adopted by

		the Borrower in a manner satisfactory to the Bank.
Type Disbursement	Financing source IBRD/IDA	Description Schedule 2, Section III.B.1: Notwithstanding the provisions of Part A of the Loan Agreement, no withdrawal shall be made under Categories 2(a), 2(b) and 3 until the ESMF, Resettlement Policy Framework, and Labor Management Procedures have been approved by the Bank and adopted and disclosed by the Borrower and the Stakeholder Engagement Plan has been updated in form and substance satisfactory to the Bank and adopted and disclosed by the Borrower.

I. STRATEGIC CONTEXT

A. Country Context

1. **Bolivia has made significant progress in reducing poverty and inequality in the past two decades, propelled by large public expenditures during the commodity boom that contributed to increasing labor earnings. Economic growth and social gains have nonetheless slowed down**. From 2002–2014, some 96,000 people exited poverty annually and Gross Domestic Product (GDP) growth averaged 4.6 percent. Progress was driven by household earnings because the private sector generates 73 percent of jobs in Bolivia and labor earnings drive both reduced poverty and greater equality. From 2014 to 2018, GDP growth decelerated, the average annual number of people exiting poverty fell significantly to 35,000, and the public sector's ability to boost progress declined in parallel.

2. **The COVID-19 crisis hit Bolivia hard at a time when there is limited fiscal space to respond.** Bolivia's output is estimated to have contracted by 7.8 percent in 2020, its first recession since 1986, and poverty is expected to have increased along with a decline in labor earnings for many households. In May 2020, just after the onset of the COVID-19 crisis, 70 percent of workers interviewed in a World Bank phone survey reported that they had not worked or had lost their jobs during the quarantine period. In addition, the combination of the COVID-19 health and economic emergency and the sharp decline in commodity prices has put macroeconomic stability under further strain, as Bolivia entered the crisis with increasing fiscal deficits and declining international reserves.

3. **Although overall poverty has decreased after the pandemic-induced peak, certain segments of the population have not recovered.** Despite almost-universal emergency transfers provided during the national lockdown, an economic contraction increased poverty from 20 percent in 2019 to 21.6 percent in 2020. By mid-2021, 60 percent of households reported lower incomes than before the pandemic, and 22.7 percent of households were food insecure at some time during the month surveyed, 5 percentage points above pre-pandemic levels. Food insecurity disproportionately affected the poorest and rural households, and the least-educated heads of household. However, the ongoing recovery in economic activity and employment – particularly among women – is estimated to have contributed to reducing poverty to 20.2 percent in 2021, a decline seemingly driven by rural areas.

4. **Public sector efforts in Bolivia to strengthen economic recovery, create more and higher-quality jobs, and achieve economic diversification for a more resilient economy need to be complemented by a thriving private sector.** In a more unfavorable external and domestic economic environment, promoting a strong and resilient private sector can accompany public efforts and contribute to boosting economic growth, cushioning the potential effects of a significantly tighter macro-fiscal situation, and providing more quality jobs to resume the path toward reducing poverty and inequality. To unleash this potential, though, the constraints that the private sector faces need to be addressed. Some 87 percent of private sector jobs are in the informal sector and at seven percent of GDP, private sector investment in Bolivia is the lowest among its comparator countries.

5. **The Systematic Country Diagnostic (SCD) Update (2021) confirmed the continued relevance of three development challenges identified under the 2015 SCD**, namely: (a) Cementing macroeconomic and financial stability as foundations of shared prosperity; (b) Enabling the private sector to become an engine of shared prosperity; and (c) Closing disparities in access to services and opportunities for shared prosperity.

6. **The National Development Plan of Bolivia (PDES), 2021-25, reflects the Bolivian government's five-year development priorities.** The PDES (framed in the context of the ten-year Patriot Agenda 2015–2025 and including Annual Operational Plans) seeks to restore the economy through a Social Community Productive Economic model, which focuses on growth through internal demand facilitated by public investment. The PDES outlines policy objectives and indicators under ten strategic pillars (Figure 1).

Figure 1: Strategic Pillars of Bolivia's Economic and Social Development Plan, 2021–2025

7. **The Bolivian government's vision for the agricultural sector promotes food security and food sovereignty.** The Bolivian constitution endorses food security as the foundation of human welfare.[1] Social and economic public policy therefore align to achieve food sovereignty through a sustained (and sustainable) increase in the productivity of agriculture, livestock, manufacturing, agro-industry, and tourism. The PDES includes food security and food sovereignty (Pillar 3), which requires: (a) increasing investments in research, development, and innovation for productivity growth; (b) improving connectivity, logistics, and value chain coordination for competitiveness; (c) building climate resilience through risk management and a reduction of the environmental footprint; and (d) strengthening capacity for evidence-based policy making and investment planning through monitoring, policy analysis, and program evaluation. Both the public and the private sectors have important roles to play in these areas and thus also in materializing the gains from the sector.

8. **Bolivia is already experiencing the effects of greater climate variability and more extreme climate events**. The Global Climate Risk Index (CRI) 2019 ranks Bolivia 10 of 178 countries in terms of the impacts of climate-related hazards. The most catastrophic disasters, including floods, droughts, and landslides, accounted for US$3.1 billion in damages over a 35-year period (1982–2016) or US$91.1 million on average per year. About 74 disasters have been recorded between 1900 and 2017. Droughts and floods jointly account for roughly 97 percent of the total number of affected people. With about 11 percent of cultivated land under irrigation, droughts pose a significant threat to the livelihoods of vulnerable farmers practicing rainfed agriculture. Most of these events are influenced by El Niño (more properly, the El Niño Southern Oscillation, ENSO). During the last 50 years, the country has lost approximately half of the surface area of its mountain glaciers. Higher projected temperatures and rainfall during the rainy season, which are expected to occur because of climate change, will expose the country to prolonged dry periods and an increase in the frequency and magnitude of floods, landslides, and other weather-related events (World Bank 2013; WRI 2017). Furthermore, these changes will have impacts on the distribution of pests and diseases, affecting production negatively if resilience measures are not in place.

[1] Food security, as defined by the United Nations' Committee on World Food Security, means that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.

9. **The conflict in Ukraine triggered two major risks to global food and nutrition security.** The first is from a pronounced spike in the international prices of key food staples, and the second from skyrocketing prices of fuel and fertilizer. The latter will likely have broad impacts across commodities and regions over several years. Ukraine and the Russian Federation are normally major exporters of food (26 percent of global wheat exports, 23 percent of barley, and 15 percent of corn), and the Russian Federation and Belarus are also among the largest exporters of fertilizer (38 percent of potassic, 17 percent of compound, and 15 percent of nitrogenous fertilizers). At least 35 million metric tons of Ukrainian food exports are likely lost in 2022 because of disruptions in farming and damage to infrastructure. Exports from the Russian Federation and Belarus are currently limited by logistical and financial restrictions. The sudden halt in exports of these critical commodities adds to the immediate pressures on food and nutrition security, particularly for poorer, import-dependent countries. The price disruptions from production and export shortfalls of grain and fertilizer from the Black Sea region are likely to persist. Looking ahead a few months and years, food production will be hit by reduced access to fertilizer for some time.

10. **Significant food insecurity persists in Bolivia and has increased due to the COVID-19 pandemic, the impacts of climate change, and the conflict in Ukraine.** Currently, food intake is insufficient for more than 20 percent of the population. The World Hunger Map (World Food Program) places Bolivia at "moderately high" risk due to its climatic vulnerability. Some 2.4 million of Bolivia's 11.4 million inhabitants are undernourished; the country is one of the 15 risk hotspots of deterioration in food security worldwide. Currently, the southern part of the country, comprising Potosí, Chuquisaca, Tarija, Oruro and Santa Cruz Departments, is at moderately high risk (UN, 2020). The poorest urban households spend between 60 and 80 percent of their income on food. In 2019, more than 2.1 million Bolivians were extremely poor and could not access the minimum requirements of staple foods to satisfy daily protein and caloric needs. In July 2020, one-fifth of households reported that an adult skipped a meal due to a lack of resources. Expected climate change impacts such as increasing temperatures, changing precipitation patterns, and greater frequency of extreme events, such as droughts and floods, will further pressure the food production system, having immediate and long-term impacts on livelihoods of poor and vulnerable communities, contributing to greater risks of food insecurity that can be a stress multiplier for internal and external migration.[2]

11. **The conflict in Ukraine and the COVID-19 pandemic have further deepened poverty and food insecurity**. Spiking food prices can destabilize governments by breaking the “social contract” to ensure access to affordable food, putting them under immense pressure to stabilize the affordability of food to consumers and fertilizer to farmers. Without clear alternatives, costly and ineffective agriculture and food policies could make the vulnerable worse off as learned from previous food price crises. In addition to farmers and consumers, increased prices and reductions in food trade can put increased pressure on private agribusinesses and traders. And just as financing needs grow, banks are curtailing lending, widening the gap in markets.

12. **The WBG, while supporting the needs arising from the conflict in Ukraine, will continue to promote a sustained focus on longer-term development priorities that are integral to the achievement of the WBG twin goals of eliminating extreme poverty and promoting shared prosperity in a sustainable manner**. Food prices in real terms are going up rapidly in the context of current and anticipated supply constraints. It is critical to avoid aggravating the situation by imposing export restrictions and price controls. Enabling greater agricultural productivity, market access and protection of vulnerable populations against food insecurity and unavailability are central to the WBG response.

[2] IPCC, 2019. Food Security. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. https://www.ipcc.ch/srccl/chapter/chapter-5/executive-summary/

B. Sectoral and Institutional Context

13. **Agriculture and agribusiness remain key sectors of the economy, accounting for 13 percent of GDP (in 2021), and employing nearly a third of all workers, with a significant impact on poverty reduction.** Agriculture is an important source of exports in Bolivia (15 percent of goods exports in 2019) and employment (24 percent in total and 75 percent of rural employment). Santa Cruz, Cochabamba, and La Paz Departments generate 72 percent of total agricultural value added nationwide. Average farm size in the Highlands, Amazon, and Sub-Andean Regions is less than 3 hectares (Ha). Land fragmentation is most acute in the Highlands, where 60 percent of farms are now smaller than 1 Ha. Some 45 percent of total harvested area is industrial commodity production (e.g., soybean), increasing to 80 percent when cereals are included.

14. **Bolivia's agricultural sector is a proven engine of economic growth and can increase its productivity.** The country has used its diverse natural endowments to grow agriculture and increase people's incomes. The agricultural sector has experienced high and sustained growth, contributing to a reduced national dependency on the mining and gas sectors. The compound annual growth of agriculture, forestry, and fishing remained above 5 percent between 2013 and 2018, and it has also proven to be pro-poor, employing one-third of the labor force. The sector nonetheless has substantive room to increase productivity and strengthen backward and forward linkages to other economic activities.

15. **More productive and climate-smart agriculture reduces negative environmental and climate vulnerability impacts while increasing the income opportunities of the rural population and promoting food security.** Given current global concerns around food security and climate risks, maximizing the high potential of this sector will require an integrated approach, carefully managing land and water resources while increasing outputs. A 2019 Bolivia-specific Stochastic Frontier Analysis recommended the following investments that could effectively increase agricultural technical efficiency and aid less-efficient farmers to reach their technical potential and reducing climate vulnerability: (a) greater collective action, especially in regions with high land fragmentation; (b) expanded and more inclusive credit programs;[3] (c) leveraging mobile phones for technical and business intelligence; and (d) increased irrigation adoption to increase agricultural intensity, climate resilience, productivity and water use efficiency, promote on-farm diversification and tap into non-traditional markets. Through increased yields and crop intensity, Bolivia can sustainably double agricultural production. Bolivian climate conditions allow for two planting seasons annually (winter and summer). The total harvested area was 3.9 million ha in 2019 covering an annual surface area of 3 million ha, equivalent to a crop intensity of 1.3. Crop intensity could nearly double to 2.03 (or 6.1 million ha of harvested area) through investments in irrigation and improved management practices while protected areas within the official soil use plan boundaries could be preserved.

16. **In rural areas of Bolivia, both men and women play important productive roles in agriculture. However, in small-scale agriculture, women have less participation in market activities compared to men**. Women's participation in the agricultural sector has been mainly as household (and largely unpaid) laborers, and apprentices; from 2011 to 2020, there was an increase in women's participation as self-employed farmers. The role of women in agriculture is as important as that of men, and although there are differences in the levels of participation among the different age groups, the productive roles of women are almost equivalent to those of men, considering the different types of family farming. The female participation of the working-age population in agricultural activities is 37 percent, compared to 44 percent for male participation. However, in agricultural activities involving the purchase of inputs, contracting,

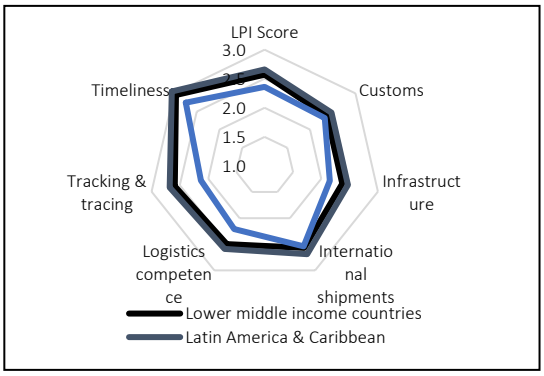
[3] The 2013 Financial Services Law introduced lending interest rate ceilings and credit quotas to productive sectors (including agriculture), which has forced financial institutions to move away from microfinance that involves higher operational costs (SCD update, 2021).

processing and marketing, there is a significantly less female participation, due to the marked role of men in market activities. There are also notable differences in all types of family farming and activities in terms of women's participation in decision-making, with an average of 21 percent compared to 31 percent for men overall, 16 percent compared to 20 percent for livestock farming and 17 percent compared to 26 percent for market engagement.[4]

17. **Persistent, low market access of rural producers in Bolivia is driven by: (a) low productivity and competitiveness; (b) highly vulnerable agricultural production systems; (c) poor and low-quality productive infrastructure (see Figure 2); and (d) poor coordination across support programs to increase agricultural production and productivity.** There are 872,000 agricultural production units in Bolivia, the vast majority of which are classified as family farms, characterized by almost exclusive household labor participation and management, and further serving as the principal source of household income. Some 80 percent of Bolivian farms have fewer than three employees, a low degree of specialization, and small land holdings.[5]

18. **Land productivity in Bolivia is one-fourth of Colombia's, one-third of Ecuador's, and a one-half that of Peru, with large gaps in productivity between regions.** The Government's fixed exchange rate system further limits the tools available for addressing macroeconomic imbalances, while the high real exchange rate overvaluation—estimated between 26 and 33 percent—hinders the competitiveness of exports from non-extractive sectors and local products competing with imports.[6] Although fertilizer imports have grown over the past decade, farmers, particularly owners of small and medium farms, are skeptical of its benefits. As a result, Bolivian farmers apply an average of 24 kilograms per hectare (kg/ha) of fertilizers, significantly below neighboring countries such as Chile (352 kg/ha), Colombia (292 kg/ha), Brazil (156 kg/ha), Paraguay (105 kg/ha), Peru (91 kg/ha) and Argentina (45 kg/ha) (INIAF et al. 2019). Moreover, many of the farmers do not have access to adequate cash resources for purchasing fertilizers.

Figure 2: Logistics Performance



Source: World Bank 2021. SCD Update.

19. **Agricultural growth in Bolivia has historically relied on land expansion, with significant environmental consequences**. Most productive land is in the highlands and is fragmented into small farm plots; furthermore, expanding agro-industry and livestock in the lowlands have been a driver of deforestation. From 1985 to 2019, land under soy production and livestock increased by 229 percent, from 2.1 million to 6.9 million Ha.[7] The deforestation of highly diverse rainforests degrades natural capital and threatens the sustainability of agricultural production. In effect, coupled with climate change, deforestation exacerbates land degradation, water scarcity, and wildfire risk, negatively affecting Bolivia's long-term productive capacity. Climate change is generating longer and more intense drought cycles and reducing agricultural yields in largely rainfed plots.

[4] ITO-VELARDE, Carola. *Un estudio exploratorio del rol de las mujeres en la agricultura familiar en Bolivia*. La Paz, n. especial, p. 79-120, dic. 2021. Disponible en *http://www.scielo.org.bo/scielo.php?script=sci_arttext&pid=S2074-47062021000300079&lng=es&nrm=iso* . accedido en 21 jun. 2022. Epub 01-Dic-2021.

[5] World Bank and IFC 2021.

[6] World Bank, 2021. Country Private Sector Diagnostic.

[7] World Bank, 2021. Systematic Country Diagnostic Update.

20. **Future agricultural growth in Bolivia** will be driven by: (a) food demand from urban population growth (projected to average 1.9 percent annually through 2030); (b) changing diets and consumer preferences for differentiated and quality products (thereby expanding local production and potentially substituting imports); (c) public policies that create domestic demand in non-food sectors, e.g., biofuels (reaching 380 million liters by 2025); and (d) exploiting current non-traditional export value chains, e.g., cocoa, beans, coffee, quinoa, Brazil nuts, and beef.

21. **The conflict in Ukraine and associated events triggered a pronounced spike in the international prices of key food staples and skyrocketing prices of fuel and fertilizer**. This broad impact reduces the resilience of many lower income countries, where food staples account for a greater share of food spending. In Bolivia, for example:

(a) Farm-level fertilizer prices have more than doubled in the last several months, resulting in supply chain disruptions and expected yield reductions, in the face of already historically low agricultural productivity.
(b) Severe drought, particularly in the Santa Cruz region, has led to corn harvest losses of up to 95 percent across 40,000 ha and associated corn producer price spikes of up to 45 percent. Consequently, consumer prices for poultry and pork (both dependent on corn as livestock feed) have risen by 25 percent.
(c) Bolivia imports 70 percent of its wheat demand; the global price of wheat has risen 50 percent since January 2022. The Government's reference price for wheat has also increased from US$335/MT (2021) to US$390/MT for the 2022 harvest, an increase of 16 percent, to encourage short-term domestic wheat production.

C. Relevance to Higher Level Objectives

22. **The proposed Project draws on lessons from the WBG Performance and Learning Review (PLR)[8] of the WBG's Country Partnership Framework (CPF)[9]** for the Plurinational State of Bolivia for the period FY16-FY20, by supporting its Pillar 1 (Promoting Broad-Based and Inclusive Growth), particularly Objective 3 (Improving Opportunities for Income Generation, Market Access, and Sustainable Intensification); and Pillar 2 (Support Environmental Sustainability and Resilience to Climate Change). The strategic priorities of the proposed CPF (FY23-FY26) include enhanced productivity, diversification, and promotion of more sustainable and inclusive practices. Overall, the proposed Project would contribute to attainment of the higher-level objective of a climate-smart agriculture sector that is profitable, sustainable, competitive, and significantly contributes to the national food security.

23. **The proposed Project aligns with the WBG Climate Change Action Plan, 2021-2025.[10]** The Climate Change Action Plan 2021–2025 advocates for a Green, Resilient, and Inclusive Development approach that sustainably eliminates extreme poverty and boosts shared prosperity.[11] This integrated long-term approach seeks to "build back greener" from the COVID-19 crisis, accelerate climate-change mitigation and adaption, and lay the foundation for a strong and durable economic and social recovery. The proposed Project is consistent with WBG's climate-change commitments and contributes to the WBG's Climate Change Action Plan goals, particularly through increasing the resilience of the food production system, supporting farmers with technical assistance and fixed investments to increase their adaptive capacity and resilience to climate change impacts, and by including carbon sequestration interventions leading to a low-carbon development.

[8] WBG Performance and Learning Review (PLR) of the CPF for the Plurinational State of Bolivia for the Period FY2016-2020 (Report No. 125068-BO) dated May 31, 2018
[9] WBG Country Partnership Framework (CPF) for the Plurinational State of Bolivia for the Period FY2016-2020 (Report No. 82173-BO) dated November 4, 2015.
[10] WBG, Climate Change Action Plan, 2021-2025. Supporting Green, Resilient, and Inclusive Development. The World Bank, 2021.
[11] From COVID-19 Crisis Response to Resilient Recovery. Saving Lives and Livelihoods while Supporting Green, Resilient, and Inclusive Development. WBG Paper, April 9, 2021.

24. **The proposed Project converges with the thematic priorities of the WBG's framework for Green, Resilient, Inclusive Development**. Investments in selected agricultural value chains and producer and community organizations would mainstream climate-smart agricultural practices, create green jobs in the agri-food system, reduce GHG emissions, and increase farmers' adaptive capacity and resilience to climate change. The Project would foster inclusion by: (a) targeting both subsistence farmers and market-ready producers; (b) promoting financial inclusion; and (c) ensuring participation by historically disadvantaged groups, e.g., Indigenous Peoples, women, and youth.

25. **The proposed Project is consistent with the WBG's operational response to the current global crises**.[12] The WBG's objective is to provide mutually re-enforcing support by addressing short-term shocks to improve prospects for long-term sustainable development, while developing long-term resilience to help prepare for future shocks. The proposed Project aligns with the four pillars of the crises response: (a) Responding to Food Insecurity through urgent support to avoid long-term derailment of development prospects and hard-earned gains realized through earlier success of the community and productive alliances models; (b) Protecting People and Preserving Jobs by increased market access and competitiveness for participating Rural Community Organizations (RCOs) and Rural Producer Organizations (RPOs); (c) Strengthening Resilience through promotion and adoption of climate-smart agricultural practices; and (d) Strengthening Policies, Institutions and Investments for Rebuilding Better through support to dialogue with the Ministry of Rural Development and Land (MDRyT) and other Ministries to generate policy options to expand and deepen food security in Bolivia.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

Contribute to increased food security, market access and the adoption of climate-smart approaches by targeted project beneficiaries.

PDO Level Indicators

26. Achievement of the PDO will be measured through the following indicators:
    (a) Participating RCOs and RPOs with satisfactory Food Consumption Score (Percentage);
    (b) Farmers adopting improved agricultural technology, disaggregated by gender (CRI, number);
    (c) Land area under sustainable landscape management practices (CRI, number in Ha); and
    (d) Increase in the value of gross sales of approved business plans for participating RPOs (Percentage).

B. Project Components

27. The design features of the proposed Project include:
    (a) Collective action: The small farmer, acting alone, is unlikely to effectively compete in a market dominated by intermediaries with asymmetric bargaining power and information. Through their participation in value chains, organized rural producer and community organizations can benefit from: (a) collective bargaining power in negotiating with other actors in the chain; (b) greater technology uptake; and (c) reduced individual risks through risk spreading. The proposed Project would promote small farmer participation in:

[12] Navigating Multiple Crises, Staying the Course on Long-term Development: The World Bank Group's Response to the Crises Affecting Developing Countries, June 20, 2022.

(i) Rural Community Organizations (RCOs): are grassroots territorial organizations with legal standing pursuant to Article 3 of the Borrower's *Decreto Supremo* 24447 of December 20, 1996, and member of a Community Alliance, which meets the eligibility criteria set forth in the Project Operational Manual;
(ii) Rural Producer Organizations (RPOs): organizations with legal standing which are members a Productive Alliance and meet the eligibility criteria set forth in the Project Operational Manual;
and seek to incorporate them into community and productive alliances, respectively.

(b) Agricultural transformation: Increased land and labor productivity through fixed investment and improved farm and land management practices.
(c) Climate resilience: Strengthen the capacity of rural producers and community organizations to withstand climate volatility through investments to adapt and mitigate climate change impacts.
(d) Commercial viability: Productive alliances must verify a minimum level of financial return on their associated business plans to qualify for financing.
(e) Participatory innovation: Farmers tend to adopt new agricultural practices through peer-learning from other farmers. Greater collaboration between rural producers and agricultural research to effectively translate scientific advances into improved farm practices, particularly for small-scale producers targeted under the proposed Project.

28. **Total project cost is estimated at US$351.2 million.** An Investment Project Financing (IPF) loan in the amount of US$300 million is proposed. Counterpart financing in the amount of US$51.2 million would include participating RCOs, RPOs, Municipalities and Departments.

29. **Component 1 – Capacity Building and Institutional Strengthening (Total Cost: US$16.5 million; IBRD: US$16.5 million)** would finance: (a) a communication and dissemination strategy to maximize stakeholder participation in the Project, e.g., RCOs and RPOs, municipalities, departments, vulnerable groups (indigenous peoples, women, youth); (b) formation of new and strengthening of existing RCOs and RPOs; (c) capacity-building and skill development for technical service providers, RCOs and RPOs, municipalities, departments and other stakeholders to prepare for participation in subprojects; (d) technical assistance toward the preparation, evaluation and implementation of subprojects to be financed under the Project; and (e) support to MDRyT and other Ministries in policy dialogue toward generating options to expand and deepen food security in Bolivia.

30. **Component 2 - Support to Community and Productive Alliances (Total Cost: US$309.3 million; IBRD: US$257.4 million)** would provide matching grants to partially finance the implementation of:

(a) *Community Alliance Subprojects (US$94.4 million)* would support the carrying out of Community Alliance Subprojects aimed primarily to reduce their vulnerability to both acute and chronic food insecurity and promote adaptation to climate change impacts and consisting of small-scale investments in *inter alia*, infrastructure and services, food security and nutrition enhancement activities, and vulnerability-reduction actions, including the technical assistance, on-farm technology and management upskilling required for their implementation.
(b) *Productive Alliance Subprojects (US$101.8 million)* would support the carrying out of Productive Alliance Subprojects consisting of *inter alia*: (i) fixed capital investments such as plant and equipment, and minor small-scale irrigation infrastructure; (ii) working capital; and (iii) technical assistance to increase domestic agricultural production and productivity, food availability in local markets, and promote adaptation to climate change impacts (including droughts).[13] A productive alliance is the mechanism through which RPOs with

[13] Specific details of all adaptation and mitigation measures are described in PAD Annex 3, Table A5.12.

market potential, commercial partners and technical assistance providers can participate in value chains to improve their productivity by giving them better and more equitable access to markets, technologies, and organizational skills. A business plan is the instrument upon which a productive alliance would be evaluated and supported.

(c) *Complementary productive infrastructure subprojects (US$113.0 million)* would support the carrying out of Complementary Productive Infrastructure Subprojects consisting of public infrastructure investments in Eligible Departments and Eligible Municipalities as required to achieve the objectives of the Community Alliance Subprojects and Productive Alliance Subprojects. The complementary productive infrastructure would increase logistic efficiency for these community alliances and productive alliances, further contributing to the Government's strategic goal of increased food security and promote adaptation to climate change impacts through climate-resilient, resource-efficient and energy-efficient infrastructure.

31. **Component 3 - Project Management (Total Cost: US$25.4 million; IBRD: US$25.4 million)** would support provision of equipment, consulting services, non-consulting services, and financing of Operating Costs to support the management, supervision, and monitoring of Project implementation and results, including, *inter alia*, staffing and necessary installations for the NCU and the DOUs, and Project Financial Audits and technical studies in subjects proposed by the Borrower, through MDRyT, and agreed to by the Bank.

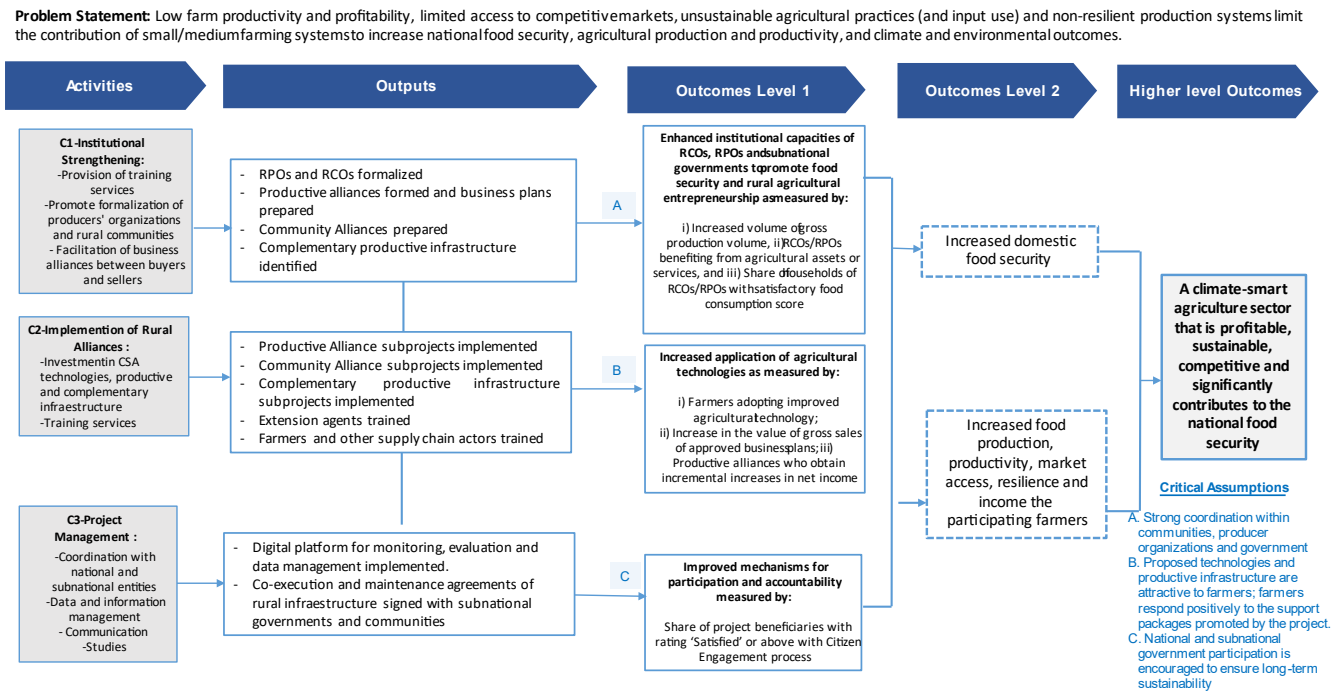
C. Project Beneficiaries

32. The primary beneficiaries would be organized rural communities (RCOs) and rural producers (RPOs) that participate in community and productive alliances. At least 1,000 RCOs nationwide would benefit from increased food security through the community alliance subprojects. Some 1,270 RPOs are expected to participate in and benefit from the investments under productive alliance subprojects. Finally, some 290 local-level complementary productive infrastructure subprojects would improve logistics and market access in areas where community alliance and productive alliances subprojects are implemented. In sum, 127,900 rural families will benefit from 2,560 subprojects, of which at least 30 percent are women.

D. Results Chain

33. **Theory of Change.** The proposed Project would implement comprehensive actions to address the main problems of the agriculture sector in Bolivia, namely: (a) low productivity and profitability; (b) limited access to competitive markets; (c) unsustainable farming practices and input use; (d) non-resilient production systems of small and medium-scale producers that constrain food production; and (e) negative climate and environmental outcomes. Figure 3 shows the activities, outputs, short- and medium-term outcomes, and impacts for the proposed Project.

Figure 3: Theory of Change



34. **The proposed Project would develop different types of activities oriented to strengthen the institutional capacities of producer organizations, communities, and local governments to enable rural alliances and promote productive investments.** These activities would lead to the following outputs: (a) formalization of RCOs and RPOs; (b) implementation of community alliances, productive alliances, and complementary productive infrastructure subprojects; and (c) mechanism for monitoring, evaluation, accountability, and management of these investments. Short-term outcomes would be evidenced in the following aspects: (a) enhanced institutional capacities of RCOs, RPOs and subnational governments to promote sustainable, climate-smart agricultural production; and (b) increased adoption of improved agricultural technologies and farm management practices. The following outcomes would be achieved in the medium and long term: (a) increased food security for participating RCOs and RPOs; and (b) increased food production and productivity, market access, climate resilience, and income for participating farmers RCOs and RPOs. The impact would be both increased food security and a climate-smart and competitive agriculture sector that is profitable, sustainable, and inclusive.

35. **The assumptions underpinning the Theory of Change are:** (a) strong coordination within RCOs, RPOs and national and sub-national governments; (b) the proposed technologies, practices and complementary productive infrastructure are attractive to farmers, and they respond by adopting the support packages promoted by the Project; and (c) national and subnational government participation is encouraged to ensure long-term sustainability.

E. Rationale for Bank Involvement and Role of Partners

36. **Public action is warranted when market failures perpetuate low land and labor productivity and constrain value addition to primary production.** Under-provision of effective rural support services, including financial access,

weakens the organizational and business development capacities of RCOs and RPOs and makes difficult their integration into more remunerative markets, thereby constraining income growth. A package of: (a) project-financed technical and business development assistance; (b) selective capital transfers through matching grants to RCOs and RPOs; and (c) facilitated access to financial intermediation from local financial institutions, as has occurred under PAR II, can scale-up and deepen sustainable solutions for market access and food security across Bolivia.

37. **WBG has contributed successfully to the agriculture sector in Bolivia**, building the institutional and management capacity of: (a) rural producer and community organizations; (b) Line Ministries (e.g., MDRyT); and (c) implementing agencies (e.g., EMPODERAR) under both the Community Investment in Rural Areas Project (PICAR – P107137) and the ongoing Rural Alliances II (PAR II – P127743). PICAR provided grants to finance communities' priority needs, including in water and sanitation, energy, local roads and productive infrastructure (e.g., irrigation). Some 46,600 families across 1,260 communities in Chuquisaca, Cochabamba, La Paz, Oruro and Potosí, implemented 2,197 subprojects totaling some US$76 million equivalent, primarily in agricultural production (1,303) and small-scale irrigation (488) and financed under matching grants, with a minimum of 10 percent community contribution (in-cash or in-kind). PAR II has promoted productive alliances between small rural producer organizations and purchasers, increased access to productive assets, technological and financial services, and implemented several municipal-level subprojects for complementary productive infrastructure. By end-2021, PAR II had financed 2,337 productive alliance subprojects totaling US$141 million equivalent, strengthening over 72,500 rural producers with capital assets and technical assistance to increase domestic food availability.

F. Lessons Learned and Reflected in the Project Design

38. **To enhance effectiveness in developing agri-food systems, interventions to improve production technologies should be integrated with those that facilitate market access.** Integrating production and access to market support helps address the fragmented production and insufficient market integration of various actors in agri-food systems.

39. **Market Orientation**: Verifiable market opportunities must underpin support for RPOs. Effective mechanisms to achieve this include: (a) focusing on existing and new markets and value chains as part of the eligibility criteria for productive alliance subprojects; (b) conducting private sector consultations during project implementation; and (c) analyzing areas where the public sector can play a catalytic role, based on current and future market conditions.

40. **RCO and RPO participation** in the selection, financing, execution, operation and maintenance of community alliance and productive alliance subprojects can generate cost savings and increase ownership, thereby improving the sustainability of these investments. Tangible RCO and RPO contributions (in-cash and in-kind) are consistent with the principle of subsidiarity, thus avoiding or mitigating possible distortions induced by subproject matching grants.

41. **Decentralization and Project Ownership**: Decentralization of project implementation and supervision responsibilities to the municipal/department levels, along with the promotion of local stakeholder project ownership, leads to successful project implementation and enhanced sustainability of the Project's activities. The expected impact of a decentralized strategy requires the effective strengthening of local capacity.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

42. The proposed Project will be managed and executed by the Ministry of Rural Development and Land (MDRyT),

through EMPODERAR's Unit.[14] EMPODERAR's National Coordinating Unit (the EMPODERAR NCU) will be the Project Implementation Unit and will coordinate, operate, and manage the proposed Project at the central and departmental levels. The EMPODERAR NCU will consist of a Project Coordinator supported by a technical team including professional, fiduciary, administrative and technical personnel (including procurement, financial, environment and social specialists), with qualifications and terms of employment satisfactory to the Bank, as set forth in the Project Operational Manual. Decentralized departmental operating units (DOUs), which will report to the NCU, will support local-level project implementation. The DOUs will have a departmental operator, business and infrastructure officers, fiduciary analysts, procurement analysts, environmental and social analysts, organizational development analysts, and support staff. The DOUs will be responsible for facilitating the coordination with local and departmental governments to involve them in the activities oriented to the project implementation in each territory.

43. The Project Operational Manual (POM) will contain detailed guidelines and procedures for Project implementation, including: (a) the budgeting, accounting, auditing, reporting, financial, disbursement, procurement, environmental, and social procedures of the Project; (b) the eligibility criteria for the selection of Eligible RCOs, Eligible RPOs, Eligible Departments and Eligible Municipalities and the eligibility criteria and procedures for the selection, approval, carrying out, monitoring and supervision of the each of the three types of Subprojects (including the types of Subprojects that require prior approval of the Bank for implementation); (c) the eligibility criteria for the approval of Community Alliance and Productive Alliances; (d) the Excluded Activities; (e) the specific in cash and in-kind counterpart requirements for Eligible RCOs for each type of Community Alliance Subprojects, for Eligible RPOs for Productive Alliances Subprojects and for Eligible Municipalities and Eligible Departments for Complementary Productive Infrastructure; (f) the model form of Subproject Agreements; (g) the ESCP; (h) the organizational structure for implementation of the Project, including the composition, functions and responsibilities of the NCU and the DOUs; and (i) the Project indicators for the monitoring and evaluation of the Project; and such other arrangements and procedures as shall be required for the effective implementation of the Project. Adoption by the Borrower of a Project Operational Manual, satisfactory to the Bank, will be a condition of Loan Effectiveness.

B. Results Monitoring and Evaluation Arrangements

44. **The EMPODERAR NCU, through its M&E Unit, will coordinate all activities related to collecting, processing, analyzing, and reporting data on their respective activities and the indicators of the Project's results framework.** The M&E Unit will provide periodic reports in agreed formats specified in the POM. To monitor implementation progress and results, the EMPODERAR NCU will submit Semester Progress Reports to the World Bank for information and decision-making on any corrective measures that may be needed to ensure achievement of project outcomes. An M&E National Coordinator, supported by DOU-level M&E specialists, will lead all M&E activities.

45. **The project M&E system will leverage the current PAR II M&E system, which is a comprehensive web-based Georeferenced Management Information System (SIGG) from which internal and external users can generate real-time information and reports.** The SIGG is used to: (a) plan and monitor subproject implementation; and (b) report aggregate progress on PDO and IR indicators of the Results Framework. The EMPODERAR NCU staff upload all information to the SIGG, which is then verified by the DOU-level M&E staff and finally by the NCU-level M&E Unit to ensure the quality of data registered and processes in this platform. The EMPODERAR NCU will also monitor in real

[14] EMPODERAR is a legally deconcentrated unit within MDRyT responsible for Project implementation and created pursuant to Article 2(b) of the Borrower's Supreme Decree No.29315, dated October 17, 2007.

time the progress on Climate Co-Benefits and GHG reductions resulting from subproject implementation.

46. **A baseline study will be conducted during the first year of the project implementation.** This study will generate a set of information about the socioeconomic characteristics of the beneficiaries and control groups and estimate the initial value of PDO and IR indicators of the results framework. Quasi-experimental methodologies will be deployed like those used in the impact evaluations of both PAR I and PAR II.

47. **A mid-term review will be carried out during the third year of Project implementation to evaluate Project progress.** A final evaluation will be conducted during the final year of implementation to evaluate overall Project accomplishments. These evaluations will be focused on the analysis of the results framework indicators and will assess the relevance, efficacy, efficiency, and sustainability of the Project. The recommendations emerging from the mid-term review will be used to adjust, as needed, the implementation arrangements of the Project. An impact evaluation will be conducted to measure the high-level indicators proposed in accordance with the public policies of rural development implemented by the Bolivian government. This study will be carried out at Project closing.

C. Sustainability

48. **Overall**: Sustainability of the Project's impact would be achieved through the Project's support to participatory processes at every level, particularly regarding: (a) local forums and stakeholder strategic planning; and (b) RCOs and RPOs in defining their respective alliances, including implementation and cost-sharing, thus increasing the felt ownership of these investments. Furthermore, technical assistance, both at the NCU and DOU levels, would ensure quality design and execution of community and productive alliances and complementary productive infrastructure. Finally, alliance subproject agreements – signed between RCOs, RPOs and the EMPODERAR NCU – would detail the RCO and RPO obligations for the operation and maintenance of community alliance and productive alliance investments. Intergovernmental agreements between the EMPODERAR NCU and Eligible Municipalities and Eligible Departments would detail the municipal/departmental obligations for the operation and maintenance of complementary productive infrastructure investments.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

49. The EMPODERAR NCU – an operationally autonomous deconcentrated unit of MDRyT – would be responsible for overall project implementation. The EMPODERAR NCU and eleven dedicated DOUs throughout the country successfully implemented the Bank-financed Rural Alliances I (2000-14) and is currently completing the implementation of Rural Alliances II, which will close in November 2022. The EMPODERAR NCU has well-established institutional capacity in terms of personnel, monitoring and evaluation systems and on-the-ground technical support to RCOs and RPOs, municipalities and departments. This effective model would facilitate the implementation of the proposed Project.

50. **Climate and Disaster Risk Screening**. The World Bank completed a climate change and disaster risk screening and estimates the overall risk to achieving project outcomes to be Moderate. Results of the rapid risk screening show a Moderate risk to the outcome/service delivery of the proposed Project. While the proposed Project has a High rating due to the exposure of Project locations and impacts on physical infrastructure/assets, the Project's soft investments and broader development context will mitigate potential risks through the proposed activities. The World Bank: (a)

estimated the net project carbon balance with the Ex-Ante Carbon-balance Tool (EX-ACT); and (b) included the net carbon balance (valued at a low and high shadow price of carbon) in the Project's Economic and Financial Analysis. The estimated net carbon balance resulting from GHGs emitted and/or sequestered/reduced during the project implementation and capitalization period (20 years) would bring a mitigation benefit of (-)156.164 tCO_2e/year compared to a business-as-usual baseline scenario. This is equivalent to annually reduced GHG emissions of (-) 1.3 tCO_2e per Ha. After 20 years, GHG mitigation would result in a reduction of (-) 3.12 million tCO_2e.

51. **Climate change**: The proposed Project would contribute directly to an increase in CO_2 sequestration and reduction of GHG emission through both: (a) on-farm investments in adaptation and mitigation technologies under both community and productive alliances; and (b) training and knowledge transfer for improved climate-smart farm and ecosystem management practices to increase climate resilience. The GHG analysis considered the combined implementation of climate-smart practices, technologies, and management through 2,270 community and productive alliance subprojects under Component 2 on at least 70,693 ha of grasslands, 11,482 ha of forest ecosystems, 18,234 ha of annual cropland, 12,954 ha of agroforestry systems and 4,492 ha of degraded land. The incorporation of climate-resilient technologies and natural resource management practices by RCOs and RPOs in their Community Alliance Subprojects and Productive Alliance Subprojects, respectively, will promote eco-system preservation, contribute to climate change mitigation, and reduce the vulnerability of these rural households (especially the poorest) to climate change and natural disasters.

52. **Gender**. Accessing economic opportunities is an effective way to help women lift themselves out of poverty. Although Bolivia has made progress on the issue of gender equity, women currently lag in important dimensions of well-being. The main gender gaps identified for the proposed Project include: (a) women participate in the sector mainly as family workers, apprentices, or unpaid persons, resulting in income gaps compared to men; (b) women are less involved in market activities compared to men, e.g., input purchasing, contracting, processing, and marketing, and in decision making overall; and (c) women have more limited access to credit and financial resources compared to men. Among other factors, rural women have more limited access to education than men, e.g., literacy and school completion rates in rural areas are lower for women and even lower if they are indigenous; they tend to have more limited access to agriculture knowledge/information; access to credit, productive resources and services/equipment adapted to their farming practices is a challenge; they face time constraints imposed by household chores, as well as cultural and social norms that prevent them from participating in decision-making. The gender action plan for the proposed Project (Annex 4) builds upon these gender gaps and is designed to contribute to narrowing them by supporting specific actions and reporting on progress.

53. Among the actions identified are:

(a) Under Component 1, the Project will support: (i) the development of a communication strategy to inform women about project activities and encourage their participation, including non-written communication tools, given the low literacy rate among women; and (ii) the capacity development of technical service providers and other stakeholders on gender issues (e.g., barriers for women to access and benefit from trainings or services) and the contracting of female technical service providers to encourage women's participation in project activities and target services to them;

(b) Under Component 2, the Project will support: (i) women's participation in decision-making positions (including coverage of market activities) in new/existing RCOs/RPOs through targeted trainings and sensitization of stakeholders, including female and male community leaders, to tackle cultural and social norms; and (ii) targeted assistance to women-led groups/agribusinesses (RCO/RPOs) to develop business plans that qualify

for matching grants and support their implementation; and

(c) Under Component 3, project management would ensure sound design and implementation of meetings, training, and related information under the Project to meet the specific needs of women (appropriate time and place, appropriate language and means of communication, etc.).

54. The results framework: (a) includes two PDO indicators to monitor progress: (i) farmers adopting improved agricultural technology, of which at least 35 percent to be female; and (ii) increase in gross sales value of approved business plans for participating RPOs that are led by women (target set at 35 percent as for those led by men)[15]; and (b) Intermediate Results indicators that are aligned with the actions proposed by the Project to contribute to closing the gaps, the details of which are explained in Annex 4.

55. **Citizen engagement.** Both citizen engagement and participation are at the core of the design of the proposed Project. The Stakeholder Engagement Plan (SEP) describes: (a) key milestones and effective channels to share information to maximize participation; (b) stakeholders' roles in defining, constructing, and implementing community alliances and productive alliances; and (c) actions to facilitate the participation of vulnerable stakeholders (i.e., women, rural youth, IPs, persons with disabilities), whose feedback will lead to adjustments in implementation. The Project's result framework includes the following two indicators to measure the extent of beneficiary feedback and grievance redress: (a) Complaints answered following the rules stipulated for response times; and (b) beneficiaries who express satisfaction with the agricultural assets and services promoted by the Project.

56. **Economic and financial analysis.** Ex-ante cost-benefit analysis assessed the proposed Project's feasibility, considering the following expected benefits: (a) increased crop yields and livestock production; (b) increased producer prices for some agricultural products; (c) reduced post-harvest losses; (d) reduced costs for some agricultural inputs; (e) increased sales volume of agricultural produce; (f) increased area under production; (g) decreased time to access markets; (h) reduced animal mortality rates; (i) increased working hours; and (j) reduced GHG emissions.

57. **The analysis was designed to estimate standard measures of project expected returns** including Incremental Net Present Value (NPV), Internal Rates of Return (IRR), Benefit/Cost ratio (B/C), payback period and Incremental NPV/beneficiary. These indicators were estimated: (a) for the overall Project; (b) specifically for project Component 2; (c) by investment categories; and (d) by production models. Scenario analyses and sensitivity analyses were carried out to explore the likely impacts of possible changes in key variables such as benefits, costs, interest rates and years of evaluation. All cash flows were estimated using nominal prices for a 20–year evaluation period and 12.67 percent of social discount rate and 12.81 percent of cost of capital according to the Bolivian public investment system. Additionally, several specific assumptions and parameters were used to estimate the indicators according to the characteristics of the activities implemented by the Project (See Annex 3).

58. **The results of the economic analysis** (including GHG reduction) show that the Project would have a positive economic return on investment. The NPV, IRR, B/C, payback period, and Incremental NPV/beneficiary were estimated at US$336 million, 21 percent, 1.5, seven years, and US$1998, respectively. In disaggregated terms, productive alliance subprojects, community alliance subprojects, and productive infrastructure subprojects would have positive returns on investment with estimated values for the NPV of US$140.1, US$88.5 and US$107.3 million; IRR of 20 percent, 20 percent and 22 percent; B/C of 1.8, 1.5 and 1.3, and payback period of 6.8, 6.8 and 7.2, respectively.

[15] Indicators report on progress in relation to increased adoption of improved technology (practice, equipment, etc.) in the sector for female farmers and to increased productivity/income for women-led RPOs (narrowing the gap with men-led RPOs).

59. In addition, the estimated financial indicators show mixed results depending on the value of the cost of capital for the agricultural sector in Bolivia. Considering a cost of capital of 12.81 percent, the NPV, IRR, B/C, payback period and incremental NPV/beneficiary were estimated at US$96.7 million, 15.5 percent, 1.14, 8.2 years and US$575.

60. The sensitivity analysis shows the analysis robustness; thus, a 10 percent decrease in incremental income value would reduce the EIRR of the overall Project to 18.43 percent. Conversely, the overall Project's EIRR would increase to 23.10 percent in a 10 percent cost reduction scenario.

61. The scenario analysis shows that the Project would still maintain a positive return on investment in economic terms considering an evaluation period of 15 years and a moderately pessimistic scenario in terms of interest rate increases. With a scenario of high carbon prices in the future (according to the World Bank forecast), the EIRR would increase significantly to 21.71 percent, respectively.

B. Fiduciary

62. **Financial Management:** A Financial Management (FM) Assessment was carried out in accordance with OB/BP 10.00, the FM Manual for World Bank Investment Project Financing, and Bank Guidance Note on FM in Rapid Response to Crises and Emergencies to evaluate the adequacy of the EMPODERAR NCU's FM arrangements for the implementation of the proposed Innovation for Resilient Food Systems Project. Annex 1 provides the details of the FM assessment, risks and associated mitigation measures, and proposed FM and disbursement arrangements. Based on the FM assessment, with mitigation measures in place, the proposed Project will have acceptable project FM and disbursement arrangements and the residual FM risk rating is Moderate. The main FM risks identified for the proposed Project relate to: (a) weaknesses in the public sector to attract and maintain qualified staff with subsequent high staff rotation, which could adversely affect both project preparation and implementation; (b) project design requires disbursement of funds to RCOs and RPOs with limited capacity for subproject implementation; and (c) the payment process for the complementary productive infrastructure subprojects (civil works) and their controls will have to reasonably ensure that the funds have been used for the agreed purposes to minimize the risk of fraud and corruption.

63. Risks will be mitigated through the following actions with the EMPODERAR NCU: (a) Based on the experience from other projects in Bolivia, retaining fiduciary staff is difficult due to high turnover; this risk will be reduced by contracting an independent consultant firm for the selection and the performance evaluation of Project staff. This mechanism will work similarly to the ongoing PAR II project and has proven effective in retaining qualified Project staff; (b) the EMPODERAR NCU has developed the expertise and has put in place acceptable operational arrangements. Therefore, the proposed Project will rely widely on existing arrangements, at both central and departmental levels, including the use of the Government's integrated financial management system (SIGEP) and Treasury Single Account (TSA) for disbursement processing; (c) Information systems should adequately record and monitor the physical and financial progress of the subprojects; the EMPODERAR NCU will adjust the management information system (SIIG - *Sistema Integrado de Información Georeferencial*) to address the proposed Project's needs; (d) the EMPODERAR NCU will review and update the Operational Manual for the ongoing PAR II to include the additional appropriate processes and procedures to adequately respond to proposed Project's FM demands (i.e., complementary productive infrastructure subprojects), reflecting enhanced arrangements (procedures and tools); and (e) the proposed Project's design includes specific arrangements and several tools and mechanism in terms of participation, transparency and accountability at different levels and throughout the subproject cycle, aiming at addressing and mitigating specific fiduciary risks which demonstrated to be effective, keeping in mind that their effective operation and maintenance throughout the life of

the Project will continue to depend on the EMPODERAR NCU's ability to maintain qualified and experienced staff.

64. The overall conclusion of the FM assessment is that with above-referenced mitigating measures in place, the proposed FM arrangements will meet the Bank's minimum fiduciary requirements.

65. **Procurement** under the proposed Project will be conducted in accordance with the World Bank Procurement Regulations for IPF Borrowers dated November 2020 ('Procurement Regulations'). The Project will be subject to the World Bank's "Guidelines on Preventing and Combating Fraud and Corruption in projects Financed by IBRD Loans and IDA Credits and Grants", October 15, 2006, revised in January 2011, and as of July 1, 2016 ('World Bank's ACG'). EMPODERAR NCU will process procurement, except for the Community Alliance Subprojects and Productive Alliance Subprojects under Component 2, which RCOs and RPOs would process with support from EMPODERAR NCU; an application may be developed like SOL to simplify RCO and RPO procurement. [16] The Bank's Standard Procurement Documents will govern the procurement of contracts under the International Market Approach. For procurement involving the National Market Approach, the Borrower may use their own procurement documents, acceptable to the World Bank. All Standard Procurement Documents as well as model contracts will be attached to the POM. The proposed Project will use the Systematic Tracking of Exchanges in Procurement to plan, record, and track procurement transactions. As the proposed Project is being prepared under paragraph 12 of the Bank Policy on IPF, the EMPODERAR NCU prepared a draft Project Procurement Strategy for Development (PPSD). The PPSD and the Procurement Plan will be finalized during Project implementation.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

[16] SOL is an online procurement solution successfully implemented by the states of Bahia and Rio Grande do Norte in Brazil https://www.sol-app.net/

D. Environmental and Social

66. The proposed Project is not expected to implement complex or large-scale subprojects. Community alliance and productive alliance subprojects would comprise activities related to agriculture, livestock, fishing, beekeeping, and non-timber forest resource production systems. Subprojects located within protected areas will not be eligible for financing, as well as subprojects with the potential of generating land-use change (particularly from forest use to agricultural use), involving the construction of new dams and/or the rehabilitation/improvement of large dams or small ones with the potential of generating significant safety risks.

67. The main potential environmental risks associated with the proposed project include: (a) inappropriate use of pesticides due to the ample supply of toxic agrochemical products in Bolivia and consequent pollution events to soil and water bodies; and (b) inadequate waste management due to the plastic inputs in the adoption of technologies and the lack of waste treatment in rural areas. Other potential environmental risks include: (a) possible displacement of native varieties of agrobiodiversity due to the interest in foreign and genetically modified organisms (GMO) crops of some communities; and (b) degradation and/or fragmentation of natural habitats

68. For the proposed Project, which is being prepared under paragraph 12 of the Bank Policy on IPF, the EMPODERAR NCU has prepared a Stakeholder Engagement Plan (SEP) and an Environmental and Social Commitment Plan (ESCP), which were disclosed in-country[17] and on the World Bank's website on July 7, 2022.[18] As both community and productive alliance subprojects are demand-driven, their design and location are not known ex-ante; as such, during project implementation, the EMPODERAR NCU will prepare an Environmental and Social Management Framework (ESMF), which will be finalized and disclosed prior to the signing of subproject agreements under Component 2 of the Project or 45 days after the Effectiveness Date, whichever occurs first. The ESMF will include an environmental and social exclusion list (which will also be included in the POM), with the set of interventions that will not be financed by the project due to their potential significant E&S risks, as well as detailed procedures for the screening, review, and approval of subprojects, and procedures for developing an environmental and social assessment and Environmental and Social Management Plans (ESMPs) for each subproject.

69. Indigenous peoples (IPs) complying with the four criteria set forth in ESS7 correspond to 78 percent of the target population for the proposed Project. Considering that the majority of the target population in the selected municipalities are IPs, all the elements that would normally be included in an Indigenous Peoples Plan are included in the overall project design, the ESMF and the SEP. IPs will be directly and indirectly impacted by Project activities through the generation of job opportunities, the funding of business plans and rural infrastructure works, mobility improvements for rural communities, and maximization of the participation of women and indigenous peoples. As such, IPs are expected to be the main group toward which the stakeholder outreach efforts are directed, along with other vulnerable groups. Free, prior, and informed consent as determined by ESS7, section B, will be required at the subproject level. Project activities are not expected to have significant negative impacts on IPs; however, the ESMF will analyze the following social risks:(a) the potential for underage child labor in family-based farming activities; (b) potential adverse impacts associated with the labor influx for minor civil works in rural areas; (c) the potential for physical, economic temporary, and/or permanent displacement caused by the minor civil works in rural areas; (d) potential loss of relevant traditional production knowledge when non-compatible with the Project's agricultural approaches; and consequently (e) potential risk of discrimination against indigenous minorities, especially those with a tradition of itinerant production.

70. There is a substantial risk of underage child labor in family-based farming activities. Child laborers between 5

and 14 years old in Bolivia reached 467,874 (ENNA: 2019). Out of the total, 68 percent work in agriculture.[19] Since potential underage child labor in the Project may be hidden by cultural reasons or seasonal work, identifying it may be challenging, particularly given the extensive territorial area in which the Project will be implemented. Beyond adversely affecting school attendance, the engagement of children could take place in situations where their health and/or physical integrity could be placed at risk. Per ESS2 the minimum age for employment or engagement of children in connection with the proposed Project will be 18. To further address these risks, the LMP will include measures to prevent the risks of child and forced labor among both project workers and beneficiaries, including on family farms. For instance, beneficiary households that have school-age children from 5 to 17 years old may have to present annual school certifications regarding their children's attendance and make sure that their children attend school. Other measures will be developed and promoted to minimize the risks of child labor that could be caused or reproduced by the Project due to the children's participation in agricultural activities.

71. There are also potential risks associated with the labor influx for civil works, especially given that civil works are minor and most of the workers will be hired locally. To prevent Sexual Exploitation Abuse (SEA)-Sexual Harassment (SH) risks, the Contractors and subcontractors will be required to develop and adopt a workers' code of conduct based on Law 348, "Comprehensive law to guarantee women a life free of violence," which will be included as part of the project's LMP. Considering Gender-Based Violence (GBV) is a contextual recurrent threat in the country, the GRM for the workers will also include a SEA/GBV prevention approach. The mapping of institutions in charge of GBV prevention and response will be part of the E&S assessments included in the ESMPs at the subproject level. Linkages between the GRM and these institutions will be addressed at the subproject level.

72. The potential risks for physical, economic temporary, and/or permanent displacement are expected to be low and manageable. Since the exact locations of subprojects are not known ex-ante, and activities to be financed through business plans are expected to cover on-site investments in privately-owned lands, this may lead to minor physical displacement. There is also potential for some economic displacement, temporary and/or permanent, as a result of the minor civil works expected in the complementary productive infrastructure subprojects (e.g., walls, fences, small portions of land, crops, fruit trees, and livestock pasture, among others). To manage these risks, the Borrower will prepare a stand-alone Resettlement Policy Framework. As part of the Resettlement Action Plans that would be prepared at the subproject level, consultation processes will apply in all situations of project-induced displacement. Also, given some subprojects might need, free, prior, and informed consent procedures, as determined by ESS7, it will be applied as relevant. Since complementary productive infrastructure subprojects are not expected to cause restrictions in access to natural resources, a Process Framework will not need to be prepared. The Resettlement Policy Framework will be prepared, consulted, approved and disclosed in the public section of both the client and Bank

[17] *https://www.ruralytierras.gob.bo/*

[18] ESCP: *https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099150007082217233/p1756720c3298503c0b9ac07241c592bc97* ;
SEP: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099150107082238287/p17567206a544c0bb0b0d50974fe7346741

[19] Participation in some agricultural activities is not always child labor. Age-appropriate tasks that are of lower risk and do not interfere with a child's schooling and leisure time can be a normal part of growing up in a rural environment. Especially in the context of family farming, small-scale fisheries and livestock husbandry, some participation of children in non-hazardous activities can be positive, as it contributes to the inter-generational transfer of technical and social skills and children's food security. Improved self-confidence, self-esteem and work skills are attributes often detected in young people engaged in some aspects of farm work. Therefore, it is important to distinguish between light duties that do no harm to the child and child labor, which is work that interferes with compulsory schooling and damages health and personal development, based on hours and conditions of work, child's age, activities performed, and hazards involved (*https://www.ilo.org/ipec/areas/Agriculture/lang--en/index.htm*)

webpage prior to the signing of subproject agreements under Component 2, or 45 days after the Effectiveness Date, whichever occurs first.

73. The potential loss of relevant traditional production knowledge when non-compatible with the proposed Project's agricultural approaches is not expected to have a significant impact on IPs' intangible cultural heritage. The ESMF will analyze the potential risk of cultural loss associated with the displacement of traditional indigenous knowledge about agricultural practices by the technical assistance to be provided under the proposed Project. Additional information on potential impacts on cultural heritage will also be gathered as part of the consultations with IPs, particularly those to be carried out for the future site-specific ESMPs for projects located in TIOCs, which will include a more detailed analysis of the local conditions and agroforestry alternatives related to the proposed activities.

V. GRIEVANCE REDRESS SERVICES

74. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit https://accountability.worldbank.org.

VI. KEY RISKS

75. The Overall Risk rating for the Project is assessed as Substantial. There are substantial risks to the implementation of the proposed Project. The Bolivia country office is fully staffed with local fiduciary and social and environmental specialists, who would closely monitor and provide implementation support to the proposed Project. Institutional, political and governance issues are challenging, and the WBG will continue to provide broad institutional support on project implementation and technical assistance.

76. Political and Governance Risk is Substantial. Changes in authorities could lead to shifts in priorities and delays in decision-making and project implementation. Coordination within central government entities, and among government levels, are key to efficient implementation of the Project. The WBG will maintain dialogue with authorities at all levels. Close implementation support and training in WBG's fiduciary procedures and Anticorruption Guidelines will continue, and increased participation of the Country Lawyer in key project discussions will be sought. The strong implementation track record of the EMPODERAR NCU in the implementation of PAR I and PAR II is a further, substantive mitigating factor.

77. Macroeconomic Risk is Substantial. The globally constrained macroeconomic context may result in lower availability of counterpart financing, which is a government policy requisite in some areas; there is limited debt capacity on the part of national and subnational governments, as well as limited resources for operations and

maintenance of infrastructure supported by WBG financing (e.g., complementary productive infrastructure, rural roads and bridges). To mitigate this risk, the WBG will endeavor to provide 100 percent financing for proposed Project investments, where feasible. Operations and Maintenance costs are included in Project costs to ensure timely resource allocation and budgeting.

78. Environmental and Social Risk is Substantial. Environmental and Social Risk is Substantial. The main potential environmental risks associated with the proposed Project are: (a) inappropriate use of pesticides due to the large supply of toxic agrochemical products in Bolivia and consequent contamination of soil and water bodies; (b) inadequate waste management mainly due to the plastic inputs in the adoption of technologies and the lack of waste treatment in rural areas; (c) possible displacement of native varieties of agrobiodiversity due to the interest on foreign and GMO crops of some communities; and (d) degradation and fragmentation of natural habitats. The main social risk is the potential for reproducing child labor practices in the family-based farming activities, particularly given their prevalence in rural areas and indigenous communities. Other social risks include: (a) potential impacts associated with the labor influx caused by the complementary infrastructure works anticipated under the Project; (b) potential for physical and economic displacement, temporary and/or permanent, as a result of the minor civil works expected in the complementary productive infrastructure subprojects (e.g., walls, fences, small portions of land, crops, fruit trees, livestock pasture, easements, etc.); (c) potential loss of indigenous agricultural, gathering and fishing traditional knowledge associated with the Project's promotion of agricultural approaches, some of which may be culturally incompatible with the ones of indigenous groups; (d) potential risk of discrimination against indigenous minorities, especially those with a tradition of itinerant production. These risks may be intensified by a context with limited participation of minoritarian indigenous groups and women, in the decision-making processes affecting production processes. Over the years, the PIU has developed procedures to manage some of these risks. Such procedures will be assessed on an ongoing basis, as part of the Bank's due diligence, and enhanced based on an adaptive management approach to adopt social risk management measures consistent with the ESF.

79. To adequately address and mitigate project environmental and social risks and impacts, the Borrower has prepared: (a) a draft Stakeholder Engagement Plan (SEP), including a stakeholder mapping, plan for information disclosure and consultation processes, resources and implementation arrangements, and the description of a grievance redress mechanism; and (b) a ESCP, describing specific E&S commitments, training and capacity-building, staffing and implementation arrangements for the PIU, and other necessary E&S measures. Both documents have been disclosed. Additionally, the Borrower will prepare an Environmental and Social Management Framework (ESMF), which will be finalized and disclosed prior to the signing of subproject agreements under Component 2 of the Project or 45 days after the Effectiveness Date, whichever occurs first. It will include, among other things, an environmental and social exclusion list, with the set of interventions that will not be financed by the project due to their potential significant E&S risks, and a Labor Management Plan with measures to prevent child and forced labor among both project workers and beneficiaries, including on family farms. Subprojects located within protected areas will not be eligible for financing, as well as subprojects with the potential of generating land-use change (particularly from forest use to agricultural use), involving the construction of new dams and/or the rehabilitation/improvement of large dams or small ones with the potential of generating significant safety risks; infrastructure subprojects that require restrictions in access to natural resources management; infrastructure subprojects that require land acquisition. The detailed Exclusion List to be included in the ESMF, as well as in the POM, will be specific enough to facilitate the objective exclusion of interventions during implementation.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY: Bolivia
Innovation for Resilient Food Systems (Alianzas Rurales - PAR III) Project

Project Development Objectives(s)

Contribute to increased food security, market access and the adoption of climate-smart approaches by targeted project beneficiaries.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
Contribute to adoption of climate-smart approaches by and increased market access for beneficiaries			
Land area under sustainable landscape management practices (CRI, Hectare(Ha))		0.00	117,855.00
Farmers adopting improved agricultural technology (CRI, Number)		0.00	127,900.00
Farmers adopting improved agricultural technology - Female (CRI, Number)		0.00	38,370.00
Farmers adopting improved agricultural technology - male (CRI, Number)		0.00	89,530.00
Increase in the value of gross sales of approved business plans for participating RPOs (Percentage)		0.00	35.00
of which are women (Percentage)		0.00	35.00
Contribute to increased food security			

Indicator Name	PBC	Baseline	End Target
Participating RCOs and RPOs with satisfactory Food Consumption Score (Percentage)		0.00	70.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Comp 1. Capacity Building and Institutional Strengthening			
Participating RCOs and RPOs that are formalized to be able to sign agreements and/or contracts (Number)		0.00	2,270.00
Market agents participating in alliances supported by the Project (Number)		0.00	1,100.00
Technical Service Providers trained to work effectively with RCOs and RCOs in alliances (Number)		0.00	2,045.00
RCOs and RPOs that are formalized to be able to sign agreements and/or contracts (Percentage)		0.00	30.00
Number of technical assistance service providers trained to work effectively with RCOs and RPOs, of which are women; (Percentage)		0.00	30.00
Comp 2. Support to Community and Productive Alliances			
RPOs that maintain or improve their business relationships (partnerships) for at least two productive cycles (Percentage)		0.00	85.00
RPOs that maintain or improve their alliances for at least two productive cycles led by women; (Percentage)		0.00	30.00
Subprojects executed and fully operational 12 months after completion (Percentage)		0.00	90.00
Subprojects with acceptable quality in the application of		0.00	100.00

Indicator Name	PBC	Baseline	End Target
environmental and social measures (Percentage)			
Farmers reached with agricultural assets or services (CRI, Number)		0.00	127,900.00
Farmers reached with agricultural assets or services - Female (CRI, Number)		0.00	38,370.00
Female farmers reached with agricultural assets or services through the subprojects; (Percentage)		0.00	30.00
Area provided with new/improved irrigation or drainage services (CRI, Hectare(Ha))		0.00	15,430.00
Area provided with new irrigation or drainage services (CRI, Hectare(Ha))		0.00	10,000.00
Area provided with improved irrigation or drainage services (CRI, Hectare(Ha))		0.00	5,430.00
Increase in crop yield due to climate-resilient agricultural practices adopted by RCOs and RPOs (Percentage)		0.00	30.00
Comp. 3 Project Management			
Project Area covered by Soil and Land Use Plans using SIGG data (Percentage)		0.00	70.00
Funded partnerships and communities whose representatives provide timely accounting to their members (Percentage)		0.00	90.00
Complaints answered following the rules stipulated for response times (Percentage)		0.00	100.00
Beneficiaries who express satisfaction with the agricultural assets and services promoted by the project (Percentage)		0.00	80.00
Percent of women who express satisfaction with the agricultural assets and services promoted by the project (Percentage)		0.00	30.00

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Land area under sustainable landscape management practices	The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management	Annual	HH Survey	HH Survey	EMPODERAR

	measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.				
Farmers adopting improved agricultural technology	This indicator measures the number of farmers (of agricultural products) who have adopted an improved agricultural technology promoted by operations supported by the World Bank. NB: "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber and non-timber forest products. Adoption refers to a change of practice or change in use of a technology that was introduced or promoted by the project. Technology includes a change in practices compared to currently used practices or technologies (seed preparation, planting	Annual	HH Survey	HH Survey	EMPODERAR

	time, feeding schedule, feeding ingredients, postharvest storage/ processing, etc.). If the project introduces or promotes a technology package in which the benefit depends on the application of the entire package (e.g., a combination of inputs such as a new variety and advice on agronomic practices such as soil preparation, changes in seeding time, fertilizer schedule, plant protection, etc.), this counts as one technology. Farmers are people engaged in farming of agricultural products or members of an agriculture related business (disaggregated by men and women) targeted by the project.				
Farmers adopting improved agricultural technology - Female					
Farmers adopting improved agricultural technology - male					
Increase in the value of gross sales of approved business plans for participating RPOs	Gross sales equals the monetary value (in pesos Bolivianos) of production	Annual	HH Survey	HH Survey	EMPODERAR

	sold by RPOs under a productive alliance.				
of which are women					
Participating RCOs and RPOs with satisfactory Food Consumption Score	Proxy indicator for current HH food access based on: (a) Dietary diversity: number of individual foods consumed over a reference period; (b) Food frequency: number of days (in the past week) that a specific food item has been consumed; and (c) Nutritional importance: food groups are weighted to reflect their nutritional importance. A high food consumption score increases the possibility that a household achieves nutrient adequacy.	Annual.	Household Survey	Household Survey	EMPODERAR

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Participating RCOs and RPOs that are formalized to be able to sign agreements and/or contracts	This indicator is calculated by counting the total number of producer	Annual	Formal agreements from	HH Survey	EMPODERAR

	organizations and communities that receive direct technical assistance from the project so that they can formalize and sign agreements and have access to financial support from the project.		Organizations and communities		
Market agents participating in alliances supported by the Project	This indicator is calculated by counting the number of buyers who acquire products supported by the RCOs and RPOs.	Annual	RCOs/RPOs	Survey	EMPODERAR
Technical Service Providers trained to work effectively with RCOs and RCOs in alliances	This indicator is calculated by counting the number of technical assistance providers that provide services in the execution of the Project: Facilitators and companions for the formulation of alliance plans and community subprojects, evaluators for alliance plans, and productive and environmental technical assistants.	Annual	Registry of agreements signed by subnational governments	Certificates of training completed	EMPODERAR
RCOs and RPOs that are formalized to be able to sign agreements and/or contracts					

Number of technical assistance service providers trained to work effectively with RCOs and RPOs, of which are women;					
RPOs that maintain or improve their business relationships (partnerships) for at least two productive cycles	This indicator is calculated by counting the total number of RPOs under productive alliances that maintain or improve their business relationships (with business partners or buyers) during at least two productive cycles, divided by the total number of RPOs financed by the Project. This value is multiplied by 100.	Annual	M&E System - Individual and aggregated information of the RPOs		EMPODERAR
RPOs that maintain or improve their alliances for at least two productive cycles led by women;					
Subprojects executed and fully operational 12 months after completion	This indicator is calculated by counting: (i) the total number of subprojects that are financed, implemented and operational after one year after concluded their implementation; and (ii) dividing by the total number of subprojects financed by the Project. This value is multiplied by 100.	Annual	M&E System - Individual and aggregate information of the communities		EMPODERAR

Subprojects with acceptable quality in the application of environmental and social measures	This indicator is calculated by weighting the number of subprojects that apply environmental measures and social measures in accordance with their business plans and community subproject and applying them duly.	Annual		Monitoring reports in the operation phase of the subprojects that achieved an acceptable rating in the implementation of their environmental and social measures	EMPODERAR
Farmers reached with agricultural assets or services	This indicator measures the number of farmers who were provided with agricultural assets or services as a result of World Bank project support. "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber, and non-timber forest products. Assets include property, biological assets, and farm and processing equipment. Biological assets may include animal agriculture breeds (e.g., livestock, fisheries) and genetic material of livestock, crops, trees, and shrubs (including fiber and fuel crops).	Annual	HH Survey	HH Survey	EMPODERAR

	Services include research, extension, training, education, ICTs, inputs (e.g., fertilizers, pesticides, labor), production-related services (e.g., soil testing, animal health/veterinary services), phyto-sanitary and food safety services, agricultural marketing support services (e.g., price monitoring, export promotion), access to farm and post-harvest machinery and storage facilities, employment, irrigation and drainage, and finance. Farmers are people engaged in agricultural activities or members of an agriculture-related business (disaggregated by men and women) targeted by the project.				
Farmers reached with agricultural assets or services - Female					
Female farmers reached with agricultural assets or services through the subprojects;					
Area provided with new/improved irrigation or drainage services	This indicator measures the total area of land provided with irrigation and drainage services under the project,	Annual	HH Survey	HH Survey	EMPODERAR

	including in (i) the area provided with new irrigation and drainage services, and (ii) the area provided with improved irrigation and drainage services, expressed in hectare (ha).				
Area provided with new irrigation or drainage services	Measures in hectares the total area of land provided with new or improved irrigation or drainage services in operations supported by the World Bank.				
Area provided with improved irrigation or drainage services	Measures in hectares the total area of land provided with new or improved irrigation or drainage services in operations supported by the World Bank.				
Increase in crop yield due to climate-resilient agricultural practices adopted by RCOs and RPOs	Increase in the total production (in kg) per hectare for a reference set of crops for participating RCOs and RPOs.	Annual	HH Survey	HH Survey	EMPODERAR
Project Area covered by Soil and Land Use Plans using SIGG data	Project area (in hectares) with soil and land use plans in place, as a percentage of total project area (in hectares).	Annual		M&E system (new subproject modules i) community, ii) municipal operating and modules iii) improved management	

				reports and iv) integrated operational programming module to new improved modules)	
Funded partnerships and communities whose representatives provide timely accounting to their members	Report of alerts of partnerships and community subprojects of discharges approved by the beneficiaries and the project			Percentage of partnerships and community subprojects that conclude their investments and their representatives report to the beneficiaries	
Complaints answered following the rules stipulated for response times	Accounting of claims and responses made	Annual		Standard response time should not exceed 30 days from the date when the complaint is received. This indicator is calculated by counting the total number of complaints answered by the Project during the first 30 days through the interaction module with the beneficiaries of the Information System Project, divided by the total number of complaints received. This is multiplied by	

				100.	
Beneficiaries who express satisfaction with the agricultural assets and services promoted by the project	Members of participating RCOs and RPOs that express satisfaction with the overall delivery of Project assets and services, measured as a percentage of total members of these organizations. Annual measurement of this indicator will confirm the merit of project implementation and, as needed from feedback, inform adjustments.	Annually	HH Survey	HH Survey	EMPODERAR
Percent of women who express satisfaction with the agricultural assets and services promoted by the project					

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Bolivia
Innovation for Resilient Food Systems

A. Institutional Arrangements

1. The proposed Project will be managed and executed by the Ministry of Rural Development and Land (MDRyT), through EMPODERAR's Unit. EMPODERAR's National Coordinating Unit (the EMPODERAR NCU) will be the Project Implementation Unit and will coordinate, operate, and manage the proposed Project at the central and departmental levels. The EMPODERAR NCU has successfully implemented the ongoing PAR II (2012-present), with consistently satisfactory ratings.

2. The EMPODERAR NCU will consist of a Project Coordinator supported by a technical team including professional, fiduciary, administrative and technical personnel (including procurement, financial, environment and social specialists), with qualifications and terms of employment satisfactory to the Bank, as set forth in the Project Operational Manual. Decentralized departmental operating units (DOUs), which will report to the NCU, will support local-level project implementation. The DOUs will have a departmental operator, business and infrastructure officers, fiduciary analysts, procurement analysts, environmental and social analysts, organizational development analysts, and support staff. The DOUs will be responsible for facilitating the coordination with local and departmental governments to involve them in the activities oriented to the project implementation in each territory.

3. Project Operational Manual: The EMPODERAR NCU would adopt a Project Operational Manual (POM) which would include, *inter alia*: (a) the budgeting, accounting, auditing, reporting, financial, disbursement, procurement, environmental, and social procedures of the Project; (b) the eligibility criteria for the selection of Eligible RCOs, Eligible RPOs, Eligible Departments and Eligible Municipalities and the eligibility criteria and procedures for the selection, approval, carrying out, monitoring and supervision of the each of the three types of Subprojects (including the types of Subprojects that require prior approval of the Bank for implementation); (c) the eligibility criteria for the approval of Community Alliance and Productive Alliance Subprojects; (d) the Excluded Activities; (e) the specific in cash and in-kind counterpart requirements for Eligible RCOS for each type of Community Alliance Subprojects, for Eligible RPOs for Productive Alliances Subprojects and for Eligible Municipalities and Eligible Departments for Complementary Productive Infrastructure; (f) the model form of Subproject Agreements; (g) the ESCP; (h) the organizational structure for implementation of the Project, including the composition, functions and responsibilities of the NCU and the DOUs; and (i) the Project indicators for the monitoring and evaluation of the Project; and such other arrangements and procedures as shall be required for the effective implementation of the Project. Adoption by the Borrower of a Project Operational Manual, satisfactory to the Bank, is a condition of Loan Effectiveness.

B. Executing Entities

4. Rural Community Organizations (RCOs) are any of the grassroots territorial organization with legal standing pursuant to Article 3 of the Borrower's *Decreto Supremo* No. 24447 of December 20, 1996, and a member of a Community Alliance, which meets the eligibility criteria set forth in the POM. RCOs would receive matching grant transfers to implement community alliance subprojects.

5. Community Alliances (CAs) would comprise one or more RCOs, with collaboration from interested local stakeholders (e.g., municipalities, departments, NGOs) seeking to improve their collective food security and, through improved agricultural practices, increase land productivity to generate a marketable surplus.

6. Rural Producer Organizations (RPOs) are legally established organizations which are members a Productive Alliance and meet the eligibility criteria set forth in the POM. RPOs would receive matching grant transfers to implement productive alliance subprojects.

7. Productive Alliances (PAs) are competitiveness clusters consisting of: (a) RPOs; (b) small and medium enterprises; (c) technical service providers, both public and private; (d) financial and academic institutions; and (e) NGOs, all located in the Borrower's territory in "win-win" arrangements. The PAs would identify discrete market opportunities mutually beneficial to their respective constituents, detailed in the form of a Business Plan, which would include a financial feasibility assessment. PAs would also take advantage of value-added processing where viable, ensure compliance with applicable sanitary standards and certification, and facilitate a scale response to verified market demand.

8. Municipalities and Departments are subnational governing entities with legal standing that would propose the complementary productive infrastructure subprojects and make counterpart contributions as set forth in the POM. The EMPODERAR NCU would implement the complementary productive infrastructure subprojects.

9. Subproject Cycle (Community Alliance Subprojects and Productive Alliance Subprojects).[20]

(a) Following a project dissemination campaign to create overall awareness, interested RCOs and RPOs would identify discrete opportunities (alliances) and develop these into subproject proposals, which they submit to the EMPODERAR NCU;

(b) The EMPODERAR NCU assesses the Subproject proposals for eligibility, according to targeting criteria set forth in the POM (e.g., RCO/RPO eligibility); if approved, RCOs/RPOs are authorized to develop Subprojects, with technical service provision as needed and financed under the Project;

(c) The EMPODERAR NCU evaluates Subprojects for compliance with environmental, financial, institutional, social and technical guidelines (per the POM);

(d) Subproject agreements are signed between RCOs/RPOs and the EMPODERAR NCU to support finance via matching grants of the approved Subproject to be implemented by RCOs/RPOs, specifying the use of subproject resources, and the rights and responsibilities of each RCP/RPO;

(e) The EMPODERAR NCU transfers Subproject resources (matching grants) to RCOs/RPOs for Subproject implementation; and

(f) RCOs/RPOs contract goods, works and services, in accordance with the norms established in the POM, and prepare reports which they submit to the EMPODERAR NCU to document the use of project resources transferred.

10. Subproject Cycle (Complementary Productive Infrastructure Subprojects):

(a) Following a project dissemination campaign to create overall awareness, Municipalities/Departments would identify discrete complementary productive infrastructure needed for approved community and productive

[20] RCOs that successfully conclude a Community Alliance subproject can subsequently present proposals for participation in Productive Alliances. The POM will include a strategy for such graduation.

alliances, *inter alia* (bridge construction and rehabilitation, irrigation) and develop these into subproject proposals, which they submit to the EMPODERAR NCU;

(b) The EMPODERAR NCU assesses Subproject proposals for eligibility, according to criteria set forth in the POM; if approved, municipalities/departments are authorized to develop Subprojects, with technical service provision as needed and financed under the Project;

(c) The EMPODERAR NCU evaluates Subprojects for compliance with environmental, financial, institutional, social and technical guidelines (per the POM);

(d) The EMPODERAR NCU signs Subproject agreements with Municipalities/Departments and Municipalities/Departments transfer counterpart contributions to the EMPODERAR NCU for Subproject implementation; and

(e) The EMPODERAR NCU contracts goods, works and services, in accordance with the norms established in the POM, for Subproject implementation.

11. For the purposes of carrying out a Community Alliance Subproject or a Productive Alliance Subproject, each Eligible RCO or Eligible RPO would: (a) provide, promptly as needed, facilities, services and other counterpart resources, necessary or appropriate to carry out the corresponding Subproject; and (b) co-finance part of the cost of the pertinent Subproject in the specific amounts in cash and in-kind specified in the Project Operational Manual. Likewise, under Complementary Productive Infrastructure Subprojects, each Eligible Department or Eligible Municipality would: (a) provide, promptly as needed, facilities, services and other counterpart resources, necessary or appropriate to carry out the corresponding Subproject; and (b) co-finance part of the cost of the pertinent Subproject in the specific amounts in cash and in-kind specified in the Project Operational Manual.

C. Financial Management

12. A Financial Management (FM) Assessment was carried out in accordance with OB/BP 10.00, the FM Manual for World Bank Investment Project Financing, and Bank Guidance Note on FM in Rapid Response to Crises and Emergencies in order to evaluate the adequacy of the EMPODERAR NCU's FM arrangements for the implementation of the Innovation for Resilient Food Systems Project. The EMPODERAR NCU is currently in charge of implementing the ongoing Rural Alliances Project PAR II (P127743).

13. Based on the FM assessment, with mitigation measures in place, the proposed Project will have acceptable project FM and disbursement arrangements and the residual FM risk rating is Moderate. The main FM risks identified under the proposed Project relates to:(a) weaknesses in the public sector to attract and maintain qualified staff with subsequent high staff rotation, which could adversely affect both project preparation and implementation; (b) project design requires disbursement of funds to RCOs and RPOs with limited capacity for subproject implementation; and (c) the payment process for complementary productive infrastructure subprojects (i.e., civil works) and their controls will have to reasonably ensure that the funds have been used for the agreed purposes to minimize the risk of fraud and corruption.

14. Risks will be mitigated through the following actions agreed with the EMPODERAR NCU: (a) Based on the experience from other projects in Bolivia, retaining fiduciary staff is difficult due to high turnover; this risk will be reduced by contracting an independent consultant firm for the selection and the performance evaluation of Project staff. This mechanism will work similarly to that under the ongoing PAR II project and has proven to be effective in retaining qualified Project staff; (b) the EMPODERAR NCU has developed the expertise and has put in place acceptable operational arrangements; the proposed Project will rely widely on these existing arrangements, at

both central and department levels, including the use of the Government of Bolivia's integrated financial management system (SIGEP) and its Treasury Single Account (TSA) for disbursement processing; (c) Information systems should adequately record and monitor the physical and financial progress of subprojects. To this end, the EMPODERAR NCU will adjust the management information system (SIIG - *Sistema Integrado de Informacion Georeferencial*) to address the proposed Project's needs; (d) the EMPODERAR NCU will review and update the Operational Manual of the ongoing PAR III to include the appropriate additional processes and procedures to adequately respond to proposed Project's demands (i.e., complementary productive infrastructure subprojects), reflecting enhanced arrangements (procedures, and tools); and (e) Project design includes specific arrangements and several tools and mechanism in terms of participation, transparency and accountability at different levels and throughout the subproject cycle, aiming at addressing and mitigating specific fiduciary risks which demonstrated to be effective under the ongoing PAR II, keeping in mind that their effective operation and maintenance throughout the life of the project will continue to depend on the EMPODERAR NCU's ability to maintain qualified and experienced staff. The following sections provide a summary of those arrangements.

15. The overall conclusion of this FM assessment is that, with the mitigating measures in place, the proposed FM arrangements will meet the Bank's minimum fiduciary requirements. This section details the main features of FM arrangements, based on the EMPODERAR NCU's existing capacity and performance.

16. ***Use of Country Public Financial Management (PFM) Systems.*** Like other projects in the Bank's Bolivia portfolio, the proposed Project will be fully integrated and executed through the National Budget, and it will benefit from the use of well-functioning PFM elements including SIGEP and the TSA, supplementing them where needed to ensure that Project needs and risks are adequately addressed, mainly as they relate to internal controls, financial reporting, and auditing. Within this framework, the following sections describe some specific arrangements.

17. ***Organizational arrangements and staffing.*** The EMPODERAR NCU's has an administrative and finance team that carries out FM tasks in relation to budgeting, accounting, disbursements, financial reporting, and monitoring of subprojects. At the departmental level, each DOU is staffed with fiduciary specialists (subject to the number of subprojects), whose main function is to provide guidance to subprojects in administrative matters and undertake full responsibility for the review of disbursement requests and presentation of expenditure documentation (*Rendiciones de cuenta*) presented by each subproject. Roles and responsibilities between the NCU and DOU offices, as well as between technical and fiduciary teams are clearly defined. The FM staff have the adequate required qualifications and experience and have also developed the skills needed for this type of project.

18. Terms of reference of all positions will be defined in the POM; any new selection process would follow the Bank's selection and contracting procedures, as they are financed out of the proceeds of the proposed Loan. Following existing practice, recruitment of new staff, as well as periodic evaluation, will be carried out by an external consulting firm. This mechanism has contributed to ensuring the recruitment of qualified staff and to diminishing staff rotation.

19. ***Programming and Budget.*** The preparation of the annual program and budget will follow local regulations established by the Ministry of Economy and Public Finance (MEFP), as well as instructions issued by the Vice ministry of Public Investment and External Finance (VIPFE), as applicable. At the subproject level, the EMPODERAR NCU has in place arrangements and mechanisms to adequately support RCOs and RPOs in the preparation and monitoring of budgets for their respective subprojects and associated tranches. New FM staff will be contracted to prepare and monitor the budgets. The criteria for defining respective tranches will be established in the POM.

20. The Project's budget will be part of the national budget, and its execution will be fully integrated into the country's integrated financial management system (SIGEP). Disbursements will be processed through the SA providing direct bank transfers from the account managed by the NCU to beneficiaries' bank accounts in the financial system. This permits an agile and simple flow of funds without additional and unnecessary layers.

21. ***Accounting – Information systems.*** The EMPODERAR NCU has to comply with the Governmental Accounting Standards. Therefore, the proposed Project would use the Chart of Accounts established by the Accountant General's Office (*Dirección General de Contabilidad Fiscal*). The proposed Project will benefit from the use of SIGEP and the STA (in US dollars and local currency) to process payments, including disbursement to subprojects. From thereon, project execution will be fully integrated into the central government accounting.

22. The use of SIGEP will be complemented with the use of the EMPODERAR NCU's Georeferenced Management Information System (SIGG), a system designed and implemented by the EMPODERAR NCU to allow recording, control, reporting and monitoring of subproject implementation, both at the physical and financial levels, and throughout the subproject cycle. All information is inserted into the SIGG by the project staff and consultants, and then verified by the DOUs and finally, by the National Coordinating Unit (NCU) in order to ensure the quality of data registered and processes in this platform. SIGG is linked to SAS (financial management system), which allows recording of project transactions incurred with all sources of financing (IBRD loan, regional, municipal and subprojects counterparts), and following a more functional classification (component/subcomponent) for further issuance of financial reports and statements of expenditures. As in the ongoing PAR II, the proposed Project's transactions and preparation of financial statements will follow the cash basis of accounting.

23. ***Processes and procedures.*** Overall, the EMPODERAR NCU has to comply with local requirements related to administrative and control systems (SAFCO Law), which are partially integrated into the operation of SIGEP, as they relate to budget preparation and execution. Considering project needs and identified risks, the EMPODERAR NCU has supplemented those administrative and control systems by putting in place specific and detailed processes and procedures, key controls, instruments and monitoring tools for subproject implementation. Those procedures provide for clear roles and responsibilities at National, Department and subprojects level; adequate segregation of duties in terms of authorization; and recording and approval of payments and disbursements. While the project management system (SIGG) provides required information for monitoring purposes, oversight function over DOUs will have to be closely monitored, so that required corrective actions are taken on a timely basis. The operation of the monitoring function will require periodic follow up from the Bank team, to make sure the EMPODERAR NCU is able to act timely and identify systemic issues based on available information.

24. At the subproject level, simplified guidelines have also been developed for RPOs and RCOs, including requirements for record keeping, minimum documentation requirements, and preparation of progress reports (physical and financial). Specific mechanisms to provide subprojects with technical assistance to carry out some administrative tasks will be like the ones applied for the ongoing PAR II. Overall, internal controls and accountability mechanisms for the implementation of subprojects are well established and have functioned well.

25. The EMPODERAR NCU is responsible for ensuring that project proceeds are used only for the intended purposes. To that end, it has put in place and maintains adequate operational arrangements, technical and fiduciary, which include a set of processes, procedures, internal controls, tools, and other mechanisms intended to assure: a) the adequate use of funds; (b) the availability of reliable information for monitoring purposes; and (c) compliance with established mechanisms in case inadequate use of funds is identified.

26. Additionally, the following measures have been defined under the ongoing PAR II and will be continued in the proposed Project:

(a) Roles and responsibilities for the implementation of subprojects are clearly differentiated among the EMPODERAR NCU, DOUs, RCOs and RPOs, providing for an adequate segregation of duties in terms of subproject execution, on-site verification of implementation and tranche approval, approval of new disbursements and processing of disbursements.

(b) Based on assigned roles, key internal controls have been designed and implemented throughout the subproject cycle. Most of these are part of the project management system (SIGG), and therefore ensure adherence and compliance by project staff.

(c) To strengthen its monitoring function over the implementation of subprojects and ROU roles, the EMPODERAR NCU's project management system (SIGG) included an alert-based mechanism that enables project staff to timely identify delays in the implementation of programmed activities.

(d) A strong project management system (SIGG) for the recording, control, processing, follow up and monitoring of subprojects has been put in place, thus ensuring that every single subproject follows the approved and standard processing line throughout the subproject cycle. This allows for the availability of timely and reliable information for monitoring purposes regarding the physical and financial progress of each subproject.

(e) Roles and responsibilities within subprojects are also clearly defined through the establishment and functioning of a Directorate made up of an Administrative Committee and a Monitoring Committee, each with clear functions and responsibilities.

(f) The Administrative Committee of the subproject provides tranche completion reports to all members of the RPOs and RCOs ("*Rendición Pública de cuentas*"), who have to approve the report and the minutes of the meeting, including the observations and responses raised. Once approved, Project staff carries out an on-site verification of proper activity completion.

27. Oversight and participation, project design and the transparency and accountability mechanisms promote and enable wide participation of project beneficiaries throughout subproject cycle:

(a) Subproject ownership is reinforced by the counterpart contributions required from RCOs, RPOs and sub-national governments. This has become a strong incentive for the members to demand sound project management, clear internal controls, and accountability arrangements from the leadership of the organization.

(b) The use of physical and financial information for accountability purposes through the "*rendición de cuentas*" has also strengthened the importance and usefulness of the financial information (although in simple formats). It is used for participatory financial evaluation and decision-making purposes as it relates to the use of the funds and the results of their small investments.

28. **Financial reporting**. As it is done under the ongoing PAR II, the interim financial reports (IFRs) will be issued from the existing financial system (SAS). IFRs will include: (a) sources and uses of funds, reconciling items, and cash balances, with expenditures classified by project component; (b) a statement of investments, classified by project component/subcomponent and Loan category, reporting the current semester and the accumulated operations against ongoing plans, as well as footnotes explaining the important variances; and (c) a Subproject Statement which shows amount disbursed, documented and outstanding balances, classified by age, to allow for timely

monitoring. The IFRs would include Loan proceeds, and local funds (municipalities/departments, RCO/RPO counterpart contributions) as well as in-kind counterpart contributions. The IFRs would be prepared and submitted to the Bank on a semiannual basis no later than 45 days after the end of each calendar semester. The IFRs would be prepared in local currency and US dollars. On an annual basis, the EMPODERAR NCU will also prepare project financial statements including cumulative figures, for the year and as of the end of the fiscal year (December 31).

29. **Audit**. Annual audit reports on project financial statements, including the management letter, should be submitted to the Bank, within six months of the end of the Borrower's fiscal year (December 31). The audit should be conducted by an independent private audit firm acceptable to the Bank and under terms of reference approved by the Bank. Audit costs would be financed out of the Loan proceeds and selection would follow standard Bank procedures. The scope of the audit would be defined by the EMPODERAR NCU in agreement with the Bank, based on project specific requirements and responding as appropriate to identified risks, including review of compliance with agreed processes and procedures, as well as on-site revision of a sample of subprojects. Audit TOR will specifically require that the internal control report clearly identifies the issues related to the EMPODERAR NCU (and DOUs) and the issues related to subproject responsibilities. Audit requirements would include the following:

Audit Report	Due date
Project financial statements	June 30
Management Letter	June 30

30. In accordance with WBG's Access to Information Policy, the audited annual financial statements will be made publicly available through the EMPODERAR website.

31. **Supervision Plan:** The WBG plans to perform at least two supervision missions per year to the extent possible while also reviewing the annual audit reports and the IFRs.

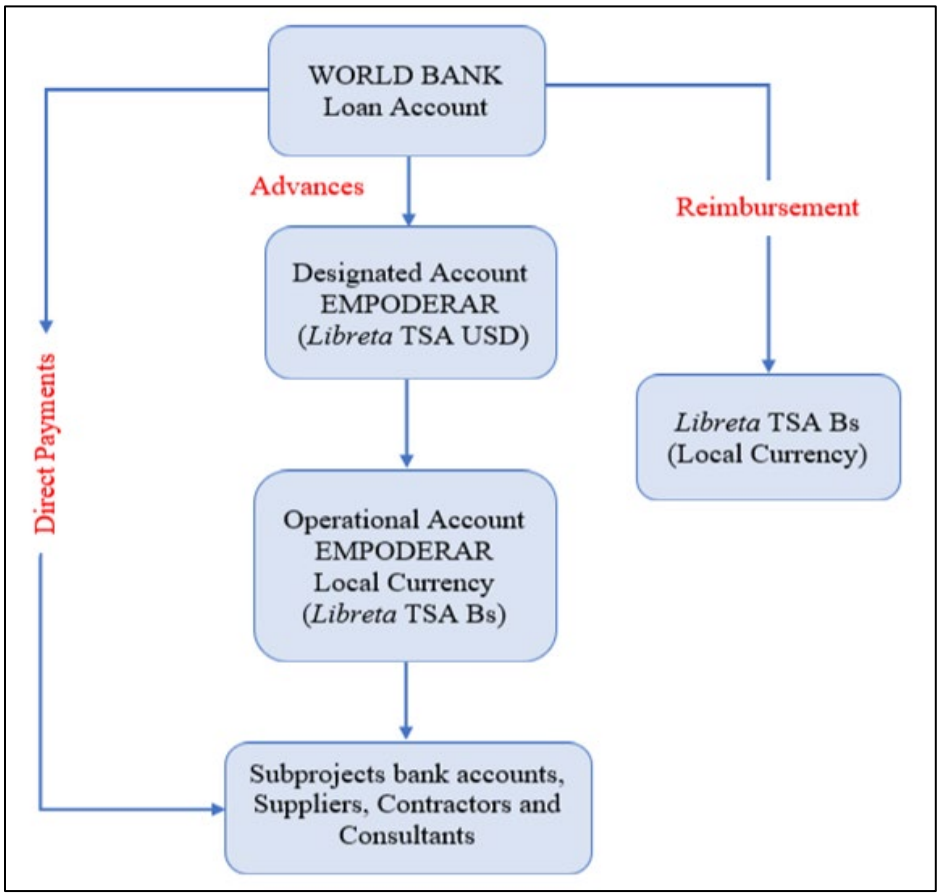
32. **Disbursements.** Following the general practice of the current portfolio, the following disbursement methods may be used to withdraw funds from the proposed Loan: (a) reimbursement, (b) advance, and (c) direct payment. Under the advance method, and to facilitate project implementation, a Designated Account (DA) in US dollars would be opened and maintained by the EMPODERAR NCU. Funds deposited into the DA as advances would follow Bank disbursement policies and procedures, as described in the Financing Agreement and in the Disbursement and Financial Information Letter (DFIL).

33. In keeping with current arrangements established by the Vice ministry of Treasury and Public Credit for the operation and use of a Treasury Single Account (TSA) in US dollars, the DA would be opened and maintained as a separate *Libreta* within the TSA in US dollar. Following the existing treasury arrangements, funds from TSA in US dollars will be periodically transferred to TSA in Bolivianos into a separate *Libreta* under the project name, from which all payments and disbursements to beneficiaries' bank accounts will be processed (See flow chart below).

34. The ceiling for advances to be made into the DA would be variable and will require the submission of a three-month forecast for project expenditures following the sample format which will be included as attachment in the DFIL. Documentation of eligible expenditures paid out of the DA is expected to be on a quarterly basis. The supporting documentation requirements to document project expenditures, as well as the minimum value for direct payments and reimbursements will be defined in the DFIL. For Subprojects, a customized SOE will be used, which is already automatically prepared from the information system SAS.

35. Disbursements to community alliance and productive alliance subprojects will be made in tranches on a lump sum basis, as defined in the Subproject Agreement to be entered into between the EMPODERAR NCU and

each RCO or RPO, as the case may be needed. Each community alliance and productive alliance subproject will contain assessed cost estimates per tranche, and a defined set of outcomes or delivery of end products. Disbursements will be made in two or more tranches, and they are expected to be processed as transfers from the Project's bank account (Libreta, TSA). Detailed funds flow arrangements for Subprojects, as well as requirements for community alliance and productive alliance subprojects to open bank accounts in the authorized financial system and be registered as SIGEP beneficiaries will be reflected in the POM. Fund flow mechanisms for participating municipalities/departments to provide their contributions under the complementary productive infrastructure subprojects will also be defined. The overall funds flow of the project is diagrammed below:



Loan proceeds will be disbursed against the following expenditure categories:

Category	Amount of the Loan Allocated (expressed in US$)[21]	Percentage of Expenditures to be financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consulting services and Training under Part 1 and Part 2 of the Project	24,618,300	100%
(2) Grants for Subprojects under: (a) Part 2(a) of the Project; and (b) Part 2(b) of the Project	 81,216,450 81,196,500	 100% disbursed by the Borrower under a Subproject Agreement
(3) Goods, works, non-consulting services, and consulting services for Subprojects under Part 2 (c) of the Project	86,782,500	100%
(4) Goods, works, consulting services, non-consulting services, Project Financial Audits and Operating Costs under Part 3 of the Project	25,436,250	100%
(5) Front-end Fee	750,000	Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07(b) of the General Conditions
(6) Interest Rate Cap or Interest Rate Collar premium	0	Amount due pursuant to Section 2.07 (c) of the General Conditions
TOTAL AMOUNT	300,000,000	

36. Disbursement Condition: No withdrawal shall be made under Categories 2(a), 2(b) and 3 until the ESMF, Resettlement Policy Framework, and Labor Management Procedures have been approved by the Bank and adopted and disclosed by the Borrower, and the Stakeholder Engagement Plan has been updated in form and substance satisfactory to the Bank and adopted and disclosed by the Borrower.

37. Procurement. Procurement activities will be undertaken by the EMPODERAR NCU staff, except for the Community Alliance Subprojects and Productive Alliance Subprojects under Component 2, which will be processed by the RCOs and RPOs with the support of the EMPODERAR NCU, an application may be developed like SOL[22] to simplify procurement. A capacity assessment of the EMPODERAR NCU reviewed the organizational structures, and the relationship between the procurement, technical, administrative, and financial units. The EMPODERAR NCU has experience in Bank-financed projects, the procurement staff in charge of the project implementation have experience in procurement of Goods, Non-Consulting and Consulting Services; the EMPODERAR NCU procurement

[21] If the Loan is made in more than one Currency Tranche, an additional column for each additional Currency Tranche would be required, so as to set out the amount in each Currency allocated to the particular Categories.

[22] SOL is an online procurement solution successfully implemented by the states of Bahia and Rio Grande do Norte in Brazil https://www.sol-app.net/

staff have limited experience on procurement of works and contract management. The EMPODERAR NCU will hire additional staff in sufficient quantity and with relevant experience in procurement of works and contract management. The selection process and the performance evaluation of the EMPODERAR NCU staff will be conducted by an independent firm selected under competitive processes. The EMPODERAR NCU has a draft Project Procurement Strategy for Development (PPSD) and a Procurement Plan for the first 18 months of Project implementation, which will provide the basis for the procurement methods and market approaches. The Procurement Plan, agreed between the Borrower and the Bank, will be uploaded, and updated in the publicly accessible Systematic Tracking of Exchanges in Procurement, as required to reflect Project implementation needs and improvements in institutional capacity.

38. Environment and Social. The EMPODERAR NCU will hire and maintain environmental and social specialists with qualifications and experience to support the environmental and social risk management. The NCU will include one environmental, health and safety specialist; one social and stakeholder engagement specialist; and one new gender specialist. In each DOU, one operator, one environmental, health and safety analyst; and one social, stakeholder engagement and gender analyst, will be part of the team. At the DOUs, the ten environmental analysts are already part of the EMPODERAR NCU; the 10 new ten social analysts will be hired not later than 60 days after Loan Effectiveness. During the first Bank Implementation Support Mission, in agreement with the Bank, expanding the number of Environmental and ASS specialists and Social and Stakeholder Engagement Specialists will be discussed based on the Project Operational Annual Plan.

ANNEX 2: Economic and Financial Analysis

COUNTRY: Bolivia

Innovation for Resilient Food Systems

A. Summary

1. The results of the economic analysis (including greenhouse gas reduction benefits) show that the overall project would have a positive economic return on investment. The NPV, IRR, B/C, payback period, and Incremental NPV/beneficiary were estimated at US$336.1 million, 20.58 percent, 1.46, 6.9 years, and US$1998, respectively. In disaggregated terms, productive alliance subprojects, community alliance subprojects, and complementary infrastructure subprojects would have positive returns on investment with estimated values for the NPV of US$ 140.1, US$88.5, and US$107.3 million; IRR of 20.17 percent, and 20.12 percent and 21.72 percent; B/C of 1.8, 1.5 and 1.3, and payback period of 6.8, 6.8 and 7.2, respectively.

Identification of the Project costs and benefits

2. The ex-ante cost-benefit analysis considered incremental costs and benefits attributable to the Project, which were identified based on the activities proposed by the Project as well as developments expected to occur in future years, as reflected in the theory of change. The benefit streams taken into consideration by this analysis were the estimated incremental income realized by project beneficiaries as a result of the improved technology adoption, access to productive infrastructure and competitive markets, and new skills acquired by the beneficiaries from participating in training activities. The expected incremental benefits and costs for each investment category are summarized in Table 2.1. The GHG reduction benefits for the economic analysis are quantified in Annex 4.

Table 2.1: Summary of costs and benefits used in ex-ante feasibility analysis

Investment category	Expected benefits/costs
Component 2. Rural alliances (Direct investment)	
2.1 Productive alliance subprojects i) Model 1. BPs with integral financing ii) Model 2. BPs for Technical Assistance iii) Model 3. BPs with access to private sector credits	**Benefits:** **i) With project scenario** Increase in yields: crops and animal productions Expansion of agricultural production: lands and animals Increase in sales of agricultural and livestock products Increase in sales prices: products of agricultural and livestock origin Reduction in harvest and post-harvest losses: crops and animal production Reduction in animal mortality: animal production **ii) Without project scenario** Low productivity of production systems Limited access to competitive markets **Costs:** **i) With project scenario** Increased production costs due to the adoption and maintenance of new technologies **ii) Without project scenario** Low production costs: traditional technologies

2.2 Community alliance subprojects i) Women subprojects ii) Community subprojects	**Benefits:** **i) With project scenario** Increase in yields: crops and animal productions Expansion of agricultural production: agricultural area and animals Increase in sales prices: products of agricultural and livestock origin Reduction in harvest and post-harvest losses: crops and animal production Reduction in animal mortality: animal production **ii) Without project scenario** Low productivity of production systems **Costs:** **i) With project scenario** Increased production costs due to the adoption and maintenance of new technologies **ii) Without project scenario** Low production costs: traditional technologies
2.3 Complementary infrastructure subprojects i) Local roads ii) Local bridges iii) Primary irrigation iv) Telecommunication v) Electricity systems	**Benefits:** **i) With project scenario** Expansion of agricultural production: lands and animals Increase in sales of agricultural and livestock products Increase in sales prices: products of agricultural and livestock origin Reduction in harvest and post-harvest losses: crops and animal production Reduction of transaction costs Increased production capacity **ii) Without project scenario** Low productivity of production systems Limited access to competitive markets High transaction costs **Costs:** **i) With project scenario** Increased production costs due to the adoption and maintenance of new technologies Increased maintenance costs of productive infrastructure **ii) Without project scenario** Low production costs: traditional technologies
Component 1. Capacity Building and Institutional Strengthening, and Component 3. Project Management, Monitoring and Evaluation	
Incremental benefits were not considered for these components, since it is assumed that the activities implemented under these components are aimed at creating the enabling conditions to generate direct benefits on Component 2. Costs associated with the implementation of both components were included in the overall cost-benefit analysis as part of total project costs.	

3. The cost and benefit cash flows were adjusted by the duration of the project implementation and expected project disbursements. Moreover, technology adoption rates were applied to reflect expectations of success for each intervention financed by the project. Several additional benefit streams were not considered: (a) future productivity gains that may be realized by producers and other agricultural value chain actors; (b) positive environmental externalities such as soil erosion reduction and water-saving; and (c) social benefits such as improved nutrition as a result of increased food availability. These additional benefit streams could be significant.

Data sources

4. Ex-ante cost-benefit analysis is based on information from: (a) data collected from PAR's M&E system; (b) PICAR's final evaluation (ex-post EFA analysis); and (c) Information on Bolivia's public investment system.

B. Analytical approach

5. Ex-ante cost-benefit analysis was designed to estimate standard economic and financial indicators including Economic and Financial Net Present Value (ENPV and FNPV) at private and social prices over a 20-year period, Financial and Economic Internal Rates of Return (EIRR and FIRR), Benefit/Cost (B/C) ratio, payback period and

Incremental Net Present Value for each beneficiary (NVP/beneficiary). These indicators were estimated for the: (a) overall Project; (b) subproject typology; and (c) investment categories. Sensitivity and scenario analysis was carried out to explore the likely impacts of possible changes in key variables such as benefits, costs, evaluation period, social discount rates, and GHG reduction emissions.

Assumptions and parameters

6. All cash flows were estimated using nominal prices. The exchange rate for converting from Bolivian currency (Bs) to US dollar was the average value registered in 2022. In the baseline scenario, the cost of capital and the social discount rate were 12.84 and 12.67 percent, respectively. Moreover, the project evaluation period was 20 years. The conversion factor values from private to social prices used for this analysis are presented in Table 2.2.

Table 2.2: Conversion factor from private to social prices

Conversion factor from private to social price	Value
A. Outputs	
Agricultural products	1
B. Inputs - Investment – Operating	
Imported inputs	0.885
National inputs	0.884
C. Labor force - Unskilled (rural areas)	0.47
D. Labor force – semi skilled	0.43
E. Labor force - Skilled	1
F. Shadow exchange ratio	1.24
G. Shadow price of carbon (world bank: conservative scenario) – forecast 2020 to 2050	2022: 42 2041: 64

Source: Bolivian's public investment system

7. Other specific assumptions and parameters were used to estimate the economic and financial indicators (See excel calculation model).

Overall results

8. The estimated values of the economic and financial indicators are presented in Table 2.3 taking into consideration the total Project costs (including governmental and beneficiary counterparts).

Table 2.3: Ex ante cost-benefit analysis – Summary results

Financial indicators				
FNPV (US$ million)	FIRR (percent)	Benefit/Cost Ratio	Payback period (years)	FNPV/beneficiary (US$)
96.7	15.55	1.14	8.2	575
Economic indicators**				
ENPV (US$ million)	EIRR (percent)	Benefit/Cost Ratio	Payback period (years)	ENPV/beneficiary (US$)
336.1	20.58	1.46	6.9	1998

** The results include the valuation of GHG reduction

9. The positive NPVs and IRRs, above the cost of capital and social discount rate, show that, overall, the resources allocated by the Project would be generating positive returns on investment. Without considering the environmental benefit reflected in the reduction of GHG, the Economic NPV and IRR are estimated at US$289.3 million and 19.55 percent, respectively. The investment would have negative results in financial terms if the cost of capital were above 15.6 percent.

10. Considering a scenario of high carbon prices in the future (according to the World Bank forecast), the ENPV and EIRR would increase significantly to US$ 382 million and 21.29 percent respectively. Table 2.4 shows the hypothetical ENPV, FNPV and EIRR changes in responses to variation of social discount rate, cost of capital and exchange rate.

Table 2.4: Ex ante cost-benefit analysis – Hypothetical scenarios

Social discount rate (hypothetical changes)	**ENPV (US$ million)**	
@ 15 percent	203.2	
@ 12.67 percent (base scenario)	336.1	
@ 10 percent	543.6	
@ 8 percent	752.8	
Evaluation period	**FIRR (percent)**	**EIRR (percent)**
20 years	15.55	20.58
15 years	13.52	19.07
10 years	6.65	13.35

11. Sensitivity analysis was carried out to determine the robustness of above-presented results under a range of hypothetical changes of key variables. Table 2.5 shows the different EIRR values.

Table 2.5: Sensitivity analysis

Parameter	EIRR values (percent)						
	-20%	**-10%**	**-5%**	**0%**	**5%**	**10%**	**20%**
Producer revenues	15.99	18.43	19.54	**20.58**	21.56	22.48	24.19
Production costs	22.87	21.71	21.14	**20.58**	20.02	19.48	18.14
Carbon price	20.38	20.48	20.53	**20.58**	20.63	20.68	20.78

12. Despite a moderately pessimistic scenario, in terms of interest rate increases, the project would have positive returns on investment in economic terms. In addition, the sensitivity analysis reveals that the EIRRs are more sensitive to changes in producer revenues, and production costs, but less sensitive to changes in carbon prices.

Disaggregated results

13. Table 2.6 shows the main economic and financial indicators for each subproject typology for 20-year evaluation period, 12.81, and 12.67 percent of the cost of capital and social discount rate, respectively.

Table 2.6: Ex ante cost-benefit analysis – subproject typology

Subproject typology	FNPV (US$ million)	FIRR (%)	B/C	Payback period (year)	FNPV/beneficiary (US$)
Productive alliance subprojects	67.7	17.30	1.40	7.5	1,736
Community alliance subprojects	5.4	13.36	1.03	8.7	73
Complementary infrastructure subprojects	23.6	15.09	1.07	8.7	429
Subproject typology[a]	**ENPV (US$ million)**	**EIRR (%)**	**B/C**	**Payback period (year)**	**ENPV/beneficiary (US$)**
Productive alliance subprojects	140.1	20.17	1.8	6.8	3,592
Community alliance subprojects	88.5	20.10	1.5	6.8	1,197
Complementary infrastructure subprojects	107.3	21.72	1.3	7.2	1.947

[a] The results include the valuation of GHG reduction

14. In economic terms, the complementary productive infrastructure subprojects and productive alliance subprojects would have the higher financial returns on investment.

Conclusion

15. The overall project investment would generate positive returns, in both financial and economic terms. The estimated FIRR exceeds the cost of capital, and the estimated EIRR exceeds the social discount rate used for this analysis considering 20-year evaluation period.

16. The project investment for each investment typology would generate positive returns, in both financial and economic terms.

ANNEX 3: Green House Gases (GHG) Accounting

COUNTRY: Bolivia
Innovation for Resilient Food Systems

A. Background and Methodology

1. The proposed Project aims to contribute to adopting climate-smart approaches and increasing market access for project beneficiaries in selected agri-food systems and value chains. The total project cost is estimated at US$351.2 million. The project will include three components (C): (C1) Institutional Strengthening; (C2) Support to Community and Productive Alliances; and (C3) Project Management. The following carbon balance focuses on Component 2, which concentrates the actions directly related to GHG emissions.

2. **In concordance with the World Bank corporate mandate to conduct greenhouse gas (GHG) emissions accounting for investment lending, the preparation process included an ex-ante quantification of GHG emissions.** It is an essential first step in managing and ultimately reducing GHG emissions. For this process, the Ex-Ante Carbon-balance version 9.3.2 Tool (EX-ACT) was used, as developed by the Food and Agriculture Organization of the United Nations (FAO) in 2010. This tool enabled an assessment of the Project's GHG emissions and carbon sequestration activities.

3. **EX-ACT allowed an ex-ante assessment of the Project's net carbon balance**, defined as the net balance of CO_2 equivalent GHG that would be emitted or sequestered as a result of project implementation compared to a 'without project' scenario. EX-ACT estimations, the carbon stock changes (emissions or sinks), were expressed in **equivalent tons of CO_2 per Ha and year.**

4. The ex-ante GHG analysis considered the information sources available at the project design stage and the pre-selected models and subprojects to be financed during implementation. Since subprojects were at different degrees of development (feasibility, pre-feasibility, profile), some assumptions and data would change during the project implementation. For this reason, a new GHG analysis will be performed in the implementation phase, which will allow adjusting the data and assumptions of the GHG assessment.

Application of EX-ACT within the Project's boundaries

5. **The greenhouse gas accounting was carried out, considering the project's boundaries.** The Project will offer demand-led support to strengthen productive alliance subprojects, including physical works, goods, materials, training, and technical assistance. In addition, the community alliance subprojects would include vulnerability-reducing and food security-enhancing investment and complementary productive infrastructure subprojects would support local roads, bridges, irrigation infrastructure, telecommunication infrastructure and electricity connection initiatives. However, these last two types of subprojects were not included in the carbon balance because there is not sufficient and reliable information to support the analysis.

6. From the methodological perspective, the GHG Analysis contemplated the use of three models and the subproject typologies defined in the Economic and Financial Analysis. Given the PDO, more than 3,700 subprojects will be designed and approved based on the application of eligibility criteria and climate-smart technologies and practices contributing to GHG mitigation while also increasing beneficiaries' climate resilience. The Project seeks to maximize the climate co-benefits of investments financed**.**

7. **Under Component 1,** the Project will offer institutional Support, including communication campaigns, institutional strengthening, and capacity building for suppliers and local governments and the productive alliance's preparation and evaluation. These investments are not considered in the GHG analysis.

8. **Under Component 2,** the Project will support three types of subprojects: (a) **Community alliance subprojects**; (b) **productive alliance subprojects**; and (c) **complementary productive infrastructure subprojects**. The subprojects will be assessed according to eligibility criteria, considering the achievement of climate co-benefits as a priority, which will be well defined as part of the POM. Component 2 will contribute to improving net carbon balances via investments oriented to rehabilitating degraded land, as well as the use of climate-smart practices and technologies that promote the reduction of intensive plowing of soils and accumulation of carbon in the soil. In addition, the Project will support appropriate natural resource management to avoid the degradation of natural pastures, including good management of grazing areas and good raising practices of livestock. Component 2 will support investments to increase water use efficiency through irrigation and adequate training and technical assistance for improved management of agricultural inputs such as fertilizers and pesticides. All this analysis is preliminary as each investment subproject in the pipeline is at a different design stage. Therefore, the design team contemplates performing a new analysis once the Project is underway. Table 3.1 presents the subprojects considered in the EFA and GHG analysis.

Table 3.1 - List of Subprojects in the Pipeline Considered for the GHG Analysis

	Type of subproject	Number
1. Productive alliance		**1300**
Model 1	Fruit trees	297
	Vegetables	143
	Grains, cereals	66
	Tubers	187
	Legumes	11
	Meat	264
	Milk	33
	Beekeeping	44
	Fish farming	11
	Cocoa and coffee)	33
	Eggs	11
Model 2	Fruit trees	28
	Vegetables	13
	Grains, cereals	6
	Tubers	17
	Legumes	1
	Meat	24
	Milk	3
	Beekeeping	4
	Fish farming	1
	Cocoa and coffee	3
Model 3	Fruits	20
	Cocoa and coffee	30
	Meat	30

	Milk	20
2. Community Alliance		**2200**
Community projects	Improved irrigation	770
	Collection/processing center	110
	Soil conservation	55
	Water micro-storage	110
	Renewable Energy	55
Women's subprojects	Agri-film/Greenhouses	110
	Living Fences	528
	Poultry houses	132
	Livestock sheds	44
	Crop storage	154
	Milking rooms	44
	Rainwater harvesting	88
3. Complementary Productive Infrastructure		**231**
III.a Local roads		57
III.b Local bridges		116
III.c Primary Irrigation Infrastructure		58

9. **Climate adaptation and mitigation**. Subprojects (Community Alliance, Productive Alliance, Complementary Productive Infrastructure) are expected to increase the adoption of climate-smart technologies and natural resource management practices, thereby reducing GHG emissions of the Project and promoting climate resilience by addressing vulnerabilities in the agricultural sector, including those related to droughts and pests. Examples of technologies and practices that would be supported under Subprojects include (see Table 3.2):

    a. Silvopastoralism, sustainable pasture management, climate-resilient fodder production, and improved livestock management (health, feeding).

    b. Soil and watershed management practices that reduce erosion and limit evapotranspiration.

    c. Efficient water-use techniques, including farmer-led, small-scale irrigation systems to increase the resilience of rainfed agriculture; water harvesting and water storage; construction and collective management of small-scale irrigation and drainage systems.

    d. Use of seed varieties that are more suited to climate change and climate variability (e.g., drought resistant, less water-use).

    e. Land management practices to rehabilitate degraded areas for crop production.

    f. On-farm irrigation technologies (drip/sprinkler) to increase water productivity and savings.

    g. Low-cost, energy-efficient renewable energy pumping systems.

    h. Biodigesters (with livestock manure) and facilities for composting crop residues).

    i. Reduced fossil fuel use in power generation.

    j. Climate-resilient, energy-efficient infrastructure: warehouses, post-harvest storage, cold chain.

k. Energy-efficient, resilient transport, logistics infrastructure and machinery.

l. Sale of seed varieties more resistant to climate change and variability).

Table 3.2: Project-supported Climate adaptation and mitigation activities

Component Activities	Adaptation/Mitigation Actions
Component 1: Capacity-building and Institutional Strengthening	
• Carrying out of a communication and dissemination strategy to maximize participation in the Project by RCOs, RPOs, Departments and Municipalities, vulnerable groups such as indigenous peoples, women, and youth, and other stakeholders. • Formation of new and strengthening of existing RCOs and RPOs. • Support through dialogue among the Borrower's agencies to generate policy options to expand and deepen food security.	• *Adaptation:* Technical assistance to the EMPODERAR NCU and DOUs in Project dissemination to and organization of RCOs and RPOs, Departments and Municipalities on climate-smart agriculture (CSA) and general climate adaptation principles o Specific focus on smallest agri-food economic units, most susceptible to climate change; o Awareness raising of risks from CC&CV climate change risks or and/or benefits of adaptation
• Capacity-building and skill development for the NCU, DOUs, technical service providers, RCOs, RPOs, Departments and Municipalities and other stakeholders to prepare for participation in Subprojects.	• *Adaptation:* Technical assistance and training to the EMPODERAR NCU and DOUs in their work with RCOs, RPOs, Departments and Municipalities to include climate-resilient, resource-efficient, and energy-efficient investments (including use of renewable energy, whenever possible) in Subproject proposals. • *Adaptation:* Support the EMPODERAR NCU and DOUs to incorporate CC&CV into extension services at the Department and Municipal levels. • *Mitigation:* Technical assistance and training to the EMPODERAR NCU and DOUs in their work with RCOs, RPOs, Departments and Municipalities to: o Develop, test and introduce practices or techniques that reduce GHG emissions and sequester CO_2 in crop production systems, animal husbandry systems, forest management systems and aquaculture management systems; o Promote adoption of sustainable land and water management that addresses land degradation and agroecological conditions; o Promote sustainable grassland management
• Provision of technical assistance for the preparation, evaluation and implementation of Subprojects.	• *Adaptation:* the EMPODERAR NCU to carry out climate vulnerability analysis and risk assessment of community alliance, productive alliance, and complementary productive infrastructure Subprojects • *Adaptation:* the EMPODERAR NCU to include specific CC&CV adaptation parameters in the evaluation of community alliance, productive alliance and complementary productive infrastructure Subprojects
Component 2: Support to Community and Productive Alliances	
• Carrying out of Community Alliance Subprojects aimed primarily to reduce the vulnerability of Eligible Community Alliances to both acute and chronic food insecurity and consisting of small-scale investments in, inter alia, water and irrigation, extension services, food security and nutrition enhancement activities, and vulnerability-reduction	• *Adaptation:* the EMPODERAR NCU to define incentives (as given the Project Operational Manual) for RCOs to include and adopt: sustainable, CSA practices for adaptation to CC&CV; and climate-resilient, resource-efficient and energy-efficient investments (including use of renewable energy) whenever possible, in Community Alliance Subprojects • *Adaptation:* the EMPODERAR NCU to provide technical assistance on climate-smart and energy- and resource-efficient technologies and infrastructure implemented by RCOs under Community Alliance

Table 3.2: Project-supported Climate adaptation and mitigation activities

Component Activities	Adaptation/Mitigation Actions
actions, including the technical assistance, on-farm technology and management upskilling required for their implementation.	Subprojects • *Adaptation:* RCOs, under Community Alliance Subprojects: to recover degraded areas for crop production through innovative CSA management practices; and introduce or expand soil management practices that control soil erosion, nutrient loss and improve the water regime in the soil profile (e.g., minimum tillage).
• Carrying out of Productive Alliance Subprojects aimed at achieving the Project objectives and consisting of, inter alia: (i) fixed capital investments such as plant and equipment, and minor small-scale irrigation infrastructure; (ii) working capital; and (iii) technical assistance to increase domestic agricultural production and productivity, and food availability in local markets.	• *Adaptation:* the EMPODERAR NCU to define incentives (as given the Project Operational Manual) for RPOs to adopt: sustainable, CSA practices for adaptation to CC&CV; and climate-resilient, resource-efficient and energy-efficient investments (including use of renewable energy) whenever possible, in Productive Alliance Subprojects • *Adaptation:* the EMPODERAR NCU to provide technical assistance on CSA and energy- and resource-efficient technologies and infrastructure implemented by RPOs under Productive Alliance Subprojects • *Mitigation*: RPOs, under Productive Alliance Subprojects, to switch to: soil management techniques that reduce GHG emissions or increase carbon sequestration; and to less water intensive crops. • *Mitigation*: RPOs under Productive Alliance Subprojects to: introduce or expand water pumping for irrigation using renewable energy sources; replace existing water pumps with more energy efficient pumps; introduce improved manure management and methane capture in animal husbandry; and intensify or expand farm production using techniques that reduce GHG emissions or increase carbon sequestration • *Adaptation:* RPOs, under Productive Alliance Subprojects: recover degraded areas for crop production through innovative CSA management practices; introduce or expand soil management practices that control soil erosion, nutrient loss and improve the water regime in the soil profile (e.g., minimum tillage); construct dams and water storage systems to manage changes in the water cycle due to CC&CV; incorporate risks from CC&CV in irrigation/water management planning; and Change management practices or techniques to reduce vulnerability to CC&CV in animal health service, pasture management, fodder production and storage practices.

• Carrying out of Complementary Productive Infrastructure Subprojects consisting of public infrastructure investments in Eligible Departments and Eligible Municipalities as required to achieve the objectives of the Community Alliance Subprojects and Productive Alliance Subprojects.	• *Adaptation:* the EMPODERAR NCU to define incentives (as given the Project Operational Manual) for Departments and Municipalities to include and adopt:
	  ○ sustainable, CSA practices for adaptation to CC&CV; and
	  ○ climate-resilient, resource-efficient and energy-efficient investments (including use of renewable energy) whenever possible, in Complementary Productive Infrastructure Subprojects
	• *Adaptation:* the EMPODERAR NCU to provide technical assistance to Departments and Municipalities to include climate-smart and energy- and resource-efficient design under Complementary Productive Infrastructure Subprojects

Component 3: Project Management	
Provision of equipment, consulting services, non-consulting services, and financing of Operating Costs to support the management, supervision, and monitoring of Project	• *Adaptation:* the EMPODERAR NCU to contract studies/assessments related to modern, climate-smart, and sustainable agricultural transformation toward improved resource efficiency and climate resilience

Table 3.2: Project-supported Climate adaptation and mitigation activities

Component Activities	Adaptation/Mitigation Actions
implementation and results, including, *inter alia*, staffing and necessary installations for the NCU and the DOUs, and Project Financial Audits and technical studies in subjects proposed by the Borrower, through MDRyT, and agreed to by the Bank.	• *Adaptation:* Improved monitoring and follow-up by the EMPODERAR NCU of CSA practices through use of SIGG (M&E) data

10. **Under Component 3,** the Project will finance goods, works, consultant services, non-consultant services, project audits, and incremental operating costs. These investments are not considered in this GHG analysis.

Main Analysis Assumptions

11. **Project Investments** seek to promote rural development and achieve the most significant net GHG mitigation potential. This analysis considers the following assumptions with implications for GHG fluxes:

(a) The timeframe for project implementation is 5 years, and the capitalization phase is 15 years; thus, the analysis period is set for 20 years.
(b) It is estimated that most subprojects (between 70 and 80 percent) will be located in the Andean and inter-Andean valley areas. Consequently, a climate that tends to be cool, temperate, and dry was defined. The dominant soil type is low activity clay soil. However, it should be kept in mind that this is an ex-ante exercise of a project that will support the implementation of hundreds of projects throughout the country (including the tropical plains of the country); and that at this design stage, the precise geographic location of each of them is not known. This implies that when repeating the present analysis, as part of the implementation phase, multiple and parallel GHG calculations will be prepared to consider the particular climatic, moisture, and soil type characteristics of each climate region of Bolivia.
(c) "Tier 1" data values were used considering the time limitations and access to information via remote. This means that default coefficients for the EX-ACT estimation were used. The construction of 'without project' and 'with project' trajectories was based on average technical references taken from previous EMPODERAR projects, several subproject proposals, as well as experts' opinions from the EMPODERAR NCU, WB, and FAO.
(d) The likely trends of inputs utilization (fertilizers and pesticides), energy consumption, and construction of new infrastructure were based on the changes in the scale of production while considering technical guidelines and improvements from climate-resilient technologies and practices and integrated pest and crop management.
(e) The transition from business as usual to climate-smart production systems and subprojects, the approximate area (ha) and dynamics (initial, 'without project'; and 'with project') of diverse land uses are detailed in an EX-ACT Excel and EFA files, available in project documents.

Inputs for the analysis

12. **As stated above, the primary source of data used to carry out the GHG analysis was the information used for the Economic and Financial Analysis, as well as technical inputs prepared mainly by the EMPODERAR NCU.** These inputs provide, inter alia, a detailed assessment of the technical approaches of the subprojects that the project will support. Table 3.3 below summarizes the primary data used for the analysis. More details on the estimates are available in the EX-ACT Excel file included as part of the Project documents.

Table 3.3 – Summary of input data and specific assumptions for GHG accounting

Direct contributions		Description
Land Use Changes	Area to be incorporated into production after rehabilitating degraded land	Subprojects will imply a land-use change of annual and perennial crops converted from non-forest land use (currently degraded land) to annual cropland (2.532 ha) and agroforestry systems (1.960). It is estimated that around subprojects will regenerate and implement climate smart agriculture (CSA) in approximately 4.492 Ha.
Cropland	Annual cropping systems remaining annual systems	Agricultural subprojects will implement climate smart practices and technologies to improve agroecosystems resilience and mitigate GHG emissions. A conservative estimate was assumed based on the subprojects lists, which will generate direct positive impacts on at least 20.765 Ha. The Exact-tool basic frame for accounting for the improved agricultural technologies and practices for annual crop production includes improved agronomic practices, nutrient management, reduced tillage, crop residue retention, the input of organic material as well as water management.
	Perennial systems remaining perennial systems	Subprojects will promote the adoption of climate smart practices and technologies in at least 14.914 ha of perennial crops. These subprojects will implement CSA options such as no or reduced tillage, agroforestry systems, the use of manure as soil fertilizer, and other practices that allow the accumulation of carbon in the agricultural soil.
Grassland and management	Grassland systems remaining grassland systems	The GHG analysis considered the implementation of climate smart management and environmental Co-Benefits of at least 70.693 Ha of grasslands. This area is the result of the sum of the subprojects that would promote climate-smart livestock production, including cattle, sheep and llama production systems. The analysis reflects the positive changes in grasslands due to improvements in grassland management, which start from a baseline scenario of severely degraded pastures (implying major long-term loss of productivity and vegetation cover, due to severe mechanical damage to the vegetation and/or severe soil erosion), and would move to a "with project scenario" of improved grasslands (representing sustainably managed grasslands with light to moderate grazing pressure, or cutting and removal of vegetation, and that receive at least one improvement, for example, fertilization, species improvement, irrigation, etc.).
	Livestock and manure management	The GHG analysis considered the evolution of the livestock herds: beef cattle (84.627 heads), dairy cattle (37.729 heads), swine (56.368 heads), sheep (106.356 heads), llama (43.624 heads), chicken (235.119 heads), and hen (199.122 heads). All these production systems are linked to the different types of subprojects and include climate smart livestock management options (for example, no fire or deforestation), and expansion of herds in percentage values fluctuating between 0 to 50%, depending on each model and type of subproject. Additional information can be found in the EX-ACT and EFA analysis Excel files.
Forest	Forest degradation and management	Subprojects, specifically those related to beekeeping, would have a positive effect on the conservation of surrounding natural forest areas, which are rich in honey flora. Honey producers will manage more than 114.822 bee colonies and will promote appropriate forest management, preventing its degradation and fire. A conservative approach estimates climate co-benefits that will cover at least 11.482 ha of forest ecosystems. This assumption is based on a current scenario of low degradation forest systems that would experience a slight improvement to very low degradation due to the conservation activities and sustainable forest management.
Aquaculture	Inland aquaculture	The GHG analysis considered all subprojects that will support aquaculture production, which implies gas emissions from production and feeding. The study took Pacú as the most relevant species, estimating a total production of 389 t/year, starting from the current scenario of 228 t/year.

Inputs	Liming, fertilizers, pesticides	The GHG analysis took into account all the subprojects related to the production of annual and perennial crops imply the adoption of climate-smart practices, which also integrate the sustainable management of soil nutrients and pests, resulting in higher yields and lower GHG emissions, in the case of agricultural inputs like pesticides, herbicides, and insecticides. Subprojects would include technical support to ensure more efficient use of agricultural inputs and application of alternative methods to meet plant nutrient demands and reduce the need for synthetic agrochemicals (e.g. by the production/use of compost, manure, natural and biofertilizers, etc.). The total needs (tons per year) of inputs like fertilizers (lime, urea, other N-fertilizers, phosphorus and potassium), were calculated based on data collected for EMPODERAR technical team. To calculate the need for fertilizers, this analysis took as reference the average nutrient requirements of 18 representative crops. To calculate the use of agrochemicals, their dose per Ha, and their concentration, this analysis used a list of more than 160 commercial products that have been previously used by farmers who benefit from the projects implemented by EMPODERAR. The project emission balance also considered that the use of pesticides (insecticides, fungicides) and herbicides will be reduced by 20% compared with the current average range.
	Energy Consumption	The GHG analysis considers savings for farmers, who would be able to reduce the travel time (2 hours less) to urban centers to sell their products. There would be a reduction in GHG emissions due to less consumption of mobile - motor Gasoline from a current scenario of 325 m^3/year to a project scenario of 195 m^3/year.
	Irrigation	The GHG analysis includes improvements resulting from subprojects that promote the modernization of several existing irrigation schemes, and the use of more efficient irrigation technology. It is expected that the project will benefit 20.063 ha that will contain improvements in irrigation methods (the use of sprinklers) for annual crops and perennials.
	Buildings & Roads	Overall, this balance includes an estimate of 26.224 m^2 of agricultural buildings (collection/processing centers, milking rooms, poultry houses); 11.264 m^2 of warehouses and storage infrastructure (crop storage, greenhouses, livestock sheds); and 11.416.276 m^2 of roads and bridges would be rehabilitated (173 subprojects).

B. Results

13. **The project would result in a net reduction in GHG emissions.** The estimated net carbon balance resulting from GHGs emitted or sequestered/reduced during the project implementation and capitalization period (20 years) will bring a mitigation benefit of **-156.164** tCO_2e/year compared to a business-as-usual baseline scenario. This is equivalent to annually reduced GHG emissions of (-) **1.3** tCO_2e per Ha. After 20 years, GHG mitigation benefits would be generated to a reduction of **(-) 3.121.044** tCO2e. The main results of this GHG analysis are summarized in Table 3.4.

Table 3.4 - Results of the ex-ante GHG analysis in tCO_2eq[23]

Project name	Programa de Alianzas Rurales PAR III						
Continent	South America	**Project duration (in years)**		**Total area (ha)**	117.855	**Global warming potential**	
Country	Bolivia	Implementation	5	Mineral soil	117.855	CO_2	1
Climate	Cool Temperate	Capitalization	15	Organic soil	0	CH_4	34
Moisture	Dry	Period analysis	20	Waterbodies	0	N_2O	298

GROSS FLUXES

In tCO_2-e over the whole period analysis

PROJECT COMPONENTS		WITHOUT	WITH	BALANCE
Land use changes	Deforestation	0	0	0
	Afforestation	0	0	0
	Other land-use	0	-236.110	-236.110
Cropland	Annual	626.661	-45.955	-672.615
	Perennial	-578.352	-1.029.918	-451.566
	Flooded rice	0	0	0
Grasslands & Livestock	Grasslands	-173.201	-3.293.233	-3.120.032
	Livestock	4.724.922	5.775.395	1.050.473
Forest mngt.		0	-431.309	-431.309
Inland wetlands		0	0	0
Coastal wetlands		0	0	0
Fisheries and aquaculture		3.609	5.839	2.230
Inputs & Invest.		830.152	1.568.038	737.886
Total emissions, tCO_2-e		**5.433.791**	**2.312.747**	**-3.121.044**
Total emissions, tCO_2-e/ha		**46,1**	**19,6**	**-26,5**
Total emissions, tCO_2-e/ha/yr		**2,3**	**1,0**	**-1,3**

+ = Source / - = Sink
Results presented here include GHG fluxes on mineral and organic soils
See further down for detailed results on organic soils
* Includes fisheries, acquaculture and inputs & investments that are not included in the AFOLU definition.

SHARE PER GHG OF THE BALANCE

In tCO_2-e over the whole period analysis

CO_2 BIOMASS	CO_2 SOIL	N_2O	CH_4	ALL NON-AFOLU EMISSIONS*
0	0	0	0	
0	0	0	0	
-37.225	-198.884	0	0	
0	-685.775	13.160	0	
-112.887	-325.537	-13.143	0	
0	0	0	0	
0	-3.120.032	0	0	
		42.720	1.007.753	
-431.309	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	2.230	0	0
	32.220	159.477		546.189
-581.421	**-4.298.009**	**204.443**	**1.007.753**	**546.189**
-4,9	**-36,5**	**1,7**	**8,6**	**4,6**
-0,2	**-1,8**	**0,1**	**0,4**	**0,2**

AVERAGE ANNUAL EMISSIONS

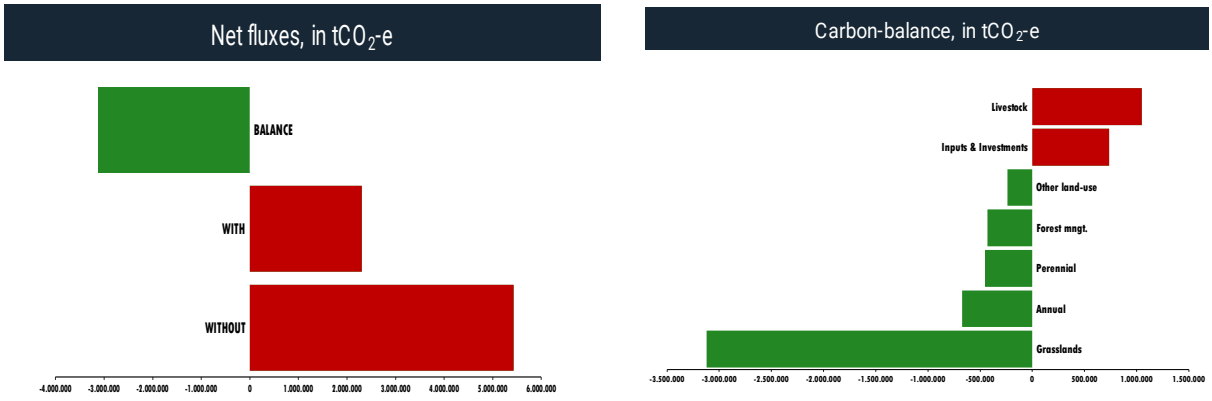
In tCO_2-e/yr

WITHOUT	WITH	BALANCE
0	0	0
0	0	0
0	-11.805	-11.805
31.333	-2.298	-33.631
-28.918	-51.496	-22.578
0	0	0
-8.660	-164.662	-156.002
236.246	288.770	52.524
0	-21.565	-21.565
0	0	0
0	0	0
41.508	78.402	36.894
271.509	**115.345**	**-156.164**

Uncertainty level	tCO2-e/yr	Percent
Without	271.509	37%
With	115.345	40%
Balance	-156.164	45%

14. **The Project would result in several carbon sources and sinks**. The main carbon sources come from livestock, agricultural inputs, and project investments (i.e., infrastructure). The sequestration benefits come predominantly from climate smart grassland management, implementation of climate smart agriculture practices in annual and perennial crop production, forest management linked to beekeeping activities, and restoration of degraded land (land-use changes). Figure 3.1 contains specific details.

Figure 3.1 Project GHG sources and sinks



[23] These results are within the estimated range for other projects of similar nature approved by the WB (e.g., Second Rural Economic Development Initiative (REDI II), Jamaica, P166279; Sustainable Recovery of Landscapes and Livelihoods Project, Argentina, P175669; Resilient Agriculture and Integrated Water Resources Management, Dominican Republic, P163260; Climate Resilient and Sustainable Agriculture, Belize, P172592).

ANNEX 4: Gender Action Plan

COUNTRY: Bolivia

Innovation for Resilient Food Systems

1. The Constitution of the Plurinational State of Bolivia indicates in Article 8 that the State must be based on the values of social and gender equity in participation and in Article 11 that mentions equality of conditions between men and women. The PDES 2021-2025 indicates that to achieve gender equality, it will address access to education for women, promotion of greater political participation and in salaried employment with equal pay, exercise of political rights of women, and their participation. Despite advances in legislation for promoting gender equality and greater female participation, inequalities persist, especially for indigenous women. The Global Gender Gap Index 2020 ranks Bolivia 43rd out of 153 countries, with a gender gap of 73 percent.

2. Gender gaps in agriculture in Bolivia:

(a) Income and Labor Market: Bolivia has one of the highest rates of female labor force participation in LAC and increased income has contributed to poverty reduction considerably, but under conditions of inequality. In 2013, the International Labor Organization (ILO) estimated that the female labor participation rate in Bolivia was 64 percent, considerably higher than the LAC average of 54 percent. Women are more likely to participate in vulnerable, low-productivity jobs and 50 percent more likely to be unemployed than men. Gender inequalities in the labor market are the result of multiple constraints, such as lack of mobility, time and skills, and exposure to violence. In agriculture activity, women play an important productive role, but have less participation compared to men (37 percent compared to 44 percent) in agricultural activities such as the purchase of inputs, contracting, processing, and marketing, which impacts the generation of income they may have.

(b) Access to credit: Most women-owned businesses are micro or small enterprises (84 percent) which tend to be informal and with less access to credit and financial services. More than 60 percent of indigenous women are self-employed in the informal sector. Women are less likely than men to use formal credit. Only 25 percent of women over the age of 15 have accounts in a formal financial institution. Gender differences in the use of formal financial services narrow as the enterprise grows.

(c) Gender-based violence: In Bolivia, gender-based violence remains widespread and young and married women are particularly vulnerable to all forms of violence. Some 75 percent of women aged 15 years and older have suffered physical or sexual violence at some point in their lives, the highest rate of violence against women in the LAC region. Younger women are more at risk than older women, while indigenous women face the highest risk of being victims of violence, yet they are the least likely to seek help from a public institution, 19 percent compared to 22 percent of non-indigenous women. 61 percent of indigenous women do not seek help at all.

(d) Productive options: Women, being mostly in the informal sector, and with low access to credit, are less likely to invest in their businesses, productive equipment, or improvements in their production processes. Since they have to take care of household chores, they tend to participate mainly in the productive phases, as this allows them more time for other household chores. As such, women have low or no participation in processing activities. In addition, women have a lower participation in decision making in agricultural activity and family decisions, which on average is 21 percent compared to 31 percent for men.

(e) Education: On the issue of schooling, rural and indigenous women are the lowest. The literacy and school completion rates in rural areas are lower for women and even lower if they are indigenous. The elementary school completion rate for indigenous women is 26 percent compared to 45 percent for indigenous men. Likewise, the Aymara population has the largest gender gap in literacy, primary and secondary school completion.

Gender Action Plan

3. **Overall Objective:** The main objective of the Gender Action Plan is that the needs of the indigenous women population are considered and that they can effectively participate in the project and receive the benefits of their participation, and that the project contributes to closing gender gaps in employment, education, and property, promoting women's empowerment. The project foresees actions to help close the identified gender gaps and achieve the objectives of the Action Plan.

At PDO level:

Considering that women are more likely to participate in vulnerable, low-productivity jobs, and have a lower participation in decision making in agricultural activity and family decisions (21 percent), and therefore to access improved technology to increase their production, the Project will promote the adoption of improved agricultural technology in order that women can access to innovative solutions in their initiatives that help them to increase productivity and incomes. This will contribute to close the gap of income, labor market and productive options.

Result framework: i) 35 percent of farmers who adopt improved agricultural technology are women; and ii) Increase in the gross sales value of approved business plans for participating RPOs led by women is 35 percent.

Component 1: - Institutional Strengthening

4. Having a dissemination and communication strategy is important to ensure the participation of the target population and will be oriented towards RCOs, RPOs and other stakeholders, as well as vulnerable groups: indigenous population, women and youth. The Project would: (a) develop a communication strategy to inform women about project activities and encourage their participation, including non-written communication tools, given the low literacy rate among women; (b) strengthen the capacity of technical service providers working with RCOs, RPOs, and other stakeholders on gender issues to increase their gender knowledge and provide them with the necessary strategies to better support women beneficiaries with the Project's actions and services. The trainings are aimed at closing the gaps in education opportunities and would benefit women technical service providers as they assist in subproject implementation.

Results framework: i) Number of technical assistance service providers trained to work effectively with RCOs and RPOs, of which 30 percent are women; ii) RCOs and RPOs that are formalized to be able to sign agreements and/or contracts, 30 percent of which are led by women (Number).

Component 2: Support to Community and Productive Alliances

5. The Project will promote the presentation of business plans by RCOs, RPOs, including vulnerable groups, and also facilitate the formation of women's groups and the participation of women in existing organizations. The proposed Project would foster women's participation in decision-making positions, (including market actions) in new and existing RCOS and RPOs through targeted trainings and sensitization of stakeholders, including female and male leaders of the communities, to address cultural and social norms and reduce gender stereotypes and gender-based violence. The Project would also support targeted assistance to women-led RCOs/RPOs and agribusinesses with women's participation to develop proposals that meet the requirements for obtaining matching grants and support their implementation. To this end, women must have access to information, adequate training and the necessary support to be able to present proposals that will enable them to access grant resources, as well as adequate accompaniment for the success of the enterprise. This will contribute to closing gender gaps in access to financing, income and labor market, and productive options.

Results framework: (i) RPOs that maintain or improve their alliances for at least two productive cycles, of which 30 percent are led by women; (ii) *30 percent of female farmers reached with agricultural assets or services through the*

subprojects; and (iii) number of women supported by training events tailored to women to provide additional support to their businesses.

Component 3: Project Management

6. Project management will ensure the sound design and implementation of meetings, trainings, and information under the Project to meet specific needs of women. Project meetings would take place at times and under conditions that do not adversely affect the women's workload or put their safety at risk. To ensure gender inclusion in project activities, different types of training events will be proposed to raise awareness among project team members and contracted operators. Attention will be paid to conducting training events to ensure that the calls for proposals are appropriate and that the information reaches women in a timely manner so that they can participate in the calls for proposals and access the benefits of the project. This will be aimed at reducing the productive options gap and will be measured through the degree of satisfaction of the participants with the services provided by the Project.

Results framework: i) 30 percent of women who express satisfaction with the agricultural assets and services promoted by the project (Percentage).