Common Format for Project/Program Concept Note for the Use of Resources from the PPCR Competitive Set-Aside (Round II)

1. **Country/Region:**		2. **CIF Project ID#:**	
3. **Project/Program Title:**	*Building Climate Resilience in Small Livestock Producers in the Bolivian Chaco*		
4. **Date of Endorsement of the Investment Plan:**	To be determined.		
5. **Funding Request (in million USD equivalent):**	*Non-Grant (loan, equity, guarantee, etc.):* *USD $5,500,000*		
6. **Implementing MDB(s):**	The Inter-American Development Bank (IDB)	x Private sector arm ☐ Public sector arm	
7. **Executing Agency:**	Currently Confidential		
8. **MDB Focal Point and Project/Program Task Team Leader (TTL):**	*Headquarters- Focal Point: Alfred Grunwaldt (alfredg@iadb.org)*	*TTL: MIF/IADB: Steven R. Wilson, Zachary Levey, Carlos Sanchez*	

I. Project/Program Description:

The proposed operation would employ reimbursable resources from the PPCR private sector set aside to deliver a loan program that builds climate resilience in small livestock producers in the Chaco region of Bolivia. PPCR resources will be augmented by a technical assistance grant from PROADAPT[1], a grant facility that supports climate resilience in micro and small enterprises and appropriate business models that respond to the demand for services and products that reduce climate risks. Small ranchers in the Bolivian Chaco are highly vulnerable to growing climate variability. This situation is exacerbated by the scarcity of water and forage, threatening the Chaco's two primary private sector productive activities: livestock and agriculture, and the livelihoods that they provide.

As part of the PROADAPT contribution to this operation, a study of the impact of climate change in the main economic activities has been completed. This study will assist the Inter-American Development Bank's (IDB) Multilateral Investment Fund (MIF) and local partners with a technical assessment and theory of change to support climate resilience in the Chaco.

The overall objective of this operation is to improve revenues, incomes, and the resilience to climate threats of small agriculture and livestock producers in Bolivia's Chaco region. The

[1] PROADAPT is co-financed by the Multilateral Investment Fund of the Inter-American Development Bank and the Nordic Development Fund.

primary objectives of this project are to:

- Facilitate investments and business opportunities related to the technologies and practices that increase climate resilience for small livestock producers, particularly against drought;
- Improve the availability of climate-related information, including an improved early warning system;
- Build technical capacity in enabling private sector institutions, including local producers associations and NGOs, in order to improve climate-related planning and coordination across relevant agencies;
- Support pilots that demonstrate the benefits of climate resilient technologies and best practices, including efficient and drought resistant irrigation systems, productive reforestation using native species that improve soil moisture and provide forage material, and the expansion of an early warning system in place on the Rio Pilcomayo, among other demonstrations.

The **expected outcomes** of this PPCR operation are as follows:

The expected results of this PPCR/PROADAPT project are the widespread adoption of climate resilient practices among small livestock producers in the Bolivian Chaco. In addition, the project expects to facilitate lending by local financial institutions to smallholder ranchers, as a result of a greater analysis of climate risk in their portfolios and of the benefits associated with more resilient clients.

The MIF/IDB defines "results" as behavioral change that can be tracked, measured and observed by the beneficiary population. A market study of the impact of climate change on small producers in the Bolivian Chaco was commissioned by the IDB-MIF and completed in June 2014. The following performance indicators are informed by the results of this study and will be used to track and measure the project's results:

(i) Increase in the time in which small livestock producers can maintain production in the face of severe drought
(ii) Measurable improvements in climate resilience in small livestock operations, disaggregated by gender
(iii) Improved access to credit for small producers, disaggregated by gender
(iv) Number of local financial institutions using a climate risk assessment tool in lending operations in the Chaco
(v) Number of private sector organizations benefiting from improved early warning and monitoring systems of the Rio Pilcomayo

Impact

Impact is defined as high-level outcomes related to improvements income, health, sales, emissions, etc. The intended impacts of the project include improvements in the livelihoods of poor and low-income livestock producers in the Bolivian Chaco, as well as increases in the profitability and sales of businesses offering products and services related to climate resilience.

The following are indicators will be used to track the project's impact:

(i) The number of small producers with annual sales growth 10% or more disaggregated by gender (target: 3000 producers)

(ii) The number of producers selling to new domestic or export markets, disaggregated by gender (target: 2000 producers)

(iii) Average value of annual sales to new domestic or export markets by small producers (target to be defined at project baseline during first 3 months of execution)

The design of this proposed operation is aligned with the Bolivia SPCR. The strategic focus of the Bolivian SPCR and relevant national plans (which emphasize the public sector) is on *water resources*. This proposed operation, *Building Climate Resilience in Small Livestock Producers in the Bolivian Chaco,* aims to improve smallholder resilience through efficient and drought resistant irrigation systems, productive reforestation using native species that improve soil moisture, and targeted investments that maximize, inter alia, water capture and water use efficiency. The SPCR further identifies climate vulnerability and variability resulting from the increased frequency and intensity of droughts and floods in Bolivia, and their impacts on, among other areas, agricultural production and agro-industry. Building greater climate resilience in small agro-producers is the major focus of this project.

The project also addresses private sector elements that directly relate to Components 1 and 3 of the Bolivian SPCR, respectively. The project aims to improve the availability of climate-related information, data and scenarios. This operation also aims to assist in new approaches to private planning, design and implementation of integrated investments in climate resiliency. Further, these results and lessons learned will be shared in other regions. In addition, this project aims to create institutional arrangements (e.g. more formal coordination arrangements with selected public and civil society partners, etc.) for the formulation and implementation of climate resilience activities in smallholders.

The Multilateral Investment Fund is a private sector member of the IDB Group and will be the technical lead on this proposed PPCR operation. The MIF approves an average of USD

100 million in technical assistance grants and venture capital investments annually, and has leveraged with local partners, more than USD 2.5 billion in Latin America and the Caribbean since 1993. The Climate Change and Sustainable Energy Department (INE/CCS) coordinates Climate Investment Fund operations on behalf of the IDB Group and is on the team for this proposed PPRC set aside in Bolivia.

II. Context, market and trans-boundary approach:

PPCR private sector set aside resources will focus exclusively on the Bolivian Chaco. This region is approximately 124,000 km^2 in area, and is rich in diversity of environments, ecosystems, species and landscapes. The country has four distinctive eco-regions: the Chaco Seco (savannah zone), Chaco humid (low), and the Cerrado and Pantanal. The vegetation of this region includes gallery forests, humid forests in dry and arid and semi-arid zones with xerophytic plants. The Chaco is distributed across three departments, Santa Cruz, Tarija, Chuquisaca, each of which administers their territory through autonomous local and municipality governments. The latest (2001) census indicates an approximate population of 300,000, with livestock production being one of the most important economic activities of the Chaco. This sector generates approximate income of USD 41,925,000 in the region and provides direct benefits to over 12,000 families.

Livestock is one of the primary sources of income and private sector employment in the Chaco region.[2] However, most livestock production in the Chaco is based on relatively inefficient models of production, in open fields in which few ranchers implement silvo-pasture practices or other forms of climate resilient livestock production. Overall, low productivity, continued dependence on forest forage and very low investment in infrastructure render the livestock sector highly vulnerable to climate risks.

Livestock prices exhibit a seasonal variation that generally reflects climatic cycles. Increasing climatic variability, however, has made it more difficult for small livestock producers to plan production or to obtain the best market prices for their livestock. Unanticipated reductions in water availability, in particular, threaten small livestock producers who lack strategies for mitigating interruptions in the supply of water and the availability of fodder. Lacking such coping mechanisms, small ranchers must often sell at disadvantageous prices, or in the worst case, exit the market. Moreover, a general lack of awareness of the climate threat and low access to credit impede the widespread adoption of the technologies and know-

[2] The market for Chaco beef is largely internal to the departments of Sucre, Cochabamba and Tarija. However, there is solid potential for increased sales of this beef in the rest of Bolivia and across Mercosur, see Cavadero, 2012. *Plan estratégico de la mesa de trabajo de carne Chaqueña del Chaco Chuquisaqueño*.

how available in the region to improve resilience and productivity in the livestock sector.

The Bolivian Chaco forms a part of the Gran Chaco, a semi-arid region covering over one million square kilometers in area and traversing the frontiers of Argentina, Bolivia, Paraguay and Brazil. As stated, the proposed PPRC set aside will be confined to Bolivia, but will be leveraged by technical assistance resources provided by the PROADADAPT Facility (co-funded by the Nordic Development Fund) in order to build private sector resilience in Bolivia and to capture the benefits of a *trans-boundary approach* involving regional partners.

A complementary, trans-boundary approach that fosters shared learning through regional platforms and networks will support the adaptation and climate resiliency efforts among small producers in Bolivia. PROADAPT will work through current platforms for regional coordination and learning across the Chaco through platforms such as *Redes Chaco* (Chaco Networks), a regional network of research institutions, private associations and local authorities that examine critical issues and propose concrete solutions.

PROADAPT will help apply this learning and related models in the Bolivian Chaco. For instance, private producers in the Argentine Chaco are reforesting degraded lands with native varieties of the Algarrobo tree, thereby expanding the supply of cattle feed, restoring depleted soils and increasing economic opportunities in the sale of forest products. In another example, *Fundacion Nativa* in Argentina has developed tools and methodologies for diagnosing climate risks and incorporating these into adaptation action plans. PROADAPT, by fostering a trans-boundary approach that leverages networks, can help to apply this type of learning in the Bolivian Chaco.

III. Project description and Innovation:

a. Project Description

Bolivia is among the most vulnerable countries to climate change in Latin America. Increasing temperatures, glacial melt and changing rainfall patterns negatively impact the country's population, of which at least 30% live in extreme poverty. Improved water management and efficiency is a priority to the Bolivian government and a focus of the Investment Plan for the Pilot Program for Climate Resilience in Bolivia. Bolivia's Chaco region, as part of a larger biome shared with Argentina and Paraguay called the "Gran Chaco", is experiencing increasing climate variability, including concentrated rain events coupled with an intensification of periods of drought. This variability threatens livestock and agriculture, a situation exacerbated by low levels of awareness and knowledge related to climate threats and resilience and limited access to credit for small producers.

This operation will employ loans from the PPCR private sector set aside and technical assistance grants from PROADAPT to (i) assist private livestock associations and other private associations and stakeholders in building technical capacity to better represent and advise their members on climate variability, (ii) provide access to technical assistance and finance to facilitate the greater climate resilience and business performance among small producers, (iii) to raise the awareness of financial intermediaries as to the costs of climate risks and the benefits of enhanced climate resilience; and to (iv) facilitate the transfer of knowledge and technology exchange with livestock producers and organizations in the Argentine and Paraguayan portions of the Gran Chaco.

b. Innovation

This project ties the need for climate resilience to business performance of small livestock producers in a vulnerable, semi-arid region in Bolivia. The project will provide capacity building and facilitate access to finance in order to improve the climate resiliency, business performance and incomes of many small producers -- while safeguarding the region's unique diverse semi-arid ecosystems. Promising opportunities to brand Chaco beef for higher-value markets will also be explored. Further, the project will strengthen efforts for cross-border collaboration and knowledge transfer in the Argentine and Paraguayan Chaco with actors that face similar threats.

c. Technology, Product, and/or Business Model:

The types of technologies, products and services that will be made available through PCCR financing reflect best practices and successful models in place across the greater Chaco region. These include those aimed at herd management, water management, capture and storage, forage management, improved early warning systems, including but not limited to the following:

- Improved irrigation and water capture systems (e.g. Australian tanks, improved natural water holes, and wells)
- Improved water storage and distribution systems
- Corrals
- Traditional and electric fencing to permit forest regeneration
- Reforestation and restoration of degraded forest ecosystems
- Regional fares to promote product sales
- Improved extension services to producers via associations

The technologies, product and services will be further defined during the project design and are based on an initial market assessment financed by PROADAPT.

d. Business Model

The business model in this operation is predicated on the recognition that building climate resilience can improve the productivity and business performance of enterprises, and that the demand for solutions to protect assets from climate risks, such as water efficient irrigation, represents business opportunities for small enterprises.

The Executing Agency is a financial institution and will administer PPCR loan resources and PROADAPT grants for this project, in collaboration with one or more private sector partners and/or civil society partners. This entity will on-lend to individual ranchers, livestock associations and other private sector groups in order to make climate resilient investments. Potential loan recipients must demonstrate that their proposed investments will have a direct and measurable effect on the climate resilience of their activities. Loans may also be made available to local producers or distributors of products or services that protect the assets of small ranchers from climate risks.

A market analysis of small-scale livestock producers in the Bolivian Chaco was commissioned by the PROADAPT facility and finalized in June 2014. This will inform, *inter alia,* the criteria to be used for ranchers' selection for the project, for an outreach campaign and for the design of a resilience screening and business continuity planning service. Results of the study underscore the opportunities for PROADAPT grant resources to be used to (i) develop a practical climate risk methodology for local financial institutions that measures climate portfolio risks and the benefits of greater resilience among clients, (ii) assess cost-effective climate resilient technologies for small livestock producers in the Chaco, (iii) develop business models for climate resilient products and services that protect the assets of ranchers' cooperatives and their members, of local small businesses, financial institutions, individual ranchers and local chambers and business associations, (iv) close gaps in availability of climate related data and business information in the Chaco, (v) provide women entrepreneurs and community leaders with the tools to build resilience in their businesses and communities, (vi) to develop partnership structures with agricultural credit cooperatives and other financial institutions needed to develop climate resilience, and to (vii) develop advisory services related to an improved and more efficient use of water, land use, storage systems and/or product processing.

e. Sustainability of intended results:

A primary obstacle to the productivity of livestock in pastoral systems is the acute shortage of feed during the dry season and the poor quality of feed that is available. By increasing short-term pressure on existing fields improved land management would increase the regeneration of forest cover and improve forage availability during periods of drought.

Two fundamental areas of intervention will increase the sustainability of this operation:

- Proof of Financial Viability – The project will provide financing for a local bank to on-lend (either directly or through a participating private sector association) to small producers for productivity enhancing, climate-resilient investments. These funds will demonstrate the commercial viability of the loan product, the demand for such a product and a practical delivery mechanism that is replicable at low marginal cost among financial institutions in Latin America. In addition, a successful proof of concept in Bolivia will provide the demonstration needed to foster replication of this type of financial product elsewhere in the region.

- Broad Capacity Building – The proposed operation will support the capacity building of key actors and institutions. These activities will include: (i) improving the availability of practical, climate-related information for private sector producers; (ii) building the capacity of private sector producers associations in climate-related planning, and to better assist and advise small livestock producers who are improving their climate-resilience; (iii) training private producers to implement climate resilient practices and strategies that can connect smallholders to higher-value markets, (iv) supporting financial intermediaries in developing loan products for climate resilience and training loan officers; and (v) creating spaces for knowledge transfer and exchange.

IV. Inclusivity:

The Chaco region is highly vulnerable, with extensive poverty, low access to credit and limited economic opportunities. The target beneficiaries of the proposed operation are small and medium producers, characterized as holding herds of under 100 animals and with sales averaging 16 heads per year. This cohort earns an average monthly income of about 3,800 Bs, barely enough to cover the most basic food, health and education expenses. Facilitating the use of climate resilient technologies and methods will enable these beneficiaries to improve their incomes and business performance, while reducing their vulnerabilities to climate risks.

Women will directly benefit from the project activities, as they are active participants across the entire value chain, from production to commercialization. Women are often involved in pricing decisions in agricultural and pastoral transactions, and are noted for their negotiating skills. Women are highly integrated in executive positions within private and public associations and will participate in training and capacity building sessions across the region.

The beneficiaries of this operation will be approximately 5,000 small-scale livestock producers and their families from the Bolivian Chaco (from departments of Tarija, Chuquisaca and Santa Cruz) defined as producers with less than 200 heads of cattle. The majority of beneficiaries will be of

indigenous ancestry (Guaraní, Ayoreo and Chiquitano), with income levels that are at or slightly above the national poverty line. All direct beneficiaries will be affiliated with a private sector producers' organization.

V. Financial Plan (Indicative):

Source of Funding (by type of instrument, equity, debt, guarantee, grants, credit lines, etc.)	**Amount (USD million equivalent)**	**Percentage (%)**
Project developer		
MDBs	1.2 mm	13%
PPCR	5.5 mm	60%
Local banks	1.5 mm	18%
Other investors		
Bilaterals		
Others	.8 mm	9%
TOTAL	9 mm	100%

VI. Expected Results and Indicators[3]

As mentioned in section 1, the expected results of this PPCR operation are the widespread adoption of climate resilient practices among small livestock producers in the Bolivian Chaco. In addition, the project expects to facilitate increased lending by local financial institutions to smallholder ranchers, as a result of a greater analysis of climate risk in their portfolios and the benefits associated with more resilient clients. The MIF/IDB defines "results" as behavioral change that can be tracked, measured and observed by the beneficiary population.

Indicator(s)	**Expected Result(s)**
Improved field management	- Measurable improvements in climate resilience in 4,000 small livestock operations, disaggregated by gender - Number of fields under fallow - Meters of fencing installed (electric and barbed wire)

[3] These indicators will need to contribute to the five agreed PPCR core indicators, which are monitored at the level of the endorsed SPCR.

	- Hectares under pasture production with drought tolerant species
Improved on field water management	- 40% increase in the period in which small livestock producers can resist a severe drought before exiting the market - Number of farm reservoirs built, improved
Increased reliability of forage supply throughout the year	- Herd numbers after primary sales period - Number of immature bulls sold
Increased investment in climate resilient infrastructure and practices	- 3,000 small producers, disaggregated by gender, with improved access to credit for climate resilience investments - Two financial institutions using a climate risk assessment tool in lending operations in the Chaco
Improved economic opportunities for business and household income growth	- At least 10 private sector organizations participating in and benefiting from improved early warning and monitoring systems of the Rio Pilcomayo - 3,000 small producers with annual sales growth 10% or more disaggregated by gender - 2,000 producers selling to new domestic or export markets, disaggregated by gender - Number of firms or farms receiving training or otherwise strengthened to provide new goods or services - Number of people who have adopted new technologies or practices

VII. Implementation Arrangements and Feasibility:

The MIF is currently in negotiations with several 1st tier financial intermediaries and one 2nd-tier bank in the Bolivian Chaco that have expressed interested in participating in the initiative. These discussions and negotiations will be on going with an estimated time for approval and first-disbursement in 1st quarter 2015.

This proposal is informed by a market study on private sector models for resilience in the Gran Chaco that was completed in June 2014. The proposed PPCR funding will be leveraged by a parallel, technical assistance grant administered by the PROADAPT program. PROADAPT will work in partnership with local producer associations, Fundacion Nativa, the Avina Foundation, Fundacion de la Cordillera and local NGOs that are part of the network, RedesChaco.

The following are the actors and their respective descriptions and roles with regard to this operation:

The Multilateral Investment Fund (MIF) is a private sector member of the IDB Group and will be the technical lead on this proposed PPCR operation. PROADAPT is a 5-year, USD 11.6 million facility, launched by the MIF in partnership with the Nordic Development Fund. PROADAPT uses grants to build climate resilience in micro, small and medium-sized enterprises and promotes business models that can capitalize on the demand for products and services that protect assets from climate risks. PROADAPT is also funding market studies and knowledge products related to the hidden market for climate resilience, to new methodologies for financial institutions to assess climate risks, on climate resilience in value chains, and climate adaptation and women entrepreneurs, among others applied studies.

In this proposed PPCR operation, the technical assistance and market studies funded by PROADAPT will facilitate resilience building in smallholder value chains and in connecting networks of smallholder value chains in the Bolivian Chaco. Local NGOs will assist in the execution of capacity building activities, network building and awareness-raising and knowledge dissemination that are critical to this operation. In addition, a commissioned report on resilience in the Bolivian Chaco, completed in June 201 provides critical input into the design of the project.

Local banks will participate in two ways. First, financial institutions will receive technical assistance to improve their analysis of climate risks through the use of risk screening tools that are specific to PROADAPT. In addition, technical assistance for financial institutions is intended to incentivize their development of credit products for cooperatives and their members. Participating banks will join a network of financial institutions, with similar profiles, participating in other PROADAPT projects in the region.

VIII. Potential Risks and Mitigation Measures:

Potential Risks	Mitigation Measures
Loan schemes may lead to unsustainable indebtedness for some borrowers.	All lending will be based on prudent screening processes and credit methodologies. Prior to the granting of loans, financial plans of smallholders will be vetted. In addition, follow-on technical assistance to build capacity among borrowers will incorporate provisions that seek to lower risks associated with debt.
Low commitment to the project on part of private associations, such as ranchers' associations	This is a risk that is mitigated in part through technical assistance that demonstrates the practical business case for implementing cost effective, climate resilient technologies in members' ranching operations. In addition, the project will stress the business opportunities for private sector associations related to such climate-resilient technologies
Participating financial institutions fail to increase lending to support investments in climate resilience.	The project will work with and train selected local FIs to incorporate climate resilience into credit and lending methodologies, and to enable FIs to better quantify the lower credit risks resulting from climate resilient borrowers
Low penetration of climate resilient technologies among poorer smallholder beneficiaries, marginalized groups or women	The project team will ensure, at the beginning of the project, that a specific percentage of poor and marginalized groups and women are beneficiaries in this operation.
Ineffective resilience investments or practices	Proposed investments and practices have been carefully identified through a mapping exercise in the region. The PROADAPT Chaco study will outline successful experiences and lessons learned in the Chaco. Other PROADAPT projects in similar conditions and biomes will inform this project.
Lack of markets/and or sales for	Preliminary conclusions from the

participating smallholders	PROADAPT study and from market studies project strong demand for livestock products in Brazil, Peru, Argentina and Chile. Moreover, technical assistance will aim to improve business practices and performance of participating farmers.