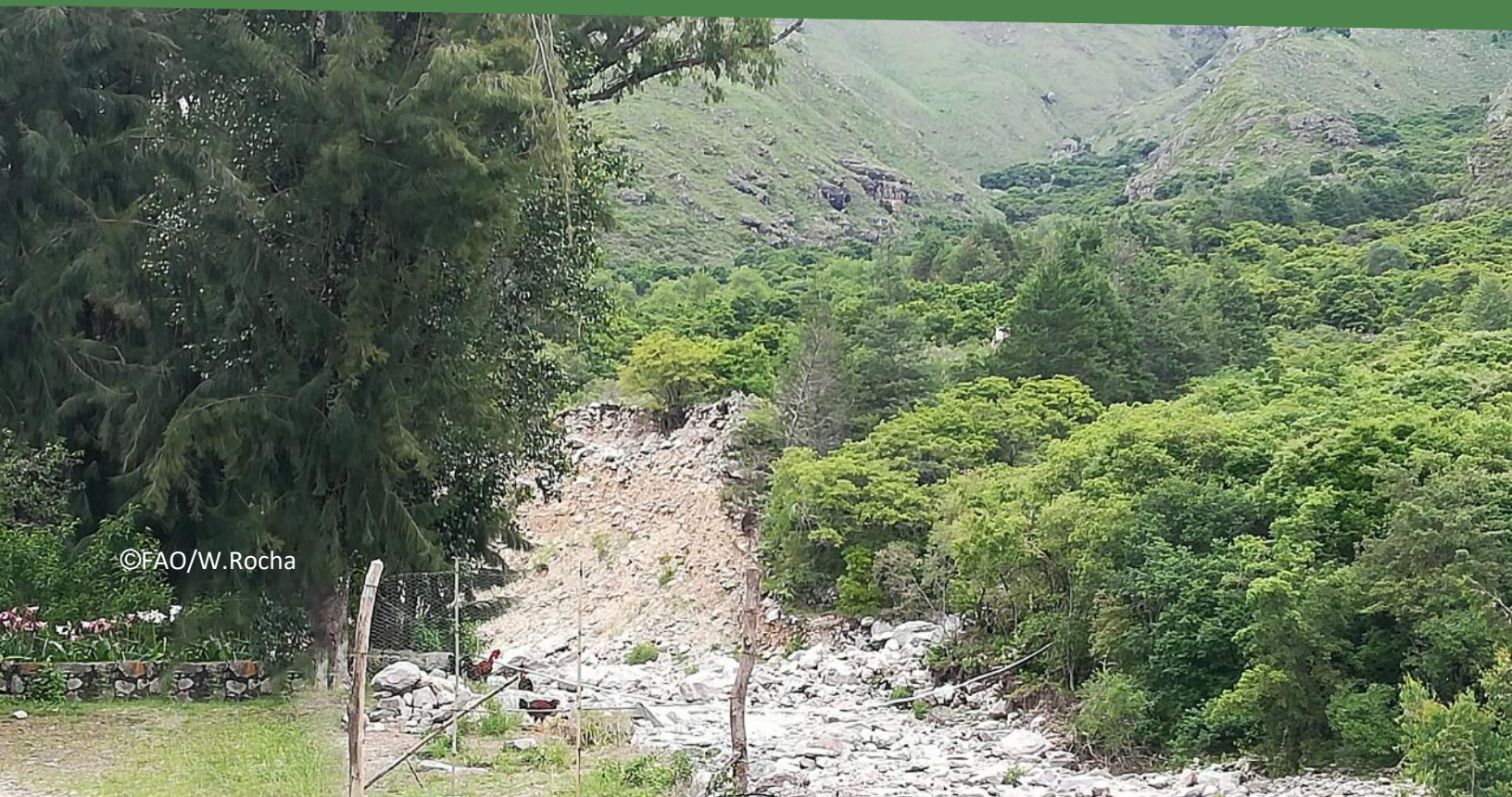




**Food and Agriculture
Organization of the
United Nations**

ANNEX 6: Environmental and Social Management Framework

Upscaling Ecosystem Based Climate Resilience of Vulnerable Rural Communities in the Valles Macro- region of the Plurinational State of Bolivia (RECEM- Valles)



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PREFACE

This Environmental and Social Management Framework (ESMF) will be applied to all activities financed by the Green Climate Fund (GCF) for technical and/or financial support of the project "Upscaling Ecosystem Based Climate Resilience of Vulnerable Rural Communities in the Valles Macro-region of the Plurinational State of Bolivia" (RECEM-Valles).

The Project Steering Committee (PSC), the Project Management Unit (PMU) of the project, hosted within FAO's La Paz Office, at the request of the National Designated Authority (NDA), is responsible for overall coordination of the project activities, with safeguards led by the Lead Safeguards Specialist. FAO is responsible for day-to-day implementation of specific subcomponents and for ensuring compliance with the ESMF, the Indigenous Peoples Plan, Gender Action Plan, and related safeguard documents, including keeping proper documentation in the project file for possible review by the GCF.

This document is considered a living document and could be modified and updated in line with the changing situation or scope of the activities.

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Abbreviations

ABT	Authority of Fiscalization and Social Control of Forest and Land
AFS	Agroforestry systems
APU	Agricultural Production Units
DETI	Integrated Territorial Development Programme
EE	Executing Entity
EMAGUA	Water and Environmental Executing Entity
EMAP	Food Production Support Enterprise
ESA	Environmental and Social Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Safeguard
FAO	Food and Agriculture Organization of the United Nations
FONADAL	National Development Fund
FONABOSQUE	National Fund for Forest Development
FPIC	Free, prior and informed consent
GBV	Gender Based Violence
GCF	Green Climate Fund
GRM	Grievance redress mechanism
IDSP	Integrated Development Sectoral Plan
IFC	International Finance Corporation
IPM	Integrated Pest Management
INRA	National Agrarian Reform Service
masl	metres above sea level
MDP	Ministry of Development Planning
MDRyT	Ministry of Rural Development and Lands
MMAyA	Ministry of Environment and Water
NARF	National Afforestation and Reforestation Plan
NDC	Nationally Determined Contribution
PA	Protected Area
PAR	Rural Partnerships Programme
PASA	Food Security Support Programme
PMU	Project Management Unit
PSC	Project Steering Committee

RECEM-Valles	"Upscaling Ecosystem Based Climate Resilience of Vulnerable Rural Communities in the Valles Macro-region of the Plurinational State of Bolivia" (the project)
SEAH	Sexual Exploitation, Abuse and Harassment
SEDP	Social and Economic Development Plan
SENARI	National Irrigation System
UNFCCC	United Nations Framework Convention on Climate Change (UNFCCC)

EXECUTIVE SUMMARY

The Valles Macroregion of Plurinational State of Bolivia is experiencing increasing rainfall variability as a result of climate change. Smallholder farmers are particularly vulnerable in light of greater rainfall unpredictability, increasing land degradation and declining ecosystem services in watersheds, particularly water provisioning. This project will increase the resilience of smallholder farmers to climate change in the Valles Macroregion of Plurinational State of Bolivia by strengthening their capacities to manage their agro-ecosystems to adapt to increasing temperature and rainfall variability. Smallholder farmers will adapt their agro-ecosystems to climate change by revitalizing and climate-proofing vulnerable irrigation systems, managing soil, vegetation and rainfall in micro and meso-scale watersheds to enhance long-term water security, and adopting resilience-enhancing agricultural practices and technologies. Enhanced institutional capacities will facilitate wider uptake of adaptive sustainable crop, soil and water management technologies in irrigated and rainfed systems and will provide hydrometeorological information to farmers for improved climate risk management. 81,551 small rural smallholder households will benefit directly from this project. An additional 1,333,320 people will be indirect beneficiaries.

As the finer details of proposed activities (e.g. specific locations, etc.) under the project have not yet been determined, a framework approach has been adopted. Under this approach, the present Environmental and Social Management Framework has been prepared by FAO to (i) identify all the readily identifiable potential but generic negative environmental and social impacts; (ii) propose mitigation measures; (iii) provide basic screening criteria for selecting sub-activities; (iv) list the type of instruments to be developed for individual sub-activities during implementation; and (v) provide institutional arrangements, grievance redress mechanism and monitoring, reporting and documentation measures for environmental and social safeguards compliance (vi) assign an overall safeguards related project risk rating. The framework covers all physical works and activities as well as feasibility and other studies to be carried out under the project.

The environmental and social impacts of the project will be largely positive. The project is expected to improve natural resource management and agricultural practices, increasing farmers' resilience to climate change. The project will focus on improving water management practices, including watershed management, and improved irrigation and water management at the farm-level. The project will engage women through a Gender Action Plan that ensures proactive mainstreaming of women into all activities, empowering women with agricultural skills and knowledge.

It is important to highlight that using the criterion of territorial "ancestry", 7.72% of the total area of the Macro-region is considered Community Lands of Origin (TCO) and Indigenous Peasant Native Territories (TIOC for its acronym in Spanish); in this sense, with the objective of specifically identifying and analyzing the role and participation of indigenous and native peoples in family farming carried out in the Valles Macro-region and, based on this, to establish strategic guidelines of action that contribute to the implementation of the Project, strengthening the governance of the territory, the revaluation of local knowledge and its articulation to technical - scientific knowledge, respect for the organizational structure and community justice, thus minimizing any adverse impact and identifying opportunities and actions to enhance the positive impacts on indigenous peoples in

a culturally appropriate manner, an Indigenous People's Plan has been developed and is presented as an Appendix 6 of this ESMF.

Livelihoods are expected to improve, as a result from increased adaptive capacities, increased income from agricultural activities, and improved access to markets.

The Project has been classified as moderate risk (Category "B") and it is expected that the project activities will trigger the following Environmental and Social Safeguard Policies: ESS1: Natural resource management; ESS5 Pest and pesticide management; ESS7 Decent work; ESS9: Indigenous peoples and cultural heritage.

Table 1. Environmental and social safeguard policies triggered by project activities

FAO Standards	Triggered
ESS 1: Natural resource management	Yes
ESS 2: Biodiversity, Ecosystems and Natural Habitats	No
ESS 3: Plant genetic resources for food and agriculture	No
ESS 4: Animal genetic resources for food and agriculture	No
ESS 5: Pest and pesticide management	No
ESS 6: Involuntary resettlement and displacement	No
ESS 7: Decent work	Yes
ESS 8: Gender equality and Prevention of Gender Based Violence	Yes
ESS 9: Indigenous peoples and cultural heritage	Yes

It is important to mention that the FPIC carried out in the Project design process has been successful, given that the main key actors in the project's area of influence have established the advances and challenges in the development of agricultural practices in the Macro-region of Los Valles, to which the accompaniment of its municipal and departmental authorities has been added, the same ones that have prioritized counterpart actions in their local operational plans. Likewise, as a result of the FPIC process released by the Ministry of Environment and Water and the accompaniment of the FAO, there are at least 14 FPIC minutes, in which full agreement is expressed with the results, products and activities of the Project. RECEM Valles, the same ones that would have been generated in the seven micro-regions of said Macro-region, as a result of at least three visits for each micro-region, marking the beginning of the design of a participatory diagnosis, to then continue with the prioritization of results and products, as well as the final validation of modified and updated products and activities in response to the suggestions made by the GCF.

On the other hand, the project will establish one or more complaint resolution mechanisms at the field level for the presentation of complaints, which includes: i) When the specific case is of indigenous peoples, the complaints will be presented either verbally or in writing to the leaders of

their indigenous organizations who will receive them and present them to the corresponding counterpart of the project, also when they have easy access, the complaint can be presented directly to the Project Management Unit (PMU); ii) The plaintiff files a complaint through one of the channels of the mechanism, which will be sent to the coordinator of the PMU to assess whether the complaint is admissible; iii) Admissible complaints will be dealt with by the PMU or the corresponding institution; iv) If the situation is too complex, or the complainant does not accept the resolution, the complaint should be sent to a higher level; v) For each complaint received, a written proof will be sent within ten (10) business days; vi) In compliance with the resolution, the person in charge of handling the complaint may interact with the complainant; vii) All complaints received, their responses and resolutions, must be duly registered.

1. INTRODUCTION

Environmental planning considers all the aspects that precede implementation of a project, so that when it is implemented, resources are used efficiently, the environment is conserved, regulations all followed, allowing the project to achieve its environmental, economic, and social goals. Part of the certainty that there will be both positive and negative impacts in any productive activity means that the former should be maximized and the latter should be minimized.

Environmental planning basically refers to an Environmental and Social Management Framework (ESMF), which consists of implementing environmental and social standards such as those of the Food and Agriculture Organization of the United Nations (FAO), which seeks to identify, evaluate and manage a project's environmental and social risks, adopt a strategy of mitigation measures and promote sustainable agricultural and food systems (FAO, 2017). Implementing these environmental and social standards or safeguards is part of the requirements established by the Green Climate Fund (GCF) when evaluating proposals submitted to it for funding.

The purpose of the ESMF is to support an environmentally and socially sustainable implementation of the project on "Upscaling Ecosystem Based Climate Resilience of Vulnerable Rural Communities in the Valles Macro-region of the Plurinational State of Bolivia" (RECEM-Valles) that will be submitted to the GCF to request funding, ensuring that activities developed in collaboration with its strategic partners and beneficiary communities incorporate measures deemed necessary and sufficient to avoid, minimize, reduce and, if applicable, compensate for any adverse impact on persons and the environment.

This project supports national efforts to promote communities and smallholder farmers in the Valleys Macroregion of Plurinational State of Bolivia adapting to the risks of rising temperatures, rainfall variability and other extreme events, such as frost or hail and extended drought periods, as a result of climate change, in the framework of integrated watershed management, the management of irrigation systems for food production, and increased resilience to the effects of climate change.

The funds provided by GCF, the government counterparts (national, departmental, and municipal), and the contributions from the communities and smallholder farmers themselves will be invested in developing sustainable, resilient farming systems, revitalizing and climate-proofing irrigation systems to use water efficiently, and strengthening institutional and community capacities for the integrated management of water and other natural resources. The aim of this project is to increase the resilience to climate change of the communities and smallholder farmers in the Valleys Macroregion by strengthening their capacities and developing better agricultural practices to increase the productivity and sustainability of their farming systems using efficient irrigation so that they can adapt to increasingly variable temperatures and rainfall.

The main goals include 4,448 ha with upgraded climate-proofed irrigation systems that improve the efficient use of water, and reduce the risks associated with drought and reduced rainfall because of climate change; 17,510 ha restored focusing on micro watersheds for water security; and at least 23,400 ha of farming systems belonging to smallholder farmers who are vulnerable to climate change that are more productive and sustainable. These actions will benefit over 26,000 families and 800 rural communities.

The project is aligned with the Plurinational State of Bolivian government's integrated development policies and planning processes, as well as with the Nationally Determined Contribution (NDC) goals that

the country proposed within the frame of global commitments agreed to at the United Nations Framework Convention on Climate Change (UNFCCC) to contribute solutions to the global climate crisis.

To support project implementation, an ESMF was prepared to identify and mitigate any potential negative environmental and social impacts caused by the project, sub-projects or activities. The ESMF follows FAO environmental and social safeguards policy, providing practical guide for identifying and mitigating any possible negative social and environmental impacts of project activities that can be used as a platform for consultation with stakeholders and possible project beneficiaries. The application of the ESMF will guarantee that the environmental and social management of the project encompasses the cycle of development of individual activities. Even though there is a general plan for the project implementation, it will be subject to adjustments given that activities and their scope may be adjusted based on the requests, consultations and agreements made with government and community authorities, and beneficiary communities. The ESMF was drafted in line with the FAO environmental and social management guiding principles and considers the GCF environmental and social safeguards.

The overall objective of the ESMF is to ensure compliance with environmental and social safeguards. It will guide the implementing agencies including FAO and any subcontracted entities¹ to adequately screen and address environmental and social impacts of the principle and sub-project activities, thereby determining the appropriate environmental and social risk category. The ESMF sets out the obligations of the Executing Entity (EE) and host country in identifying and addressing environmental and social risks and impacts that may require particular attention. The Environmental and Social Safeguard (ESS) standards establish objectives and requirements to avoid, minimize, reduce and mitigate risks and impacts. Specifically, the objectives of the ESMF are to:

- Assess the potential environmental and social impacts of the proposed project, whether positive or negative, and propose mitigation measures which will effectively address these impacts;
- Establish clear procedures for the environmental and social planning, review, approval, and implementation of sub-activities (i.e., activities grouped together based on similarity and/or geographical proximity) to be financed under the project;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to sub-activities;
- Consider different alternatives, options, and relevant mitigation measures during project preparation and implementation;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF (ensure that these events raise awareness of and prevent SEAH and GBV);
- Address mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances; and
- Establish the project funding required to implement the ESMF requirements and to provide practical resources for implementing the ESMF.

¹ Conditions related to the provisions included in this ESMF will be included as part of the contracts with executing or sub-contracted entities, which must follow FAO's Environmental and Social risk mitigation measures.

2. PROJECT DESCRIPTION

2.1. Description of the problem

The vulnerability of the water provision and the agricultural (crops and livestock) sectors to climate change impacts is high since hydrological cycles are highly impacted by rainfall and temperature variability. Recent studies predict that the crop and livestock sectors will be among the most affected, facing losses of 6-14% of sectoral GDP. This is anticipated primarily by the corresponding predicted declines in productivity, which for a number of key staple crops could reach 17%. Smallholder farmers are particularly vulnerable as their current crop yields are very low —the average potato yield is 5.7 t/ha, the lowest in the Andean region; and the average maize yield is only 2.2 t/ha. These impacts are exacerbated with unsustainable land use change (e.g., particularly deforestation), and management (e.g., intense monocropping) because of the deterioration of ecosystem functions that they foster, decreasing the possibility to climate resilience, particularly in regard to water and nutrient cycling.

A vulnerability assessment was conducted for the Valles Macro-region on the basis of (i) climate exposure, (ii) sensitivity to climate change, and (iii) adaptive capacity to impacts. Accordingly, vulnerability was determined based on 13 indicators distributed in three criteria. The main changes projected for the analyzed scenarios give evidence of the vegetation's upward movement along the elevational gradients of between 100 and 500 m. Therefore, the vegetation types of altitudinal changes are expected to be the most critical characteristic of the climatic impact on the Valleys Macro-region ecosystems of Plurinational State of Bolivia. The Andean forests are located within the relatively narrow band of the slopes of the Andes with altitudes between 800 and 3200 m (Seiler & al. 2014), these forests would be pushed towards higher levels (FAN, 2018).

The semi-humid Puna has the least projected change for future scenarios. The pastures and xeric vegetation of the inter-Andean dry valleys will occupy the region's most arid parts, shrubs, and other low vegetation adapted to drought (Navarro & Ferreira 2004). A change in the forest's structure and composition is expected due to the invasion of woody species in the higher parts. Shade intolerant trees are pioneer species adapted to forest glades. Therefore, in general, pioneer species are expected to increase in abundance in a period of continuous change (FAN, 2018).

Most simulations project a precipitation change amounting to less than 10% of current levels. The concentration of precipitation in the rainy season and decrease in the dry season would be the Valleys Macro-region's main characteristic. Changes in runoff would cause different effects in the region. Uncovered or sparsely vegetated slopes would be more prone to erosion due to increased runoff. Also, there is a considerable risk of large increases in progressive flood events in the future. A decrease of more than 20% in runoff would cause an increase in periods of drought. Such a result would be even more severe due to the melting of glaciers that could seriously affect the region's water supply (FAN, 2018).

The project is specifically tailored to address and overcome institutional and local barriers that inhibit resilience-building by vulnerable populations with respect to climate change. At the local level, these barriers are largely socio-economic in nature rather than technical, reflecting issues related to farmers' agricultural practices, available financial resources, and coordination.

a. Technical Barriers

Smallholder farmers have limited technical support to apply the appropriate technological know-how and innovation to adapt traditional agroecosystems management to increased climate variability.

Smallholder farmers have developed agricultural practices and cropping systems over millennia that have been finely tuned to historical constraints and opportunities. However, such practices are not enough to cope with current and projected climate change in the Valles Macro-region. Besides, the agricultural assistance to farmers is centralized and is based on the conventional model for extension services, which often provides inadequate support. On the one hand, the extension services cannot reach farmers due to a limited number of technical staff. Moreover, the provided assistance is centered around conventional agricultural practices due to limited knowledge and lack of skills to plan and implement climate-resilient farming practices.

Smallholder farmers lack appropriate and efficient on-farm water management practices and infrastructure to adapt to climate change.

Smallholder farmers in the Valleys Macro-region experience water shortages due to droughts and lack of adequate on-farm irrigation systems. Around 41% of Plurinational State of Bolivia's territory has a water deficit, where the combination of insufficient irrigation coverage and the inadequate water use technologies, result in the low agricultural productivity.

b. Economic Barriers

Limited access of smallholder farmers to financing to build resilience.

The financial sector lacks incentive, capacity and skills to extend financial services to these populations, many of whom are remotely located, largely as the markets are not at scale and thus provide less lucrative returns than conventional and higher income market segments, unless reached at scale. Financial service providers (i.e., banks, microfinance institutions, and insurance companies) are discouraged from lending to farmers. As a result, smallholder rain-fed farmers have very limited access to finance and improved opportunities to improve their production. This has prevented investments in land preparation, the ability to have climate-resilient production practices (e.g., rainwater harvesting) and has kept many families (especially single female-headed households) in continuous cycles of poverty and food insecurity. Consequently, farmers have had trouble entering markets, have poor access to agricultural technologies, and lack critical agricultural/livestock advisory and extension services.

Smallholder farmers lack support for marketing and selling opportunities for their agricultural produce.

Smallholders' access to markets is a crucial challenge, which contributes to poverty and food insecurity. The lack of timely market information on pricing, demand, market trends, and limited management skills hinders smallholder farmers from equitably access and benefit from local,

departmental, and national markets. Despite government efforts to improve the agricultural marketing systems, this remains a challenge for smallholder farmers.

c. Institutional Barriers

Interinstitutional coordination takes place at regional level, without addressing the needs of smallholder farmers and producer associations.

Mi Riego Programme is a national programme implemented by the central government which has a wide coverage of irrigation infrastructure; however, there are two limitations: (i) irrigation programs have focused on a centralized administrative approach in providing physical infrastructure and equipment; and (ii) a gap for reaching on-farm due to normative constraints that bans State infrastructure interventions to (i.e. transfer of service like on-farm irrigation) to private actors, including smallholders. Accordingly, in terms of small-size infrastructure, there is a gap between the infrastructure built by the central government and the one needed by the smallholder to transport water to their farms along the last phase of distribution of water for irrigation.

To reduce the vulnerability of local communities and small producers to the effects of climate change in the “Valleys Macro-region” landscape, government institutions must implement a support program that integrates social, economic and ecological priorities. This articulation of actions requires a shared strategy that incorporates the preservation and restoration of environmental functions from implementing sustainable management practices of grasslands, vegetation cover and forest lands.

Likewise, the lack of coordination between institutions makes it difficult to develop and implement effective mechanisms that allow small farmers and producers in general, to sustainably manage their natural resources and agroecosystems to optimize productivity, with less impact on processes of hydrological regulation, climatic and of other existing environmental functions in the water sources or their parcel. Undoubtedly, one of the causes of the lack of inter-institutional coordination is that most institutions focus on their sectoral priorities, making it impossible to develop synergies with other sectors, thus reducing the opportunities to generate articulated impacts the landscape level of the “Valleys Macro-region”.

In this sense, inter-institutional coordination is a preponderant factor for implementing actions with an integrated landscape approach and required to successfully adopt climate-resilient technologies and/or practices. To date, irrigation programs have focused on a centralized administrative process to provide physical infrastructure and equipment; However, to achieve the development of climate resilience, it is also necessary to restore the vegetation cover and implement measures for the conservation of soil and water sources, as well as the responsible use of water, to develop the most efficient operating capacity in systems irrigation.

In this context, institutions must generate capacities to provide adequate support to small farmers and local authorities, based on the implementation of a participatory approach to watershed management and the administration of efficient irrigation systems, considering the aptitude of the land, water availability and demand, as well as food production within the framework of productive diversification and resilience to climate variability.

Local institutions lack strong governance mechanisms for climate change and natural resources due to limited technical capacities

Local institutions have significant limitations to implement public policies and adequately integrate gender equality, indigenous peoples or youth inclusion in relevant programs for climate adaptation and watershed management. An important driver of this limited approach in public policy implementation is the weak knowledge of the internal communal norms, and accordingly limited locally adapted means to spur leadership and active social roles of women, indigenous populations and youth. At the same time, an additional weakness is the lack of community-driven and multi-stakeholder climate change adaptation processes, among others. In addition, institutions focus primarily on their sectoral priorities, often to the detriment of synergies with other sectors, as result, opportunities for broader landscape level impacts are diminished or lost. The limited coordination, due to different factors, across institutions hinders the development and implementation of an effective approach that resolves institutional challenges, addresses direct and underlying causes of vulnerability, and empowers smallholders and other actors to sustainably manage their natural resources and agroecosystems so as to optimize productivity as well as impacts on hydrological and climate regulation and other ecosystem functions and services at watershed scale. Inter-institutional coordination is critical for the integrated landscape approach required for successful adoption of climate resilient agriculture and integral watershed management strategies at scale.

Lack of systematic and solid monitoring and evaluation processes and data

One of the challenges in government is that monitoring and evaluation of community programmes or projects are not well coordinated or planned, or they do not adequately inform planning, policymaking and budgeting decisions. This results in government interventions missing the opportunity to improve the functioning of adaptation interventions. Climate data, in particular on frosts and hailstorms, is scarce and often monitored on a regional scale, which is not always relevant for specific local needs for timely and accurate information. This is a constraint in developing local adaptation solutions.

Lack of integral and participatory micro-watershed management plans to guide climate resilient watershed restoration and conservation practices.

In general, there is a lack of planning instruments at micro-watershed level to guide local decision-makers in integral watershed management adopting a climate resilient approach. This often results in unsustainable land and water use in the watersheds. In a context of decreasing water availability due to climate change in the prioritised areas of the project, the lack of water and land-use management plans will exacerbate water scarcity problems and agricultural impacts.

2.2. Location

The project intervention area covers 60% of the total area of the Valleys Macroregion of Plurinational State of Bolivia² – approximately 8,338,000 hectares. The project areas include territories in 5 departments and 65 municipalities (Table 2 and Map 1). Several ecoregions are represented in the project areas, including Yungas forests in the Department of Cochabamba, inter-Andean dry valleys in Santa Cruz,

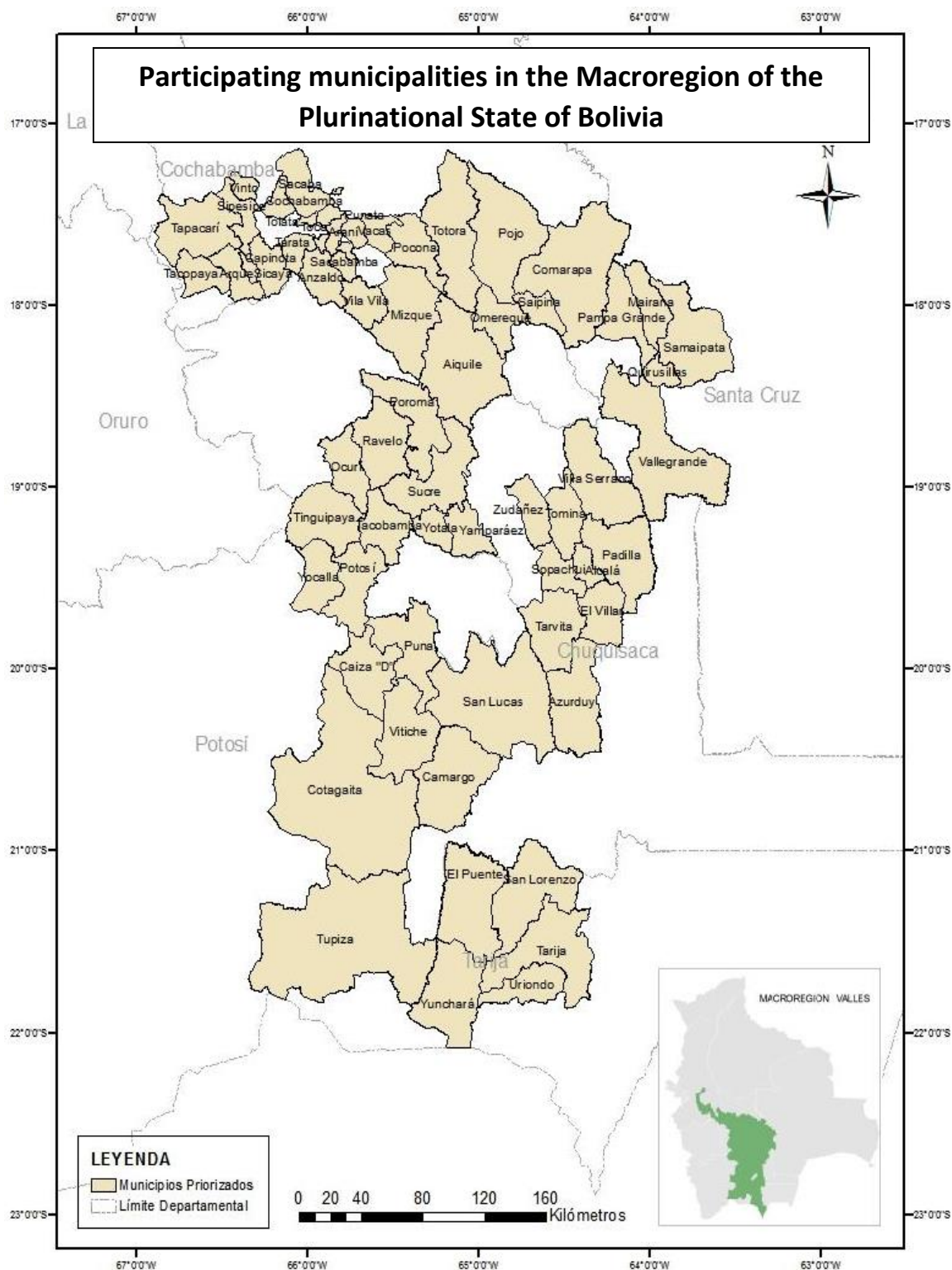
² The Strategic Macroregions in Bolivia are defined by the Ministry of Development Planning (MDP) through its Agency for the Development of Macroregions and Border Zones (ADEMAF, 2016).

highlands in Potosí and Tarija, and Tucumano-Plurinational State of Boliviano forests in Chuquisaca and Tarija. Project sites are located at altitudes from 1,400 to 3,800 metres above sea level (masl). Precipitation varies from 300 mm in January, February and March, to 20-50 mm from May to September. Monthly temperatures range from 11 °C to 18 °C. The lowest temperatures are registered between May and September (Fundación Amigos de la Naturaleza, 2018). Land uses vary depending on different factors including altitude, weather, biogeography, and sociocultural factors.

Table 2. Participating municipalities by department

Department	No. of Municipalities
Chuquisaca	16
Cochabamba	26
Potosí	11
Santa Cruz	7
Tarija	5

Map 1. Location of participating municipalities



Source: Conservation Strategy Fund. Prepared for FAO Bolivia within the framework of the Technical and Financial Feasibility Study of the RECEM Valles project (2019).

Note: The boundaries and names shown and the designations used on these map(s) do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement

Out of 65 participating municipalities, 61 are organized in 12 Associations of Municipalities. Associations of Municipalities are voluntary unions of autonomous municipal governments to collaborate on areas that are within the scope of their competencies (Law No. 031 of 2010) (Machicado, 2012). Associations of Municipalities are key project partners given their institutional capacities, and their role mobilizing resources. All of the municipalities participating in the project are organized around Interinstitutional Watershed Management Platform, in this context, particularly the work with the municipalities of Capinota, Villa Gualberto Villarroel and Villa Rivero in the Department of Cochabamba, and the municipalities of Tarija (Department of Tarija) that do not belong to any association will take place through the mentioned Watershed Management Interinstitutional Platforms.

Table 3. Municipal associations by department in the project intervention area

Department	Associations of Municipalities	Number of municipalities in the project area
Chuquisaca	Chuquisaca Centro	8
	Chuquisaca Norte	5
	Los Cintis	2
Cochabamba	Cono Sur	8
	Metrópoli de Cochabamba	4
	Region Andina de Cochabamba	4
	Valle Alto	8
Potosí	Los Chichas	3
	Gran Centro de Potosí	6
	Norte de Potosí	2
Santa Cruz	Valles Cruceños	7
Tarija	Héroes de la Independencia	4

2.3. Project description

The project “Upscaling Ecosystem Based Resilience of Vulnerable Rural Communities in the Valles Macro-region of the Plurinational State of Bolivia” (RECEM-Valles) represents an adaptation investment aiming to enhance the resilience of the livelihoods of the most vulnerable producers, of the ecosystems and environmental functions, of the infrastructure and technologies developed, and of food security in the Valle Macro-region of Plurinational State of Bolivia, in order to face the threats of climate change. The project structure and proposed activities in this sense, reflect on the close relationship between ecosystem functions and services (primarily hydrological regulation) on one hand and climate and socio-ecological resilience on the other, and aim to tackle the climate vulnerability experienced in the Valles Macro-Region through an integral and systemic perspective.

The objective of this project is to increase the resilience to climate change of smallholder farmers in the Valles Macro-region of Plurinational State of Bolivia by implementing integral and participatory micro-watershed management that includes the improvement of small-scale farmers’ capacities to manage their agroecosystems sustainably, on-farm climate-proofed irrigation systems, and strengthening the corresponding institutional capacities to support climate risk management by smallholder farmers and communities. To do so, farmers will collectively enhance the ecosystem functions at agroecosystems and watershed levels, which will manifest in water regulation and

supply, reduction of erosion and disaster risk (e.g., flooding), among others that jeopardize smallholders' livelihoods and welfare.

The project also addresses the barriers faced by smallholders in relation to access to markets and financial instruments, by supporting strategic activities leading to diversification and access to upscaled markets through certifications of production and by investing in opportunities for investment in products with added-value. Similarly, the project targets to work with domestic funders and financial institutions to develop different financial instruments that more particularly respond to the needs of smallholders in the target areas. These activities represent the backbone of the exit and sustainability strategy of the project, which will enable smallholders to sustain climate adaptive investments beyond the project span.

Increasing water security through expansion of irrigation is a government priority to meet increasing local demand for food as well as for export, and to cope with increasing rainfall variability due to climate change. The proposed investments will ensure agricultural sustainability and food security in the target area and in the whole country, as the farms in the Valles Macro-region to benefit from climate investments under the project, are responsible for 60% of food production in Plurinational State of Bolivia. The proposed adaptation approach will be topped with the deployment of climate-resilient technologies and equipment and support for production diversification (in biological and financial terms) to contribute to yields increase and stabilization and advisory support for market access. Therefore, crucial motivation for farmers to sustain adoption and application of resilience-enhancing measures and technologies should be heightened by achieving increases in farm income from access to fair markets.

The RECEM-Valles project is based on the considerable investments implemented by Bolivian Central Government over the period 2006-2017 to provide solutions to the problems of scarcity of water resources, including the MiAgua I, II and III programme. Particularly, the project will establish synergies with the MiRiego Programme by not only filling the gap of on-farm water provision, due to the large-scale characteristics of irrigation systems deployed under MiRiego, but also to enable-climate resilient agriculture by supporting climate-resilient irrigation infrastructure. Lastly, the RECEM-Valles will scale-up the investments carried out under MiRiego by supporting watershed management in a highly vulnerable macro-region from a climate-resilient approach that enables sustainability in the provision of ecosystems functions and services.

The project will be executed over a five-year period (2022-2027) in 18 selected micro-watersheds identified as priorities by the Government of Plurinational State of Bolivia in 65 municipalities in the Valles Macro-region, located in five departments: Cochabamba, Chuquisaca, Potosí, Tarija y Santa Cruz. The population of the Valles Macro-region is very diverse (see Annex III for socio-cultural map) and particularly vulnerable to climate change given the high degree of poverty. It is important to highlight that 63% of the total population corresponding to the project area, are in a situation of poverty, out of which 47% correspond to the moderate poverty group and 16% to the extreme poverty group (adding the indigent and marginal population). The municipalities of the project area, particularly those located in the departments of Chuquisaca and Potosí, stand out as very poor

municipalities or those with a higher prevalence of poverty, with more than 72% of their population living in poverty in both departments.

The Valles Macro-region corresponds to watersheds of Rio Grande, Guadalquivir, Azero, Rocha, Mizque, Cachimayo and Arque-Tapacarí. This macro-region is considered the most vulnerable to climate change in the Plurinational State of Bolivia, based on an assessment of 13 indicators corresponding to three main criteria: a) climate exposure, b) sensitivity to climate change, and c) adaptive capacity to impacts. Furthermore, it is important to highlight that this assessment has shown that deterioration of ecosystems functions, experienced in the targeted territory, is a relevant factor of vulnerability.

In the Valleys Macro-region, large portion of the ecosystem functions is related to forests, with six types of forests that all together represent 38% of the project area with crucial role for hydrological regulation and provisioning, water infiltration, climate regulation and prevention of soil erosion, flooding and drought. Wetlands is another type of ecosystem in the project area, relevant for their ecosystem function of water and habitat provision to wildlife, although they represent a small area of the Valleys (7,625 hectares). Extreme droughts have been affecting forest ecosystems, consequently causing forest fires and loss of vegetative cover with direct impact on maintaining the capacity for water regulation, the loss of organic matter in the soil and of biological diversity, in many cases endemic to these areas.

The project in this context, will target to increase resilience in the Valles Macro -region by putting in place important climate resilient infrastructure and increased adaptive capacities, but also and very importantly, by restoring forest and wetland ecosystems so ecosystem functions and services, such as regulation of hydrological cycle and carbon storage can be ensured and sustained. To this end, important afforestation and reforestation efforts are envisaged in the target area.

Furthermore, agriculture in the Bolivia's Valley Macro-region is characterized by smallholder cultivation of an average of 2 hectares, primarily for self-consumption with only small surpluses destined for local or departmental markets. Irrigated plots are even smaller ranging from 0.4 ha per family (considered "micro") to 1.5 ha per family (considered "large" in this Macro-region). These irrigated farms, which are under threat due to climate change, are responsible for 60% of food production in The Plurinational State of Bolivia. Moreover, the population of the Valles Macro-region has a strong dependence on low-yielding agriculture and as a result, a high degree of relative food insecurity.

There are currently 161,982 hectares in the Macro-region served by irrigation systems and 86,740 hectares without. However, 40% of existing systems reported at national level are unable to access water consistently and efficiently, exacerbating smallholder vulnerability to rainfall variability. In this context, the most vulnerable people in the Valles Macro-region are the subsistence farmers with highly vulnerable to degrading landscapes, declining ecosystem functions, increasing climate change effects, and low yields. These factors contribute to place them into a vicious cycle of asset depletion and extreme poverty. Without the financial resources to invest in adopting resilience-enhancing

agricultural management, smallholders have severe limitations to address their increasing vulnerability.

It is also important to highlight, that at least 48% of agricultural production systems in The Plurinational State of Bolivia are managed by women, and they represent approximately 42% of the economically active population in agriculture, nationally. Their main activities are crop production, bee keeping, forestry, animal husbandry, and commercial activities. At the same time, 34% of all smallholder farms led by women correspond to families where the woman is the head of the household. This figure tends to increase due to men migration, therefore, the Valley Macro-region also experiences the process of feminization of agriculture. With low yields on small plots, farmers are often forced to migrate seasonally for months to urban and other areas for wage labor. Over time there is a progressive drain of male labor and knowledge from rural to urban areas resulting in a trend towards a greater proportion of women and older inhabitants in rural farm communities, resulting in another rural process: aging of agriculture. Both women's and elders' agricultural activities rely mostly on ecosystem functions and services, particularly the ones resulting from agrobiodiversity since they have limited access to credit and technical assistance, among other services and infrastructure, given that such credits and assistance are mainly addressed to adult and economically active men .

Additionally, Plurinational State of Bolivia has a comparatively large fraction of indigenous population, estimated at 42%. In 2012, 4.2 million Bolivians identified themselves as indigenous. (INE, 2012) Indigenous peoples in Plurinational State of Bolivia are diverse, with 36 different recognized indigenous groups (nations). The largest indigenous groups are Aymara and Quechua. In this context, considering the population in the target area is composed by 7,7% of indigenous people, as part of the stakeholder engagement activities, the project preparation activities included a process to seek and obtain the Free, Prior and Informed Consent (FPIC) by indigenous peoples. The FPIC process included seven workshops carried out in 2019.

Similarly, according to the evaluation process of the Social and Environmental Safeguard No. 9 applied to the Project, and considering that there is an area of intervention with the presence of indigenous peoples and nations according to what is referred to in previous paragraphs, and the information compiled in the participatory construction workshops and the process of free and prior informed consent (CPLI) held, an Indigenous Peoples Plan has been developed and is presented as an appendix 6 to annex 6 of the funding proposal (ESMF), serving as an important strategic document that contributes to the implementation of activities for the development of the country following a Human Rights approach and considering the specific role of indigenous peoples in the context of the project implementation.

In this sense, the adverse effects of climate change on agriculture mainly affect the most impoverished rural population including women, youth and elderly populations, since the risk of disasters of hydrometeorological origin results from the occurrence of natural hazards and the vulnerability of human populations as a result of poor socio-economic conditions. The most vulnerable people in the Valles Macro-region are the subsistence farmers with highly vulnerable to degrading landscapes, declining ecosystem functions, increasing climate change effects, and low

yields. These factors contribute to place them into a vicious cycle of asset depletion and extreme poverty. Without the financial resources to invest in adopting resilience-enhancing agricultural management, smallholders have severe limitations to address their increasing vulnerability.

The project has been designed through a participatory process that has sought inputs from stakeholders for the identification and prioritization of the needs and opportunities to be addressed, and that invited recommendations on the strategies and actions to be implemented. The participatory process has included actions to secure the buy-in and participation from local authorities and institutions across the 65 participating municipalities. The process has also invited the participation of local civil society organizations (CSOs), non-governmental organizations (NGOs) associations of agricultural producers, women organizations, and academic institutions.

The project will work closely with smallholder organizations to build the climate risk management capacities of their constituents through Farmer Field Schools (FFS), water users associations (WUA) and watershed committees and peer-to-peer exchanges. This will include empowering the decision-making capacities of these local institutions, especially of women, and increasing the abilities of women and youth to produce, add value to, and market climate-resilient agricultural products. The project will also organize larger learning-dialogue-coordination platforms organized by agroecological zones or establishments to share lessons in enhancing productivity and resilience, facilitate development of value chain partnerships and achieve economies of scale in regard to input acquisition, marketing, and advocacy for policy implementation and dialogue. Institutional support to producers' organizations and community leaders (through FFS, WUAs, watershed committees) will be strengthened through training of field staff and decision makers in climate-resilient agriculture and watershed management and the FFS action-research approach for learning by doing, and the provision of climate and weather information for more effective and timely decentralized climate risk management. The project will follow a gender-sensitive approach, consider women, youth and elderly population as key agents of change. The project in this sense, will provide highly vulnerable populations with tools, knowledge, technologies and enhanced management practices to empower them to drive a transformation of their livelihoods and ecosystems and reduce dependence on low-yielding agriculture. It is therefore expected that the project will not only tackle climate vulnerability directly through the climate-proofed investments in irrigation, but also will increase population's adaptive capacities by improving income generation and diversifying agricultural production.

2.4. Project beneficiaries

In general, a multi-criteria analysis was applied to carry out a process of identification and prioritization of the Macro-region, the municipalities and the number of small-holder farmers to be considered in the implementation of the RECEM-Valles Project. The target areas and number of beneficiaries of the project were selected through a stepwise process, as follows:

A multi-criteria analysis was carried out with a Geographic Information System (GIS), of the Macro-regions of Plurinational State of Bolivia, which considered the following criteria: i) high vulnerability to climate change (hailstorms, frosts and droughts), ii) Contribution to the basic family basket of the main cities with food products, iii) important water recharge areas, measured by

SENAMHI and iv) priority areas for conversation on biodiversity. This analysis allowed to identify the Valles Macro-region as the priority area for food production at the national level, which is highly vulnerable to the effects of climate change, mainly to the variability of precipitation and temperature.

This Macro-region has a high prevalence of poverty (approximately 63% of the population is poor), and it is considered the most vulnerable area within the national territory. The people currently living in poverty are mainly concentrated in rural areas, where 56% of the inhabitants work in agriculture, livestock and fishery, relying on the availability of natural resources (water, soil, biodiversity), the environmental functions of the life zones and favorable weather conditions for their survival. Among the main agricultural crops are wheat, potatoes, corn, peas and broad beans, which cover a total area of 379,134.54 hectares. There are other agricultural products that are becoming increasingly relevant for small producers, such as peach, apple, grapes, vegetables such as garlic and onions. Nonetheless, increasing the production of these products requires specialized technical assistance.

Ranking of municipalities nationwide through a multi-criteria analysis considering the following variables: i) vulnerability to food insecurity, ii) traditional food production zone, iii) areas with soil degradation and iv) poverty levels (data on these variables are only available at municipal level). The inclusion of socioeconomic variables in the prioritization process reflects the assumed relation that exists between vulnerability to the effects of climate change and poverty: the poorest members of the national population are assumed to have the least ability to invest in diversifying their livelihoods to reduce their exposure to CC impacts, and least access to social and financial safety nets. The greatest concentrations of high-vulnerability municipalities, in accordance with the indicated criteria, were located, resulting in the final selection of a total of 65 target municipalities. The project will focus on the areas of highest socioeconomic and environmental vulnerability, identified through the application of a further layer of biophysical variables of direct relevance to vulnerability and the potential for achieving adaptation and mitigation benefits (productive potential of soils and hydrological recharge potential).

Within these selected highest vulnerability areas of the 65 target municipalities, the project will work with small-holder farmers (defined as small-scale family farmers relying on family labour, and therefore with limited access to the human, physical and financial resources required for adaptation), and who are at greatest risk of being pushed into conditions of extreme food insecurity due to climate change (all of those in conditions of poverty or extreme poverty fall into this group). The project will target the same small-holder farmers with approximately 0.5 ha of land, who principally produce maize, vegetables, potatoes, wheat, etc.

The application of the criteria presented above will result in the selection of 58,000 small-holder farmers as direct beneficiaries and 290,00 members of their families, as indirect beneficiaries in the target municipalities. Female headed households will be prioritized. Selection criteria will assign a weight to women's participation in access to technical assistance, level of participation in local organized structures, and access to incentives. Women represent 51% of the total population of the intervention area.

Child labor has been reduced in Plurinational State of Bolivia thanks to social protection programs such as the School Feeding Programs under the Avelino Siñani N°070 Education Reform Law or the Juancito Pinto Bonus, which have encouraged parents to send their children to school, reducing jobs in which they collaborate with their parents in agriculture or herding their animals.

The project will work with a family farming approach, with a head of the family (male or female), who will participate in the implementation of the project components, mainly in climate resilient agriculture, on-farm climate-proofed irrigation management systems, and in some activities of restoration and conservation of micro-watersheds ecosystem functions and services. However, due to this focus on family farmers, and in order to strictly avoid child labor in the context of the project, the following elements will be introduced to reinforce the child labor exclusion from the project activities:

- a) The no-child labor policy will be communicated to project beneficiaries, suppliers/contractors and the extended communities.
- b) A procedure for age verification of applicants as part of hiring policy will be created/enforced.
- c) Establish protocol for how to respond when child labor is detected.
- d) Training will be provided to staff within the Project Management Unit and the Provincial Focal Points to provide them with tools to enforce the no-child labor policy.
- e) Include the issue of child labor as one of the potential issues that can be reported through the Grievance mechanism with the assurance of confidentiality.

These elements will be closely monitored by the project PMU via the Environmental and Social Specialist and through FAO supervision missions.

3. ENVIRONMENTAL AND SOCIAL BASELINE

The assessment of the state of the environment in the Valles Macroregion, as presented in the Valles Macroregion Integrated Development Study (ADEMAF, 2016), shows that local natural resources are under great pressure in rural area. For example, while forests still cover 38% of the area of the Valles Macroregion, they are not sustainably managed. In the east of the Valles Macroregion there are large tracts of forests, mainly in the Yungas and Tucumano-Boliviano forests, that are in protected areas but constantly under threat from human activities. In the rest of the Macroregion, Andean forests are isolated patches in a mosaic of grassland and shrublands characteristic of the Andean puna. There is also pressure from farming families who hunt wildlife and expand agricultural lands into natural ecosystems. Human settlements spring up haphazardly in sectors where there are government lands. Deforestation and unsustainable agriculture practices (such as felling, slashing and burning; overusing pesticides; using restricted or banned pesticides; clearing headwaters of watersheds and ecological easements; taking livestock to graze on water recharge areas, etc.) have great impact on the biodiversity, soils and water in the region. In the west of the Macroregion, there is mining activity, mainly by mining cooperatives, which are rarely monitored and contribute significant levels of pollution and environmental damage. The level of pollution by mining activities of water sources used for human consumption and irrigation in this region is of great concern, and even more so because water is scarce. Compounding this situation is the environmental pressure brought to bear by the main urban cities (capital and intermediate) of the departments of Santa Cruz, Cochabamba, Chuquisaca, Tarija and Potosí that demand natural resources, mainly water for human consumption, and food, and pollute water bodies with waste and sewage disposal. The incursion of urban areas into surrounding rural areas, as is the case of the cities of Tarija and Cochabamba, puts a great strain on forest areas, and the aquifer recharge areas used not only for water for human consumption but also for irrigation.

The RECEM-Valles project seeks to reduce the pressure to change land use and deforestation and find alternative farming activities that are compatible with forest and vegetation cover conservation by, for example, implementing Agroforestry Systems (AFSs). Using water efficiently will be encouraged through irrigation modernization. Conserving soils and water will be done by changing traditional farming over to organic farming and conservation farming, using organic and inorganic resources that have a low impact on the environment. One key component of this project is to protect water sources (headwaters of basins and water recharge zones) by afforesting and reforesting and protecting them using living and man-made barriers. Therefore, the inventory of water sources and water recharge zones, and the environmental monitoring of them will provide valuable information for decision making by governments and farmers.

With regards to evaluating the farming systems, the production sustainability conditions are currently rather low in the Valles Macroregion (ADEMAF, 2016). This means that the farming systems are not using resources such as water, soil, and agricultural inputs (fertilizers, pesticides, manure, etc.) or new technologies that complement traditional farming methods efficiently. Large areas of the Macroregion still use ancestral farming methods that often, because of the effects of climate change (prolonged drought, frequent frost and hail, changes in rainfall patterns, rising local temperatures, etc.), and a shortage of natural resources like water, are not the most efficient and therefore do not yield as much as expected and/or crops are lost. Overall, the region is highly dependent on low-yield agriculture and therefore a high degree of food insecurity. The vulnerability of water resources and agricultural production to the effects of climate change is high; recent studies predict that the farming and livestock sectors will be the most affected as they face losses of 6 – 14% of the sectors' GDP. This scenario will also bring limited productivity and weak yields affecting a series of basic crops will result in only 17% of the demand for food being satisfied. Therefore, the smallholder farmers are a highly vulnerable group as their crop's yields are already very low – the average potato yield is 5.7 t/ha, the lowest in the Andean region, whereas the average corn yield is only 2.2 t/ha. Currently, 161,982 hectares in the Valles Macroregion have irrigation systems, while another 86,740 hectares are dry-farmed. On the other hand, 40% of the irrigation systems around the country are subject to great variations in rainfall and there is no training on how to use water efficiently, which would guarantee continual access to this vital resource, and reduce the vulnerability of the smallholder farmers.

Currently, irrigation systems are implemented using the participatory planning approach, complemented with technical assistance to maintain the systems and practical support for the smallholder farmers to level up their capacities to adapt effectively to changes in rainfall patterns. Nevertheless, the centralized administration of community irrigation systems in an area as vast as the Valles Macroregion is inefficient, slows down the producers' decisions and takes responsibility away from them, which then has a knock-on effect on local actors' capacity to administer and adapt their irrigation systems to climate change in a timely and strategic fashion.

Another point that should be mentioned is that the flow of communication between the primary and the transformation sector is fractured (even though the Macroregion is home to many food manufacturing companies) (ADEMAF, 2016). Many producers, mainly fruit and vegetable farmers, have problems selling their produce. The lack of specific markets for their produce and low prices when there is excess supply are reasons why they waste produce.

The project proposes a series of activities that will support local producers and government authorities to face the current problems affecting the farming systems, and how farming produce is produced and commercialized. To tackle the adverse effects of climate change which, year in year out, lead to losses and the ensuing economic effects on the families, technologies, such as greenhouses, anti-hail netting, hydrogels, thermal mesh, etc. will be used to counteract frost, drought and hail. The irrigation systems will be upgraded to ensure that water is used efficiently given that around 90% of irrigation in the Macroregion is currently flood or gravity-fed, which is not very efficient as this region is prone to water shortages and droughts. Plans also include supporting developing infrastructure and equipment to store water; reservoirs and water tanks that enable water to be captured during the rainy season to be used during dry periods. Training sessions and training local technicians will accompany installing these technologies so that local producers and technicians can take over the new technology. Size thresholds for water reservoirs and tanks will be duly considered in order to ensure the area of water impounded, dam height and abstraction rate are consistent with a Category B type of activity.

According to the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the context of National Food Security, States should ensure that the legitimate tenure rights to land, fisheries and forests of all individuals, communities or peoples likely to be affected, with an emphasis on farmers, small-scale food producers, and vulnerable and marginalized people, are respected and protected by laws, policies, strategies and actions with the aim to prevent and respond to the effects of climate change consistent with their respective obligations, as applicable, in terms of relevant climate change framework agreements³. In this sense, it is important to highlight that based on the Decree on Agrarian Reform No. 3664 enacted by the State of Bolivia on August 2nd, 1953, and promoted to Law on October 29th, 1956, it was decreed the definitive abolition and illegality of latifundio which turned former estate pawns into smallholders and free citizens. In this sense, all smallholders that will participate in the activities to be implemented under the RECEM-Valles project, poses legal ownership of their respective plots and have legal land tenure rights⁴.

Regarding transforming and commercializing production, the project aims to support producers participating in markets tailored for their produce, open new markets to ensure that produce is sold, collected, refrigerated, and transformed. These activities will help reduce wastage (rotting) and increase family income by adding value to their produce through transformation. The need for the families to diversify their production should be mentioned as the effects of climate change, the shortage of resources like water, and the changes in consumer trends are drivers behind this need. Therefore, the project will identify high-value products and support initiatives, such as honey and tourism, which are currently in demand at the local and national level.

The social assessment of the Valles Macroregion shows that as well as the population being very culturally diverse, it is particularly vulnerable to climate change because of the underlying poverty. The annual income per capita is Bs. 648 (\$US 93.96) with 63% of the population living in moderate poverty and 21% in extreme poverty. Regarding access to basic services, there is a real lack with many rural

³ [Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security \(fao.org\)](https://www.fao.org/voluntary-guidelines/)

⁴ If required, supporting documents to demonstrate legal ownership of the plots where activities will be implemented will included in the project file and presented if needed.

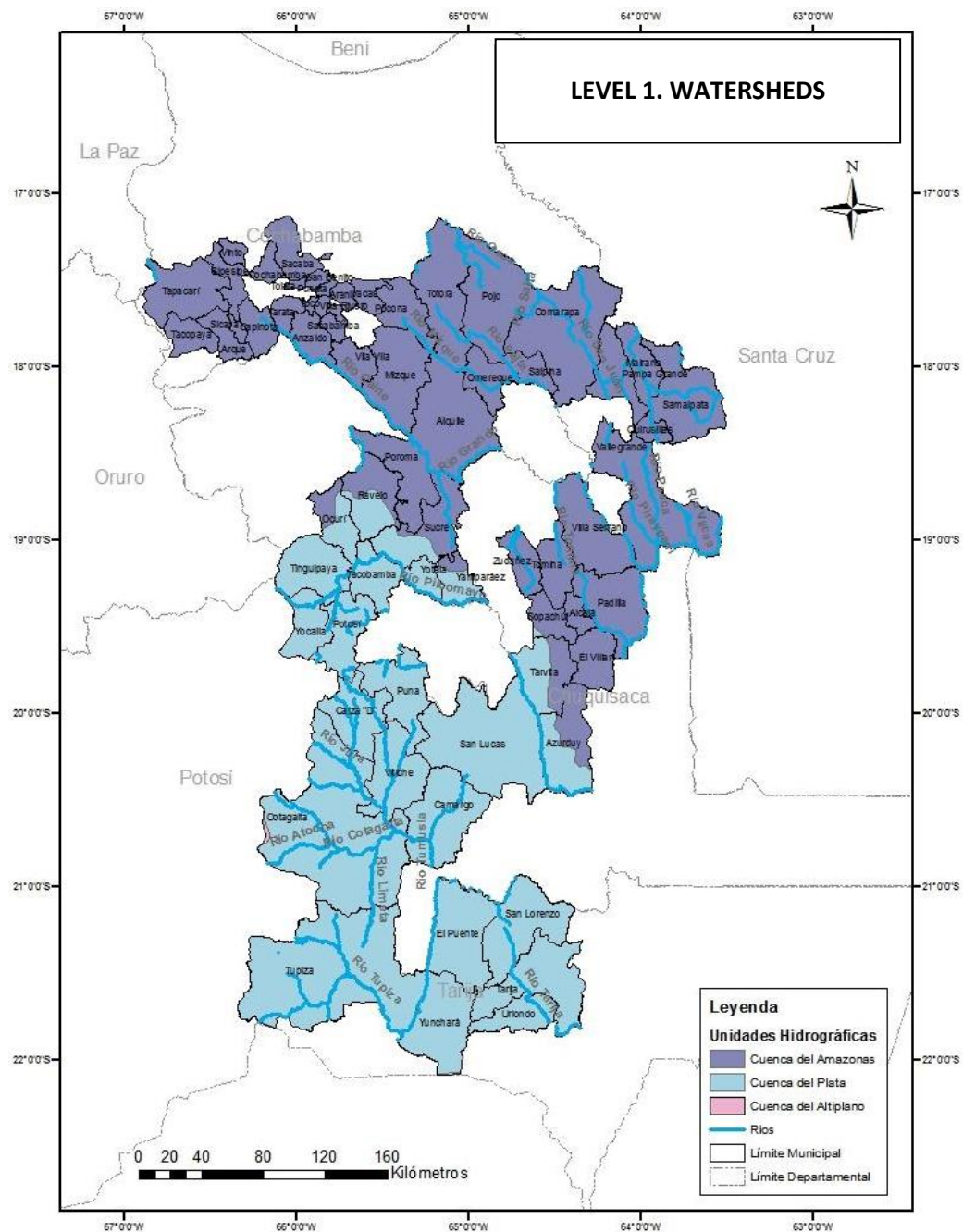
communities still without decent housing. Likewise, there are few opportunities for young people in rural areas to access technical training, and the high rates of migration to the cities dampen the impact of training programmes.

The project proposes involving women and youth in the majority of the training activities and focuses on implementing modern technologies and changes in the farming systems to deal with climate change and increase the families' incomes.

a. Environmental features

Watersheds. The project intervention area lies within three of the country's main basins: The Amazon Basin, the Plata Basin and a small part of the Altiplano Basin (see Map 2). In Plurinational State of Bolivia, the Amazon Basin is in the centre and northern sectors of the territory and is the most important of the three mentioned basins because of the volume of water and the area it covers. The Amazon Basin is divided into six main watersheds, three of which are part of the project intervention area: the Río Beni watershed; the Río Grande watershed, and the Río Ichilo-Mamoré watershed. The basin covers the departments of Pando, Beni and Cochabamba, the north-eastern section of the Department of La Paz, the north-eastern section of the Department of Chuquisaca, and the north-western section of the Department of Santa Cruz. The project area covers 41,077 km² of the Amazon Basin, which is six% of the total area of the country. The Río Grande, Río Mizque, Río Tomina, Río Caine and Río San Juan are some of the main rivers in this region.

Map 2. Watersheds in the Valles Macroregion of Plurinational State of Bolivia (Hydrographic Units Level1)



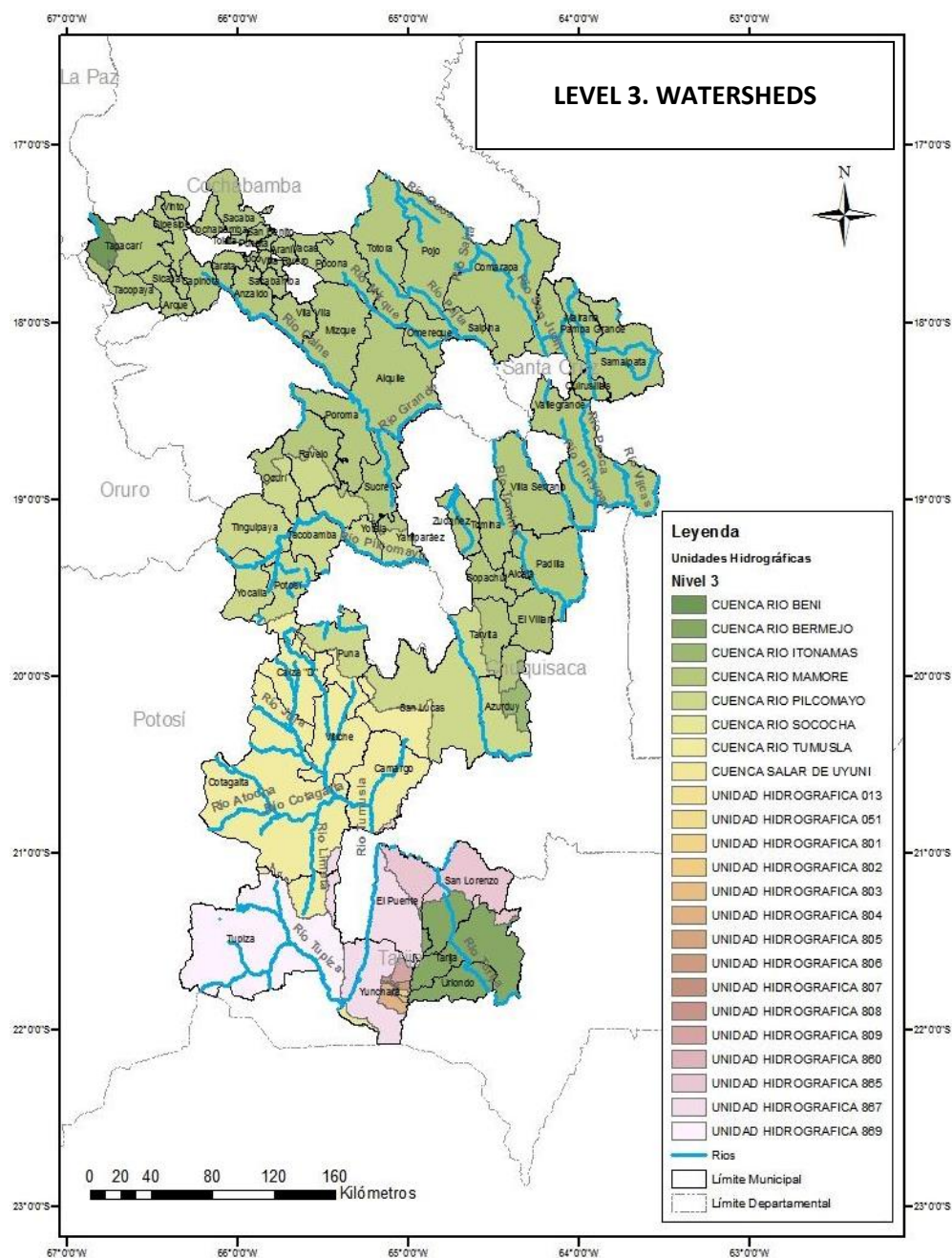
Source: Conservation Strategy Fund. Prepared for FAO Bolivia within the framework of the Technical and Financial Feasibility Study of the RECEM Valles project (2019).

Note: The boundaries and names shown and the designations used on these map(s) do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement

The Plata Basin is located to the south-east of Bolivia and covers approximately 214,242 km², which is 20.6% of the area of the country, making it the second largest basin. It covers the departments of Tarija

and Chuquisaca. The project intervention area within this basin is 40,626 km², which represents 19% percent of the basin in Plurinational State of Bolivia. The Río Atocha, Río Cotagaita, Río Pilcomayo, Río Tupiza and Río Tarija are some of the main rivers in the Plata Basin. According to the map of Hydrographic Units Level 3, the project intervention area covers a total of 23 watersheds: the largest are the Río Pilcomayo (12,268 km²), Río Bermejo (3,571 km²), Río Tumusla (13,547 km²), Río Mamoré (40,610 km²) watersheds (Map 3). A small sector of the Municipality of Cotagaita, in the Nor Chichas province of the Department of Potosí is part of the Altiplano Basin. It covers an area of around 36 km², which is only 0.02% of the total area of this basin.

Map 3. Watersheds in the Valles Macroregion of Plurinational State of Bolivia (Hydrographic Units Level 3)



Source: Conservation Strategy Fund. Prepared for FAO Bolivia within the framework of the Technical and Financial Feasibility Study of the RECEM Valles project (2019).

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Five strategic watersheds currently have management plans: Katari watershed, Río Grande watershed, Río Rocha watershed, Lago Poopó watershed, and Guadalquivir watershed. These planning tools will be useful for the project as the Río Rocha, Guadalquivir and Río Grande watersheds are important to the

project intervention areas. In addition, by 2020 there should be 14 Watershed Management Plans (WMP) for 14 additional strategic watersheds (National Basin Plan Multi-Year Plan, 2017-2020).

Table 4. Strategic and prioritized watersheds for the development of Watershed Management Plans

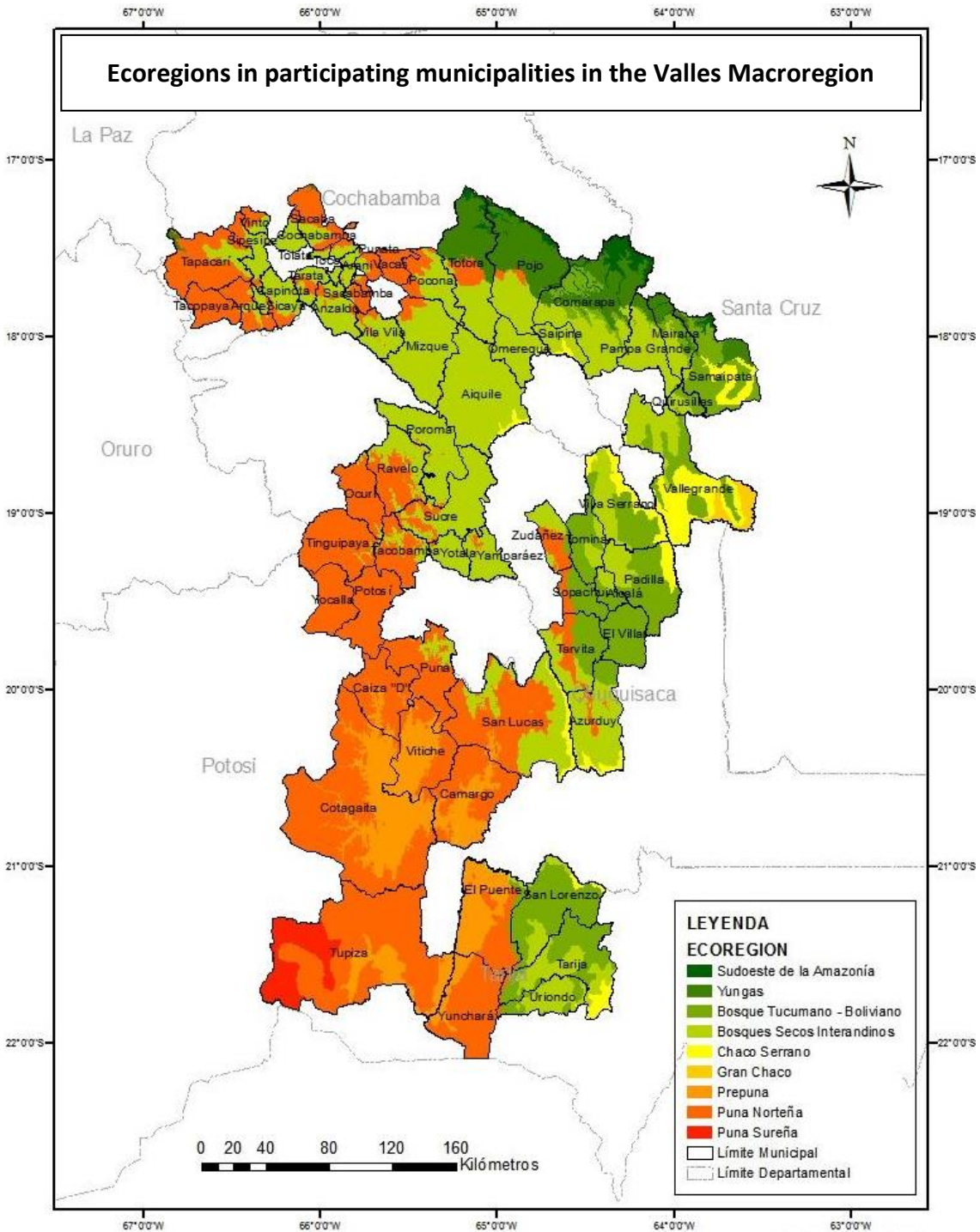
Strategic Watersheds	Department	Number of Municipalities
Katari	La Paz	24
Arroyo Bahía	Pando	1
Río Grande	Cochabamba, Potosí, Chuquisaca, Santa Cruz	31
Yapacaní	Santa Cruz	9
Rocha	Cochabamba	21
Mizque	Cochabamba, Santa Cruz	14
Azero	Chuquisaca	8
Cachimayo	Chuquisaca, Potosí	4
Lago Poopó	Oruro	13
Pampa Huari	Potosí	2
Cotagaita	Potosí	3
Tupiza	Potosí	1
Guadalquivir	Tarija	4
Arque Tapacarí	Cochabamba	4

Ecoregions and ecosystems. According to the classification of Bolivian ecoregions, the project intervention area includes 9 ecological regions (see Map 4 and Table 5). The largest ecoregions are the northern puna and the inter-Andean dry forests, which cover 35 and 32% of the territory respectively, while the Gran Chaco and the south-west Amazon only cover 1.5% of the project area. The Yungas Forest and Tucumano-Boliviano Forest cover 18% of the project areas.

Table 5. Ecoregions and sub-ecoregions in the project intervention areas

Ecoregion	Sub-ecoregions	Area in km ²	%
Northern puna	Semi-humid Puna	28,785	35
Inter-Andean dry forests	Inter-Andean Dry Forests	25,800	32
Tucumano-Boliviano Forest	Tucumano-Boliviano Forest	10,522	13
Prepuna	Prepuna	6,819	8
Yungas	Yungas	4,332	5
Chaco Serrano	Chaco Serrano	2,983	4
Southern puna	Desert Puna below the snowline of the Western Cordillera	1,331	2
South-west Amazon	Sub-Andean Amazonian Forests	907	1
Gran Chaco	Gran Chaco	354	0.4

Map 4. Ecoregions in the Valles Macroregion



Source: Fundación Amigos de la Naturaleza. Prepared for FAO Bolivia within the framework of the Technical and Financial Feasibility Study of the RECEM Valles project (2021).

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Six types of forests are represented in the project intervention area (Map 5, Table 6), with an extension of 3,186,189 ha (Geo-Bolivia, 2016) that is equivalent to 38% of the project area. The Yungas forests and Tucumano-Boliviano Forest are the most common type of forest in the project area.

With regard to forest potential, as indicated in the Macroregion Valleys Comprehensive Development Strategy (ADEMAF, 2016), the greatest potential lies in the northeast sector of the Macroregion, especially in the municipalities of Comarapa, Valle Grande, Postrer Valle, Samaipata and Mairana of the Department of Santa Cruz; in the municipality of Pojo (in the Carrasco National Park) of the Department of Cochabamba, and the municipalities of Padcaya and Bermejo (near the National Flora and Fauna Reserve of Tariquía) of the Department of Tarija. That is, the largest forest cover with forest potential is part of different protected areas of national importance.

The main forest species that can be found are Cupesi, Soto, Tipa, Tajibo, Mara, Cuchi and Laurel. In addition to wooded cover, bofedales are a very important vegetation type for puna subhumid-humid areas. In the area of intervention of the project an estimated area of 7,725 ha of bofedales, distributed in the municipalities of Arani, Sacaba, Vinto and Vacas, in the Department of Cochabamba and in the Municipalities of Tupiza and Tinquipaya in the Department of Potosí. The municipalities with the highest representation of bofedales in the project area are Vacas and Tupiza.

Table 6. Forests in the project areas

Type of forest	Area [ha]	Location
Andean Forest	47	Chuquisaca
	2,048	Cochabamba
	234	Potosí
	35	Tarija
Amazonian Forest	16	Santa Cruz
Chaco Forests	31,179	Santa Cruz
Yungas Forest	525,168	Cochabamba
	731,305	Santa Cruz
Inter-Andean Dry Forests	38,110	Chuquisaca
	4,773	Cochabamba
	325	Potosí
	600,140	Santa Cruz
	20,250	Tarija
Tucumano-Boliviano Forest	447,011	Chuquisaca
	755,624	Santa Cruz
	29,926	Tarija
Total Area	3,186,189	

Source: (Ministry of the Environment and Water, 2017)

Forest cover in the Valles Macroregion

LEYENDA

Tipo de Bosque

- Bosque Amazónico
- Bosque de Yungas
- Bosque Tucumano-Boliviano
- Bosque Secos Interandinos
- Bosque Andinos
- Bosque Chaqueño

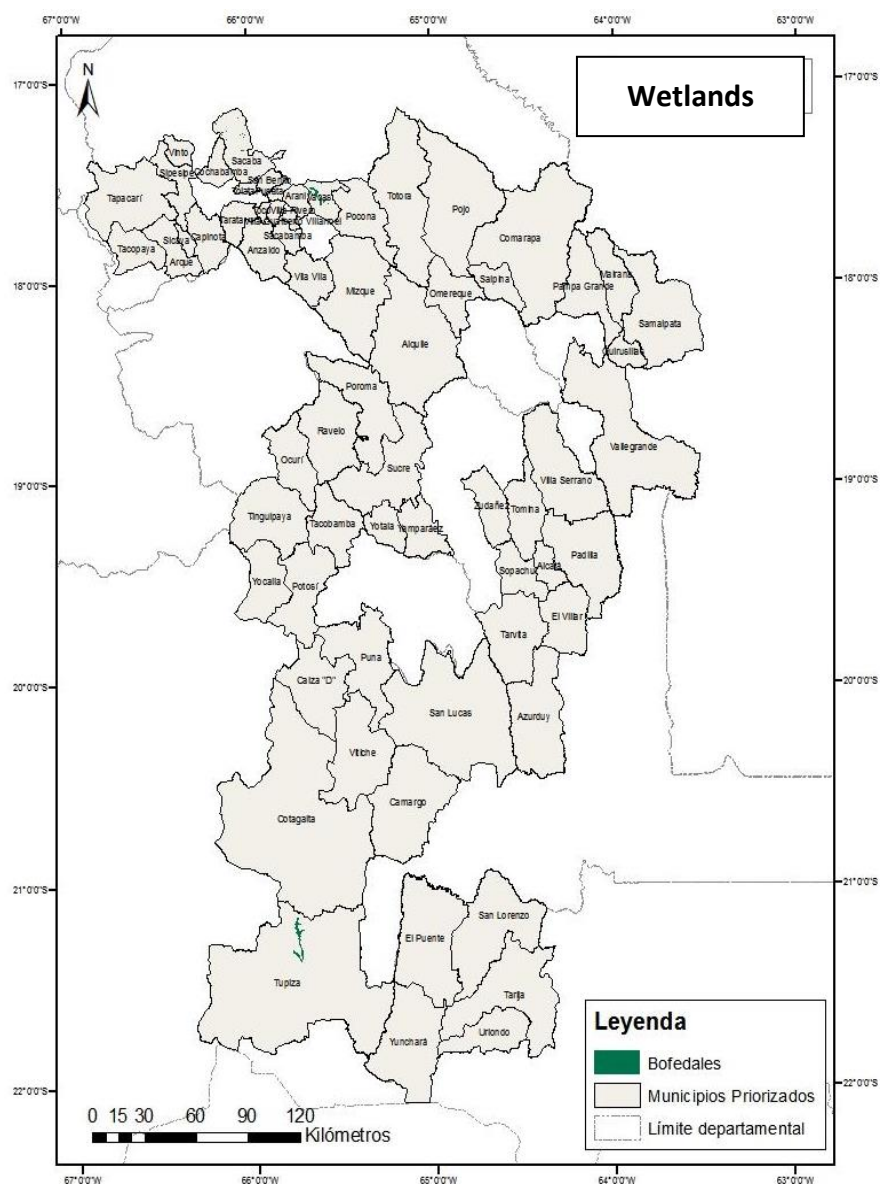
— Límite Municipal
— Límite Departamental

0 15 30 60 90 120 Kilómetros

Source: Ministerio de Medio Ambiente y Agua. (2013).

Wetlands are an important habitat in the dry and wet Puna. There is an estimated 7,725 ha of wetlands in the project intervention area, located in the municipalities of Arani, Sacaba, Vinto and Vacas in the Department of Cochabamba, and in the municipalities of Tupiza and Tinquipaya in the Department of Potosí (Map 6). The municipalities with the most wetland area in the project area are Vacas and Tupiza.

Map 6. Wetlands



Source: Ministerio de Medio Ambiente y Agua. (2013).

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It is worth highlighting that currently, Plurinational State of Bolivia is one of the countries with the highest rates of deforestation per capita in the world, in the period 1990-2010 10% of the total forest cover existing in the national territory has been lost (Andersen et al. 2016). In Plurinational State of Bolivia, the annual deforestation rate is 0.34%. Annual deforestation has increased in Plurinational State of Bolivia by an average of approximately 150,000 hectares per year during the 1990s, to nearly 350,000 hectares per year during 2016-2017. 2016 was the year with the highest level of deforestation in Bolivian history, with

more than 417,000 hectares deforested, but the figure fell to 263,000 hectares in 2017 (Andersen & Ledezma, 2019).

According to Gonzales (2019), the cost of deforestation in Plurinational State of Bolivia represents a figure greater than 10% of national GDP, considering that deforestation leads to CO₂ emissions, biodiversity loss and variation of the hydrological cycle. Deforestation in the Valles Macroregion has been estimated at 3,000 hectares a year (Fundación Amigos de la Naturaleza, 2018).

With the intervention of the Project, annual loss of 0.34% of the 1,219,444 ha of forests will be avoided through the enclosure of forest associated water sources (water recharge zones, water spring, etc.), management and conservation of land; Support for the management of protected areas and Permanent Forest Production Lands (TPFPs), for the implementation of water source conservation programs and the creation of conservation areas at sites of water importance. This forest area under management will contribute to CO₂ capture and improve water balance conditions at the local level.

Environmental services. The diversity of ecoregions, forests and other vegetation in the Valles Macroregion of Plurinational State of Bolivia provides important benefits to the local population. According to the Millennium Ecosystem Assessment,⁵ these benefits or ecosystem services, may be divided into two types: direct and indirect. Direct benefits relate to the provision of water and food, and the regulation of natural cycles, such as floods, soil degradation, desiccation and salinization, pests and diseases. Indirect services relate to how the ecosystem processes generate the direct services function (supporting), such as photosynthesis and the formation and storage of organic matter, soil formation, cycling nutrients and neutralizing toxic waste. Ecosystems also provide intangible benefits, such as recreational, aesthetic, spiritual and cultural (cultural services). The key environmental functions in the Valles Macroregion that are associated with the forests and wetlands are summarized in Table 7.

Table 7. Environmental services

Environmental services	Description
PROVISIONING	
Water provision (quantity and quality)	Smaller permanent watercourses, such as streams, springs or brooks. Water sources used to provide drinking water for humans and livestock (cattle, goats, horses, and poultry) and for irrigation.
Availability of natural pasturelands	Natural pastures, scrub and woodlands are areas dedicated to extensive livestock production.
REGULATING	
Water regime regulation	The forests help maintain the quality of the water, influence the amount of water available and regulate the flow of underground and groundwater. They also contribute to reducing risks, such as landslides, floods and drought, desertification, and salinization.
Local climate regulation (temperature regulation)	Vegetation plays an important role in regulating the weather. It acts as a cooling system through evaporation, capturing rainwater, storing, and filtering it, etc. Foliage can regulate the climate with increasing effectiveness as the density increases.

⁵ The Millennium Ecosystem Assessment was called for by the United Nations Secretary-General Kofi Annan in 2000. Launched in 2001, its aim was to assess the consequences of ecosystem change for human well-being and to establish the scientific basis for actions needed to enhance the conservation and sustainable use of ecosystems.

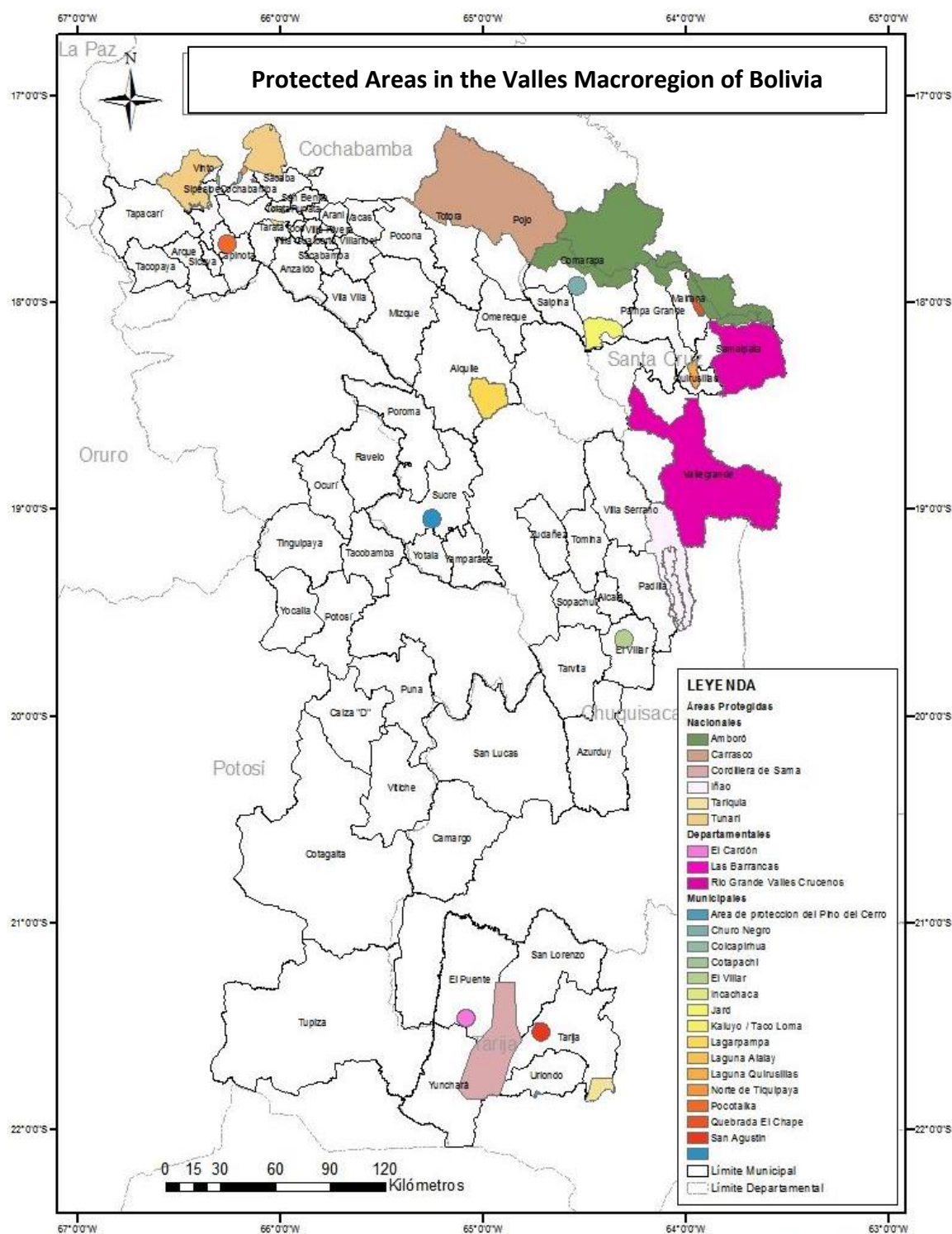
Carbon capture and storage	The forests sequester CO ₂ through photosynthesis and store it in their biomass; therefore, reducing forest cover means reducing CO ₂ in already existing carbon sinks, and also reduces the capacity to store more carbon.
CULTURAL	
Cultural identity and diversity	Cultural diversity: presence of indigenous peoples and farming communities, maintaining traditions and cultural identity despite outside influences.
SUPPORTING	
Crops and orchards pollination	Pollination increases crop and orchard yields. There are different pollinators in the area – insects, birds, and bats. A drop in the pollinator population would affect crop and orchard yields.

Source: Millennium Ecosystem Assessment

Protected areas. In the project area there are 25 Protected Areas (PAs): 6 national, 3 departmental and 16 municipal (see Map 7 and **Table 8**). These PA a total area of 1,393,417 ha, which is 45% of the total area of the country's PAs, and 17% of the project intervention area. 36 municipalities of the 65 covered by the project, have territories classified as PAs.

All project activities will exclude work in PAs and their buffer zones and will adhere to current legislation regarding PA (S.D. 24781 of 1997) and the environment (e.g., Law 300 of 2012; Law 1333 of 1996). In Plurinational State of Bolivia, production activities, works and projects may be carried out in the PAs, including the sustainable extraction of natural resources and different forms of non-consumptive use, depending on the category and zoning as established in the management plans for each one. Many of the PAs were set up not only because they are home to biodiversity but also because they are the source of water used for human and animal consumption and irrigation.

Map 7. National, departmental and municipal protected areas in the Valles Macroregion



Source: SERNAP. (2015)

Fuente: SERNAP, 2015.

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Table 8. Protected Areas in the project intervention area

Name	Category	Area (ha)	Area within project boundaries (ha)
National			
Amboró	Integrated Management Natural Area	160,864	81,512
	National Park	441,311	210,343
Carrasco	National Park	693,992	295,351
Cordillera de Sama	Biological Reserve	107,163	105,431
Iñao	Integrated Management Natural Area	171,192	70,679
	National Park	90,903	20,746
Tariquía	Flora and Fauna National Reserve	247,257	10,640
Tunari	National Park	328,520	100,812
Departmental			
Rio Grande Valles Cruceños	Integrated Management Natural Area	741,748	385,190
El Cardón	Natural Park and Integrated Management Natural Area	6,505	6,505
Las Barrancas	National Park	224	224
Municipal			
-	Landscape Protection Zone	7,322	7,322
Pino de Cerro PA	Wildlife Refuge	4,703	623
Churo Negro	Municipal Protected Area	7,359	7,359
Colcapirhua	Metropolitan Park	7,448	1,306
Cotapachi	Natural Archaeological Monument	7,448	682
El Villar	Forest and Water Reserve	7,304	7,304
Incachaca	Archaeological Park	7,445	519
Jard	Municipal Protected Area	22,260	22,260
Taco Loma /Kaluyo	Integrated Management Natural Area	7,437	2,438
Lagarpampa	Integrated Management Natural Area	29,962	29,962
Laguna Alalay	Environmental Protection Area	214	214
Laguna Quirusillas	Municipal Protected Area	6,098	6,098
Norte de Tiquipaya	Wildlife Reserve	7,449	1,708
Pocotaika	Municipal Protected Area	7,366	7,366
Quebrada El Chape	Municipal Protected Area	3,560	3,560
San Agustín	Flora and Fauna Forest Reserve	7,250	7,250

b. Social features

Land Rights. 93% (7,713,707 ha) of lands included in the project areas is titled (Table 9). The smallholdings and original communal lands (i.e., *tierra comunitaria de origen*) cover a large fraction of the area of the Macroregion with 2,263,150 ha and 2,140,079 ha respectively, totalling 57% of the area covered by the project. The people in original communal lands work in agriculture, small-scale livestock rearing and extracting timber and non-timber forest products, as well as hunting and fishing. In the Department of Potosí, the *Ayllus Originarios* (clans) predominate in the central zone. Smallholder farmers mainly live in the highlands, valleys and lowlands and hold the property rights to their land in the departments of Chuquisaca, Santa Cruz, Cochabamba, and the north of Potosí. In the highlands, valleys, and lowlands of the departments of Cochabamba, Chuquisaca and Tarija, the inhabitants live in farming communities.

Agricultural entrepreneurs are groups or individuals working in agricultural and livestock production focusing on extensive production. They are settled mainly in the north of the Department of Santa Cruz

and, to a much lesser degree, in other departments. In the Valles Macroregion, they are located in the Department of Tarija on the border with the Chaco Macroregion. There are few agro-businesses and medium-scale holdings in the project intervention area.

Table 9. Land-ownership in the project areas

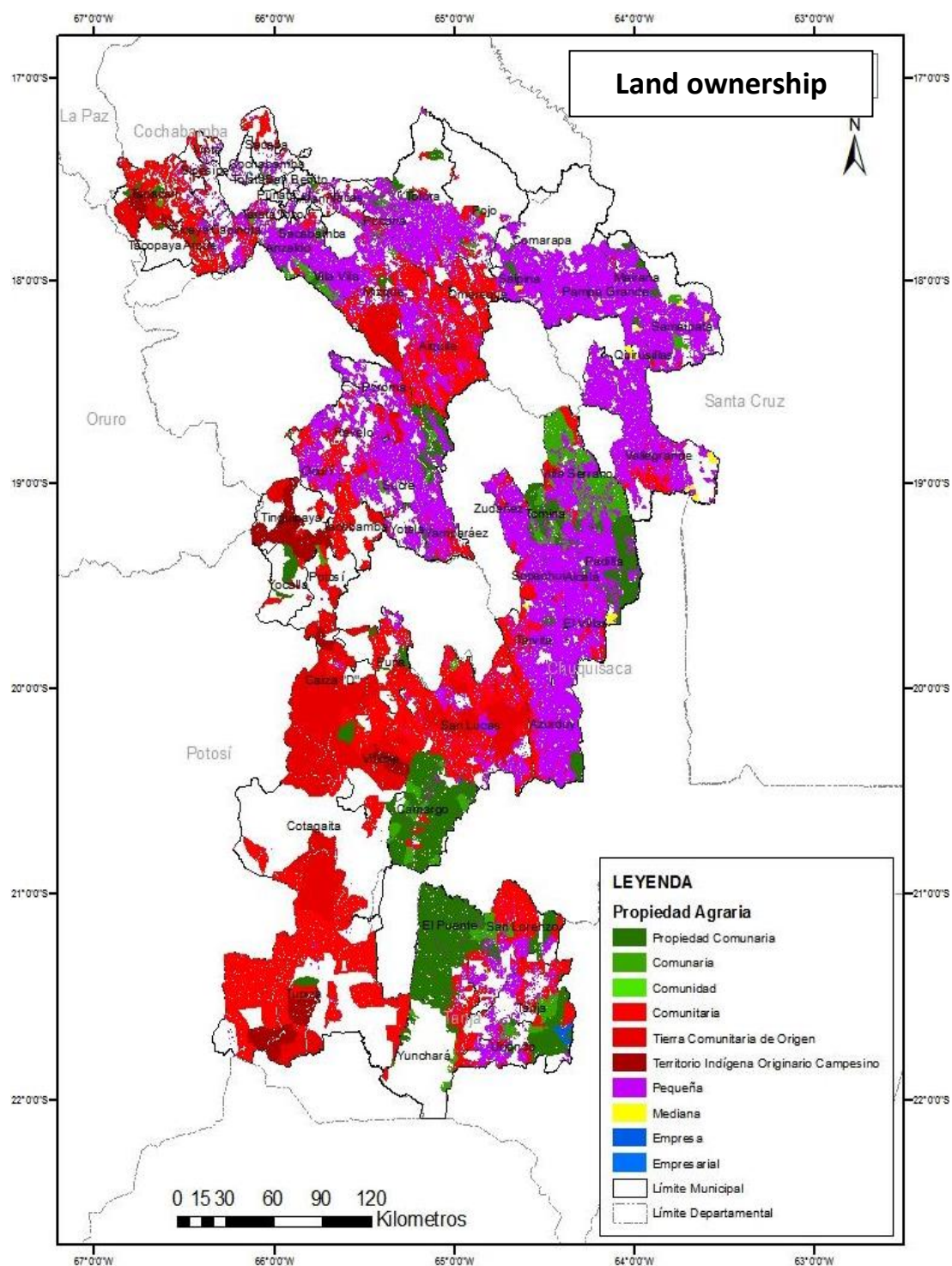
Land-ownership	Area (ha)
Community property (<i>propiedad comunaria</i>)	825,467
Individual (<i>comunaria</i>)	279,434
Community (<i>comunidad</i>)	10
Communitarian (<i>comunitaria</i>)	1,844,214
Indigenous Communitarian Lands (<i>tierra comunitaria de origen</i>)	2,140,079
Indigenous Peasant Native Territory	322,852
Small-holdings	2,263,150
Medium-holdings	18,496
Agricultural entrepreneurs	19,897
Agri-business	109
Total area	7,713,707

It is important to highlight that the activities to be implemented under the RECEM-Valles project will aim to target smallholders that possess legal ownership of their respective plots and have legal land tenure rights⁶ according to the Decree on Agrarian Reform No. 3664 enacted by the State of Bolivia on August 2nd, 1953, and promoted to Law on October 29th, 1956, which defined the definitive abolition and illegality of latifundio which turned former estate pawns into smallholders and free citizens. Particularly, according to the mentioned Decree on Agrarian Reform No 3664, legal land tenure rights over Community Lands of Origin (TCO) and Indigenous Peasant Native Territories (TIOCs for its acronym in Spanish) have been granted to legal persona known as Indigenous Nation People, in its nature these communal lands are communitarian, untransferable, exempt from seizure and is managed based on land management charters.

Therefore, in accordance with the Voluntary guidelines on the responsible Governance of tenure of Land, fisheries and forests in the context of national food security, the project will exclude farms with recent deforestation, agricultural frontier zones and **land with unresolved property rights issues**.

⁶ If required, supporting documents to demonstrate legal ownership of the plots where activities will be implemented will be included in the project file and presented if needed. This will include the legal instruments to demonstrate legal ownership of TCOs and TIOCs.

Map 8. Land ownership



Fuente: INRA, 2019.

Source: INRA. (2019)

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Self-identification as indigenous peoples. In urban areas, 19% of the population self-identify as Quechua and 3% percent as Aymara. The remaining urban population do not identify themselves as members of indigenous groups. In rural areas, most people identify themselves as Quechua (81%), with larger concentrations in the departments of Potosí, Chuquisaca, and Cochabamba. In North Chuquisaca, people self-identify as Yamparas, and in the Department of Potosí as Chichas. Farmers occupy primarily the Andean regions and valleys of the Department of Tarija.

In rural areas, the main type of organization is legally established farmers' unions, which are divided into *Subcentrales* and *Centrales*. *Centrales* are organized at the provincial level and are represented at the Departmental Confederations of Peasant Workers (i.e., *Federaciones Únicas de Trabajadores Campesinos Departamentales*). *Subcentrales* represent farmers at the municipal level. The Departmental Confederations are represented at the National Confederation of Peasant Workers of Plurinational State of Bolivia (i.e., *Confederación Sindical Única de Trabajadores Campesinos de Bolivia*). In urban areas, there are no indigenous organizations, but neighbourhood groups (i.e., *Juntas Vecinales*).

Poverty and access to basic services. Poverty, in all its manifestations, means social exclusion, lack of material and spiritual well-being. 63% of the people living in the project intervention area are poor, including 21% who live in extreme poverty. The average annual income per capita is Bs. 648 (\$US 93.96). In the project areas, 76% of the population has access to drinking water and 71% to electricity, but only 42% has access to basic sanitation services. Often, poverty drives migration from rural areas to cities, where people concentrate in neighbourhoods characterized by marginalization and poverty (ADEMAF, 2016). Poverty can be traced back to a number of causes, such as unemployment, low wages, natural disasters, war, disease, etc. Actions taken by the Bolivian government since 2008 have reduced poverty in the Macroregion, as reflected in falling rates of extreme and absolute poverty. Nevertheless, there are still too many people living in moderate poverty and the poorest live in rural areas (ADEMAF, 2016).

Land use. Currently, the use and occupation of the territory are oriented on the basis of land use plans developed at the departmental level. There is a need for up-to-date plans on a finer scale of analysis than departmental planning, which allows municipalities to make better decisions for the use and occupation of the territory, so it is necessary to develop land management plans at commonwealth level and Community territorial management plans. These plans will be developed with an adaptation and mitigation approach to climate change.

Soil Use Plans (PLUS) are operated through land management plans for individual properties and community territorial management plans for indigenous communities. Compliance with these instruments ensures the sustainable use of forests, water, soil and biodiversity, which are complemented by management plans. In addition, the land and community ordering, allows to identify ecological easements such as slopes greater than 45°, wetlands, marshes, curichis, bofedales, areas of natural water outcrop and recharge, including 50 meters around from its periphery, 100 meters per side on the banks of rivers in erodable or floodable areas; 100 meters around lagoons and lakes; 10 meters per side at the edge of public roads, from the retreat area, including railroads.

In addition, Article 2 of Law No. 1715 supplemented by Law No. 3545 states that the fulfilment of the social or social economic function is the sustainable use of the land according to the greater usability established by PLUS or the Territorial Plans for Integral Development of municipalities. Undoubtedly these restrictions on land use guarantee the fixation and capture of carbon, organic matter in soils and

priority areas of biodiversity conservation that are identified as a product of territorial ordering or proximity to protected areas.

According to the Valles Macroregion of Plurinational State of Bolivia land-use plan, 48% of the land has been classified as lands under protection with restrictions on their use, and 11% as lands for extensive agriculture (Table 10). Almost 20% of the land has not been assessed and classified. The range of uses and the lack of information in different sectors highlights the need to develop a more rigorous land-use plan for the project intervention area.

Table 10. Land-use according to land-use plan

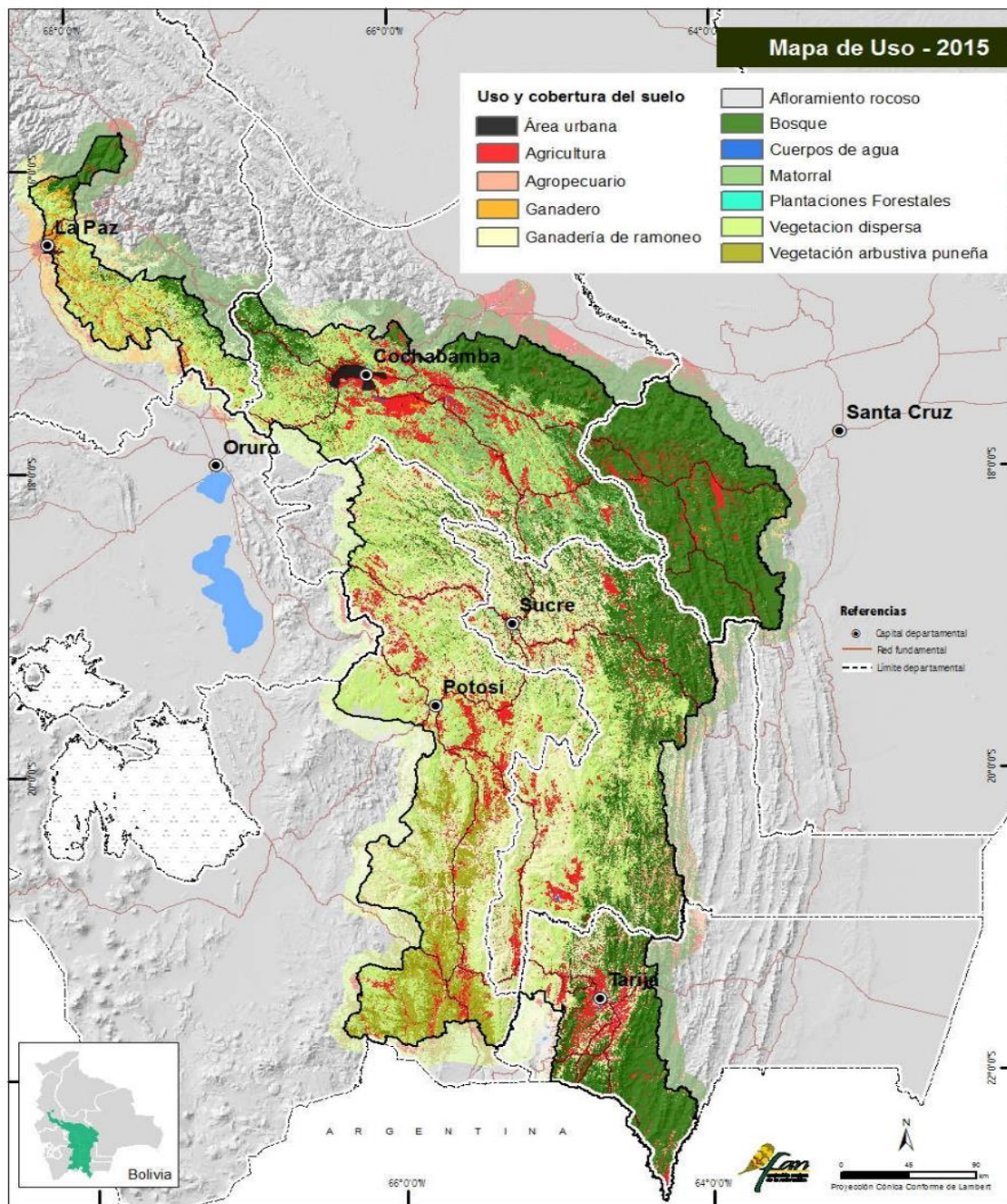
Land use	Area (ha)
Lands under protection with use restrictions	3,956,136
Extensive agriculture	870,604
Intensive agriculture	73,101
Agroforestry and silvopastoral	444,420
Forestry	407,811
Restricted use	410,410
Urban	7,104
Protection	320,814
Conservation	114,267
Not classified	1,569,382
Total area	8,174,049

In the Valles Macroregion of Plurinational State of Bolivia, 30% (3.8 million ha) of the land is being used (Map 9). 60% of the land (2.3 million ha) is used to raise livestock (camelids, pigs, sheep, and goats). Herds graze in the forests on mountain and hillsides for long periods, and over shorter periods they are moved into the valleys, where they eat the stubble of harvested leafy vegetable and annual crops. Herds of sheep and goats live mainly in the hills and mountainsides, where they graze mainly in dry forests (Fundación Amigos de la Naturaleza, 2018). Agriculture in the Macroregion is affected by low annual rainfall and temperatures. Farmlands are carved out of the hill and mountainsides to grow potatoes, corn, broad beans and peas. Still, in the project area, 34% of the land (1.3 million ha) is used for agriculture (Fundación Amigos de la Naturaleza, 2018).

In the eastern region of the Macroregion, the climate is warmer, and a large variety of crops are planted. Agriculture is the main activity in this region and is concentrated in the boxed-in valleys at the foot of mountains where there is usually plenty of water for irrigation (using water pumps) coming from primary and secondary runoff. The main crops grown here are beans, carrots, potatoes, broad beans, tomatoes, cucumbers, chard, celery, cabbages, broccoli, spinach, peppers, etc., as well as bananas and citrus fruits. However, farms are encroaching areas classified as conservation lands. Slash and burn practices contributed to the deforestation of 48,000 ha from 2000 to 2015 (Fundación Amigos de la Naturaleza, 2018).

Large sections of the lands in the Macroregion (70% or 9.1 million ha) are not being used. In 2015, forests covered an area of 3.9 million ha (31% of the total area of the Macroregion). On average, 3,000 ha are deforested each year. In contrast, a total of only 6,000 ha were planted up to 2015 (Fundación Amigos de la Naturaleza, 2018).

Map 9. Land use (2015)



Source: Fundación Amigos de la Naturaleza. Prepared for FAO Bolivia within the framework of the Technical and Financial Feasibility Study of the RECEM Valles project (2021).

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Agriculture. The main cash crops cultivated in the project areas are: corn (73,838 ha), potatoes (51,583 ha) and wheat (32,111 ha), kidney beans (9,108 ha), peas (8,622 ha) and broad beans (9,047 ha). Potatoes and corn are usually grown for self-consumption in the communities in the valleys of Cochabamba, in the municipalities in the centre and north of Potosí, and in the municipalities of the valleys of Tarija. Areas for

growing cereal, tubers, root crops are usually tended to by smallholder farmers given the preponderance of smallholdings in the region. Garden vegetables are mainly produced in municipalities are Cintis in the Department of Chuquisaca, and Mizque and Aiquile in the Department of Cochabamba. The Department of Cochabamba has the greatest potential for agroindustrial crops, including the Municipality of Arani (potato crops), and the valleys of Tarija (grapes) (ADEMAF, 2016).

Within Bolivia's Valleys Macroregion, 30% (3.8 million hectares) of the total area has some land use. Farmers and indigenous communities in the project area have herds of livestock, mainly goats, sheep and cattle, which are an important driver of the local economy. These family-owned herds are essential for food security and their products are sold in urban centres. The livestock of camels, pigs, sheep and goats is dispersed and represents an activity that is distributed for long periods in the forests of the mountain ranges and hills, with grazing and in very short periods in the valleys taking advantage of crop residues, especially annual crops and leafy vegetables. Goat and sheep farming is reduced in the mountain and hills where there is dry forest that provides them with their food. Areas exclusively for livestock represent 4% (167 thousand hectares) of the Macro-region (FAN 2018).

With little rainfall and low temperatures agriculture is limited, therefore, agricultural land is enabled in the mountain ranges and hills. The crops that are produced are potato, corn, pea. Within the project area agriculture accounts for 34%, equivalent to 1.3 million hectares and 5% agricultural use (FAN, 2018).

In the east of the Macroregion, crops are varied, the temperate climate favours agricultural expansion, which has been advancing in areas considered fragile and / or conservation areas. The application of the cutting, slash-and-burn system in the forested region where 48 thousand hectares have been deforested from 2000 to 2015. For this area agriculture is the most important activity, concentrated in the boxed valleys (pedestrians), where there is usually water for supplementary irrigation (by water pumps) from the main and secondary runoffs. The main crops are bean, carrot, potato, pea, tomato, cucumber, paprika, chard, celery, cabbage, broccoli, spinach, etc. There are also orchards mainly banana and citrus (FAN, 2018).

Significant area of the macro region is not under any use, this proportion represents 70% of the area which is equivalent to 9.1 million hectares. The remaining forests in this region by 2015 reached a total area of 3.9 million hectares (31% of the total macro region). On average in this region 3 thousand hectares are deforested each year. More than 5,000 hectares were deforested in 2011 and 2013, with the most critical years. As opposed, the plantations reach 6,000 hectares in total until 2015 (FAN, 2018).

There are 188,268 Agricultural Production Units (APU) in the project area, 187,094 of which are dedicated to summer crops and 1,719 to winter crops. Most APUs that function in summer are in the municipalities of the Department of Cochabamba (72,596), followed by the municipalities in Potosí (43,704) and Chuquisaca (40,948). There are 11,145 APUs in Santa Cruz and 18,711 in Tarija (Table 11). Of a total of 248,722 ha cultivated in summer in the project area, 161,982 ha are irrigated. Of the 1,711ha cultivated in winter, 1,037 are irrigated.

A notable fact is the existence of 15,342 ha of pastures cultivated for a total of 3,409 UPAs the area with natural grass is 751,893 ha.

Table 11. Area of irrigated and not irrigated lands in the project area

	Winter	Summer
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Department	Nº of APU's	Irrigated (ha)	Not irrigated (ha)	Total area (ha)	Nº of APU's	Irrigated (ha)	Not irrigated (ha)	Total area (ha)
Total APU's	1,719	1,037	674	1,711	187,094	161,982	86,740	248,722
Chuquisaca	417	109	20	129	40,948	49,862	14,340	64,202
Cochabamba	88	27	3	31	72,596	53,872	26,374	80,246
Potosí	176	46	0	46	43,704	22,810	19,483	42,293
Santa Cruz	915	806	639	1,445	11,145	20,650	10,849	31,499
Tarija	123	49	11	60	18,701	14,788	15,694	30,482

Source: National Institute of Statistics

With regard to irrigation, the most widely used water sources are rivers that are used by a total of 411,832 UPAs equivalent to 36%, which reflects on the strong dependence on natural water sources which due to climate change have reduce their flows, increasing the vulnerability of peasant and indigenous communities and families. On the other hand, 239,131 of the UPAs (i.e., 21%) use pouring water for irrigation while 4% use lagoons. A total of 66% of UPAs that irrigate for agricultural purposes depend on rivers, slopes, lagoons, bofedales and curiches. This certainly represents a high vulnerability.

It is important to mention that in an indigenous community, there usually are several beneficiary families. In this sense, the average community irrigation will be counted by communal family, the same one that becomes part of, or considered a UPA, but also an irrigating family. In the area of intervention of the project, indigenous communities establish food production systems from a fourth of hectare to 2 hectares, the same ones that added throughout the community are reported as a total community irrigation scheme. For example: if in a community there are 20 indigenous families producing food, altogether they will have 10 hectares under irrigation systems. The 2010 Agricultural Census has already foreseen this and that is why in indigenous territories to have precision, count is made by agricultural production units that are the family units.

Government and other social programmes. Public investment in agriculture has risen since 2006. The Ministry of Rural Development and Lands (MDRyT) has implemented different programmes and projects geared to boosting the productive capacities of the poorest communities, including the Food Security Support Programme (PASA); the Rural Partnerships Programme (PAR); the Integrated Territorial Development Programme (DETI); the National Development Fund (FONADAL); and the Livestock Repopulation Programme. The programmes' actions aimed at improving productive capacities by providing and strengthening agricultural resources (ADEMAF, 2016). Likewise, the Ministry of the Environment and Water (MMAyA) contributed to agricultural development in the region by executing the different phases of the MI AGUA and MI RIEGO programmes to strengthen the use of water for production. In addition to the central government's programmes, the departmental governments also invest in agricultural development in Macroregion, mainly on irrigation projects (ADEMAF, 2016).

4. NATIONAL POLICY, LEGAL AND REGULATORY FRAMEWORK

4.1. Policy and legal framework

This section describes the legal framework for the preservation and restitution of environmental functions, water security, irrigation, and family agricultural production.

Political Constitution of Plurinational State of Bolivia. Enacted in 2009 the Constitution lays the legal foundation for a new environmental regulation, which has not yet been completed. Regarding Protected Areas (Art. 385), the Constitution establishes that these constitute a common good, form part of the natural and cultural heritage of the country and fulfil environmental, cultural, social, and economic functions for sustainable development. Regarding forests (Art. 385), the Constitution establishes the promotion of conservation activities and the sustainable use of such, the generation of added value to their products, and the rehabilitation and reforestation of degraded areas. In addition, it issues a mandate to recover biodiversity in the areas that were previously indicated. Finally, it prohibits planning in spaces (other than where legally permitted) and issues a mandate to zone capacities for greater use of forest lands. Furthermore, it issues Art. 398 specifies that converting forest land for agriculture or other productive activities may only proceed where legally permitted, in accordance with planning policies and with the Law. Regarding water and its uses (Art. 374), the Constitution establishes that the State – through its regulatory and administrative entities – has the obligation to guarantee the use of water for human consumption and agricultural and forestry irrigation, also known as the use of water for life, and also has the responsibility to regulate, protect and plan the use of water resources. The Constitution promotes the economy of agricultural smallholder farmers and the economy of families and the community as a whole, as well as strengthening native indigenous communities as agricultural and forestry producers. In accordance with the provisions regarding Sustainable Integrated Rural Development (Art. 405), this is a fundamental part of the state’s economic politics and prioritizes its actions to promote all community economic enterprises and of rural actors, with an emphasis on security and food sovereignty.

Law No. 300. Law of Mother Earth and Integral Development for Living Well. Law No. 300 of Mother Earth and Integral Development for Living Well of 2012 establishes the political, technical, and legal guidelines to guarantee sustainable development and the restoration and regeneration of the life zones of Mother Earth. In relation to the conservation of biological and cultural diversity (Art. 23), the Law promotes conserving and protecting water recharge zones, headwaters, watersheds, the country’s borders, and areas with high conservation value through the framework of the integrated management of watersheds. Regarding agriculture, fishing and cattle raising (Art. 24), the Law indicates that the maximum limits of use and exploitation of the components of Mother Earth should be established according to each zone and life system, and that harmonious, adequate, responsible and participatory management policies for agricultural production should be developed according to the characteristics and regional vocation of each life system. In relation to Forests (Art. 25), it indicates that the surface area of total forests and their functions should be identified, updated, and classified for the use and planned harvesting of timber and non-timber products, and the protection of primary forests. In article 27, the Law indicates that the conservation, protection, preservation, restoration, sustainable use, and the integrated management of glacial, wetlands, underground, and other water sources must be guaranteed, prioritizing the use of water for life.

Law 031. The “Andrés Bóñez” Framework Law on Autonomous Entities and Decentralization. Enacted on 19 July 2010, this Law aims to regulate the autonomous regime by mandate of Article 271 of the SPC and using as a basis the territorial organization of the state established in its Third Part, Articles 269 to 305. This Law has made the creation of diverse and different autonomous levels possible, within the framework of respect for national unity: departmental, municipal, indigenous, and native peoples, and regional autonomies. The first two correspond to the existing territorial entities in the country, while the third would be a new type of entity created through the framework of indigenous territories and the

fourth constitutes a new type of autonomous where two or more provinces unite to build a new autonomous region or by associations of municipalities (as long as they do not exceed the departmental limits). All autonomous levels have competencies and attributions related to state management at different levels; they have legislative entities and executive bodies as stated in the law. The departments quickly constituted their autonomous legislative assemblies and their executive bodies, pending the drafting of their autonomous status or adapting to the new constitution through the drafts and proposals of statutes they already have. Municipal Governments have a long tradition of organizational methods, which they will adapt to how they take on and process the new competencies.

Law No. 777. State Integrated Planning System. The Constitution asserts that national planning is an exclusive competence of the central level of the state (Art. 298) and that the planning of autonomous territorial entities is exclusive to the autonomous departmental governments (Art. 300), the autonomous municipal governments (Art. 302) and the rural native indigenous autonomies (Art. 304). Furthermore, the SPC states that planning autonomous territorial entities must be in accordance with the national plans. Law No. 777 State Integrated Planning System (SIPS) approved in 2016 aims to establish the Plurinational State of Bolivia integrated management system for planning integrated development within the framework of Living Well. The SIPS aims to construct Living Well through integrated development, promoting the life systems of Mother Earth to achieve simultaneous and complementarily sustainable farming systems, the eradication of extreme poverty and the conservation of environmental functions in different territorial and jurisdictional areas. The objective of this legal framework is for long, medium and short-term planning to be done using an integrated and harmonious approach, and also by coordinating different levels of national and sub-national governments, which would coordinate with the social sectors to carry out comprehensive monitoring and evaluation of these plans based on specific goals, results and actions. The long-term plan (10 years) includes the General Plan for Economic and Social Development (GPESD), the Bicentennial Patriotic Agenda for 2025, which has a five-year medium-term plan, and the Economic and Social Development Plan (ESDP). The Integrated Development Sectoral Plans (IDSP) are linked with the GPESD over a period of 10 years, and the ESDP five-year plan.

The GPESD defines the pillars and targets, while the ESDP establishes the results of the targets and pillars. The IDSP incorporates the specific actions of the sector in relation to the indicated pillars, targets and results of the GPESD and ESDP. Within this framework, the sector headed by MMAyA prepared its Integrated Development Sectoral Plan (IDSP), with input from MDP. The IDSP incorporates the watersheds and water resources, water and sanitation, irrigation, solid residues, forests, biodiversity and protected areas subsectors, has cross-cutting components for the quality management of the environment and climate change, and intersectional actions with other sectors overseen by various ministries of the Executive Branch of the Plurinational State.

Law No. 144. Agricultural Community Productive Revolution. Law 144 was enacted in 2011 and establishes a state policy – within the framework of sustainable integrated rural development and food security and sovereignty – to promote and strengthen production (Art. 13). This Law recognizes indigenous organizations as economic organizations subject to assistance and loans, and also as central actors in the process of development in rural areas. The Law develops, in detail, the mechanisms of food sovereignty by attributing state control over commercialization, importation as well as exportation of products while coordinating such processes with the producers.

Law No. 2878. Promotion and Support to the Irrigation Sector for Farming and Animal Husbandry. Law 2878 enacted in 2004 creates a water rights regime for different agricultural irrigation actors as a way to legally protect the water sources of native communities and indigenous producers, while also establishing a normative framework for conflict management and resolution, as well as an institutional framework to regulate, support and promote irrigation. The Law establishes two types of rights in relation to water use for irrigation by irrigators' organizations, for native and indigenous producers in general and for other non-community agricultural and forestry users (for example agri-business). The Law establishes the right to use water resources for irrigation (Art. 21). When the Water Resources Authority was set up, it established the National Irrigation System (SENARI) to grant and revoke water use authorizations for irrigation. The Law also establishes the creation of Local Watershed Committees, as an option available to the users. Regulatory decrees establish respect for local irrigation authorities following local tradition.

Law No. 1715. National Agrarian Reform Service (INRA) and Law No. 3545. Community-based Agrarian Reform Renewal. Law No. 1715, on the National Agrarian Reform Service (INRA) or INRA Law, was enacted in 1996 to guarantee the right to land ownership, title lands and plan, organize and consolidate agrarian reform in the country. Law No. 3545 was enacted in 2006, and incorporates the provisions for the INRA Law, making them compatible with Law No. 3351 of the Executive Authority Organization. Among the most important aspects of Law No. 345 are the paragraphs on Social Economic Function, means of verification and the parameters for the areas that must be considered. It also provides the option to extend tax payments for the farming sector, small properties owned by indigenous and native peoples and communities, and for those with appropriate accreditation rights. This Law includes the Ministry of Rural Development and Agriculture and the Environment in the structure of the National Agrarian Reform Service instead of the Ministry of Sustainable Development and the Environment. It confers on the President of the Plurinational State, the attribution of granting legal status to Indigenous and Native Peoples, indigenous and farming communities, and their respective national, departmental and regional organizations, at the request of a party. Finally, it modifies the composition of the National Agrarian Commission, and adds the attribution: "Promote and present plans or policies for the expropriation of land due to established public utility," as presented in Law INRA.

Law No. 337. Support to Food Production and Forest Restoration. Enacted in 2013 this Law aims to encourage – through the use of areas that would have otherwise been cleared without authorization – the production of food to guarantee the fundamental right to sovereignty and food security, as well as the restitution of affected forest areas. This can be found within the envisaged framework paragraph II of Article 16 of the State Political Constitution and Law No. 300 of October 2012: Law of Mother Earth and Integral Development for Living Well. Through this Law the Programme for Food Production and Restitution of Forests was created, which aims to encourage food production and the reforestation of affected areas under the supervision of MDRyT. This ministry is also in charge of the Food Production Support Enterprise (EMAP) and the Authority of Fiscalization and Social Control of Forest and Land (ABT).

Law No. 071. Rights of Mother Earth. Its objective is to recognize the rights of Mother Earth, as well as the obligations and duties of the Plurinational State and society to guarantee respect for these rights. Enacted in 2010, it established six principles of mandatory compliance (Art. 2) which are: 1. Harmony; 2. The Collective Good; 3. Guarantee the regeneration of Mother Earth; 4. Respect and Defend the Rights of

Mother Earth; 5. The NON-mercantilization of life systems, nor of the processes that support such, or anyone's private heritage; and 6. Interculturality.

Law No. 1333. Environment Law and Regulations. Enacted in 1992, it aims to protect and conserve the environment and its natural resources, by regulating the actions of human beings in relation to nature and by promoting sustainable development in order to improve the quality of life of the population. This Law establishes five main regulations: General Regulation of Environmental Management, Regulation of Water Pollution, Regulations for Activities with Hazardous Substances, Solid Waste Management Regulation, and Environmental Prevention and Control Regulations.

Law No. 755. Integrated Waste Management. Enacted in 2015, this Law establishes the general policy and legal regime for Integrated Waste Management in the Plurinational State of Bolivia. This law prioritizes prevention to reduce waste production, use it efficiently and dispose of it safely. This relates to the Rights of Mother Earth framework, as well as the right to health and to live in a healthy and balanced environment.

Law No. 1700. Forestry Law. This Law regulates the sustainable use and protection of forests and forest land for the benefit of current and future generations, while harmonizing the social, economic and ecological interests of the country. Enacted in 1996 through S.D. No. 24453, it also declared the Regulation of the new Forestry Law.

Law No. 745. Decade of Irrigation. Enacted on 5 October 2015, the purpose of this law is to declare the period 2015-2025 – The Decade of Irrigation “Towards a Million Hectares” – within the framework of the Bicentennial Patriotic Agenda. This aims to promote agricultural production through investments from the central level of the state and the Autonomous Territorial Entities, oriented to develop irrigation in the country.

General Regulations for Protected Areas. Enacted through S.D. No. 24781 in 1997, it aims to regulate the management of protected areas and to establish its institutional framework based on the provisions of Law No. 1333 of the Environment and the Convention on Biological Diversity ratified through Law No. 1580 of 1994.

Law No. 1576. Approval and ratification of UNFCCC. Plurinational State of Bolivia signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and ratified it in 1994 through Executive Decree No. 1576 approved by the National Congress and the Executive.

Law No. 835. Ratification of the Paris Agreement. Plurinational State of Bolivia ratified the “Paris Agreement” adopted on 12 December 2015, during UNFCCC twenty-first Conference of the Parties (COP 21). The agreement was signed by the president of the Plurinational State of Bolivia on 22 April 2016 and became law on 17 September 2016.

4.2. Institutional framework

Ministry of the Environment and Water (MMAyA). The ministry promotes equitable, reciprocal and harmonious development with Mother Earth through the integrated management of water resources, access to potable and safe water sources, irrigation for food security, as well as the integrated management of the environment and life systems to Live Well.

Ministry of Rural Development and Land (MDRyT). The institution is in charge of defining and implementing policies to promote, facilitate, regulate and articulate the integrated rural development of agriculture, forestry, aquaculture and coca, in a sustainable way that promotes a new structure of tenure and access to land and forests in the country. This will generate decent employment for producers, communities, farmer and indigenous economic organizations and the business sector, under the principles of quality, equality, inclusion, transparency, reciprocity and cultural identity for food safety and sovereignty to Live Well.

Plurinational Authority of Mother Earth (APMT): A strategic and autonomous entity that plans, manages, monitors and evaluates climate change actions, in addition to managing and implementing climate change policies, strategies, plans and programmes.

The Authority of Fiscalization and Social Control of Forest and Land (ABT): Responsible for exercising governance of forests and land: protecting, regulating, supervising and controlling human activities, while promoting the development and integrated sustainable management of forests and land for the benefit of the Bolivian people.

National Fund for Forest Development (FONAFOREST): An independent institution under the Ministry of Environment and Water (MMAyA) that channels financial resources to the integrated management of forests and forest lands. FONAFOREST manages different programmes linked to the application of Law No. 300 of Mother Earth and Integrated Development to Live Well, as well as the afforestation and reforestation decrees. It is undoubtedly one of the institutions that has been the most receptive and useful to ensuring the application of Law No. 300 and its mandates, particularly for implementing the National Determined Contribution (NDC).

National Irrigation System (SENARI): Law No. 2878 created SERANI at a national level and SEDERI at a departmental level, as entities that regulate and grant registration and authorizations to use water for irrigation.

The Water and Environmental Executing Entity (EMAGUA): The drinking water and sanitation sector receives substantial amounts to be invested in the sector, particularly those managed by the Ministry of Environment and Water. However, the MMAyA cannot make public investment in this sector due to legal limitations; therefore, the state has various executing entities, one of which is EMAGUA created as an executing entity specialized in the environment and water management. EMAGUA is a decentralized entity with an autonomous administration.

4.2.1 Programmes and Projects

“Our Forests” Programme: Approved through S.D. No. 2914 of 2016, this programme aims to establish regulatory mechanisms for agricultural production on forest lands, control and eradicate illegal deforestation, strengthen local institutional capacities, reduce the effects of illegal deforestation, and promote strategies and actions for the recovery of forests in degraded areas. The main authority responsible for this programme is MMAyA, along with other entities that depend on it, especially ABT. The Autonomous Territorial Entities play a special role as they are the programme implementers at the local level – at the municipal and departmental levels with their corresponding governments. MMAyA and MDRyT, through a biministerial resolution, identify annual targets and areas of agricultural frontier expansion for the production of food within the Social and Economic Development Plan framework. This

process is carried out by identifying how the land is being used and the environmental functions of the forests in the area in question. MMAyA's Forestry Information and Monitoring System monitors the achievement of targets.

National Afforestation and Reforestation Plan (NARF): Approved by S.D. No. 2913 of 2016 as a strategic and national priority. This programme relates to the National Determined Contribution that Plurinational State of Bolivia presented to the United Nations. There are six institutions that implement the NARF; the MMAyA coordinates the NARF National Implementation Strategy 2016-2030 and runs the projects. Local authorities have specific afforestation and reforestation mandates in their territorial area of competence and coordinate mainly with the MMAyA. On the other hand, social organizations are invited to participate in afforestation and reforestation processes. The framework promotes the general participation of communities, neighbourhood meetings, associations and other local organizations. Furthermore, the "My Tree" campaign was implemented to disseminate the NARF actions. To monitor progress, the autonomous governments must send all information related to compliance with the NARF targets in their jurisdiction to the MMAyA Forestry Information and Monitoring System. The National Fund for Forest Development (FONABOSQUE) is responsible for financing the NARF. There are also specific mandates for governors and municipal governments to contribute to the financing of targets established through the programme.

Nationally Determined Contribution of the Plurinational State of Bolivia (NDC): Part of the framework of global commitments that were agreed by UNFCCC to provide solutions to the current climate crisis (commitment to mitigate and adapt to climate change). The NDC of the Plurinational State of Bolivia was officially submitted to UNFCCC in 2016. This establishes results through an integrated focus on three main areas: water, energy and forests (see **Table 12**).

Table 12. Overview of nationally determined contribution

Results of National Efforts	Results with International Cooperation	Actions
<ul style="list-style-type: none"> Water storage capacity has tripled (3 779 million m³) by 2030, compared to 596 million m³ in 2010. 100% of drinkable water coverage has been reached in 2025, with resilient service delivery systems. The water component of the Unsatisfied Basic Needs (UBN) will be reduced to 0.02% by 2030. The surface area of irrigation has tripled, exceeding 1 million hectares by 2030 compared to the 296 368 hectares in 2010. Doubling food production through irrigation by 2020 and tripling by 2030, compared to the 1.69 million MT of 2010. This way, resilient agricultural systems will have been achieved. Significant progress has been made in regard to social 	<ul style="list-style-type: none"> The water storage capacity has quadrupled by 2030 (3 779 million m³) compared to 2010 (596 million m³). The surface area of agriculture being irrigated has increased to 1.5 million hectares by 2030 compared to 296 million hectares in 2010. Agricultural production being irrigated has quadrupled by 2030 (9.49 million MT) compared to 2010 (1.69 million MT). Local management of water by social organizations has increased to 90% by 2030. 	<ul style="list-style-type: none"> Develop resilient infrastructures for productive and service sectors. Construct drinking water and sewage networks. Re-use water for productive purposes to increase food production. Restore vegetation (trees, grasslands, wetlands and others) to avoid erosion and damage from adverse climate events. Increase the surface area irrigated through technified irrigation systems, irrigation with dams, water harvesting, multipurpose projects and water re-use. Construct multipurpose hydroelectric plants to expand water storage capacity. Domestic and industrial wastewater treatment plants to reduce their contribution of methane to the atmosphere. Strengthen community and cooperative management and local climate change adaptation capacities. Including the community management of irrigation and collective administration of water services.

<p>participation for local water management. Increasing to 80% of organizations focusing on the social management of resilient water systems compared to the 35% found in 2010.</p> <ul style="list-style-type: none"> • The production of food using irrigation has increased by more than 6 million TM in 2030 compared to 2010. • The Gross Domestic Product (GDP) has increased to 5.37% by 2030, because of the contribution of potable water and resilient irrigation systems. • Water vulnerability has been reduced to 0.51 to 0.30 units by 2030 compared to 2010. This is measured through the National Index of Water Vulnerability of the country which considers aspects related to exposure (threats), the sensitivity of water distribution systems (water scarcity) and adaptability. • Adaptation capacity has increased from 0.23 units of 2010 to 0.69 units by 2030. This is measured through the National Index of Water Adaptation Capacity. 		<ul style="list-style-type: none"> • Apply practices and ancestral knowledge, within the framework of the integrated management of water. • Risk management to mitigate recurrent threats of droughts and floods. • Install hydro meteorological, geological and seismic stations at the national level. • Manage the quality of services and reduction of losses, including promoting the use of low consumption water appliances, efficient sanitary systems and alternative technologies. • Rainwater harvesting as well as the re-use of greywater from showers, sinks, laundries and downspouts for different domestic uses, except for human consumption. • Wider use of water-harvesting technologies, conservation of soil moisture and efficient water use (irrigation and livestock) (as well as how to stock up when there is a shortage or how to store when there is plenty). • Implement treatment and potabilization systems for better quality water for human consumption. • Actions to treat contaminated water from mining, industrial activities and other productive areas. • Strengthen administrative, technical and management capacities of the social and public water systems.
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The proposed intervention has scalability potential and could inform Bolivian Government on how to achieve the goals stated in the NDC (particularly related to massive expansion of irrigated agriculture). This could also show the climate change mitigation and adaptation potential of proposed investments with the aim to replicate them in other territories.

Social and Economic Development Plan. Through the Social and Economic Development Plan (SEDP) several national investments have been made on climate change mitigation and adaptation.

Investment in water and basic sanitation. One of the main priorities of the 2006-2017 government was to offer solutions to water shortages due to a lack of drinking water and sanitation facilities, and the weak institutional capacities of the service providers. Regarding investments made between 2006 and 2016, Bs. 9,295 million were invested in potable water and basic sanitation, while Bs. 2,645 billion were invested in 2,845 irrigation and drinking water projects for the MI AGUA I, II and III programmes between 2011 and 2015.

Investment in irrigation. Plurinational State of Bolivia has made significant improvements on irrigation since 2005, however, there are still some major challenges to be overcome, which are covered in the Patriotic Agenda, the SEDP and the sectoral plans at the national and sub-national levels. Investment on irrigation in Plurinational State of Bolivia took a leap forward from Bs. 843 million invested during the period 1987-2005, to Bs. 5,354 billion during the period 2006 – 2015 (an increase of 816%). In 2015 alone, Bs. 1,481 billion were invested in irrigation projects, of which over Bs. 1,306 billion were used on major

investments in dams, reservoirs, modernized irrigation catchment, reservoirs and channels, and new projects to improve and expand systems, these investments expanded irrigation services to an additional area of around 32 736 ha of farmland. This progress was made possible by all different levels of government (national and sub-national), EMAGUA and FPS at the forefront of ensuring this great leap forward. Over 100,000 families benefitted from irrigation projects between 2006 and 2015, bringing the number of families benefitting from investment in irrigation between 1987 and 2015 to a total of 144,327.

MI RIEGO Programme was rolled out by the MMAyA in 2015 with external funding from the Inter-American Development Bank (IDB), the Development Bank of Latin America (CAF), OPEC Fund for International Development (OFID). The aim of the MI RIEGO programme is to raise income from agriculture for rural households benefitting from a sustainable increase in irrigated farmland and improved efficient use and distribution of water for agriculture.

4.3. Applicable environmental and social safeguards policies

This proposal has been prepared following the policies and environmental and social safeguards standard of GCF and FAO. These standards are described below.

a. FAO Safeguards

FAO has a set of environmental and social environmental and social risk management safeguards in its strategies, policies and projects on the ground. These guidelines aid in identifying and early and systematically assessing environmental and social risks and their integration into the project cycle (design and implementation). FAO's social and environmental standards are applicable in the following areas:

- ESS 1: Natural resource management
- ESS 2: Biodiversity, Ecosystems and Natural Habitats
- ESS 3: Plant genetic resources for food and agriculture
- ESS 4: Animal genetic resources for food and agriculture
- ESS 5: Pest and pesticide management
- ESS 6: Involuntary resettlement and displacement
- ESS 7: Decent work
- ESS 8: Gender equality and Prevention of Gender Based Violence
- ESS 9: Indigenous peoples and cultural heritage

FAO policies considered are:

FAO Accountability Policy (2014). FAO is committed to designing and operating its approach to accountability, based on FAO's core values of commitment, respect for all, integrity and transparency, and according to the following principles: (i) Focus on FAO's purpose and outcomes for beneficiaries and partners; (ii) Define clear roles and responsibilities; (iii) Take informed and transparent decisions and communicate clearly, providing the basis for acting with a focus on outcomes and within clearly defined roles; (iv) Put FAO's values into practice through consistent application of a shared ethos and culture in the development of policy and the behaviour of employees; (v) Engage with stakeholders to make accountability real; (vi) Establish a culture of consequences - to be meaningful, accountability must be felt.

FAO whistleblower protection policy (administrative circular N°2019/06) applying to any FAO personnel when internal or external reporting according to the consideration of the circular.

GCF Policy on the Protection of Whistleblowers and Witnesses (2018) aims to empower GCF-project related persons to report suspicions of wrongdoing in good faith and without fear of retaliation so that the GCF can effectively protect its interests, resources, and mission.

FAO Policy on Gender Equality 2020-2030 strives to achieve equality between women and men in sustainable agriculture and rural development for the elimination of hunger and poverty.

GCF Gender Policy (2019) reinforces the responsiveness of GCF to the culturally diverse context of gender equality to better address and account for the links between gender equality and climate change.

FAO Protection from sexual exploitation and sexual abuse (PSAE) N° 2013/27. The principles of integrity, professionalism, respect for human rights and the dignity of all peoples underpin FAO's commitment to preventing and addressing acts of sexual exploitation and abuse (SEA)

FAO Policy on the prevention of harassment, sexual harassment and abuse of authority N° 2015/03 (2015) and FAO policy on sexual harassment (13 February 2019) which states Sexual Harassment in all its forms is contrary to the United Nations Charter, the Staff Regulations and Staff Rules of the Organization and the Standards of Conduct for the International Civil Service.

FAO Policy against fraud and other corrupt practices N° 2015/08 (2015) Fraud and other corrupt practices pose a grave threat to the effective implementation of the Organization's policies and objectives

FAO's Framework for Environmental and Social Management (FESM) was recently approved (June 2022) and reflects the Organization's commitment to sustainability with a new set of principles, two operational pillars, and nine Environmental and Social Standards (ESS). The FESM establishes broader environmental and social performance requirements for FAO programming. Important changes include an innovative process of climate change and disaster risk screening, and new and updated requirements to: conserve and restore renewable natural resources and biodiversity; protect animal welfare; foster resilient livelihoods; manage waste and non-pesticide hazardous materials; promote resource efficiency; protect community health and promote decent jobs; strengthen requirements for dealing with gender-based violence including the prevention of sexual exploitation and abuse (PSEA); respect Indigenous Peoples living in voluntary isolation; and enhance accountability, conflict resolution and grievance mechanisms.

b. GCF Safeguards

The GCF uses the International Finance Corporation (IFC) (part of the World Bank Group) performance standards. The list of standards appears below:

Performance Standard 1: Environmental and social impact assessment and management

Performance Standard 2: Work and working conditions

Performance Standard 3: Efficiency in use of resources and pollution prevention

Performance Standard 4: Community health and safety

Performance Standard 5: Land acquisition and involuntary resettlement

Performance Standard 6: Conservation of biodiversity and sustainable management of live natural resources

Performance Standard 7: Indigenous peoples

Performance Standard 8: Cultural heritage

GCF policies considered are:

GCF Revised Policy on the Prevention and Protection from Sexual Exploitation, Sexual Abuse, and Sexual Harassment (2021) sets clear obligations for GCF-project related persons to prevent and respond to SEAH and to refrain from condoning, encouraging, participating in, or engaging in SEAH.

GCF Revised Environmental and Social Policy (2021) requires that the accredited entities to undertake environmental and social due diligence including SEAH due diligence, and to provide and implement the environmental and social management system to manage the environmental and social risks and impacts associated with the activities, allow meaningful and inclusive multi-stakeholder consultation and engagement throughout the lifecycle of activities and that the activities proposed for GCF financing are properly screened, assigned appropriate environmental and social risk categories and that the environmental and social risks and impacts are properly and sufficiently assessed.

GCF Policy on Prohibited Activities (2019) prohibits GCF-project related persons to engage in: corrupt, fraudulent, coercive, collusive, or obstructive practices; or abuse, etc. to maintain the highest levels of integrity, accountability and efficiency.

GCF Gender policy (2019), mainstream gender issues in its implementation arrangements and frameworks for its projects. The Gender Policy recognizes that gender relations, roles and responsibilities exercise important influences on women's and men's access to and control over decisions, assets and resources, information, and knowledge.

c. Consistency of FAO and GCF safeguards standards

Table 13, below, shows the relationship between the 9 FAO standards or norms and the IFC performance standards. Basically, these two sets of standards complement each other and in many cases the guidelines are the same; in this regard, the FAO standards were used to guide the project social and environmental assessment.

Table 13. Comparison of FAO and GCF standards

FAO Standards	GCF Performance Standards
ESS 1: Natural resource management	PS 1: Environmental and social impact assessment and management
ESS 2: Biodiversity, Ecosystems and Natural Habitats	PS4 Community health and safety
ESS 3: Plant genetic resources for food and agriculture	PS 6: Conservation of biodiversity and sustainable management of live natural resources
ESS 4: Animal genetic resources for food and agriculture	
ESS 5: Pest and pesticide management	PS 3: Efficiency in use of resources and pollution prevention
ESS 6: Involuntary resettlement and displacement	PS 5: Land acquisition and involuntary resettlement
ESS 7: Decent work	PS 2: Work and working conditions
ESS 8: Gender equality and Prevention of Gender Based Violence	PS 1: Environmental and social impact assessment and management (partially)

ESS 9: Indigenous peoples and cultural heritage	PS 7: Indigenous peoples
	PS 8: Cultural heritage

Consistency of GCF Indigenous Peoples Policy and the FAO's ESS 9 on Indigenous Peoples and Cultural Heritage

GCF and FAO safeguards frameworks include particular attention to the rights, needs and situations of indigenous peoples, with specific provisions, tools and instruments for projects that may involve or affect indigenous peoples or communities. The table below includes the key elements as well as points of consistency of the two frameworks:

Table 14. Comparison of GCF and FAO's indigenous peoples safeguard policies

Topic	GCF Indigenous Peoples Policy	FAO's ESS 9 on Indigenous Peoples and Cultural Heritage
Free, prior and informed consent (FPIC)	There is a need to ensure that meaningful consultation has been undertaken and free, prior and informed consent has been properly sought, with evidence provided	Before adopting and implementing projects and programmes that may affect indigenous peoples, an FPIC process followed, and consent given by the indigenous community
Risk management	<p>There is a need to implement a management system to manage the risks and impacts associated with the project activities.</p> <p>There is a need to ensure that activities proposed for GCF financing are properly screened, assigned appropriate risk categories, and that the risks and impacts are properly and sufficiently assessed</p>	<p>There is a need to carry out screening of risks, including answering "trigger" questions.</p> <p>The levels of risks are defined as follows:</p> <p>LOW: At project assessment there are no indigenous peoples in the project area</p> <p>MODERATE: There are indigenous peoples in the project area and/or project activities could affect indigenous peoples outside the project area</p> <p>HIGH: There are indigenous peoples in the project area or outside the project area who are adversely affected by the proposed project activities</p> <p>The risk level of a project will be determined by: (i) the results of the project assessment undertaken by the FAO technical units and independent external experts as part of an environmental and social assessment; and (ii) the outcome of the Free Prior and Informed Consent process determined by the indigenous community (ies).</p>

Indigenous Peoples Plan (IPP)	Where there are potential impacts on indigenous peoples, accredited entities must prepare an IPP.	In those circumstances when a proposed project may be considered high risk IPP will be prepared following the results of the FPIC.
Monitoring	Monitoring and reporting on the progress and performance of GCF-financed activities to GCF and its stakeholders will take place throughout the implementation of the GCF financed activities, in accordance with this Policy and any relevant plan	Participatory and transparent monitoring arrangements under the principle of FPIC will be put in place, wherein indigenous peoples will jointly monitor project implementation with FAO.
Grievance redress mechanism	There is a need to ensure that all grievance mechanisms associated with GCF activities are effective in addressing issues raised by indigenous peoples and are accessible, fair, transparent and culturally appropriate.	An adequate redress mechanism for indigenous people is a component of the IPP.

d. FAO safeguards framework

FAO's Environmental and Social Management (ESM) Guidelines are an important building block for FAO's approach to achieve sustainable development and provide guidelines for the management of environmental and social risks in its projects. These guidelines facilitate the early and systematic identification and assessment of environmental and social risks and the integration of the management of these risks into the project cycle (design and implementation). At the project level, FAO applies a risk management process that focuses specifically on individual project risks.

FAO's Environmental and Social Standards (ESS) 1-9 are designed to help manage and improve FAO environmental and social performance through a risk- and outcome-based approach. The nine ESS set out specific requirements relating to different social and environmental issues. Projects approved and supported.

Table 15. Overview of FAO Environmental and safeguards standards

FAO Standards	Objectives
ESS 1: Natural resource management	<ul style="list-style-type: none"> • Promote direct action to enhance resource use efficiency. • Focus on ways to ensure the transition to sustainable practices.
ESS 2: Biodiversity, Ecosystems and Natural Habitats	<ul style="list-style-type: none"> • Avoid agricultural, livestock, fisheries, aquaculture and forestry practices that could have adverse impacts on biodiversity, ecosystems, ecosystem services or critical habitats.

	<ul style="list-style-type: none"> • Sustainably manage the ecosystems in order to maintain the services and benefits they provide. • Ensure that exchange of genetic resources conforms to access and benefit sharing measures in force in the country(ies) involved.
ESS 3: Plant genetic resources for food and agriculture	<ul style="list-style-type: none"> • Prevent actions resulting in loss of Plant Genetic Resources for Food and Agriculture (PGRFA) diversity by promoting their effective conservation (in situ and ex situ). • Safeguard against actions resulting in unintended environmental and social consequences. • Promote sustainable crop improvements and production and enhanced productivity. • Ensure that the transfer of PGRFA conforms with the measures relating to access and benefit sharing, IPR and farmers' rights which are in force in the country(ies) involved.
ESS 4: Animal genetic resources for food and agriculture	<ul style="list-style-type: none"> • Promote sustainable management of animal and aquatic genetic resources. • Prevent loss of valuable livestock and aquatic genetic diversity. • Safeguard against actions resulting in unintended environmental and social consequences.
ESS 5: Pest and pesticide management	<ul style="list-style-type: none"> • Promote Integrated Pest Management (IPM), reduce reliance on pesticides and avoid adverse impacts from pesticide use on the health and safety of farming communities, consumers and the environment.
ESS 6: Involuntary resettlement and displacement	<ul style="list-style-type: none"> • Prohibit forced eviction. • Avoid, and when avoidance is not possible, minimize adverse social and economic impacts from restrictions on land or resource use or from land and resource acquisition. • Improve or at least restore living conditions of persons who are physically or economically displaced, through improving and restoring their productive assets and security of tenure.
ESS 7: Decent work	<ul style="list-style-type: none"> • Promote direct action to foster decent rural employment. • Promote fair treatment, non-discrimination and equal opportunity for all workers. • Protect and support workers, particularly disadvantaged and vulnerable categories of workers. • Promote the application of international labour standards in the rural economy, including the prevention and elimination of child labour in agriculture.
ESS 8: Gender equality and Prevention of Gender Based Violence	<ul style="list-style-type: none"> • Provide equal access to and control over productive resources, services and markets.

	<ul style="list-style-type: none"> • Strengthen women and men's participation in decision-making in rural institutions and policy processes. • Ensure that all stakeholders benefit equally from development interventions and that inequality is not reinforced or perpetuated. • Strengthen requirements for dealing with gender-based violence including the prevention of sexual exploitation.
ESS 9: Indigenous peoples and cultural heritage	<ul style="list-style-type: none"> • Ensure that the UN Declaration on the Rights of Indigenous Peoples is respected in all FAO's projects and programmes. • Promote the right to self-determination and development with identity of indigenous peoples (right to decide the kind of development that takes place among their people and on their lands and territories, in accordance with their own priorities and conceptions of well-being). • Guarantee the application of the principle of Free, Prior and Informed Consent (FPIC) of indigenous peoples affected by the project. • Recognize, respect and preserve the rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems of Indigenous Peoples. • Protect cultural heritage and avoid its alteration, damage or removal.

FAO risk screening

An Environmental and Social Screening has been completed for this project. The screening assessed the activities to be implemented under the project against FAO's Environmental and Social Standards. A standard was triggered whenever it was determined that an activity may present certain risks and/or impacts. The results from the screening are shown in 6.2.

During the screening of project activities, some Environmental and Social Safeguard Policies were triggered (see **Table 16**, below). As a result of the risk screening and categorization, this project has been classified as moderate risk (Category "B"). Projects with moderate risk are defined by FAO's Environmental and Social Management framework as:

- Environmental and social risks for the most part are mostly limited to and readily mitigated through application of good industry practice as described in relevant Environmental, Health and Safety Guidelines;
- Labor and working conditions are unlikely to include harmful child labor, involuntary or compulsory labor, or significant occupational health and safety issues;
- Significant land acquisition or significant land use change is not expected, nor is there expectation of displacement of people or significant loss of livelihoods due to project activities; and
- Socially or economically disadvantaged groups, such as tribal or ethnic groups or similar communities, are not known to occur in the project's area of direct impact, nor does the activity involve use of lands to which they are collectively attached, or where those communities are present but consultation has indicated Free Prior and Informed Consent (FPIC).

The level of risk of a project may not always be immediately apparent or may change during project preparation when project sites are being identified. Therefore, according to FAO's Environmental and Social Management framework, this project will be systematically monitored during implementation in order to identify indirect, cumulative and associated impacts, as relevant.

Table 16. Safeguards policies triggered by the project activities

FAO Standards	Triggered
ESS 1: Natural resource management	Yes
ESS 2: Biodiversity, Ecosystems and Natural Habitats	No
ESS 3: Plant genetic resources for food and agriculture	No
ESS 4: Animal genetic resources for food and agriculture	No
ESS 5: Pest and pesticide management	No
ESS 6: Involuntary resettlement and displacement	No
ESS 7: Decent work	Yes
ESS 8: Gender equality and Prevention of Gender Based Violence	Yes
ESS 9: Indigenous peoples and cultural heritage	Yes

e. Summary of Objectives and Principles for Implementation of the Gender Action Plan

The different activities that men and women carry out in their roles and tasks to provide for themselves and their families depend on natural resources availability. Women, particularly in rural areas, spend a lot of time obtaining food, water, fuel/energy for sustenance, the livelihood, health and well-being of their family, which requires natural resources that are well managed and a suitable environment. Climate change is a threat to all of these factors since it has severe impacts on food, water and other natural resources such as wood and other energy sources.

In the past few years, the east of Plurinational State of Bolivia has seen a rise in floods, rain, and heatwaves. The west is experiencing a reduction in available water sources (more droughts, variable levels of rainfall). All of this has had an impact on available food sources. These impacts directly affect the lives of women and men, particularly on their capacity to ensure their survival in all its forms, including water and food security.

For women in rural areas dependent on natural resources, these effects are detrimental and exacerbated in female-headed households. Unequal access to resources and decision-making processes has also magnified these adverse effects.

Women are more vulnerable to natural disasters due to their socially constructed roles and responsibilities and their social, economic and political status, which is lower than that of men. They also tend to have limited mobility, which means that they are left in charge of household responsibilities. Thus,

if the water is polluted, which usually causes diarrhea and illness in children, there is more pressure on women as their families' caregivers.

Another impact of climate change is migration because global warming reduces the possibilities of survival since water and fertile soil are prerequisites for those living in rural areas. Generally, men migrate in search of job opportunities, while women are left in charge of the family and production.

Women play an essential role in natural resource management due to the particular knowledge about natural resources and the environment. They contribute to adaptation to climate change by resorting to different survival strategies when facing a crisis. They are the ones that transfer knowledge within their group and between different generations, which is necessary to ensure their survival and finally, they have experience of a vast number of plants used to treat illnesses.

This is why the more equitable the division of labour – where women play an active role in decision-making, power relations in natural resource management and access to knowledge – the better they can respond to the environmental changes threatening them.

The proposed project, “Upscaling Ecosystem Based Climate Resilience of Vulnerable Rural Communities in the Valles Macro-region of the Plurinational State of Bolivia (RECEM-Valles)” aims to strengthen the resilience of agricultural producers in the Valles Macroregion, located in the departments of Cochabamba, Chuquisaca, Potosí and Tarija. The vast majority of this area is rural. The region is inhabited by more than 2.328.741 people, and approximately half of them are women.

At the national level, the project will strengthen Institutions and governance mechanisms related to water management and climate-resilient agriculture to benefit vulnerable smallholders and their communities. Given the water scarcity in the project intervention area, the project will enhance the integrated management of micro-watersheds and the ecosystem services to ensure water provision to rural communities under climate change scenarios. In parallel, the project will design climate resilient agro-system technological packages and provide technical support to smallholder farmers in their adoption to achieve food security. Climate resilient agriculture will contribute to food and nutritional security, leading to climate resilient communities. Women empowered through more dynamic participation in agriculture would result in more gender-neutral food distribution within households and better health for both women and children.

The needs that differentiate women and men within the project are anchored in the access to resources and the low autonomy of women in terms of their personal priorities. The clear sexual division of labour as a barrier to the generation of productive and economic development. Social, cultural, economic and political constraints such as violence at different levels that restrict women's active participation in decision-making processes at family and community level. Identifies key challenges and opportunities within the learning level to promote leadership in different livelihood systems across ecosystem and environmental functions.

The project will promote the distribution of timely information on climate and agriculture as well as sharing of knowledge and skills obtained by farmers through Farmer Field Schools (FFS). Given that key gender gaps include education and access to financial assets, the project will seek to address these disparities through gender-transformative actions to ensure gender equality in the access to trainings, technology and financial services.

The project will also raise awareness on various subjects related to adaptation to climate change, including gender, along the entire value chain – from policy, public administration, education to agricultural input, product, credit and insurance and consumption – so that adaptation to climate change by farmers will be socioeconomically feasible, and hence sustainable.

The objective of the Gender Assessment is to provide the foundation for effective gender mainstreaming in the Green Climate Fund (GCF) project, “Upscaling Ecosystem Based Climate Resilience of Vulnerable Rural Communities in the Valles Macro-region of the Plurinational State of Bolivia (RECEM-Valles)” The Analysis examines the socioeconomic conditions of women and men targeted by the project and elucidates gender-specific roles, constraints and needs, thereby allowing a strategic approach to the integration of gender dimensions into the project, summarised as the Gender Action Plan (GAP). The underlying theory of change is: the project will create effective opportunities to empower women through paying sufficient attention to existing gender differences, which will allow communities in the Valles Macroregion to adapt to climate change in a sustainable and equitable manner.

The project will work with beneficiary families from different municipalities. Mechanisms will be established to guarantee the active and effective participation of women. Based on the context and supported by the country's laws and equality policies, women and their specific needs are considered a priority. Women tend to be permanently in the communities and, therefore, often become responsible for the day-to-day management of their families and natural resources. This does not mean that more responsibilities will be added to their regular tasks and roles. Instead, it is intended that participatory methodologies will be implemented for both men and women, which will promote intuitive processes about the democratisation of roles. The project will additionally consider gender-relevant aspects such as distances to be travelled, the time allocated to training and the support needed, for example, by implementing mobile nurseries (for babies brought by their mothers).

Alliances will be made in the territory with institutions that promote gender equality, such as the Gender Units in the municipal governments, NGOs that work on gender, the Associations of Women Counsellors of each municipality, grassroots organisations, such as the National Confederation of Indigenous Peasant Women of Plurinational State of Bolivia-Bartolina Sisa, and others. This way, at least 30% of participants will be women, guaranteed in each project cycle. This will imply a specific budget.

Generally, women gather natural resources and products from the forest and have a unique knowledge of these and other related habitats' flora and fauna. Thus, their participation in the design, development and implementation of this project is vital for its success and for the overall conservation of the habitat. This is why the project will be gender-responsive. When designing the project, it took into account sex-disaggregated information, women's participation to know their needs, and their capacity and limitations when it comes to their access to tangible and intangible assets. Therefore, positive affirmative actions will be proposed so that women are considered the main participants in this project, especially women who are heads of household.

This project's implementation proposal considers mainstreaming the cross-cutting gender perspective through objectives, products, actions, and indicators that can measure women's effective participation. Joint responsibility of work will be sought within the families so that women are not especially overloaded.

Different tools will be available in this project to guarantee equal participation of men and women:

- It will take a community-based human rights approach, which strongly depends on equal and meaningful public participation (mainly through women's empowerment in the rural areas where the project will work).
- The gender and climate change situation will be researched and gender and climate change analysis policies, programmes, and initiatives from the project intervention area.
- A minimum quota (30%) will be assigned to participate in female beneficiaries and decision-makers for project accountability.
- Budgets for climate change policies and initiatives will be considered within a gender-responsive framework.
- Training and technical assistance services will be available for both men and women. It will use the "learning by doing" methodology, the appropriate time and location, and the language spoken by the group to guarantee the participation of women.

f. Summary of the framework for developing the Plan for Indigenous Peoples

To date the project has already consulted with the Indigenous Peoples using the appropriate procedures and through their representative institutions and obtained their FPIC. The FPIC process was led by MMyA, supported by FAO and FILAC. Participants in the process included representatives from local governments, indigenous organizations, and local organizations working on water and natural resources management.

Each workshop followed a common program, which was adapted to reflect the characteristics and realities of each individual site. Workshops followed a participatory methodology that encouraged participants to share their reality, life experiences, customary uses, and their own understanding. Sessions were opened by a welcome note from host authorities, and the official opening by representatives of MMyA. Participants introduced themselves and the organizations they represented. FILAC described the FPIC process, explaining that the consultation process seeks to exercise the rights that local communities and indigenous peoples have to be consulted, to freely express their dissent or consensus regarding each action, project, or program initiated by the State or any other organization, and to have their decisions and voice heard and respected. FAO described the project, including the background, scope, and activities. Presentations were adapted to each context, considering the technical complexity of the project's design and the cultural diversity of the participants in each workshop.

During the workshops, the participants discussed different topics in working groups, where they reviewed the project based on documentation provided by the facilitators, including the project objectives, goals, components, results, indicators, and responsible actors. After the groups' discussion, the conclusions, remarks, proposals, and suggestions were presented in plenary for their validation. Minutes of each workshop were drafted and presented to participants for their review and approval. Further details on the FPIC methodology, procedures and key findings can be found in Annex 7 to the Funding Proposal titled "Summary of Stakeholder Consultations and Participation Plan".

Therefore, based on the list of participants at different consultations, a series of events for disseminating the assessed project impacts and measures identified to prevent or mitigate them were the most appropriate ones, or the study must otherwise be extended to include other potential impacts and

measures, trying to ensure that they are culturally appropriate and gender and generationally inclusive solutions, providing assistance and opportunities to options favored by the communities involved.

The information gathered at dissemination events and complementary information obtained from the FPIC will be used to develop a plan of action that will describe the measures to be implemented to avoid or minimize negative impacts or improve positive impacts and how and when they will be implemented, as well as identifying and describing the measures that will be adopted to ensure continuation of natural resource management by the community.

This plan will also describe the complaint mechanism adapted to indigenous communities, as well as the monitoring and evaluation mechanism, which will identify those responsible for internal and external monitoring and evaluation, participation, if applicable, of the indigenous community and how the outcomes will be disseminated.

According with the GCF Operational Guidelines: Indigenous Peoples Policy (IPP), the plan includes the following minimum elements (se appendix 2 to this document for further details on the IPP):

- a) The types of subprojects likely to be proposed for financing under the project;
- b) The potential positive and adverse impacts of such programmes or subprojects on indigenous peoples;
- c) A plan for carrying out the assessment for such programmes or subprojects;
- d) A framework for ensuring the meaningful consultation tailored to indigenous peoples and, in the specified circumstances, a framework for ensuring their FPIC;
- e) Institutional arrangements, including capacity-building where necessary, for screening project-supported activities, evaluating their effects on indigenous peoples, preparing IPPs and addressing any grievances; and,
- f) f. Monitoring and reporting arrangements,

The project will safeguard the relationship between biological and cultural diversity, particularly by framing the activities under the project in the context of the culture of ayni for practices between inhabitants of the upper and lower parts of the watersheds, which may refer to the concept of reciprocity or mutualism between people in Andean Mountain communities or the practice of this concept. As a noun, the law of ayni states that everything in the world is connected, and it is the one commandment that governs daily life in many communities. As a verb, this often refers to cooperation between members of a community when one member gives to another, he is entitled to receive something in return. This action has in fact developed into reciprocal water agreements.

5. STAKEHOLDER ENGAGEMENT

5.1. Stakeholder consultation and participation, including indigenous peoples

The information is presented in Annex 7 (Summary of the consultations and stakeholder participation plan) of the Funding proposal. Additionally, important information regarding the role of indigenous peoples in the context of the economic and social development of the Valles Macro-region and more particularly of project activities has been introduced in the Indigenous People's Plan (Appendix 2 to Annex 6-ESMF). Particularly it is important to highlight that the demands of TCOs and TIOCs have been made collectively and through representative organizations of indigenous peoples, all of them affiliated with the National Council of Ayllus and Marqas de Collasuyo (CONAMAQ); this level of organization and coordination among indigenous groups **has facilitated the development of the FPIC and IPP respectively.**

5.2. Disclosure

According to GCF and FAO policies on access to information, all safeguard instruments under this project, including the ESMF and Gender Action Plan must be disclosed online in the English and local language (Castilian Spanish, in the case of Plurinational State of Bolivia) at least 30 days prior to GCF Board meeting and approval of the project. Access to the documents must be possible for any locals (i.e. it must be disclosed locally in an accessible place) in a form and language understandable to key stakeholders. Such disclosure of relevant project information helps stakeholders effectively participate. FAO is committed to disclosing information in a timely manner and in a way that is accessible and culturally appropriate, placing due attention to the specific needs of community groups which may be affected by project implementation (e.g. literacy, gender, differences in language or accessibility of technical information or connectivity).

For moderate risk projects like this one, FAO releases the applicable information as early as possible, and no later than 30 days prior to project approval. The 30-day period starts only when all the project's relevant information has been provided and is available to the public. FAO undertakes disclosure for all moderate risk projects, using a disclosure portal to publicly disclose all of the projects' documentation related to environmental and social safeguards (e.g. Environmental and Social Management Frameworks, Gender Action Plans, Indigenous Peoples Plans, and other relevant documents). The website is: <http://www.fao.org/environmental-social-standards/disclosure-portal/en/>.

In order to ensure inclusive dissemination and disclosure of project information, including any details related to applicable environmental and social safeguards, local and accessible disclosure tools including audiovisual materials (e.g., flyers, brochures, community radio broadcasts) will be utilized in addition to the standard portal disclosure tool. Messaging will be gender-sensitive. Furthermore, particular attention will be paid to farmers, indigenous peoples, illiterate or technological illiterate people, people with hearing or visual disabilities, those with limited or no access to internet and other groups with special needs. The dissemination of information among these groups will be carried out with the project counterparts and relevant local actors.

In relation to each type of Category B sub-activity to be funded under the Project, FAO shall disclose fit-for-purpose environmental and social impact assessment, the Environmental and Social Management Plan (ESMP), Social Inclusion Management Plan, and as appropriate any other associated information

required to be disclosed in accordance with the GCF Information Disclosure Policy (Project Disclosure Package). FAO shall disclose the sub-activity safeguards information at least 30 calendar days prior to commencing execution of any sub-activities that have been categorized as Category B, in English and in the local language (if not English), on its website and in locations convenient to affected peoples, and provide the Project Disclosure Package to the GCF Secretariat for further distribution to the Board and Active Observers and for posting on the GCF website. Within 180 days of the GCF Board approval of the Project, FAO and GCF Secretariat shall agree on a process to enable communication of any comments to FAO, including from the GCF Board members and Active Observers, on Category B subactivities relating to the Project Disclosure Package, and to take account of such comments in the finalization of such documents.

5.3. Complaint and Grievance Mechanism

The grievance redress mechanism (GRM) is an integral project management element that intends to seek feedback from beneficiaries and resolve complaints about project activities and performance. The mechanism is based on FAO requirements and most importantly, it is based on existing, community-specific grievance redress mechanisms preferred by the local beneficiaries.

To support the overall implementation of the Environmental and Social Management Framework and particularly to lead the established grievance mechanism, the project will recruit an Environmental and Social Safeguards Specialist as a full-time position during the project duration. This ESS Specialist will be responsible for the receipt, filtering and following up on the resolution of any complaints received.

5.3.1. FAO's Approach to the GRM

FAO is committed to ensuring that its programs are implemented in accordance with the Organization's environmental and social obligations. In order to better achieve these goals, and to ensure that beneficiaries of FAO programs have access to an effective and timely mechanism to address their concerns about non-compliance with these obligations, the Organization, in order to supplement measures for receiving, reviewing and acting as appropriate on these concerns at the program management level, has entrusted the Office of the Inspector-General with the mandate to independently review the complaints that cannot be resolved at that level.

FAO will facilitate the resolution of concerns of beneficiaries of FAO programs regarding alleged or potential violations of FAO's social and environmental commitments. For this purpose, concerns may be communicated in accordance with the eligibility criteria of the Guidelines for Compliance Reviews Following Complaints Related to the Organization's Environmental and Social Standards, which applies to all FAO programs and projects (Guidelines for Compliance Reviews Following Complaints Related to the Organization's Environmental and Social Standards).

Concerns must be addressed at the closest appropriate level, i.e., at the project management/technical level, and if necessary, at the Regional Office level. If a concern or grievance cannot be resolved through consultations and measures at the project management level, a complaint requesting a Compliance Review may be filed with the Office of the Inspector-General (OIG) in accordance with the Guidelines. Program and project managers will have the responsibility to address concerns brought to the attention of the focal point.

The principles to be followed during the complaint resolution process include impartiality, respect for human rights, including those pertaining to Indigenous peoples, compliance of national norms, coherence with the norms, equality, transparency, honesty, and mutual respect.

5.3.2. Project-level grievance mechanism

The project will establish a grievance mechanism at field level to receive complaints; this grievance mechanism has been agreed with beneficiaries (including during the FPIC with indigenous populations) to take place in the context of the Consultative Territorial Platforms to be facilitated in the context of the project (Activity 4.3.3.). Contact information and information on the process to file a complaint will be refined once the consultative platforms are operational and will be disclosed in all meetings, workshops and other related events throughout the life of the project. In addition, it is expected that all awareness-raising material distributed will include the necessary information regarding the contacts and the process for filing grievances, including on the availability of and ways to access the GCF's Independent Redress Mechanism.

SEAH and GBV grievances will be managed as incidents with an inclusive, survivor-centered and gender responsive approach, including confidential reporting and mandatory involvement of the FAO E&S and Gender specialists in monitoring the process. In case of GBV, the reporting party will be immediately directed to appropriate GBV referral pathway by the GRM personnel, and directed as necessary to medical care, psychosocial support, legal support, community driven protection measures, and reintegration services.

The project will also be responsible for safe and ethical documenting and reporting as part of the safeguards performance monitoring on any grievances received and how they were addressed.

In addition, a GRM for project-related on-site workers/labor will be also provided given the possibility of hiring project workers.

This procedure is also a standard one in which a GRM Focal Point will perform his/her tasks under the overall supervision of the FAO Representative and the direct supervision of the Ethics Officer.

The main **Tasks and responsibilities** for the GRM Focal Point for workers will be related to:

- Follow the FAO GRM process specially designed for the hired project workers.
- Receive feedback, comments and complaints from all project workers, including applicants, through phone calls, SMS and WhatsApp messages, and emails;
- File the complaints (programmatic, fraud, corruption, misconduct, sexual harassment or sexual exploitation and abuse) and send it through one of the channels of the established GRM;
- Send the programmatic complaints to the Programme Manager, who will assess whether the complaint is eligible;
- Send the complaints of fraud, corruption and misconduct to the CFM Committee for assessment;
- Send the sexual harassment or sexual exploitation and abuse complaints to the PSEA (Protection from Sexual Exploitation and Abuse) focal point in FAO;
- Document and report any complaint or feedback received, its responses and resolutions in a specific database developed for this purpose, and send a written proof to the complainant;
- Interact with complainants or conduct interviews and meetings along with the Programme Manager to better understand the complaints or feedbacks reasons;

- Coordinate with Programme Manager to assess eligibility of complaints;
- Copy all complaints received, its responses and resolutions, to the Assistant FAO Representative (Programme) in Plurinational State of Bolivia for registration purposes;
- Maintain objectivity when dealing with complaints and feedbacks and focus on facts without speculating or making value judgements;
- Understand the boundaries of the job and seek help when a situation may compromise his or her ability to perform assigned duties;
- Strive for equity in response to complaints and results of complaint assessment, such that if a particular resolution becomes known to others, it will be viewed as reasonable and consistent with how other complaints have been resolved;
- Maintain confidentiality if requested to do so by a complainant and consider anonymity during the process;
- Ensure the timelines to respond to complaints are respected;
- Track/Follow-up on cases until they are solved.

The general mechanism includes the following stages:

- The complainant files a complaint through one of the channels of the grievance mechanism. This will be sent to the Environmental and Social Safeguards Specialist to assess whether the complaint is eligible. The confidentiality of the complaint must be preserved during the process.
- The Project Team (PT) will address eligible complaints and the Environmental and Social Safeguards Specialist will be responsible for recording the grievance and how it has been addressed, if a resolution was agreed.
- If the situation is too complex, or the complainer does not accept the resolution, the complaint must be sent to a higher level, until a solution or acceptance is reached.
- For every complaint received, written proof will be sent within ten (10) working days; afterwards, a resolution proposal will be made within thirty (30) working days.
- In compliance with the resolution, the person in charge of dealing with the complaint, may interact with the complainant, or may call for interviews and meetings, to better understand the reasons.
- All complaints received, their response and resolutions, must be duly registered.

The complaint could come in writing or orally to the Project Team directly or through the provincial focal points. At this level, received complaints will be registered, investigated and solved by the coordinator.

FAO Representative. If the complaint has not been solved and could not be solved by the Coordinator, then the assistance of the FAO Representative is requested.

FAO Regional Office for Latin American and the Caribbean. The FAO Representative will request, as necessary the advice of the Regional Office to resolve a grievance, or will transfer the resolution of the grievance entirely to the regional office, if the problem is highly complex.

The FAO Regional Representative will request only for very specific situations or complex problems the assistance on the FAO Inspector General who pursues its own procedures to solve the problem.

5.3.3. Resolution

Upon acceptance a solution by the complainer, a document with the agreement should be signed with the agreement.

Table 17: Grievance mechanism

Local Level	Environmental and Social Safeguards Specialist – FAO Bolivia Wilson Rocha Vera Email: wilson.rochavera@fao.org
FAO representation	Must respond within 5 working days, in consultation with Project Team. Rosse Noda Email: rosse.noda@fao.org
Regional FAO Office for Latin America and the Caribbean	Must respond within 5 working days in consultation with FAO's Representation. María Mercedes Proaño Email: mariamercedes.proano@fao.org
Office of the Inspector General (OIG)	To report possible fraud and bad behavior by fax, confidential: Pablo Fonte By e-mail: Pablo.Fonte@fao.org By confidential hotline:
GCF Independent Redress Mechanism	Independent Redress Mechanism - Green Climate Fund By email: irm@gcfund.org Office telephone: +82 32-458-6186; Fax: +82 32-458-6096; Cellphone: +82 10-4296-1337

6. EXPECTED PROJECT IMPACTS

6.1. Risk classification

The assessment classified project risk as moderate, although large-scale, significant, or irreversible environmental impacts are not expected. The potential impacts identified are mainly impacts associated with activities that include community participation, especially of indigenous communities, on a purely voluntary basis, which can be mitigated effectively and are addressed through the project's selection criteria and social and environmental plan of action.

Summary of the Project's Environmental and Sociocultural Impacts

Below is the project Environmental and Social Impact Assessment following the guidelines for FAO field projects.

Table 18: Project environmental and social impact assessment checklist

Would the project, if implemented	Not applicable	Yes	No	Unable to determine	Technical justification/description
FAO'S VISION, GOALS AND STRATEGIC OBJECTIVES					
Be in line with FAO's vision?		x			This project will develop capacities to improve productivity and the sustainability of the farming systems in the face of the adverse effects of climate change, by revitalizing and optimizing the irrigation systems, the integrated and sustainable management of soil, water and vegetation using an integrated management of micro watersheds approach to achieve water security in the long term, by adopting resilient farming practices and technologies. Likewise, the project will increase the rural families' incomes and improve their food security.
Be supportive of FAO's strategic objectives?		x			Regarding FAO's 5 strategic objectives: The project contributes to eradicating food insecurity (Objective 1) and focusses on increasing farming systems' production and productivity (Objective 2) by minimizing the adverse impacts on natural resources and ecosystem functions. It is also geared to moving from traditional farming practices to more sustainable practices. The project seeks to improve governance of the farming systems, create and improve access to markets (Objective 3). It also supports more inclusive agriculture systems, involving women and young people, to be more efficient at the local and national level (Objective 4), and finally, the project increases resilience of agriculture and natural resources based livelihoods, which is important for food security, as well as enhancing the resilience of ecosystem services (Objective 5).
II. FAO KEY PRINCIPLES FOR SUSTAINABILITY IN FOOD AND AGRICULTURE					
Improve efficiency in the use of resources?		x			Water will be used more efficiently when the irrigation systems are modernized (Project Component 2), given that currently 90% of irrigation uses gravity (also known as flood-

					irrigation). Likewise, water will be available during the dry season and in municipalities with high and very high risk of drought by implementing community reservoirs and family water tanks.
Conserve, protect and enhance natural resources?		x			The afforestation, reforestation, closing off and integrated management of forests activities (Project Component 3) to protect and restore water sources, degraded soils, natural defences and other environmental functions. In Puna, wetlands and native prairies ecosystems where there are important water sources, they will be conserved with Private Natural Heritage Reserves, PAs, fences, etc. Likewise, forests and woodland will be managed and the headlands of the watershed and water recharge areas of these ecosystems will be protected and conserved using living fences, enclosures, PNHRs, ecological easements and PAs.
Protect and improve rural livelihoods and social well-being?		x			Implementing resilient sustainable agriculture systems (Project Component 1) should increase the productivity and sustainability of the farming systems of smallholder farmers vulnerable to climate change. It is hoped that this will reduce losing crops/agricultural production because of climate change, which then affects families' income. Incorporating more environmentally sustainable production systems (e.g., organic farming, conservation farming) will enable the families to farm their land for longer. Diversifying to include high-value products and alternative livelihoods (e.g., honey, tourism, agro tourism) will contribute more to families' livelihoods.
Enhance resilience of people, communities and ecosystems?		x			The local capacity-strengthening activities (Project Components 1, 2 and 4) to manage and conserve the farming systems and implement resilient production systems, and conserve and protect ecosystems because of their environmental functions (Project Component 3).
Include responsible and effective governance mechanisms?		x			The local capacity-strengthening activities (Project Component 4) for the governance of the farming systems, and the strengthening of government authorities to promote, control and monitor the use of natural resources, such as water, soil and forests, which are necessary to guarantee the sustainability of the farming systems.
ESS 1 NATURAL RESOURCES MANAGEMENT					
❖ Management of water resources and small dams					
Include an irrigation scheme that is more than 20 hectares or withdraws more than 1000 m3/day of water?		x			4,448 hectares will be revitalized and/or complemented with modernized resilient irrigation systems (Project Component 2) comprising family (1/4 to 2 ha) or community (40 ha to 80 ha) fields. It is important to mention that in an indigenous community, there usually are several beneficiary families. In this sense, the average community irrigation will be counted by communal family, the same one that becomes part of, or considered a UPA, but also an irrigating family. In the area of intervention of the project, indigenous communities establish food production systems from a fourth of hectare to 2 hectares, the same ones that added throughout the community are reported as a total community irrigation scheme. For example: if in a community there are 20 indigenous families producing food, altogether they will have 10 hectares under irrigation systems. The 2010 Agricultural Census has already foreseen this and that is why in indigenous territories to have precision, count is made by agricultural production units that are the family units.
Include an irrigation scheme that is more than 100 hectares or withdraws more than 5000 m3/day of			x		

water?					
Include an existing irrigation scheme?		x			
Include an area known or expected to have water quality problems?		x			Some places where the project will work include bodies of water (rivers and streams) used for irrigation but that have been contaminated by mining activity (e.g., municipalities in the Department of Potosí) or the intensive use of pesticides (e.g., municipalities in the departments of Tarija and Santa Cruz). It is worth highlighting that the project will ensure that these sources of water are not used neither for irrigation or any other use. On the contrary, by promoting the preparation of biological pesticides, the project will aim at reducing the use of chemical pesticides and therefore reducing water pollution.
Include usage of non-conventional sources of water (i.e., wastewater)?			x		
Include a dam that is more than 5 m. in height?			x		
Include a dam that is more than 15 m. in height?			x		
Include measures that build resilience to climate change?		x			Develop and implement irrigation and resilient production infrastructure and technologies (Project Components 1 and 2) to face climate change threats, such as modernized irrigation systems, anti-hail netting, greenhouses, thermal mesh hydrogels. Increase the resilience of the ecosystems and environmental and ecosystem functions (Component 3) by protecting water sources, afforested and reforested important water areas. Using living or man-made fences to close off water recharge areas, water holes, etc.
❖ Tenure					
Negatively affect the legitimate tenure rights of individuals, communities or others?			x		
ESS 2 BIODIVERSITY, ECOSYSTEMS AND NATURAL HABITATS					
Make reasonable and feasible effort to avoid practices that could have a negative impact on biodiversity, including agricultural biodiversity and genetic resources?		x			Afforested and reforested activities will prioritize planting native species. The modernization of irrigation systems and other actions to do with irrigation (Project Component 2) will be done using specialist technical studies: Inventory of irrigation systems in the Macroregion. Likewise, an inventory of the water sources will also be done in the municipalities given priority by the project in the Valles Macroregion to be used as a baseline for deciding where to forest and reforest.
Have biosafety provisions in place?	x				
Respect access and benefit-sharing measures in force?		x			Any activity and work to be done by the project (Components 1, 2, 3 and 4) will respect rights of access to land and natural resources.
Safeguard the relationships between biological and cultural diversity?		x			All the farming activities are proposed respecting the ecosystems and sociocultural diversity. More particularly, the work under the project will be framed under the culture of <i>ayni</i> for practices between inhabitants of the upper and lower parts of the watersheds, which may refer to the concept of reciprocity or mutualism between people in Andean Mountain communities or the practice of this concept. As a noun, the law of <i>ayni</i> states that everything in the world is connected, and it is the one commandment that governs daily life in many communities. As a verb, this often refers to cooperation between members of a community when one member gives to another, he is entitled to receive something in return. This action has in fact developed into reciprocal water agreements.

❖ Protected areas, buffer zones and natural habitats					
Be located such that it poses no risk or impact to protected areas, critical habitats and ecosystem functions?			x		Any activity and work to be done by the project (Project Components 1, 2, 3 and 4) will respect the presence of protected areas whose zoning determines the use and management categories of each one. No activities will take place in the core or buffer zones of protected areas.
ESS 3 PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE					
Planted forests					
Have a credible forest certification scheme, national forest programmes or equivalent or use the Voluntary Guidelines on Planted Forests (or an equivalent for indigenous forests)?	x				No planted forests are envisaged in the context of the project. The restoration initiatives (Project Component 3) will take into account the programmes and projects already underway in the Valles Macroregion, to be able to complement actions, use technical baseline information, and use the experiences and capacities available and lessons learned up until now.
ESS 4 ANIMAL - LIVESTOCK AND AQUATIC- GENETIC RESOURCES FOR FOOD AND AGRICULTURE					
Introduce new species/breeds, collect wild genetic resources and/or modify habitats?			X		
❖ Aquatic genetic resources					
Adhere (Aligned) to the FAO Code of Conduct for Responsible Fisheries (CCRF) and its related negotiated instruments?	x				
Be aligned, where applicable, with FAO's strategic policies established in the FAO Technical Guidelines for Responsible Fisheries (including aquaculture)?	x				
❖ Livestock genetic resources					
Be aligned with the Livestock Sector Strategy including the animal disease, public health and land degradation provisions?	x				
ESS 5 PEST AND PESTICIDES MANAGEMENT					
Involve the procurement, provision or use of pesticides?			x		Smallholder farmers receive training for the preparation of organic agricultural inputs (biological pesticides) adapted to the agricultural and environmental needs (Project Component 1). The project will promote an approach to Integrated Pest Management (IPM) and favouring the use of biological pest control tools over synthetic chemicals and preventive measures and monitoring.
Result in increased use of pesticides through expansion or intensification of production systems?			x		
Require the disposal of pesticides or pesticide contaminated materials?			x		

ESS 6 INVOLUNTARY RESETTLEMENT AND DISPLACEMENT					
Avoid the physical and economic displacement of people?		x			The activities do not involve any physical or economic displacement of people. Actually, the activities focus on addressing the drivers of migration which has been the result of environmental degradation and lack of economic opportunities. The project activities involve young people to avoid the high rates of rural to urban migration to city by this age group (Project Components 1, 2, 3, 4).
ESS 7 DECENT WORK					
Adhere to FAO's guidance on decent rural employment, promoting more and better employment opportunities and working conditions in rural areas and avoiding practices that could increase workers' vulnerability?		x			Because the project focuses on family age, it will promote significant improvements in the employment opportunities and working conditions in the Valles Macroregion, supporting highly vulnerable smallholders to access markets and diversify their livelihoods.
Respect the fundamental principles and rights at work and support the effective implementation of other international labour standards, in particular those that are relevant to the agro-food sector?		x			The project will promote the fundamental principles and workers' rights, including those workers directly recruited under the project. The recruitment of workers directly under the project will be conducted according to the UN/FAO regulations.
ESS 8: GENDER EQUALITY AND PREVENTION OF GENDER-BASED VIOLENCE					
Have the needs, priorities and constraints of both women and men been taken into consideration?		x			The activities guarantee women's and young people's participation as they are considered to be vulnerable groups.
Promote women's and men's equitable access to and control over productive resources and services?		x			There are no gender restrictions to be a project beneficiary.
Foster their equal participation in institutions and decision-making processes?		x			The scope of the project was shared with the different local actors (beneficiary rural producers), as well as with government actors who will be beneficiaries and/or joint implementers (Project Components 1, 2, 3 and 4).
Make a reasonable and feasible effort to prevent GBV SEAH		x			<p>Contracts and worker induction will contain express clauses to prevent all types of GBV-SEAH, within the framework of GBV-SEAH safeguards, prevention policies and codes of conduct related to women and children.</p> <p>During the implementation of the Project, FAO's guiding principles of protection will be applied.</p> <p>We will develop information, communication and training actions on protection laws and also the dissemination of the rights of women and children, with different actors: public authorities, native authorities and social organizations.</p> <p>Alliances will be established with municipal legal instances to denounce GBV-SEAH.</p>
ESS 9 INDIGENOUS PEOPLES AND CULTURAL HERITAGE					
Are there any indigenous communities in the project area?		x			The Valles Macroregion of Plurinational State of Bolivia is home to a wide cultural diversity. Indigenous communities occupy 4,307,145 ha in indigenous communitarian lands and farming communities occupy around 1,104,911 ha (Project Components 1, 2, 3 and 4).

Are project activities likely to have adverse effects on indigenous peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems, and culture or heritage (tangible and intangible)?			x		
Are indigenous communities outside the project area likely to be affected by the project?			x		
Designed to be sensitive to cultural heritage issues?	x				

6.2. Analysis of the Social and Environmental Safeguards on the potential risks and impacts of the project

As mentioned previously, the project is classed as **Moderate Risk**. Here follows a summary of the main risks and possible impacts:

Component 1. Strengthened food and income security in changing climate through climate resilient agricultural systems

The purpose of component 1 is to boost the capacities of the smallholder farmers, including women and young people, to increase their farming systems' productivity and sustainability as a way of adapting to the changes in temperatures, rains, and drought. Three strategic lines of action were proposed:

- Implement resilient farming practices and promote product diversification as a means of adapting to climate change, based on delivering supplies, developing technologies and strengthening capacities to improve productivity and how farming systems are managed.
- Provide technical assistance on processes of ecological certification for agricultural products as well as on strengthening agricultural food supply chains by facilitating market access
- Boost resilient community and associative productive enterprises to consolidate or set up produce collection, transformation and commercialization centers.

Table 19. Component 1. Risks and potential impacts

Standard	Risks	Likelihood of occurrence	Impact level	Potential impacts
ESS 1: Natural Resource Management	Land Management Plans are not adhered to.	Low	Low	Farming activities lead to loss of woody vegetation cover in forest areas.
	Farmers do not follow through on processes needed to transition to organic and conservation farming do not happen because of lack of commitment and motivation, a lack of training and technical assistance. Project-dependence. Smallholder farmers depend on the project to do conservation farming, organic farming and agroforestry systems (AFSs). Traditional farmers resist changing over to conservation farming and organic farming.	Low	Low	Loss of productivity. Disgruntled producers. Producers' income drops. Reduced productivity while changing over to conservation farming and organic farming.

ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A			N/A
ESS 3: Plant Genetic Resources for Food and Agriculture	N/A			N/A
ESS 4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	N/A			N/A
ESS 5: Pest and Pesticide Management	Farmers misuse and use agricultural inputs incorrectly.	Low	Medium	Environmental pollution (Eutrophication of bodies of water, pollution of fertile land) and loss of productivity due to improper use of agricultural inputs.
ESS 6: Involuntary Resettlement and Displacement	N/A			N/A
ESS7: Decent Work	Farmers use child labour in the context of farming activities	Low	Low	bodily and mental harm, economic exploitation cuts children off from schooling and health care, restricting their fundamental rights and threatening their futures.
	Vulnerable farmers (including youth, women, migrant farmers) are not interested in participating in project activities	Low	Low	Project activities cannot be implemented and therefore livelihoods are not improved.

<p>ESS 8: Gender equality and Prevention of Gender Based Violence</p>	<p>Direct project workers and employees of contractors and subcontractors may request sexual favors as a pre-requisite for the technologies provided in this component</p> <p>Workers may also be engaged in issuing threats, insults, assault and other forms of abuse on girls, women, children and other vulnerable groups, especially with the possible influx of workers from outside the community.</p> <p>Women may face opposition of their husbands and other male family members for their wish to participate in the project. In some households, the situation may escalate to violence. If their spouses are not involved in the project, the possibility of violence is higher.</p> <p>If women's income increases, and they refuse to give up their earnings to their husbands and other male family members, that is likely to trigger violence against the women.</p> <p>Girls should take care of household chores so that their mothers can participate in other areas.</p>	<p>Low</p>	<p>Low</p>	<p>Acts of Gender Base Violence have long term physical health and psychological effects on survivors.</p> <ul style="list-style-type: none"> -Abuse of power to obtain transactional sex with young women -Women prefer not to participate in the project to avoid conflict with their partner -Discrimination against women and girls persists
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ESS 9: Indigenous Peoples and Cultural Heritage	Government authorities do not hold to their commitments as counterparts to support the activities. The principle of Free, Prior, and Informed Consent (FPIC) of Indigenous Peoples affected by the project is not adhered to.	Low	Low	Local producers are not happy with/mistrust the project. Work is stopped and project investment is lost.
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Component 2. Smallholder water resources secured to reduce the risks from droughts and low rainfall. Project activities under component 2 will improve existing irrigation systems to optimize the efficient use of water and reduce production losses from drought. Three strategic lines of action were proposed:

- Revitalize, modernize and set up irrigation systems that can cope with climate variations to reduce risks from drought and scarce rainfall.
- Develop capacities and train people to manage climate-proofed irrigation systems using innovative experiences and practices, using an integrated watershed management approach and participatory research-action methods.
- Have an updated information and monitoring system for modernized climate-proofed irrigation systems for making decisions.
- Climate-proof existing irrigation systems for increased water use efficiency and productivity to lower the risks from climate-induced drought from unreliable rainfall and extended dry spells.

Table 20. Component 2. Risks and potential impacts

Standard	Risk	Likelihood of occurrence	Impact level	Impact potential
ESS 1: Natural Resource Management	Community reservoirs in areas that are not apt for storing and distributing water to the fields. The irrigation infrastructure is poorly designed and built. The project will contribute to the modernization and revitalization of existing irrigation systems, and the construction of small-scale communal water reservoirs. It and it is not expected to use hazardous materials, and any impacts in conservation and environment typically associated to these small-scale activities are expected to be low.	Low	High	Poor use of water. Disgruntled locals. Water shortages, inefficient agricultural production. Crops lost because of water shortage. Any sedimentation would be temporary and generation of handling of wastes is expected to be minimal. Any generation and handling of wastes is expected to be minimal.

	Dusts and waste generation may generate temporary sedimentation of canals and streams.			
ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A			N/A
ESS 3: Plant Genetic Resources for Food and Agriculture	N/A			N/A
ESS 4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	N/A			N/A
ESS 5: Pest and Pesticide Management	N/A			N/A
ESS 6: Involuntary Resettlement and Displacement	N/A			N/A
ESS7: Decent Work	Smallholders do not accept irrigation schemes	Low	Low	Poor ownership of irrigation schemes. Failure to fully implement on-farm irrigation systems. Lack of water availability at on-farm level.
ESS 8: Gender equality and Prevention of Gender Based Violence	<p>Direct project workers and employees of contractors and subcontractors may request sexual favors as a pre-requisite for the technologies provided in this component</p> <p>Workers may be engaged in issuing threats, insults, assault and other forms of abuse on girls, women,</p>	Low	Low	<p>Acts of Gender Base Violence have long term physical health and psychological effects on survivors.</p> <p>Young women do not participate in the project for fear of transactional sex</p> <p>-Women prefer not to participate in the project to avoid conflict with their partner</p> <p>-Naturalization of the reproductive role of women and ignorance of their contributions to the productive and community role.</p>

	<p>children and other vulnerable groups, especially with the possible influx of workers from outside the community.</p> <p>Women may face opposition of their husbands and other male family members for their wish to participate in the project. In some households, the situation may escalate to violence. If their spouses are not involved in the project, the possibility of violence is higher.</p> <p>If women's income increases, and they refuse to give up their earnings to their husbands and other male family members, that is likely to trigger violence against the women.</p>			
ESS 9: Indigenous Peoples and Cultural Heritage	<p>Conflicts between those who use the irrigation systems and those who do not.</p> <p>Government authorities do not hold to their commitments as counterparts to support the activities.</p>	Low	Low	<p>Local producers are not happy with/mistrust the project. Work is stopped and project investment is lost.</p> <p>Poor ownership of irrigation schemes. Failure to fully implement on-farm irrigation systems. Lack of water availability at on-farm level.</p> <p>Local producers are not happy with/mistrust the project. Work is stopped and project investment is lost</p>

Component 3. Restored and conserved micro-watersheds and ecosystem functions and services. Under component 3, the project will improve communities' and smallholder farmers' water security to guarantee the sustainability of their livelihoods using a participatory integrated watershed management approach. Three strategic lines of action were proposed:

- Implement and/or develop integrated and sustainable water source management practices to ensure availability (reasonable quantity and quality).
- Restoration process in easements to conserve and/or restore water sources and environmental functions.
- Have a water sources information and monitoring system and tools for local water use (quality and quantity).

Table 21. Component 3. Risks and potential impacts

Standard	Risk	Likelihood of occurrence	Impact level	Impact potential
ESS 1: Natural Resource Management	The wetlands and forests management activities are not implemented properly and so cannot conserve water sources.	Low	Low	Loss of water sources. Loss of vegetation in water recharge areas. Reduced availability of water sources.
ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A			N/A
ESS 3: Plant Genetic Resources for Food and Agriculture	N/A			N/A
ESS 4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	N/A			N/A
ESS 5: Pest and Pesticide Management	N/A			N/A
ESS 6: Involuntary Resettlement and Displacement	N/A			N/A
ESS7: Decent Work	Smallholders do not fully participate in the restoration activities	Low	Low	Restoration activities cannot be implemented.
ESS 8: Gender equality and Prevention of Gender Based Violence	Workers may be engaged in issuing threats, insults, assault and other forms of abuse on girls, women, children and other vulnerable groups, especially with the possible influx of workers from outside the community	Low	Low	Acts of Gender Base Violence have long term physical health and psychological effects on survivors. Women and vulnerable population do not participate in the project for fear of mistreatment Women prefer not to participate in the project to avoid conflict with their partner Discrimination against women and girls persists

	<p>Women may face opposition of their husbands and other male family members for their wish to participate in the project. In some households, the situation may escalate to violence. If their spouses are not involved in the project, the possibility of violence is higher.</p> <p>If women's income increases, and they refuse to give up their earnings to their husbands and other male family members, that is likely to trigger violence against the women.</p> <p>Girls should take care of household chores so that their mothers can participate in other areas.</p>			
ESS 9: Indigenous Peoples and Cultural Heritage	<p>Forest plantations and closing off water recharge areas spark conflicts among members of communities (those who irrigate and those who do not).</p> <p>Government authorities do not hold to their commitments as counterparts to support the activities.</p>	Medium	Medium	Local producers are not happy with/mistrust the project. Work is stopped and project investment is lost.

Component 4. Enabling conditions created to implement and upscale climate-resilient agroecological management, climate-informed integral micro-watershed management, and access to financial mechanisms

Activities under component 4 will strengthen public and community capacities to implement resilience practices and support climate risk management by smallholder farmers and communities. Four strategic lines of action are proposed:

- Strengthen the capacities of national and local government institutions to implement policies and regulations for resilient production of food using irrigation systems focusing on adapting to and mitigating climate change.
- Strengthen and/or design with the national and local government institutions financial mechanisms for resilient production of food, installing and maintaining irrigation systems focusing on adapting to and mitigating climate change.
- Strengthen community capacities to administer and distribute benefits, and organizational and technical development for farming systems, modernized climate-proofed irrigation using a gender and generational approach.
- Strengthen procedures for implementing Agricultural Early Warning System, with the aim of providing timely information to local producers and decision-makers.

- On SEAH / GBV: Government officials may be engaged in issuing threats, insults, assault and other forms of abuse on girls, women, children and other vulnerable groups abusing their authority especially in the activities in the field and the capacity building sessions of communities.
- Women may face opposition of their husbands and other male family members for their wish to participate in the project. In some households, the situation may escalate to violence. If their spouses are not involved in the project, the possibility of violence is higher.
- If women's income increases, and they refuse to give up their earnings to their husbands and other male family members, that is likely to trigger violence against the women.
- Girls should take care of household chores so that their mothers can participate in other areas.

The environmental risks are very few for this component, and mainly comprise of monitoring investments and building the beneficiaries' capacities to implement the project activities properly. There could, however, be environmental impacts as a result of poor management, a lack of training, and not complying with the regulations or following good practices. Social impacts or conflicts may arise because of poor project supervision, monitoring and evaluation.

7. MITIGATION MEASURES AND APPROACH TO ENHANCE POSITIVE IMPACTS

This section describes the preventive, control, mitigation and/or corrective measures of each of the impacts identified.

Component 1. Agricultural systems transformed and reoriented to ensure food and income security in a changing climate

Table 22. Component 1. Mitigation measures

Standard	Risks	Potential impacts	Mitigation measures/ACTIVITIES	Indicative cost (USD)	Institutions responsible for measures
ESS 1: Natural Resource Management	Land Management Plans are not adhered to.	Farming activities lead to loss of woody vegetation cover in forest areas.	Technical assessment and follow-up on how the LMPs are being implemented.	300,000 -Conservation-agronomy expert for the preparation of Micro-watershed management plans (21). -Preparation of Local micro-watershed management plan - for micro-watersheds with prioritized communities. -Forestry expert in restoration conservation specialist: forestry conservation, restoration, and utilization. Preparation of Management plans	Associations of Municipalities (Territorial Operations Units). Accompanying institutions (FAM).

				(conservation, restoration, and utilization) -Climate change expert for technical support for the TOUS. -Design and implementation of a mechanism to follow-up on how the LMPs are being implemented. -Trips for field visits to verify progress of the implementation of the LMPs.	
	Farmers do not follow through on processes needed to transition to organic and conservation farming do not happen because of lack of commitment and motivation, a lack of training and technical assistance. Project-dependence. Smallholder farmers depend on the project to do conservation farming, organic farming and agroforestry systems (AFSs).	Loss of productivity. Disgruntled producers. Producers' income drops. Reduced productivity while changing over to conservation farming and organic farming. Reduced productivity, activities do not continue once the project exits.	Ensure that good farming and forestry practices are appropriate implemented. Promote organic products to safe, profitable markets. High-value forest species in AFSs. Keep a good balance of native and exotic species in AFSs, when restocking forests. Continually monitor and provide technical assistance for organic farming, conservation farming and AFSs. Social and environmentally-aware service and training providers.	500,000 -Agronomists (4) to provide technical support to farmers. -Forestry expert to provide technical support to forestry farmers. -Open call for the preparation of the water availability	Associations of Municipalities (Territorial Operations Units). Social and environmentally-aware service and training providers. Accompanying institutions do socio-environmental monitoring.

	Traditional farmers resist changing over to conservation farming and organic farming.		Socio-environmental monitoring of fields and AFSs.	study for implementation of agriculture and forestry practices adapted to climate change. -Design of a monitoring system for tracking the transformation to good practices (organic and conservation farming).	
ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A	N/A	N/A		N/A
ESS 3: Plant Genetic Resources for Food and Agriculture	N/A	N/A	N/A		N/A
ESS 4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	N/A	N/A	N/A		N/A
ESS 5: Pest and Pesticide Management	Farmers misuse and use agricultural inputs incorrectly. Potential risk to the health of the farming families and consumers.	Environmental pollution (Eutrophication of bodies of water, pollution of fertile land) waste management and loss of productivity due to improper use of agricultural inputs. Farming families and consumers have health problems.	<ul style="list-style-type: none"> The project shall minimize the use of pesticides by implementing a pest and disease early-warning mechanism for pest and diseases, by using biological pest and disease control methods, and by implementing 	300,000 -Development of a Pest Management Plan/Program to fight against pest and diseases that	Associations of Municipalities (Territorial Operations Units). Social and environmentally-aware service and training providers. Project Technical Committee and accompanying institutions (Universities,

			<p>control measures before outbreaks require large-scale control.</p> <ul style="list-style-type: none"> • The Project will develop a Pest Management Plan/Program that targets the main crops and potential pests and include a biological pesticides application regimen and adequate waste management. - The project will provide technical assistance and know-how to farmers for the preparation organic and biological pesticides and will facilitate the implementation of practices ensuring the use of allelopathic plants. 	<p>affects in the main crops that includes biological pesticides application regimen</p> <ul style="list-style-type: none"> -Travel visits to all communities to technically support farmers for the preparation of organic and biological pesticides and will facilitate the implementation of practices ensuring the use of allelopathic plants, and ensure adequate waste management. -Development of technical training tools and communication material with the recipes of biological pesticides and best practices 	<p>government agencies) to do follow-up.</p>
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				<p>of biological pest and diseases management and correct waste management.</p> <p>-Outreach programme for exchange successful experiences associate agriculture and forestry good practices among communities and municipalities. Monitoring visits to support and monitor the effective application of the Plan.</p>	
ESS 6: Involuntary Resettlement and Displacement	N/A	N/A	N/A		N/A
ESS 7: Decent Work	<p>Accidents can occur, especially during land clearing and tilling, planting, pruning on fields and AFSs.</p> <p>Risk of child labour.</p> <p>Young people and women not interested.</p>	Disgruntled local producers.	-Provide training on good practices for the activities being promoted in this component, ensuring they are adapted to encourage local producers to participate, especially women and young people.	<p>100,000</p> <p>-A protocol for how to respond when harmful child labor is detected will</p>	<p>Territorial Operations Units.</p> <p>Territorial Platforms.</p> <p>Project Technical Committee does follow-up.</p>

			<p>-Prohibit the use of child labour in the project activities; communicate the no-child labor policy to project beneficiaries, suppliers/contractors and the extended communities; created/enforced a procedure for age verification of applicants as part of hiring policy.</p>	<p>be developed and installed.</p> <p>-Training sessions to staff within the Project Management Unit and the Provincial Focal Points to provide them with tools to enforce the no-child labor policy and child labor will be clearly defined as one of the potential issues that can be reported through the Grievance mechanism with the assurance of confidentiality.</p> <p>-A strategy of incidence and communication will include actions in order to better address no child – labor and also ensuring to encourage</p>	
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				<p>local producers to participate, especially women and young people in the initiatives promoted by the project.</p> <p>-Dissemination of Guidelines to Prohibit the use of child labour in the project activities will be also developed and applied.</p> <p>An incidence and communication plan to Emphasize alternative activities for female heads of families, such as organic farming, beekeeping, will be developed and implemented.</p>	
ESS 8: Gender equality and Prevention of	Direct project workers and employees of contractors and subcontractors may	Acts of Gender Base Violence have long term physical health	<ul style="list-style-type: none"> SEAH-GBV action plan to be developed during project inception phase. 	7,000	PMU (ESS specialist. Gender Specialist) Territorial Operations Units.

<p>Gender Based Violence</p>	<p>request for sexual favors as a pre-requisite for the technologies provided in this component</p> <p>Workers may also be engaged in issuing threats, insults, assault and other forms of abuse on girls, women, children and other vulnerable groups, especially with the possible influx of workers from outside the community.</p> <p>Women may face opposition of their husbands and other male family members for their wish to participate in the project. In some households, the situation may escalate to violence. If their spouses are not involved in the project, the possibility of violence is higher.</p> <p>If women's income increases, and they refuse to give up their earnings to their husbands and other male family members, that is likely to trigger violence against the women.</p>	<p>and psychological effects on survivors.</p> <p>Discrimination against women and girls persists</p> <p>Naturalization of the reproductive role of women and ignorance of their contributions to the productive and community role.</p>	<ul style="list-style-type: none"> • Contractual Clauses on mandatory and regular training for workers on required lawful conduct and legal consequences for failure to comply with laws on non-discrimination and GBV will be inserted in Contract Documents. • Contractual Clauses with a commitment to cooperate with law enforcement agencies investigating cases of gender-based violence shall be inserted into the Contract documents of the contractor and Supervising Consultant. • Contractual clauses against rape, defilement and other Gender based Violence as well as child and forced Labour shall be inserted into the contract of the Contractor and Supervising Consultant. • Workers on site will sign Code of Conduct with sanctions on rape defilement, abuse and other gender-based violence. • Sensitize beneficiaries/parents on the prohibition of child labour. • Disseminating laws protecting the rights of women and girls. 	<p>-Annual awareness workshops for employees of the Contractor/Supervising Consultant and Sub-Contractors as well as persons working or living in the immediate project area and to provide contact numbers of the nearest law enforcement Agency Office, the Grievance Redress Mechanism and GBV Service Providers to offices, schools and clinics within the project area.</p> <p>-Workshops on gender, gender roles, leadership and self-esteem will be held with women's associations and workshops on</p>	<p>Accompanying institutions (MMaYA and FAM).</p> <p>Communication Specialist</p> <p>Specialist in masculinities</p> <p>Municipal legal services</p> <p>Ombudsman local for children and adolescents</p>
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			<ul style="list-style-type: none"> • A community-based approach to the project will be taken, informing families about the importance of the participation of both men and women. • The promotion of co-responsibility in care work will be promoted. 	<p>masculinities with men.</p> <p>-Review the communication strategy to include content on the prevention of violence and harassment.</p> <p>-Development of appropriate legislative clauses to guarantee enforcement the prevention of gender violence</p> <p>-Clear guidelines develop and disseminated to present the project as a zero tolerance on any type of violence or harassments.</p> <p>-Disseminating communication plan through local media and traduced in two native languages to let the people know about laws that</p>	
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				<p>protects the rights of women.</p> <p>-Grievance mechanism to assure confidentiality on reporting and clear action for follow up when violence's or harassments occur.</p>	
<p>ESS 9: Indigenous Peoples and Cultural Heritage</p>	<p>Government authorities do not hold to their commitments as counterparts to support the activities.</p> <p>The principle of Free, Prior, and Informed Consent (FPIC) of Indigenous Peoples affected by the project is not adhered to.</p> <p>Lack of technical assistance and training in culturally sensitive practices and in native languages when necessary.</p> <p>None of the activities should have any effect on tangible or intangible cultural heritage.</p>	<p>Local producers are not happy with/mistrust the project.</p> <p>Work is stopped and project investment is lost.</p>	<p>Keep to the plan and secure the consent of the local and community authorities.</p> <p>Ensure the running of the Territorial Platforms.</p> <p>Activities implemented only after free and informed consent has been given</p> <p>Provide technical support to Territorial Platforms when they need it.</p>	<p>150,000</p> <p>- Meetings, and constant travels on field to strengthen/sup port the participation of indigenous people in the Project and reduce cultural barriers.</p> <p>- Design a culturally appropriate project outreach strategy for indigenous producers.</p> <p>- A communication plan to</p>	<p>Territorial Operations Units.</p> <p>Territorial Platforms.</p> <p>Project Technical Committee does follow-up.</p>

				<p>disseminate to permanently keep the people informed about the progress aligned to the CPLI consultations.</p> <ul style="list-style-type: none">- Establish a mechanism to address complaints.- Establish a mechanism linked to the main monitoring system of the project to ensure the running of the Territorial Platforms.- Communication material in different formats and languages to promote the participation and progress of the Territorial Platforms in order to generate real participative mechanisms.	
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Component 2. Smallholder water resources secured to reduce the risks from droughts and low rainfall

Table 23. Component 2. Mitigation measures

Standard	Risk	Impact potential	Mitigation measures	Indicative cost (USD)	Institutions responsible for measures
ESS 1: Natural Resource Management	<p>Community reservoirs in areas that are not apt for storing and distributing water to the fields.</p> <p>The project will contribute to the modernization and revitalization of existing irrigation systems, and the construction of small-scale communal water reservoirs. It and it is not expected to use hazardous materials, and any impacts in conservation and environment typically associated to these small-scale activities are expected to be low. Dusts and waste generation may generate temporary sedimentation of canals and streams.</p>	<p>Poor use of water. Disgruntled locals.</p> <p>Water shortages, inefficient agricultural production. Crops lost because of water shortage.</p> <p>Any sedimentation would be temporary and generation of handling of wastes is expected to be minimal.</p> <p>Any generation and handling of wastes is expected to be minimal</p>	<p>Build community reservoirs based on the availability and supply of water as calculated in the technical reports (Water source inventories, water balances, etc.).</p> <p>Close technical supervision when building reservoirs and water distribution systems to the fields.</p> <p>Prior consultation with potential beneficiaries and local and community authorities.</p> <p>Contractors will be required to comply with FAOs safeguards policy and in the unlikely event that hazardous materials will be used, contractors must inform FAO and discuss if a C-ESMP is required. In the unlikely event that the project leads to considerable amounts of waste, a Site Waste Management Plan will be developed.</p>	<p>300,000</p> <p>-40 Specialized engineers and contractors for the implementation, installation of 1,000 community gender sensitive communal water reservoirs, installation of 5,000 family water tanks.</p> <p>-Agronomist expert, to technically support to proof climate irrigation practices for crops, and forestry.</p> <p>-Training plan on efficient use of water and proof climate</p>	<p>Territorial Operations Units.</p> <p>Territorial Platforms.</p> <p>Accompanying institutions (UCEP MI RIEGO, MI AGUA, Vice-Ministry of Water Resources and Irrigation, SENARI, SEDERI).</p>

				irrigation practices.	
ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A.	N/A	N/A		N/A
ESS 3: Plant Genetic Resources for Food and Agriculture	N/A	N/A	N/A		N/A
ESS 4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	N/A	N/A	N/A		N/A
ESS 5: Pest and Pesticide Management	N/A	N/A	N/A		N/A
ESS 6: Involuntary Resettlement and Displacement	N/A	N/A	N/A		N/A
ESS 7: Decent Work	Accidents can occur, especially during land clearing and tilling, planting, pruning on fields and AFSs. Risk of child labour. Young people and women not interested.	Disgruntled local producers.	<ul style="list-style-type: none"> Local workers will not be hired without corresponding Employment Injury Insurance. A project standard for the hiring of local women, young people and indigenous people will be applied. Local labour will always be hired first as long as they have 	50,000 Gender expert and Agronomist expert for technical backstopping. -Workshops to mainstream gender to properly address decent work.	Territorial Operations Units. Territorial Platforms. Project Technical Committee does follow-up.

			the experience and technical skills needed – this will reduce the tendency to migrate.		
ESS 8: Gender equality and Prevention of Gender Based Violence	<p>Direct project workers and employees of contractors and subcontractors may request sexual favors as a pre-requisite for the technologies provided in this component</p> <p>Workers may be engaged in issuing threats, insults, assault and other forms of abuse on girls, women, children and other vulnerable groups, especially with the possible influx of workers from outside the community.</p> <p>Women may face opposition of their husbands and other male family members for their wish to participate in the project. In some households, the situation may escalate to violence. If their spouses are not involved in the project, the possibility of violence is higher.</p> <p>If women's income increases, and they refuse</p>		<ul style="list-style-type: none"> • SEAH-GBV action plan to be developed during project inception phase. • Annual awareness workshops shall be undertaken for employees of the Contractor/Supervising Consultant and Sub-Contractors as well as persons working or living in the immediate project area and to provide contact numbers of the nearest law enforcement Agency Office, the Grievance Redress Mechanism and GBV Service Providers to offices, schools and clinics within the project area. • Contractual Clauses on mandatory and regular training for workers on required lawful conduct and legal consequences for failure to comply with laws on non-discrimination and GBV will be inserted in Contract Documents. • Contractual Clauses with a commitment to cooperate with law enforcement agencies investigating cases of gender-based violence shall be inserted into the Contract documents of the contractor and Supervising Consultant. 	<p>7,000</p> <p>-Development of appropriate legislative clauses to guarantee enforcement of gender violence.</p> <p>-Develop and disseminate clear guidelines to present the project as a zero tolerance on any type of violence or harassments.</p> <p>-Review the communication strategy to ensure it is considering the dissemination of the SEAH-GBV action plan developed by the project.</p> <p>Grievance mechanism to assure</p>	<p>PMU (ESS specialist. Gender Specialist)</p> <p>Territorial Operations Units.</p> <p>Accompanying institutions (MMAYa and FAM).</p> <p>Communication Specialist</p> <p>Specialist in masculinities</p> <p>Municipal legal services</p> <p>Ombudsman for children and adolescents</p>

	to give up their earnings to their husbands and other male family members, that is likely to trigger violence against the women.		<ul style="list-style-type: none"> Contractual clauses against rape, defilement and other Gender based Violence as well as child and forced Labor shall be inserted into the contract of the Contractor and Supervising Consultant. Workers on site will sign Code of Conduct with sanctions on rape defilement, abuse and other gender-based violence. Sensitize beneficiaries/parents on the prohibition of child labor. A community-based approach to the project will be taken, informing families about the importance of the participation of both men and women. Workshops on gender, gender roles, leadership and self-esteem will be held with women's associations and workshops on masculinities with men. The communication strategy will include content on the prevention of violence and harassment. The promotion of co-responsibility in care work will be promoted. 	<p>confidentiality on reporting and clear action for follow up when violence's or harassments occur.</p> <p>-Meetings and awareness workshops to sensitize beneficiaries on gender equality and protect vulnerable population rights.</p>	
ESS 9: Indigenous Peoples and Cultural Heritage	Conflicts between those who use the irrigation systems and those who do not.	Local producers are not happy with/mistrust the project. Work is stopped and project investment is lost.	Keep to the plan and secure the consent of the local and community authorities.	<p>150,000</p> <p>-Irrigation engineer:</p>	<p>Territorial Operations Units. Territorial Platforms. Project Technical Committee does follow-up.</p>

	<p>Government authorities do not hold to their commitments as counterparts to support the activities.</p>			<p>training programme on efficient irrigation based on indigenous people consultation process.</p> <ul style="list-style-type: none">-Communal legal agreements; Meetings and workshops and visits of field for the preparation and signature of O&M plans.-Training: Preparation and implementation of operational plans regarding Master Plans.- Workshops among associations to share knowledge and best practices around O&M plans and their sustainability.	
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Component 3. Restored and conserved micro-watersheds and ecosystem functions and services

Table 24. Component 3. Mitigation measures

Standard	Risk	Impact potential	Mitigation measures	Indicative cost (USD)	Institutions responsible for measures
ESS 1: Natural Resource Management	The wetlands and forests management activities are not implemented properly and so cannot conserve water sources.	Loss of water sources. Loss of vegetation in water recharge areas. Reduced availability of water sources.	Water source protection and conservation activities closely supervised (technical assessment and bases – documents like the water sources inventory) and with the agreement and support of local communities. Ensure that the E&S standards are adhered to, depending on the context.	500,000 -Forestry expert to technically support the: restoration practices specialized in native species according to the territory. -Open call for the preparation of the water availability study for implementation restoration and conservation of micro watersheds and ecosystems functions practices adapted to climate change -Design of a monitoring system for tracking the transformation to good practice on restoration	Territorial Operations Units. Territorial Platforms. Accompanying institutions (Vice-Ministry of Environment, Biodiversity, Climate Change and Forest Management and Development, Vice-Ministry of Water Resources and Irrigation, FONAForest, Universities).

				and conservation.	
ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A	N/A	N/A		N/A
ESS 3: Plant Genetic Resources for Food and Agriculture	N/A	N/A	N/A		N/A
ESS 4: Animal - Livestock and Aquatic - Genetic Resources for Food and Agriculture	N/A	N/A	N/A		N/A
E-SS 5: Pest and Pesticide Management	N/A	N/A	N/A		N/A
ESS 6: Involuntary Resettlement and Displacement	N/A	N/A	N/A		N/A
ESS 7: Decent Work	Accidents can occur, especially during land clearing and tilling, planting, pruning on fields and AFSs. Risk of child labour. Young people and women not interested.	Disgruntled local producers.	Local workers will not be hired without corresponding Employment Injury Insurance. A project standard for the hiring of local women, young people and indigenous people will be applied.	50,000 -Workshops to mainstream gender to properly address decent work.	Territorial Operations Units. Territorial Platforms. Project Technical Committee does follow-up.
ESS 8: Gender equality and Prevention of Gender Based Violence	Workers may be engaged in issuing threats, insults, assault and other forms of abuse on girls, women, children and other vulnerable groups, especially with the		SEAH-GBV action plan to be developed during project inception phase. Annual awareness workshops shall be undertaken for employees of the Contractor/Supervising	7,000 -Development of appropriate legislative clauses to guarantee	PMU (ESS specialist. Gender Specialist) Territorial Operations Units. Accompanying institutions (MMAyA and FAM). Communication Specialist Specialist in masculinities

	<p>possible influx of workers from outside the community</p> <p>Women may face opposition of their husbands and other male family members for their wish to participate in the project. In some households, the situation may escalate to violence. If their spouses are not involved in the project, the possibility of violence is higher.</p> <p>If women's income increases, and they refuse to give up their earnings to their husbands and other male family members, that is likely to trigger violence against the women.</p>		<p>Consultant and Sub-Contractors as well as persons working or living in the immediate project area and to provide contact numbers of the nearest law enforcement Agency Office, the Grievance Redress Mechanism and GBV Service Providers to offices, schools and clinics within the project area.</p> <p>Contractual Clauses on mandatory and regular training for workers on required lawful conduct and legal consequences for failure to comply with laws on non-discrimination and GBV will be inserted in Contract Documents.</p> <p>Contractual Clauses with a commitment to cooperate with law enforcement agencies investigating cases of gender-based violence shall be inserted into the Contract documents of the contractor and Supervising Consultant.</p> <p>Contractual clauses against rape, defilement and other Gender based Violence as well as child and forced Labor shall be inserted into the contract of the Contractor and Supervising Consultant.</p> <p>Workers on site will sign Code of Conduct with sanctions on rape</p>	<p>enforcement the prevention of gender violence</p> <ul style="list-style-type: none"> -Clear guidelines develop and disseminated to present the project as a zero tolerance on any type of violence or harassments -Grievance mechanism to assure confidentiality on reporting and clear action for follow up when violence's or harassments occur. 	<p>Municipal legal services</p> <p>Ombudsman for children and adolescents</p>
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			<p>defilement, abuse and other gender-based violence. Sensitize beneficiaries/parents on the prohibition of child labor.</p> <p>Disseminating laws protecting the rights of women and girls. A community-based approach to the project will be taken, informing families about the importance of the participation of both men and women. Workshops on gender, gender roles, leadership and self-esteem will be held with women's associations and workshops on masculinities with men. The communication strategy will include content on the prevention of violence and harassment. The promotion of co-responsibility in care work will be promoted.</p>		
ESS 9: Indigenous Peoples and Cultural heritage	<p>Forest plantations and closing off of water recharge areas spark conflicts among members of communities (those who irrigate and those who do not). Government authorities do not hold to their commitments as counterparts to support the activities.</p>	<p>Local producers are not happy with/mistrust the project. Work is stopped and project investment is lost.</p>	<p>Keep to the plan and secure the consent of the local and community authorities. Ensure the running of the Territorial Platforms. Activities implemented only after free and informed consent has been given Provide technical support to Territorial Platforms when they need it.</p>	<p>150,000 -Irrigation engineer: training programme on efficient irrigation based on indigenous people consultation process</p>	<p>Territorial Operations Units. Territorial Platforms.</p>

				<ul style="list-style-type: none"> - On field visits in the intervention area to make incidence and to establish the Territorial Platforms. -Communal legal agreements; Travel and meetings for the preparation and signature of O&M plans. -Workshops among municipalities to monitor and systematize good practices and progress of the ESMF in the framework of the Territorial Platforms and CPLI. -Training: Preparation and implementation of operational plans regarding Master Plans. 	
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COMPONENT 4: Enabling conditions created to implement and upscale climate-resilient agroecological management, climate-informed integral micro-watershed management, and access to financial mechanisms

The environmental risks are very few for this component, and mainly comprise of monitoring investments and building the beneficiaries' capacities to implement the project activities properly. There could, however, be environmental impacts as a result of poor management, a lack of training, and not complying with the regulations or following good practices. Social impacts or conflicts may arise because of poor project supervision, monitoring and evaluation.

Implementation timetable. Mitigation measures will be implemented according to the following schedule:

Component 1.

Table 25. Component 1. Mitigation measures' implementation schedule

Standard	Mitigation Measures	Year 1	Year 2	Year 3	Year 4	Year 5
ESS 1: Natural Resource Management	Technical assessment and follow-up on how the LMPs are being implemented.					
	Ensure that good farming and forestry practices are in force. Promote organic products to safe, profitable markets. Keep a good balance of native and exotic species in AFSs, when restocking forests. Continually monitor and provide technical assistance for organic farming, conservation farming and AFSs. Social and environmentally aware service and training providers. Socio-environmental monitoring of fields and AFSs.					
ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A					
ESS 3	N/A					
ESS 4	N/A					
ESS 5: Pest and Pesticide Management	<ul style="list-style-type: none"> The project shall minimize the use of pesticides by implementing a pest and disease early-warning mechanism for pest and diseases, by using biological pest and disease control methods, and by implementing control measures before outbreaks require large-scale control. The Project will develop a Pest Management Plan/Program that targets the main crops and potential pests and include a biological pesticides application regimen <p>The project will provide technical assistance and know-how to farmers for the preparation organic and biological pesticides and will facilitate the implementation of practices ensuring the use of allelopathic plants.</p>					
ESS 6: Involuntary Resettlement and Displacement	N/A					
ESS 7: Decent Work	Provide training on good practices for the activities being promoted in this component, ensuring they are adapted to encourage local producers to participate, especially women and young people.					

ESS 8: Gender equality and Prevention of Gender Based Violence	<p>SEAH-GBV action plan at project start-up</p> <p>Annual awareness workshops for the employees of the supervising contractor/consultant and subcontractors in SEAH-GBV.</p> <p>Dissemination of contact numbers of the nearest law enforcement office, grievance redress mechanism and GBV service providers as part of the communication strategy</p> <p>Inclusion in contract documents of Contractor, Supervising Consultant and workers; clauses on GBV and SEAH codes of conduct, mandatory and periodic training of workers on required legal conduct and legal consequences of non-compliance with SEAH-GBV laws.</p> <p>Communication strategy for the prevention and protection of violence against women and the prohibition of child labor throughout the project.</p>					
ESS 9: Indigenous Peoples and Cultural Heritage	<p>Keep to the plan and secure the consent of the local and community authorities.</p> <p>Ensure the running of the Territorial Platforms.</p> <p>Activities implemented only after free and informed consent has been given</p> <p>Provide technical support to Territorial Platforms when they need it.</p>					

Component 2.

Table 26. Component 2. Mitigation measures' implementation schedule

Standard	Mitigation measures	year 1	year 2	year 3	year 4	year 5
ESS 1: Natural Resource Management	<p>Build community reservoirs based on the availability and supply of water as calculated in the technical reports (Water source inventories, water balances, etc.).</p> <p>Training sessions on how to use water efficiently for irrigation.</p> <p>Close technical supervision when building reservoirs and water distribution systems to the fields.</p> <p>Prior consultation with potential beneficiaries and local and community authorities.</p>					
ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A					
ESS 3	N/A					
ESS 4	N/A					
ESS 5	N/A					
ESS 6: Involuntary Resettlement	N/A					

and Displacement						
ESS 7: Decent Work	Local workers will not be hired without corresponding Employment Injury Insurance. A project standard for the hiring of local women, young people and indigenous people will be applied. Local labour will always be hired first as long as they have the experience and technical skills needed – this will reduce the tendency to migrate.					
ESS 8: Gender equality and Prevention of Gender Based Violence	SEAH-GBV action plan at project start-up Annual awareness workshops for the employees of the supervising contractor/consultant and subcontractors in SEAH-GBV. Dissemination of contact numbers of the nearest law enforcement office, grievance redress mechanism and GBV service providers as part of the communication strategy Inclusion in contract documents of Contractor, Supervising Consultant and workers; clauses on GBV and SEAH codes of conduct, mandatory and periodic training of workers on required legal conduct and legal consequences of non-compliance with SEAH-GBV laws. Communication strategy for the prevention and protection of violence against women and the prohibition of child labor throughout the project.					
ESS 9: Indigenous Peoples and Cultural Heritage	Keep to the plan and secure the consent of the local and community authorities. Ensure the running of the Territorial Platforms. Activities implemented only after free and informed consent has been given Provide technical support to Territorial Platforms when they need it.					
SEAH / GBV						

Component 3. Restored and conserved micro-watersheds and ecosystem functions and services.

Table 27. Component 3. Mitigation measures' implementation schedule

Standard	Mitigation measures	year 1	year 2	year 3	year 4	year 5
ESS 1: Natural Resource Management	Water source protection and conservation activities closely supervised (technical assessment and bases - documents like the water sources inventory) and with the agreement and support of local communities. Ensure that the S&E standards are adhered to, depending on the context.					

ESS 2: Biodiversity, Ecosystems and Natural Habitats	N/A					
ESS 3	N/A					
ESS 4	N/A					
ESS 5	N/A					
ESS 6	N/A					
ESS 7: Decent Work	Local workers will not be hired without corresponding Employment Injury Insurance. A project standard for the hiring of local women, young people and indigenous people will be applied.					
ESS 8: Gender equality and Prevention of Gender Based Violence	SEAH-GBV action plan at project start-up Annual awareness workshops for the employees of the supervising contractor/consultant and subcontractors in SEAH-GBV. Dissemination of contact numbers of the nearest law enforcement office, grievance redress mechanism and GBV service providers as part of the communication strategy Inclusion in contract documents of Contractor, Supervising Consultant and workers; clauses on GBV and SEAH codes of conduct, mandatory and periodic training of workers on required legal conduct and legal consequences of non-compliance with SEAH-GBV laws. Communication strategy for the prevention and protection of violence against women and the prohibition of child labor throughout the project.					
ESS 9: Indigenous Peoples and Cultural heritage	Keep to the plan and secure the consent of the local and community authorities. Ensure the running of the Territorial Platforms. Activities implemented only after free and informed consent has been given Provide technical support to Territorial Platforms when they need it.					

8. IMPLEMENTATION ARRANGEMENTS

Full details on the implementation arrangements are available in section C.2.5 of the funding proposal. For ease of reference, key arrangements are also reported in the following paragraphs. The Government of Bolivian Plurinational Estate, through MPD, has requested FAO's technical and overall assistance for the design and implementation of the RECEM VALLES Project proposal package, with collaboration from MMAyA as needed - mostly regarding safeguards, but also on issues related to private sector and markets.

The Government also specifically requested that FAO act as executing entity for this project; responding to such request, FAO will serve both as Accredited Entity (AE) and Executing Entity (EE).

As an AE of GCF, FAO shall be responsible for the overall management, implementation and supervision of the Funded Activity. FAO will do so through its Headquarters. FAO will carry out both operational and administrative support activities, as well as advisory and technical support functions during the implementation of the Project. Execution will be carried out in collaboration with a variety of partners as needed (an initial identification of which is reported in the "Project partners" paragraphs in this section). FAO recognizes that successful development should be driven and owned by countries, as emphasized by Agenda 2030. To achieve the objectives of the project, while reinforcing capacities, ownership, sustainability and making the best use of expertise available on the ground, the project will be implemented through the letters of agreement.

While the project will be implemented in partnership, FAO, MPD and MMAyA detailed out a clear division of roles:

- FAO: in addition to the AE and EE responsibilities mentioned in the paragraphs above, will provide technical support for the design and implementation of ground interventions as well to strengthen capacities of the counterpart and key stakeholders and beneficiaries, at different levels.

Contributing to enhanced ground interventions, main areas of technical support will encompass integrated land-use planning, sustainable water management, community-based forestry, restoration, and water, forest and land governance - in support of strategic integral basin management plans and community life plans; enhancement of practices on management, sustainable rural development and environmental and social safeguards.

- MMAyA, as the technical entity responsible for water public policies, will have an important role in the articulation with key national platforms (for example the SENARI) and with the municipalities through FAM. In addition, the MMAyA will deliver key efforts to strengthen capacities at territorial level and increase water management, agriculture extension capabilities.

FAO may also enter into agreements with other organizations and entities (project partners) beyond MMAyA and MPD, which may support the implementation of specific activities and achievement of project outputs on its behalf or in collaboration. These arrangements will seek to facilitate and enhance the effectiveness of the implementation of the project. These entities will be accountable directly to the Executing Entity and will be selected by FAO and MMAyA, as per FAO Rules and Regulations.

The implementation arrangements - described below and summarized in the figure - include the Steering Committee, Project Management Unit. Additionally, it should be noted that the MPD in coordination with MMAyA, as platform for the regional dialogues and articulations, can be the decision-making forums for establishing benefit technical assistance.

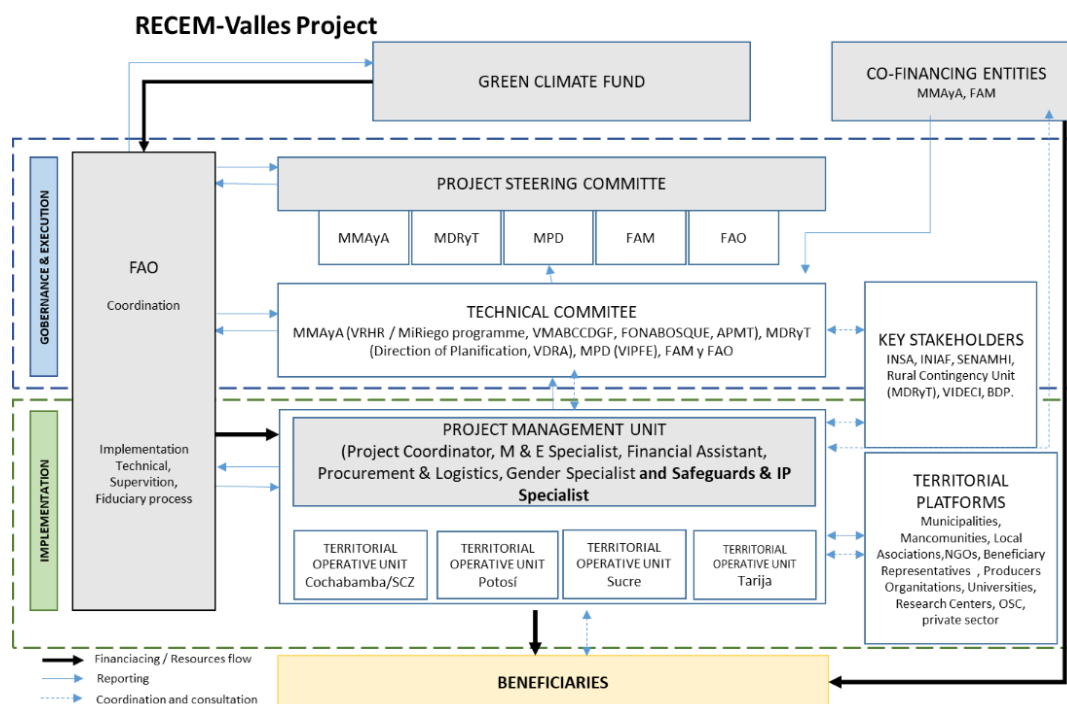
The project will be implemented under the following structure:

- a. **FAO**, the AE, will act as the EE for all GCF-funded project activities and will be responsible for the GCF proceeds. In this context, FAO Office in La Paz- Plurinational State of Bolivia will set up a Project Management Unit (PMU) with project-recruited staff. This PMU will coordinate the work of four Territorial Operating Units (TOUs). Led by the PMU, these units will collectively perform all EE functions on this project, including (inter alia) the preparation of Annual Work Plans and Budgets (AWPBs) in collaboration with key government counterparts, and the overall day-to-day project management, monitoring project progress, and reporting to the Project Steering Committee (PSC) and FAO-GCF project supervision team. These units will work with relevant partners to deliver individual outputs and activities, as outlined below. Along with specialized FAO technical experts who will directly support the project, the project-recruited staff and government staff in the PMU and TOUs will collectively comprise a project delivery team. This project delivery team will lead the execution of all GCF-funded activities included in this project. FAO will ensure that there is no direct overlap between (i) these staff who comprise the project delivery team, and (ii) the staff who comprise the project supervision team and fulfill FAO's AE functions. This will ensure built-in project oversight and supervision functions are fulfilled.
- b. **The GoB, acting through MMAyA, and FAM** will be EEs for activities funded by their co-financing resources. As such, they will be responsible for managing and executing their co-financing funds but will not execute any GCF Proceeds. The GoB, acting through MMAyA, and FAM will coordinate the implementation of these activities through the Project Steering Committee.
- c. The **PSC** will be the highest level of project governance, and will guide overall project implementation, ensuring inter-institutional coordination. The PSC will be comprised of high-level representatives from MMAyA, MDRyT, MDP, FAM, and FAO. MMAyA will chair the PSC and FAO will act as the Secretariat. FAO will keep the documentary and logistical record for the operation of the PSC.
- d. A **Technical Committee (TC)** will be responsible for the overall project coordination and for ensuring its strategic approach, coordination among the partners and consistency of the outputs with the project's strategic framework. The TC will be comprised of technical staff from MMAyA, MDRyT, MDP, FAM, and FAO. MMAyA will chair the TC and FAO will act as the technical secretariat and provide support to the TC. The Executing Entities through Steering will retain final decision-making over the implementation of the Project and the use of proceeds and other final decisions and approvals
- e. A **Project Management Unit (PMU)** will be responsible for the implementation of the project. The PMU is the technical-administrative unit for the project. The personnel for the PMU and TOUs will be procured and hired by FAO. The PMU coordinator and a team will be hosted in the offices of MMAyA in La Paz. The PMU will coordinate and support project implementation, performing day-to-day implementation, coordination, and supervision activities during the project lifecycle, operating in close consultation with the governing structures of the project. While the PMU will be located physically at MMAyA's offices, it will remain under the supervision of FAO, as EE of the GCF proceeds. The PMU will follow FAO's operative procedures and will operate according to AWPBs approved by the TC. Key administrative matters of the project (including procurement and financial plans, periodic reports, etc.) will be approved by the TC. The PMU will include the following staff (*inter alia*): (i) Project Coordinator, (ii) Finance assistant, (iii) M&E Specialist, (iv) Gender Specialist, (v) Knowledge Management Specialist, and (vi) Administrative assistant. All roles and responsibilities of PMU staff are described in more detail in Section 19 of the Feasibility Study.

- f. Four **Territorial Operating Units (TOUs)** working at the local level will be established to serve as the key channel of communication between the PMU and local stakeholders and to assist with the implementation of activities on the ground. TOUs will be located in Cochabamba, Potosí, Sucre, and Tarija. Each TOU will be headed by a Regional Project Director, supported by technical staff including, for example, (i) Agronomists, (ii) Farmer Field School Specialists, (iii) Gender and Nutrition Specialists, and (iv) Safeguards Specialists, as appropriate. The Regional Project Director will ensure effective liaison and coordination with the PMU and other TOUs during the implementation of the project activities.

The governance and implementation structure and flow of funds for the project are shown below figure.

Figure 1. Governance structure of the project



8.1. Annual reports

The PMU will prepare Annual Reports for each year of implementation and FAO will review/clear them. The Project Director of the PMU and the M&E Specialist will ensure that the indicators in the results framework are monitored and reported annually. Annual Reports will be shared with the PSC, TC and other stakeholders. Annual Reports will be due to GCF 60 days after the end of the calendar year. The final Annual Report and the terminal evaluation report will serve as the final project report package.

Table 28. Roles and responsibilities of the key governance entities

Institution	Responsibilities
Project Steering Committee (PSC)	<ul style="list-style-type: none"> • Provide political and strategic orientation to the implementation of the project. • Recommend strategic elements based on the project progress, results and impacts. • Ensure alignment of the project with national policies. • Ensure transparency of processes. • Promote ownership of actions for addressing climate issues by national authorities. • Ensure sound inter-institutional coordination. • Ensure that co-financing is delivered in a timely manner.
Technical Committee (TC)	<ul style="list-style-type: none"> • Review and approve annual work plan and budgeting. • Monitor implementation, and safeguards compliance. • Invite, where relevant, to partner entities' representatives or other relevant institutions to participate in special informative meetings. • Mobilize timely technical expertise from the participating institutions as per the agreed work plan. • Serve as a key channel of communication between PMU and key local stakeholders. • Assist in the implementation of the stakeholders' participation and engagement plan. • Assist in communication strategy of the project at the local level.
Project Management Unit (PMU)	<ul style="list-style-type: none"> • Prepare AWPBs for review and approval by the TC and FAO. • Report on annual/semiannual basis to FAO (results base, financial progress, etc) to complete the Annual Performance Reports (APR) to be submitted to the GCF and request of subsequent disbursements. • Establish and supervise TOUs for project implementation at the local level. • Ensure that recommendations by TOUs are discussed and addressed ensuring project adaptive management. • Manage the procurement, contracting, administrative and accounting process needed under the direct and permanent control, monitoring, and supervision of FAO. • Collect data and ensure reporting to the PSC is in accordance with the reporting to be provided to GCF.
FAO	<ul style="list-style-type: none"> • Responsible for the reporting, monitoring, implementation and fiduciary management of activities funded by GCF Proceeds. • Responsible for the reporting, monitoring, implementation, and financing of the co-financed activities. • Responsible for supervising the performance of the PMU and the timely delivery of management services provided by the PMU.
MMAyA	<ul style="list-style-type: none"> • Member of the Steering committee in charge of ensuring the integrated management of water resources for irrigation and food security, as well as the integrated management of the environment and life systems to Live Well. • Responsible for managing and executing co-financed funds provided. • Co-financier
FAM	<ul style="list-style-type: none"> • Member of the Steering committee that will ensure participation of selected municipalities in the project execution • Responsible for managing and executing co-financed funds provided. • Co-financier

MDP	<ul style="list-style-type: none"> As National Designated authority, it will supervise that project activities comply with the country's national priorities for Climate Change
MDRyT	<ul style="list-style-type: none"> Member of the steering committee in charge of ensuring that the implementation of the project produces decent employment for producers, communities, farmer and indigenous economic organizations and the business sector, under the principles of quality, equality, inclusion, transparency, reciprocity and cultural identity for food safety and sovereignty to Live Well.

Financial flows

FAO is the AE and will act as the EE for GCF-funded project activities. FAO, in its role of EE, will manage GCF funds, by verifying financial expenditures against budgets, making payments, and providing technical and secretariat assistance to the PSC and TC. The GCF and FAO will enter into a Funded Activity Agreement (FAA), under which FAO shall administer the relevant GCF Proceeds to be used for the financing of the project, in accordance with the FAA and AMA. Accountability on the use of financial resources will be facilitated through the review of annual and bi-annual project reports, as well as through audit and monitoring reports.

The GoB, acting through the MMAyA, and FAM will be the co-financiers of the Project. As such MMAyA and FAM will be EEs for activities funded by their co-financing resources and will not execute any GCF proceeds. Instead, these institutions will be solely responsible for the management and execution of their co-financed funds.

FAO in its role of AE shall sign a Project agreement with the GoB, which will:

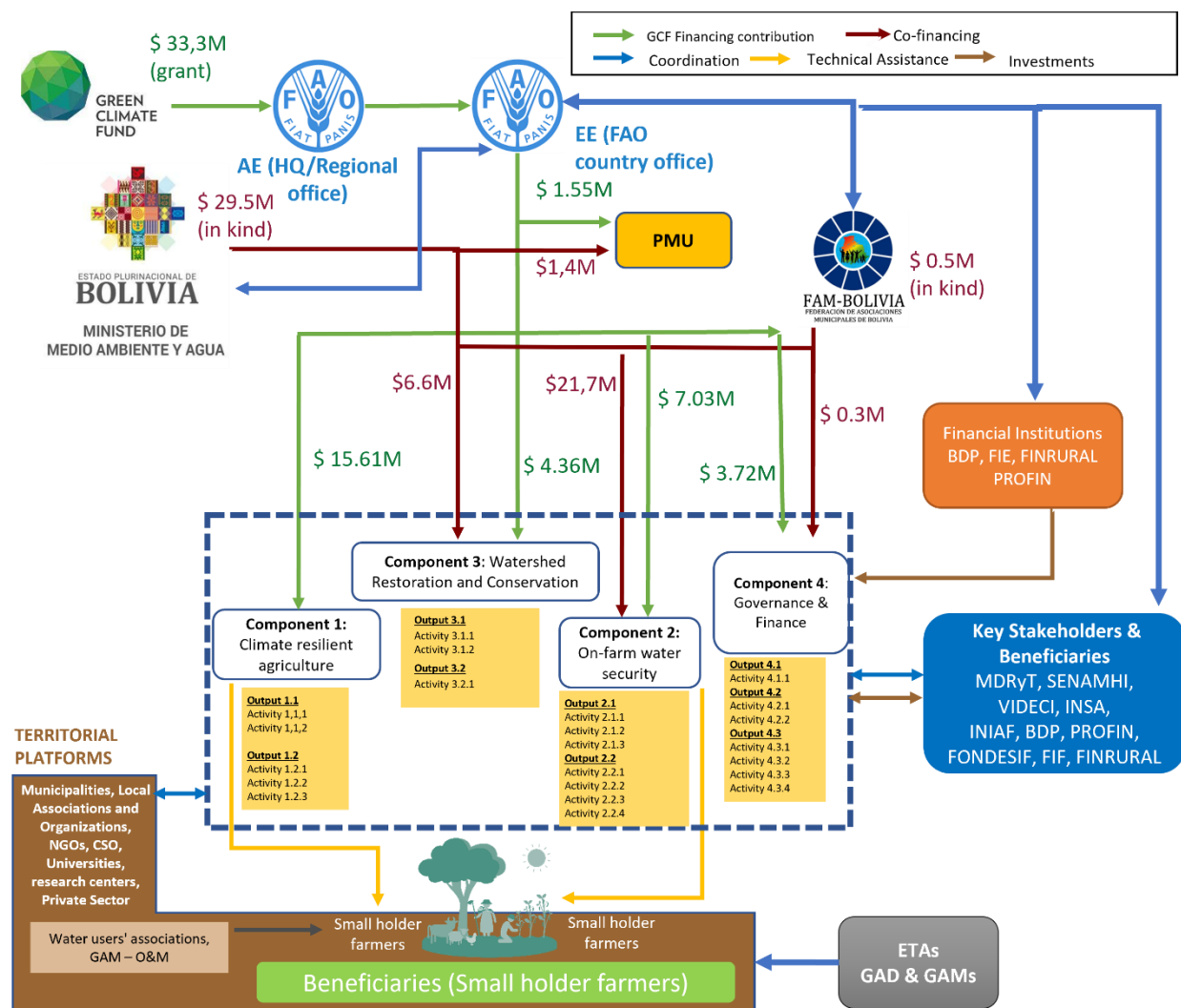
1. Cover the host country obligations;
 2. Include the obligation of MMAyA to provide its co-financing;
 3. reflect the governance arrangements;
 1. govern the implementation of the project activities entrusted to MMAyA;
 2. be legally binding;
 3. detail the roles and responsibilities of FAO and MMAyA;
 4. contain the relevant provisions for FAO's compliance with the requirements from the AMA and FAA that need to be transferred to the co financiers and co executing entities;
 5. Contain provisions on the applicability of the Convention on the Privileges and Immunities of the Specialized Agencies (the "the Specialized Agencies Convention") to FAO, including to the GCF Proceeds held by FAO.
- FAO will sign a second agreement with the FAM, which will cover the relevant obligations of FAM as Executing Entity and Co-financier. For the avoidance of doubt, both the project agreement with the GoB and the agreement with FAM are subsidiary agreements.

MMAyA and FAM will be directly accountable to FAO for the performance of their respective obligations listed under each of the *Agreements* respectively signed with FAO as AE.

Every year the PMU will prepare an AWPB including a rolling procurement plan for the next 18 months. The TC will approve the plan and FAO will spend funds according to its covenants, rules, and standards. A yearly financial and results-based report will be submitted to the GCF. Co-financing resources will be

managed directly by MMAyA and FAM. GCF Proceeds will not be disbursed nor channeled through the GoB.

Figure 2. Flow of funds according to formal agreements between GCF, FAO and the two entities providing co-financing



8.2. Mitigating the risks identified in the ESMF

It is expected that as part of the preparation of the activities and outputs mentioned in section C.2 of the Funding Proposal – through the Project Management Unit, its partners and beneficiaries - the risks identified in the ESMF will be taken into consideration and, at inception phase and formulation phase of each activities in the components A, B, C, D there will be further development and specific funding assigned for the risk mitigation measures to be implemented. Component D on strengthening capacities of key stakeholders at national and local level will also embed attention to risk mitigation efforts.

9. PRINCIPLES AND PROCEDURES TO MITIGATE IMPACTS FROM IMPLEMENTATION

This ESMF, along with the Gender Action Plan, is not being used solely as a compliance process. It goes beyond compliance and takes a proactive approach in design. Similarly, the GRM included in this document is not just about being a last-resort mechanism. Rather, the GRM is about creating a project culture of transparency with built-in feedback systems. The ESMF and the Gender Action Plan are taken as positive aspects that help the project implementation units in identifying and developing activities for greater environmental and social co-benefits. In order to ensure that the environmental and social issues are addressed properly in accordance and in compliance with the FAO and GCF Policies, all project activities shall undergo screening, assessment, review, and clearance process before execution of the project activities.

This chapter describes the process for ensuring that environmental and social concerns are adequately addressed through the institutional arrangements and procedures used by the project for managing the identification, preparation, approval, and implementation of sub-activities.

9.1. Step 1: Defining Sub-Activities

By design, the project is expected to have far greater environmental benefits than adverse environmental impacts. The potential adverse environmental impacts from the project are likely to be very small and limited. However, it is recognized that such impacts can accrue into larger impacts if they are not identified early during the planning cycle and their mitigation measures integrated into the project planning and implementation.

Considering that the activities to be implemented in each site will be the same in nature and scale across the implementation area, it is proposed that screening for potential risks is undertaken at sub-activity level. Sub-activities constitute a valid tool to identify expected impacts and mitigation and monitoring measures.

In this context, sub-activities will be identified during the inception phase in Year 1. For each sub-activity, implementing sites will be identified along with activities, including capacity building/training and stakeholder engagement information specific to each site.

9.2. Step 2: Environmental and Social Risk Screening of Sub-Activities

FAO's environmental and social screening checklist will determine if a sub-activity will require an Environmental and Social Management Plan (ESMP). While the nature, magnitude, reversibility, and location of impacts are main elements in the screening of sub-activities, the results of the FAO's environmental and social screening checklist and expert judgment from a team (including Environmental and Social Safeguards Specialist, Project Manager and other FAO staff and/or consultants involved in the implementation of the project) will be a main factor in deciding whether an ESMP is required for a sub-activity or not.

For a sub-activity that requires an ESMP, the proposal must include a set of mitigation measures with monitoring and institutional arrangements to be taken during the implementation phase to correctly manage any potential adverse environmental and social impacts that may have been identified.

FAO will undertake environmental and social screening following FAO's Environmental and Social Screening Checklist. Once the implementation sites and beneficiaries are determined, a screening checklist will be completed per sub-activity and signed off by the National consultant specialist in Monitoring and Evaluation at the Project Management Unit (PMU). The results of the screening checklists will be aggregated by the safeguards specialist. This document will be sent to ESM unit in FAO for endorsement.

Screening of sub-activities involve:

- Checking that the activities involved are permissible (as per the legal and regulatory requirements of the project);
- Determining the level of environmental assessment required based on the level of expected impacts.

The E&S screening checklist will result in the following screening outcomes: (i) determine the category for further assessment; and (ii) determine which environmental assessment instrument to be applied.

Pre-implementation safeguards documents (one per sub-activity) will be prepared by the Monitoring and Evaluation specialist in the PMU prior to the implementation of activities and sent to ESM Unit in FAO Headquarters for endorsement.

The documents will outline the following information relative to each sub-activity:

- a) Description of the activities to be carried out in all sites;
- b) Description of each implementing site:
 - i. Geography and specificities in terms of activities
 - ii. Beneficiaries and stakeholders
 - iii. Map of the site
- c) Description of the stakeholder engagement process that was carried out in the inception phase and the stakeholder engagement plan to be carried during implementation;
- d) Breakdown of information by site about the grievance mechanism and disclosure;
- e) Aggregated results of the environmental and social screening checklists per sub-activity signed off by the Safeguards Specialist in the Management Unit;
- f) Where applicable, Environmental and Social Management Plans identifying mitigation measures, indicators, responsibilities and timeframe. The ESMP will be added to the monitoring plan to ensure safeguards performance is regularly reported upon along with stakeholder engagement monitoring per site.

9.3 Step 3: Environmental and Social Risk Management (Monitoring and Reporting)

Sub-activities classified as medium risk based on the environmental and social risks identified during the screening process will then be required to develop ESMPs that include information on the mitigation actions, the indicators and timeframe where the completion of such mitigation actions are expected.

While the nature, magnitude, reversibility, and location of impacts are main elements in the screening of sub-activities, expert judgment will be a main factor in deciding whether an ESMP is required for a sub-activity or not.

The ESMP should include:

- **Mitigation Measures:** Based on the environmental and social impacts identified from the checklist, the ESMP should describe with technical details each mitigation measure, together with designs, equipment descriptions and operating procedures as appropriate (including measures to enhance gender equality, and to prevent, address and eliminate SEAH).
- **Monitoring:** Environmental and social monitoring during the implementation of the sub-activities, in order to measure the success of the mitigation measures. Specifically, the monitoring section of the ESMP provides:
 - A specific description and technical details of monitoring measures that include the parameters to be measured, the methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions.
 - Monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and to furnish information on the progress and results of mitigation, e.g., by annual audits and surveys to monitor overall effectiveness of this ESMF.
- **Institutional Arrangements:** The ESMP should also provide a specific description of institutional arrangements, i.e., who is responsible for carrying out the mitigating and monitoring measures (for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting and staff training). Additionally, the ESMP should include an estimate of the costs of the measures and activities recommended so that the necessary funds are included. The mitigation and monitoring measures recommended in the ESMP should be developed in consultation with all affected groups to incorporate their concerns and views in the design of the ESMP.

Once the ESM unit in FAO Headquarters endorses the pre-implementation documents with ESMPs, the Monitoring and Evaluation specialist will ensure ESMPs are included and reported upon, along with stakeholder engagement in the context of the monitoring plan.

In this context, field staff will be responsible for monitoring the progress, as relevant, in the monitoring plan, as well as to identify any potential risks that may emerge through the implementation phase. This information will be compiled in progress reports and templates will include a section on E&S risk management, where the above information will be reported.

Information from progress reports will be received by the Monitoring and Evaluation specialist in the PMU who will compile the information received in the progress reports, as well as that related to grievances to feed in a semi-annual report on Environmental and Social Safeguards Performance to be endorsed by the ESM unit in FAO.

10. MONITORING AND REPORTING

FAO is ensuring that resources for managing environmental and social risks are clearly identified as per the projects Monitoring Plan.

FAO will monitor and evaluate the overall performance of the project against the objectives and requirements of the ESS within its project quality assurance system. During implementation and

monitoring, the environmental and social risk management process will focus on monitoring the project against the ESMP to track progress and establish operational controls to verify compliance.

Monitoring will be adjusted according to experience and actions required, and the feedback from stakeholders. Monitoring arrangements will ensure an adequate representation of women and the groups most at risk from the social and environmental impacts.

Monitoring of activities will involve direct participation of project beneficiaries and other stakeholders. Where appropriate, the project will engage other third parties (e.g. independent experts, local communities or non-governmental organizations) to complement or verify its own monitoring activities.

Monitoring will be adjusted according to performance, the actions requested by regulatory authorities, feedback from stakeholders, and the evolving approaches within the project and within FAO as a whole.

The Safeguards Specialist will be in charge of monitoring through the checklist to verify if an activity is permissible.

The project will provide, through the Annual Performance Report, information to GCF and to stakeholders of the monitoring results in accordance with the stakeholder engagement plan. Based on monitoring results, the project will amend ESMPs or other ESS instruments and management tools and monitor and report on any necessary corrective and preventive action

11. CONFLICT ANALYSIS, MANAGEMENT AND RESOLUTION

The project has different instances and levels in which information will be analysed and where decisions will be taken to avoid, minimize and/or mitigate conflicts. There is a governance structure that will allow this process to be clear and fluid. If the conflict implies a major impact, population, or actions, such as negative impacts due to any adverse event, the project will establish the implementation of agroclimatic tables and territorial consultative platforms as governance mechanisms that will contribute to the comprehensive and sustainable management and resolution of possible conflicts that derives for example, from the management of natural resources. Additionally, the implementation of the permanent consultations through CPLI, is also one of the mechanisms that will be used to avoid, minimize and/or mitigate conflicts.

Since the October 2003 crisis, better known as the "gas war", the Bolivian political system has been shaken by two movements: on the one hand, the rural peasant-indigenous movement, embodied by the coca growers' leader and then president Evo Morales, and, on the other, the regionalist movement, led by the business sector in the department of Santa Cruz, linked to an autonomous system of resource management by sub-national governments. Based on a review of the literature and an analysis of the conflicts arising from the new political configurations in Bolivia. With empirical bases and analytical perspectives, both the regionalist movements and the indigenous-peasant movements, often considered diametrically opposed and even mutually reactive phenomena, appear as the result of a parallel and intertwined process of territorial reconfiguration, based on a distancing from the national sphere and party politics, and a return to the local, where a new link between identities and territories is nourished and flourishes.

In this scenario, recent agrarian conflicts are part of history, but they also contain an obvious political and cultural charge that is not significant, so that the land problem is not such a complex issue that it cannot be resolved in Bolivia. In particular, the conflict over access to land is a structural element at the root of these conflicts. This is due to several factors: population growth, inheritance administration mechanisms that tend to parcel out properties (minifundio), loss of soil fertility and the intense exploitation of natural resources. Added to this is a highly unequal system of land distribution between families and social groups. Furthermore, land disputes are not a recent phenomenon, but have been at the centre of cyclical tensions and struggles since the formation of modern states two hundred years ago. Issues of land control, ownership and exploitation have been the basis of important mobilisations in the region, and social movements have historically acted as the articulators of these struggles. In fact, the relationship between the agrarian question and social organisations has a centuries-old history and a pattern forged in social conflicts that often ended in violent unrest. In particular, the land question has been at the centre of the claims of the two main articulating traditions of political struggles in Bolivia: Indianism and national-populism (Thomson and Hylton, 2007) https://www.bivica.org/files/conflictividad_Bolivia.pdf.

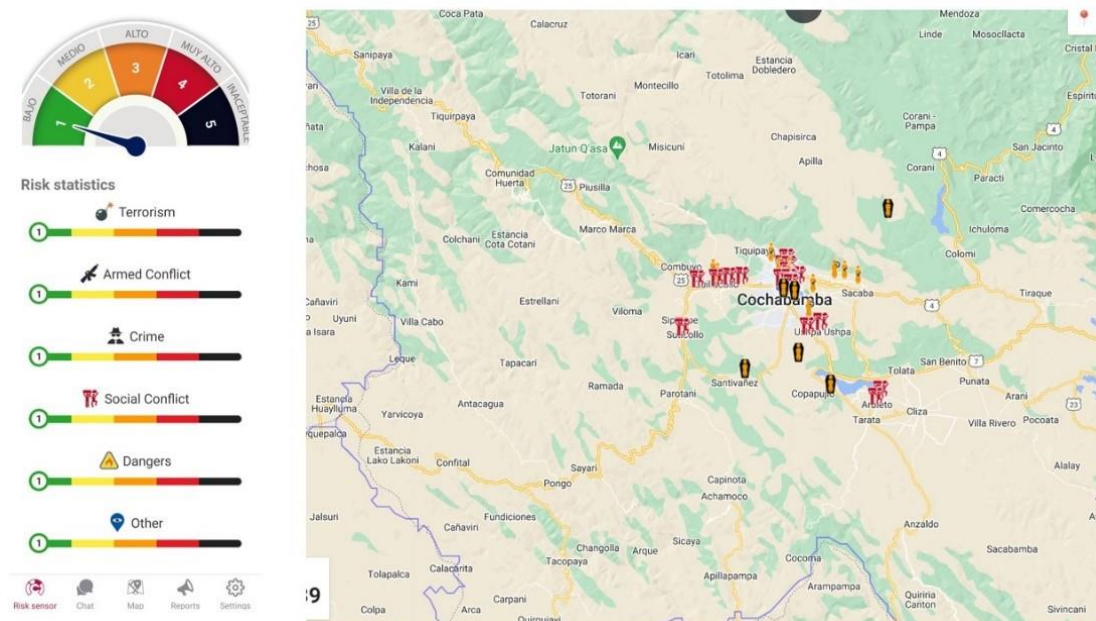
Looking at the contemporary geopolitical map of rural Bolivia, conflicts between social organisations are often rooted in the fault lines between the Altiplano and the Amazon, where disarticulations between identity patterns are strongest. Many of these areas have the potential to become zones of collision between indigenous community lands of origin (TCOs) and peasant and coca-growing communities. In order to control the land and catalyse the majority of the population, both indigenous organisations and peasant unions tried to strengthen their corporate structures and ties, in some cases carrying out real conversion campaigns to attract the inhabitants of rural communities, relying on the strong corporate sense of the local population, on identity ambivalences and fluidity, and on the scarcity of economic resources.

In this context, the Valleys Macro-region is an area where the levels of conflict over access to land have disappeared, given that land tenure and property rights have been relatively clear since the last century, in addition to the lack of adequate territorial space for the advance of the agricultural frontier, limited by the topography of the inter-Andean valleys and the extreme division of land.

On the other hand, the extreme climatic phenomena and the climatic crisis that the macro-region of the Valleys is going through could generate conflicts over access to water, due to the long periods of drought that the area faces; This element was undoubtedly considered by the RECEM Valles Project, which is why it has proposed a series of governance actions in the management of water resources and sustainable production of agri-food systems, the conservation of water sources and the empowerment of the existing inter-institutional platforms in the macro-region.

This series of actions will also contribute to enriching the early warning systems and the management of the conflict map, with the aim of generating clear routes for action.

Figure 3. Map the Social conflicts in Cochabamba: Level of risk



Source: SAFER web page. UNDSS - COSNU Bolivia, actualized daily

As showed in figure 3, the conflicts reported in the department of Cochabamba are in the Chapare municipality (due to the presence of coca plantations) and near to the urban (main) city of Cochabamba. The project intervention area is located far away from those areas and has not reported conflicts during the last years, as informed by the UNDSS.

12. FAO ENVIRONMENTAL AND SOCIAL ANALYSIS REQUIREMENTS FOR MODERATE RISK PROJECTS

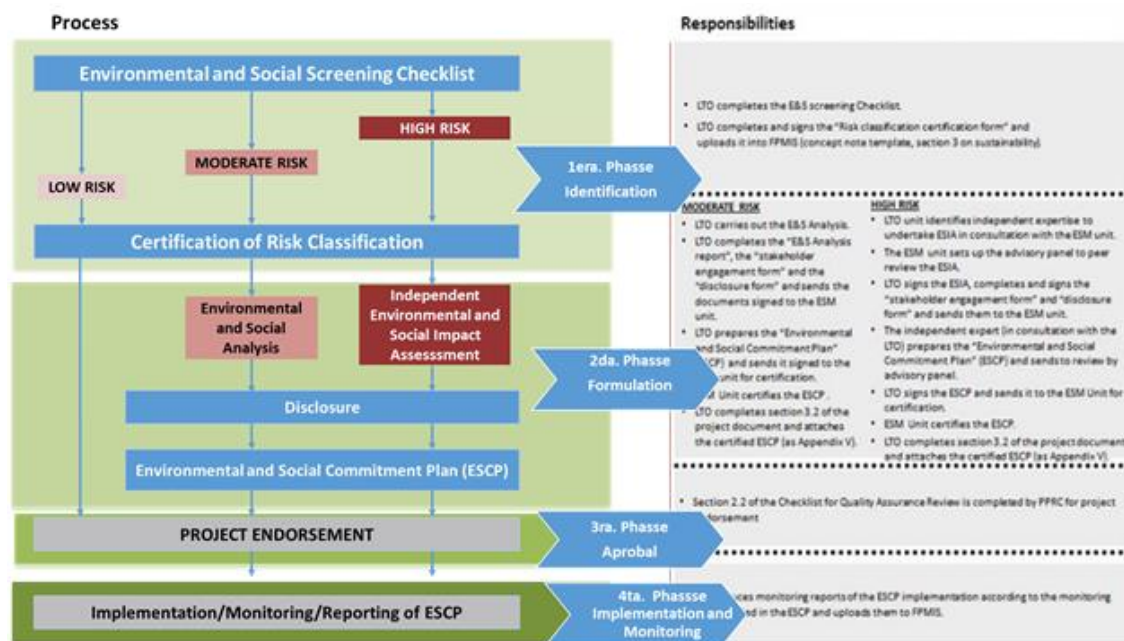
Preliminary potential negative impacts and initially proposed mitigation measures have been identified for the project. Since the project has been classified as Moderate Risk, according to the FAO Guidelines, during the first months of implementation the project will prepare the requested ES Analysis for Moderate Risk Projects. The construction of the ES Analysis will involve all relevant stakeholders that could be involved in the implementation of the activities as those that could be affected for the interventions, and the scope will cover the entire project and/or subprojects.

Based on the recommendations derived from the ES Analysis, and according to FAO procedures for Moderate Risk projects, the PMU, supported by FAO and MAYDS safeguards experts, will prepare the Environmental and Social Commitment Plan (ESCP) for the entire project, during project development, setting out the measures and actions required for the project to manage and effectively mitigate environmental and social risks and achieve compliance with ESS over a specified timeframe. The ESCP will serve as monitoring and reporting tool, defining the mitigation indicators to be monitored, the time frame

agreed, reporting mechanisms and templates, reporting time frame and will define the procedures to adjust mitigation measures and plans, following and adaptive management approach. In this way, during implementation and monitoring, the E&S risk management process will focus on monitoring the project against the ESCP to track progress and establish relevant operational controls to verify compliance.

FAO's environmental and social risk management process, incorporating the key steps in the project cycle, is shown in the following figure:

Figure 4. Environmental and Social risk management in the FAO project cycle and responsibilities



Source: FAO Environmental and Social Management Guidelines.

13. BUDGET ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

Budget EMSF	
Components	Cost USD
Component 1	1.357.000
Component 2	507.000
Component 3	707.000
Component 4	30.000
Total USD	2.601.000

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15. APPENDIX

Appendix 1. Gender-Based and Child Violence, Sexual Exploitation and Harassment against Women and Children: Definitions

This appendix gives the definitions of terms related to violence, exploitation and harassment and considered under this ESMF.

Harassment

The “Policy on the Prevention of Harassment, Sexual Harassment and Abuse of Authority,” Food and Agriculture Organization of the United Nations (FAO) Administrative Circular, No. 2015/13, defines harassment as:

Any improper and unwelcome conduct by an individual or group of individuals that is directed at, and offensive to, another person and that the individual(s) knew, or reasonably ought to have known, would cause offence or harm to that person. Harassment does not have to be intentional or deliberate. Harassment may take the form of words, gestures or actions which tend to annoy, alarm, abuse, demean, intimidate, belittle, humiliate or embarrass another or which create an intimidating, hostile or offensive work environment.

It further characterizes harassment as normally repeated incidents. It sees harassment to include sexual harassment and abuse of authority, which are specific forms of harassment. FAO defines sexual harassment as:

Any unwelcome sexual advance, request for sexual favor, verbal or physical conduct or gesture of a sexual nature, or any other behavior of a sexual nature that might reasonably be expected or be perceived to cause offence or humiliation to another, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment. While typically involving a pattern of behavior, it can take the form of a single incident. Sexual harassment may occur between persons of the opposite or same sex.

Abuse of authority, in the context of harassment, is:

Improper use of a position of influence, power or authority against another person. This is particularly serious when a person uses his or her influence, power or authority to improperly influence the career or employment conditions of another, including, but not limited to, appointment, assignment, contract renewal, performance evaluation or promotion. Abuse of authority may also include conduct that creates a hostile or offensive work environment which includes, but is not limited to, the use of intimidation, threats, blackmail or coercion. Discrimination and harassment, including sexual harassment, are particularly serious when accompanied by abuse of authority.

It notes that sexual harassment may occur between persons of the opposite sexes or of the same sex and that unwelcome sexual behavior may be obvious, or it may be subtle and persistent. While typically involving a pattern of behavior, it can take the form of a single incident.

Violence

Violence against women, as defined by the 1993 UN Declaration on the Elimination of Violence against Women, is any act of gender-based violence that results in, or is likely to result in, physical, sexual or

mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.

FAO definition of gender-based violence (GBV) proposed by the Inter-Agency Standing Committee and based on the Declaration: an umbrella term covering a wide range of abusive, exploitative and often sexualized actions that are perpetrated against a person's will and are based on socially ascribed gender differences between women and men. The definition contains characterization of GBV as "a widespread and life-threatening health, protection and human rights issue with serious negative consequences not only for survivors but also for the achievement of food security and the social and economic development of communities and states." The majority of victims and survivors are women and girls, who suffer a range of mental and physical health problems as well as stigma and discrimination, affecting their ability to fulfill their potential and undermining efforts to reduce poverty and promote peace, security and sustainable development.

FAO sees the following six types of GBV as relevant to its work:

1. Denial of resources, opportunities or services: Denial of rightful access to or control over productive and financial resources, livelihood opportunities, information, education, health or other social services. Examples include preventing a widow from receiving an inheritance, land grabbing, earnings forcibly taken by an intimate partner or family member and preventing a partner from achieving self-sufficiency and gaining financial independence.
2. Physical violence: An act of physical violence that is not sexual in nature. Examples include hitting, slapping, choking, cutting, shoving, burning, shooting or use of any weapons, acid attacks or any other act that results in pain, discomfort or injury.
3. Sexual violence: Sexual violence takes many forms, including rape and marital rape, sexual slavery and/or trafficking, forced pregnancy, sexual harassment, sexual exploitation and/or abuse (e.g., forced prostitution), sexual slavery and transactional sex (i.e., sex for food/fish).
4. Emotional and psychological assault: Includes verbal abuse and humiliation, cruel and degrading treatment, compelling a person to engage in humiliating acts and placing restrictions on freedom of movement or behavior, thus causing increased dependency and fear.
5. Harmful practices: These include forced marriage, child marriage, honor or dowry killings, son preference (which may mean a female child is disadvantaged from birth in quality and quantity of parental care).
6. Sexual exploitation and abuse (SEA): Refers to acts of sexual exploitation and sexual abuse committed by United Nations, NGO, and Intergovernmental Organization (IGO) personnel against the affected population.

FAO consider violence against girls together with violence against women; when they refer to gender-based violence, girls are in their scope. Violence against boys or that against children in general have not yet gained attention. According to the United Nations Children's Fund (UNICEF), the Convention on the Rights of the Child (CRC) defines violence against children as "all forms of physical or mental violence, injury and abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse" and further defines each type of violence as follows:

Physical Violence against Children

That which results in actual or potential physical harm from an interaction or abuse lack of an interaction, which is reasonably within the control of a parent or person in a position of responsibility, power or trust. There may be single or repeated incidents.

Sexual Abuse against Children

Child sexual abuse is the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared and cannot give consent, or that violate the laws or social taboos of society. Child sexual abuse is evidenced by this activity between a child and an adult or another child who by age or development is in a relationship of responsibility, trust or power, the activity being intended to gratify or satisfy the needs of the other person.

Emotional Abuse against Children

Emotional abuse involves the failure to provide a developmentally abuse appropriate, supportive environment, including the availability of a primary attachment figure, so that the child can develop a stable and full range of emotional and social competencies commensurate with her or his personal potentials and in the context of the society in which the child dwells. There may also be acts towards the child that cause or have a high probability of causing harm to the child's health or physical, mental, spiritual, moral or social development. These acts must be reasonably within the control of the parent or person in a relationship of responsibility, trust or power. Acts include restriction of movement, patterns of belittling, denigrating, scapegoating, threatening, scaring, discriminating, ridiculing or other non-physical forms of hostile or rejecting treatment.

Neglect of Children

Neglect can be defined as the failure to provide for the development of the child in all spheres: health, education, emotional development, nutrition, shelter, and safe living conditions, in the context of resources reasonably available to the family or caretakers and causes or has a high probability of causing harm to the child's health or physical, mental, spiritual, moral or social development. This includes the failure to properly supervise and protect children from harm as much as is feasible.

Exploitation of Children

Commercial or other exploitation of a child refers to use of the child in work or other activities for the benefit of others. This includes, but is not limited to, child labor and child prostitution. These activities are to the detriment of the child's physical or mental health, education, or spiritual, moral or social-emotional development. Child exploitation also includes the recruitment and use of children in armed conflict, child trafficking and the sale of children.

Appendix 2. Exclusion List of the RECEM-Valles Project

The following practices and activities will not be supported by the project:

1. Land management practices that cause degradation (biological or physical) of the soil and water.

2. Development of large irrigation schemes and construction of new reservoirs.
3. Use of wastewater.
4. Actions that represent significant increase in GHG emissions.
5. Use of genetically modified organisms, or the supply or use of modern biotechnologies or their products in crops.
6. Introduction of crops and varieties that previously did not grow in the implementation areas, including seed import/transfer
7. Actions resulting in loss of biodiversity, alteration of the functioning of ecosystems, and introduction of new invasive alien species.
8. Activities that affect gene flows and biological corridors.
9. Collection of wild genetic resources.
10. Landscape model(s) requiring high levels of (mainly) agrochemical inputs.
11. Anything in violation of the Pesticide Code of Conduct.
12. Procurement and/or use of highly hazardous pesticides or those that are not nationally validated or that are internationally regulated, especially by FAO and environmental conventions.
13. Activities that do not consider gender aspects or contribute to exacerbating any inequality or gender gap that may exist.
14. Changes in land tenure or displacement (permanent or temporary) of people from their homes or places of work and subsistence or restrict their access to them.
15. Child Labor.
16. Activities in areas with cultural, historical or transcendent values for individuals and communities.

Appendix.3. Chance find procedures

The following “chance find” procedures must be included in all third-party contracts (e.g., Letters of Agreement), in instances where the contracted party is assisting with implementation of the project.

If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during project implementation, the Contractor shall:

- Stop the activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities, or the Bolivian Ministry of Cultures take over;
- Notify the supervisory Safeguards Specialist within the PMU who, in turn, will notify the responsible local and provincial authorities immediately (within 24 hours or less);
- Responsible local and/or provincial authorities would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by government approved archeologists. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible local and provincial authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- Project activities could resume only after permission is given from the responsible local or provincial authorities concerning safeguard of the heritage.

Note that the reporting of chance finds only occurs when an item/area/etc. of cultural significance is found, and is only carried out insofar as what is detailed above (i.e. reporting the find, reporting how the item/area will be treated moving forward). Reporting begins with the local level implementer (e.g. staff tasked to the implement the project within a village) notifying the Monitoring and evaluation Specialist, after which, the Safeguards Specialist guides the process according to the instructions above (e.g. notifying the relevant government authorities).

Appendix.4: Environmental and Social Screening Form

Every sub-activity undergoes an initial screening, utilizing FAO's Safeguards Screening Checklist, found at the end of this annex. Based on the screening, sub-activities are categorized as low, moderate, or high risk. Based on the screening, sub-activities will either be approved for implementation, or will be amended to meet the requirements detailed within this ESMF (specifically, all sub-activities must have low-to-moderate impact; high risk sub-activities will not be allowed under the project, nor will sub-activities which involve elements listed in the Appendix 1 Exclusion List of the 214 Every sub-activity will must undergo an initial screening, utilizing FAO's Safeguards Screening Checklist, found at the end of this annex. Based on the screening, sub-activities will be categorized as low, moderate, or high risk. Based on the screening, sub-activities will either be approved for implementation, or will be amended to meet the requirements detailed within this ESMF (specifically, all sub-activities must have low-to-moderate impact; high risk sub-activities will not be allowed under the project, nor will sub-activities which involve elements listed in the exclusion list in Appendix 1.

Guidance and Examples for Sub-Activity Categorization

Categorization: To ensure that the extent of the review is commensurate with the nature of risk, categorization is a useful step in procedures were based on basic information about a project such as sector and scale, the level of environmental and social (E&S) risk the project could pose is determined. This also enables the UNGP Safeguards Specialist to determine the extent and sophistication of the E&S review required. Categorization may be low, moderate or high. For the purposes of this project, all sub-activities are expected to be Category B (Medium) or Category C (Low) risk.

High Risk (Category A) Sub-Activity

The location of the farmers/project enterprise or activity may be:

- Near sensitive and valuable ecosystems, protected areas and habitat of endangered species;
- Near sensitive receptor such as hospital, school, temple, etc.;
- Near areas with archaeological and/or historic sites or existing cultural and social institutions;
- Near or in areas occupied by vulnerable ethnic minorities or indigenous peoples, or lands to which they are collectively attached, where negative impacts are expected and/or have not involved prior consultation;
- In densely populated areas, where resettlement may be required or potential pollution impacts and other disturbances may significantly affect communities;
- In regions where there are conflicts in natural resources allocation;
- Near watercourses, aquifer recharge areas or in reservoirs used for potable water supply; or in or close to lands or waters containing valuable resources.

Examples of sensitivity issues are those where the sub-activity can:

- Cause adverse global or regional environmental impacts;
- Concern the rights of indigenous people or vulnerable ethnic minorities;
- Require large scale land acquisition or subsequent change in land use that produces loss or damage of assets or income for local residents;
- Lead to involuntary settlements or displacement of people from their livelihoods;
- Impact protected or otherwise recognized areas of high biodiversity or cultural value; or

- Lead to toxic waste disposal.

Acquisition of small parcels of land, even if obtained on a negotiated basis with property owners or those with recognized rights to the land, should be considered as sensitive if expropriation or other compulsory measures would have resulted upon the failure of negotiation.

Examples where the nature of the sub-activity may:

- Cause irreversible degradation or unsustainable exploitation of natural resources; or
- Pose serious risks of significant harm to human health and safety.

Examples of the magnitude of the sub-activity where:

- A high amount of scarce resources may be put at risk;
- The timing and duration of the negative impacts are long; or
- The cumulative effects of many similar, but individually small transactions together lead to serious impacts.

Category A sub-activities are perceived to have significant adverse environmental and/or social impacts and are not permitted to form part of the target portfolio.

Medium Risk (Category B) Sub-Activity

Transactions with a limited number of potentially adverse environmental or social impacts that are generally site-specific, largely reversible, and readily addressed through mitigation measures that reduce the risk to moderate or low levels are normally classified as Category B. The following characteristics indicate a Category B:

- Environmental and social risks for the most part are mostly limited to and readily mitigated through application of good industry practice as described in relevant Environmental, Health and Safety Guidelines;
- Labor and working conditions are unlikely to include harmful child labor, involuntary or compulsory labor, or significant occupational health and safety issues;
- Significant land acquisition or significant land use change is not expected, nor is there expectation of displacement of people or significant loss of livelihoods due to project activities; and
- Socially or economically disadvantaged groups, such as tribal or ethnic groups or similar communities, are not known to occur in the project's area of direct impact, nor does the activity involve use of lands to which they are collectively attached, or where those communities are present, but consultation has indicated Free Prior and Informed Consent (FPIC).

Low Risk (Category C) Sub-Activity

Sub-activity proposals that are perceived to have minimal or no adverse environmental or social impacts are classified as Category C, and no further environmental or social assessment work needs to be done after initial screening and categorization.

Table 30: Template trigger questions according to FAO Environmental and Social screening criteria

	Question	YES	NO
1	<p>Would this project:</p> <ul style="list-style-type: none"> • result in the degradation (biological or physical) of soils or undermine sustainable land management practices; or • include the development of a large irrigation scheme, dam construction, use of wastewater or affect the quality of water; or • reduce the adaptive capacity to climate change or increase GHG emissions significantly; or • result in any changes to existing tenure rights⁷ (formal and informal⁸) of individuals, communities or others to land, fishery and forest resources? 		X ⁹
2	Would this project be executed in or around protected areas or natural habitats, decrease the biodiversity or alter the ecosystem functionality, use alien species, or use genetic resources?	X	
3	<p>Would this project:</p> <ul style="list-style-type: none"> • Introduce crops and varieties previously not grown, and/or; • Provide seeds/planting material for cultivation, and/or; • Involve the importing or transfer of seeds and or planting material for cultivation <u>or</u> research and development; • Supply or use modern biotechnologies or their products in crop production, and/or • Establish or manage planted forests? 		X
4	Would this project introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to an area or production system, or modify in any way the surrounding habitat or production system used by existing genetic resources?		X
5	Would this project:	X	

⁷ Tenure rights are rights to own, use or benefit from natural resources such as land, water bodies or forests

⁸ Socially or traditionally recognized tenure rights that are not defined in law may still be considered to be 'legitimate tenure rights'.

⁹ However see detailed screening questions, Table 29.

	<ul style="list-style-type: none"> result in the direct or indirect procurement, supply or use of pesticides¹⁰: <ul style="list-style-type: none"> on crops, livestock, aquaculture, forestry, household; or as seed/crop treatment in field or storage; or through input supply programmes including voucher schemes; or for small demonstration and research purposes; or for strategic stocks (locust) and emergencies; or causing adverse effects to health and/or environment; or result in an increased use of pesticides in the project area as a result of production intensification; or result in the management or disposal of pesticide waste and pesticide contaminated materials; or result in violations of the Code of Conduct? 		
6	Would this project permanently or temporarily remove people from their homes or means of production/livelihood or restrict their access to their means of livelihood?		X
7	Would this project affect the current or future employment situation of the rural poor, and in particular the labour productivity, employability, labour conditions and rights at work of self-employed rural producers and other rural workers?		X ¹¹
8	Could this project risk overlooking existing gender inequalities in access to productive resources, goods, services, markets, decent employment and decision-making? For example, by not addressing existing discrimination against women and girls, or by not taking into account the different needs of men and women.		X
9	<p>Would this project:</p> <ul style="list-style-type: none"> have indigenous peoples* living outside the project area¹ where activities will take place; or have indigenous peoples living in the project area where activities will take place; or adversely or seriously affect on indigenous peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, 	X	

¹⁰ Pesticide means any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling any pest, or regulating plant growth.

¹¹ However see detailed screening questions, Table 29.

	<p>governance systems, and culture or heritage (physical² and non-physical or intangible³) inside and/or outside the project area; or</p> <ul style="list-style-type: none"> • be located in an area where cultural resources exist? <p>* FAO considers the following criteria to identify indigenous peoples: priority in time with respect to occupation and use of a specific territory; the voluntary perpetuation of cultural distinctiveness (e.g. languages, laws and institutions); self-identification; an experience of subjugation, marginalization, dispossession, exclusion or discrimination (whether or not these conditions persist).</p> <p>¹The phrase "Outside the project area" should be read taking into consideration the likelihood of project activities to influence the livelihoods, land access and/or rights of Indigenous Peoples' irrespective of physical distance. In example: If an indigenous community is living 100 km away from a project area where fishing activities will affect the river yield which is also accessed by this community, then the user should answer "YES" to the question.</p> <p>²Physical defined as movable or immovable objects, sites, structures, group of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance located in urban or rural settings, ground, underground or underwater.</p> <p>³Non-physical or intangible defined as "the practices, representations, expressions, knowledge and skills as well as the instruments, objects, artifacts and cultural spaces associated therewith that communities, groups, and in some cases individuals, recognize as part of their spiritual and/or cultural heritage"</p>		
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Appendix 5: Second Level Questions

Table 31: Field information

SAFEGUARD 1 NATURAL RESOURCES MANAGEMENT

Question	Management of soil and land resources	No	Yes	Comments
1.1	Would this project result in the degradation (biological or physical) of soils	LOW RISK	LOW RISK Demonstrate how the project applies and adheres to the principles of the World Soil Charter	No, the project aims at supporting restoration of ecosystem functions and services, therefore no degradation of soils is expected. <i>This project will contribute to restore physical-chemical and biological characteristics that determine soil health and soil-related ecosystem functions that, at the same time, ensure adequate soil moisture for dryland farming</i>
1.2	Would this project undermine sustainable land management practices?	LOW RISK	LOW RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, the project on the contrary will promote sustainable land management practices.

	Management of water resources and small dams	No	Yes	Comments
1.3	Would this project develop an irrigation scheme that is more than 20 hectares or withdraws more than 1000 m3/day of water?	MODERATE RISK	<p>MODERATE RISK</p> <p>Specify the following information:</p> <ul style="list-style-type: none"> a) implementation of appropriate efficiency principles and options to enhance productivity, b) technically feasible water conservation measures, c) alternative water supplies, d) resource contamination mitigation or/and avoidance, e) potential impact on water users downstream, f) water use offsets and demand management options to maintain total demand for water resources within the available supply. g) The ICID-checklist will be included, as well as appropriate action within the project to mitigate identified potential negative impacts. h) Projects aiming at improving water efficiency will carry out thorough water accounting in order to avoid possible negative impacts such as waterlogging, salinity or reduction of water availability downstream. 	<p>Yes, because the project will work in indigenous community lands which includes the plots of several families¹², the overall area of these community fields is considered between 40 and 80ha. However, the project will promote the implementation of technified and efficient on-farm irrigation systems substituting gravity-fed and flood irrigation which represent inefficient practices. The construction of water storage systems is proposed, with catchment and adduction through pipes for the</p>

¹² Unidades....

			<p>catchment, taking advantage of some existing tributaries such as springs and streams. These systems will be implemented according to the needs and conditions of the area, the storage space or area that the beneficiaries have, the amount of rainfall-runoff that can be captured, as well as the amount of water that can be stored, according to the contribution/flow of each water source.</p> <p>Lastly, the project will facilitate thorough water accounting based on an inventory of water sources and water balances of strategic basins and/or micro-basins as a tool for informed longer-term climate-sensitive planning processes.</p>
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1.4	Would this project develop an irrigation scheme that is more than 100 hectares or withdraws more than 5000 m3/day of water?	LOW RISK	<p>MODERATE RISK</p> <p>A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.</p>	No, the maximum dimensions of irrigation schemes under the project are below 100 ha.
1.5	Would this project aim at improving an irrigation scheme (without expansion)?	LOW RISK	<p>MODERATE RISK</p> <p>The ICID-checklist will be included, as well as appropriate action within the project to mitigate identified potential negative impacts.</p> <p>Projects aiming at improving water efficiency <u>will carry out thorough water accounting</u> in order to avoid possible negative impacts such as waterlogging, salinity or reduction of water availability downstream.</p>	No, the project will expand existing irrigation system to reach smallholders plots with on-fam technified irrigation schemes.
1.6	Would this project affect the quality of water either by the release of pollutants or by its use, thus affecting its characteristics (such as temperature, pH, DO, TSS or any other)?	LOW RISK	<p>MODERATE RISK</p> <p>A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.</p>	<p>No, the project will not affect quality of water.</p> <p>However, some places where the project will work include bodies of water (rivers and streams) used for irrigation but that have been contaminated by mining activity (e.g., municipalities in the Department of Potosí) or the intensive use of pesticides (e.g., municipalities in the</p>

				departments of Tarija and Santa Cruz). It is worth highlighting that the project will ensure that these sources of water are not used neither for irrigation or any other use. On the contrary, by promoting the preparation of biological pesticides, the project will aim at reducing the use of chemical pesticides and therefore reducing water pollution.
1.7	Would this project include the usage of wastewater?	LOW RISK	MODERATE RISK Demonstrate how the project applies and adheres to applicable national guidelines or, if not available, the WHO/FAO/UNEP Guidelines on Safe Usage of Waste Water in Agriculture	No, usage of waste water will not be included under this project
1.8	Would this project involve the construction or financing of a dam that is more than 15 m. in height?	LOW RISK	CANNOT PROCEED	No, the project does not include the construction or financing of a dam that is more than 15m. in height.
1.9	Would this project involve the construction or financing of a dam that is more than 5 m. in height?	LOW RISK	MODERATE RISK	No, the project does not involve the construction or

			A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	financing of a dam that is more than 5m in height
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	Tenure	No	Yes	Comments
1.10	Would this project permanently or temporarily remove people from their homes or means of production/livelihood or restrict their access to their means of livelihood?	LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, the project does not remove people from their homes or means of production neither it restricts their access to their means of livelihood
1.11	Would this project permanently or temporarily deny or restrict access to natural resources to which they have rights of access or use	LOW RISK	PROCEED TO NEXT Q	No, this project will not deny or restrict access to natural resources
1.11.1	Would the denial or restriction of access be voluntary and with the agreement of the affected people?	CANNOT PROCEED	MODERATE RISK Demonstrate how the project applies and adheres to the principles/framework of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	Non applicable
1.12	Would the project bring about consolidation or adjustment of tenure rights?	LOW RISK	PROCEED TO NEXT Q	No, the project would not bring consolidation or adjustment of tenure rights

1.12.1	Would the consolidation or adjustment of tenure rights be voluntary and with the agreement of the affected people?		CANNOT PROCEED	MODERATE RISK Demonstrate how the project applies and adheres to the principles/framework of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)	Non applicable
	Climate		No	Yes	Comments
1.13	Could this project result in a reduction of the adaptive capacity to climate change for any stakeholders in the project area?		LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, the project will not result in a reduction of the adaptive capacity to climate change
1.14	Could this project result in a reduction of resilience against extreme weather events?		LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, the project will not result in a reduction of resilience against extreme weather events
1.15	could this project result in a net increase of GHG emissions beyond those expected from increased production?		LOW RISK	PROCEED TO NEXT Q	No, the project will not result in a net increase of GHG emissions beyond those expected from increased production
	1.15.1	Is the expected increase below the level specified by FAO guidance or national policy/law (whichever is more stringent)?	LOWRISK A full environmental and social impact	LOW RISK	Non applicable

			assessment is required. Please contact the ESM unit for further guidance.		
	1.15 .2	Is the expected increase above the level specified by FAO guidance or national policy/law (whichever is more stringent)?	LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	Non applicable

SAFEGUARD 2 BIODIVERSITY, ECOSYSTEMS AND NATURAL HABITATS

	Protected areas, buffer zones or natural habitats	No	Yes	Comments
2.1	Would this project be implemented within a legally designated protected area or its buffer zone?	LOW RISK	<p>MODERATE RISK</p> <p>A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.</p>	<p>No, the project will not be implemented within a Protected Area or its buffer zone.</p> <p>It is worth mentioning that in the project area there are 25 Protected Areas (PAs): 6 national, 3 departmental and 16 municipals. These PAs cover a total area of 1,393,417 ha, which is 45% of the total area of the country's PAs, and 17% of the project intervention area. 36 of the 65 municipalities covered by the project have territories classified as PAs. Many of the PAs were set up not only because they are</p>

				<p>home to biodiversity but also because they are the source of water used for human and animal consumption and irrigation.</p> <p>In Plurinational State of Bolivia, production activities and projects may be carried out inside PAs, including sustainable extraction of natural resources and different forms of non-consumptive use, depending on the details of the management plan for each PA.</p> <p>All project activities will exclude work in PAs and their buffer zones and will adhere to current legislation regarding PAs (S.D. 24781 of 1997) and the environment (e.g., Law 300 of</p>
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				2012; Law 1333 of 1996).
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	Biodiversity Conservation	No	Yes	Comments
2.2	Would this project change a natural ecosystem to an agricultural/aquacultural/forestry production unit with a reduced diversity of flora and fauna?	LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, the project will not change natural ecosystem to an agricultural/aquacultural/forestry production unit with reduced diversity of flora and fauna
2.3	Would this project increase the current impact on the surrounding environment for example by using more water, chemicals or machinery than previously?	LOW RISK	MODERATE RISK Demonstrate in the project document what measures will be taken to minimize adverse impacts on the environment and ensure that implementation of these measures is reported in the risk log during progress reports.	No, the project will not increase current impact on the surrounding environment

	Use of alien species	No	Yes	Comments
2.4	Would this project use an alien species which has exhibited an invasive* behavior in the country or in other parts of the world or a species with unknown behavior? *An invasive alien species is defined by the Convention on Biological Diversity as “an alien species whose introduction and/or spread threaten biological diversity” (see https://www.cbd.int/invasive/terms.shtml)	LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, the project will not use alien species or species with unknown behaviour

	Access and benefit sharing for genetic resources	No	Yes	Comments
2.5	Would this project involve access to genetic resources for their utilization and/or access to traditional knowledge associated with genetic resources that is held by indigenous, local communities and/or farmers?	LOW RISK	<p>MODERATE RISK</p> <p>Ensure that the following issues are considered and appropriate action is taken. The issues identified and the action taken to address them must be included in the project document and reported on in progress reports.</p> <p>For plant genetic resources for food and agriculture (PGRFA) falling under the Multilateral System of Access and Benefit-sharing (MLS) of the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty), ensure that Standard Material Transfer Agreement (SMTA) has been signed and comply with SMTA provisions.</p> <p>For genetic resources, other than PGRFA falling under the MLS of the Treaty:</p> <ol style="list-style-type: none"> 1. Ensure that, subject to domestic access and benefit-sharing legislation or other regulatory requirements, prior informed consent has been granted by the country providing the genetic resources that is the country of origin of the resources or that has acquired the resources in accordance with the Convention on Biological Diversity, unless otherwise determined by that country; and 	No, the project will not involve access to genetic resources for their utilization and/or access to traditional knowledge associated with genetic resources

			<p>2. Ensure that benefits arising from the utilization of the genetic resources as well as subsequent applications and commercialization are shared in a fair and equitable way with the country providing the genetic resources that is the country of origin of the resources or that has acquired the resources in accordance with the Convention on Biological Diversity; and</p> <p>3. Ensure that, in accordance with domestic law, prior informed consent or approval and involvements of indigenous and local communities is obtained for access to genetic resources where the indigenous and local communities have the established right to grant such resources; and</p> <p>4. Ensure that, in accordance with domestic legislation regarding the established rights of these indigenous and local communities over the genetic resources, are shared in a fair and equitable way with the communities concerned, based on mutually agreed terms.</p> <p>For traditional knowledge associated with genetic resources that is held by indigenous and local communities:</p> <p>1. Ensure, in accordance with applicable domestic law, that knowledge is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established; and</p>	
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			<p>2. Ensure that, in accordance with domestic law, benefits arising from the utilization of traditional knowledge associated with genetic resources are shared, upon mutually agreed terms, in a fair and equitable way with indigenous and local communities holding such knowledge.</p> <p>Ensure that the project is aligned with the Elements to Facilitate Domestic Implementation of Access and Benefit Sharing for Different Subsectors of Genetic Resources for Food and Agriculture when it is the case</p>	
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SAFEGUARD 3 PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

	Introduce new crops and varieties	No	Yes	Comments
3.1	Would this project Introduce crops and varieties previously not grown?	LOW RISK	<p>MODERATE RISK</p> <ul style="list-style-type: none"> Follow appropriate phytosanitary protocols in accordance with IPPC Take measures to ensure that displaced varieties and/or crops, if any, are included in the national or international <i>ex situ</i> conservation programmes 	No, the project will not introduce crops and varieties previously not grown

	Provision of seeds and planting materials	No	Yes	Comments
3.2	Would this project provide seeds/planting material for cultivation?	LOW RISK	PROCEED TO NEXT Q	No, the project will not provide seeds/planting materials

	3.2.1	Would this project involve the importing or transfer of seeds and/or planting materials for cultivation?	LOW RISK	<p>MODERATE RISK</p> <ul style="list-style-type: none"> ● Avoid undermining local seed & planting material production and supply systems through the use of seed voucher schemes, for instance ● Ensure that the seeds and planting materials are from locally adapted crops and varieties that are accepted by farmers and consumers ● Ensure that the seeds and planting materials are free from pests and diseases according to agreed norms, especially the IPPC ● Internal clearance from AGPMG is required for all procurement of seeds and planting materials. Clearance from AGPMC is required for chemical treatment of seeds and planting materials ● Clarify that the seed or planting material can be legally used in the country to which it is being imported ● Clarify whether seed saving is permitted under the country's existing laws and/or regulations and advise the counterparts accordingly. ● Ensure, according to applicable national laws and/or regulations, that farmers' rights to PGRFA and over associated traditional knowledge are respected in the access to PGRFA and the sharing of the benefits accruing from their use. Refer to ESS9: Indigenous peoples and cultural heritage. 	Non applicable
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	3.2.2	Would this project involve the importing or transfer of seeds and/or planting materials for research and development?	LOW RISK	MODERATE RISK Ensure compliance with Access and Benefit Sharing norms as stipulated in the International Treaty on Plant Genetic Resources for Food and Agriculture and the Nagoya Protocol of the Convention on Biodiversity as may be applicable. Refer also to ESS2: Biodiversity, Ecosystems and Natural Habitats.	Non applicable
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	Modern biotechnologies and the deployment of their products in crop production	No	Yes	Comments
3.3	Would this project supply or use modern plant biotechnologies and their products?	LOW RISK	MODERATE RISK <ul style="list-style-type: none"> Adhere to the Cartagena Protocol on Biosafety of the Convention on Biological Diversity to ensure the safe handling, transport and use of Living Modified Organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health. Adhere to biosafety requirements in the handling of Genetically Modified Organisms (GMOs) or Living Modified Organisms (LMOs) according to national legislation or¹³ 	No, the project will not supply or use modern plant biotechnologies and their products

¹³ Food and Agriculture Organization of the United Nations. 2011. Biosafety Resource Book. Rome, <http://www.fao.org/docrep/014/i1905e/i1905e00.htm>

			<ul style="list-style-type: none"> Take measures to prevent gene flow from the introduced varieties to existing ones and/or wild relatives 	
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	Planted forests	No	Yes	Comments
3.4	Would this project establish or manage planted forests?	LOW RISK	<p>MODERATE RISK</p> <ul style="list-style-type: none"> Adhere to existing national forest policies, forest programmes or equivalent strategies. The observance of principles 9, 10, 11 and 12 of the Voluntary Guidelines on Planted Forests suffice for indigenous forests but must be read in full compliance with ESS 9- Indigenous People and Cultural Heritage. Planners and managers must incorporate conservation of biological diversity as fundamental in their planning, management, utilization and monitoring of planted forest resources. In order to reduce the environmental risk, incidence and impact of abiotic and biotic damaging agents and to maintain and improve planted forest health and productivity, FAO will work together with stakeholders to develop and derive appropriate and efficient response options in planted forest management. 	No, the project will not establish or manage planted forests

SAFEGUARD 4 ANIMAL (LIVESTOCK AND AQUATIC) GENETIC RESOURCES FOR FOOD AND AGRICULTURE

	Introduce new species/breeds and change in the production system of locally adapted breeds	No	Yes	Comments
4.1	Would this project introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to an area or production system?	LOW RISK	PROCEED TO NEXT Q	No, the project will not introduce non-native or non-locally adapted species, breeds, genotypes or other genetic material to an area or production system
4.1.1	Would this project foresee an increase in production by at least 30% (due to the introduction) relative	CANNOT PROCEED	LOW RISK	Non applicable

		to currently available locally adapted breeds and can monitor production performance?			
	4.1.2	Would this project introduce genetically altered organisms, e.g., through selective breeding, chromosome set manipulation, hybridization, genome editing or gene transfer and/or introduce or use experimental genetic technologies, e.g., genetic engineering and gene transfer, or the products of those technologies?	LOW RISK	<p>MODERATE RISK</p> <p>A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.</p>	Non applicable
4.2		Would this project introduce a non-native or non-locally adapted species or breed for the first time into a country or production system?	LOW RISK	<p>MODERATE RISK</p> <p>A genetic impact assessment should be conducted prior to granting permission to import (cover the animal identification, performance recording and capacity development that allow monitoring of the introduced species/ breeds' productivity,</p>	No, the project will not introduce a non-native or non-

			<p>health and economic sustainability over several production cycles)</p> <ul style="list-style-type: none"> • http://www.fao.org/docrep/012/i0970e/i0970e00.htm • ftp://ftp.fao.org/docrep/fao/012/i0970e/i0970e03.pdf 	locally adapted species or breed for the first time into a country or production system
4.3	Would this project introduce a non-native or non-locally adapted species or breed, independent whether it already exists in the country?	LOW RISK	<p>MODERATE RISK</p> <ul style="list-style-type: none"> • If the project imports or promotes species/breeds with higher performance than locally adapted ones, ensure feed resources, health management, farm management capacity, input supply and farmer organization to allow the new species/breeds to express their genetic potential • Follow the OIE terrestrial or aquatic code to ensure the introduced species/breed does not carry different diseases than the local ones • Include a health risk assessment and farmer/veterinary capacity development in the project to ensure the introduced species/breed do not have different susceptibility to local diseases including ecto-and endo-parasites than the locally adapted/native species/breeds. 	No, this project will not introduce a non-native or non-locally adapted species or breed, independent whether it already exists in the country
4.4	Would this project ensure there is no spread of the introduced genetic material into other production systems	<p>MODERATE RISK</p> <p>Introduce a) animal identification and recording mechanism</p>	LOW RISK	Non applicable

	(i.e., indiscriminate crossbreeding with locally adapted species/breeds)?	in the project and b) develop new or amend existing livestock policy and National Strategy and Action Plan for AnGR		
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	Collection of wild genetic resources for farming systems	No	Yes	Comments
4.5	Would this project collect living material from the wild, e.g., for breeding, or juveniles and eggs for ongrowing?	LOW RISK	MODERATE RISK Guidance to be provided	No, this project will not collect living material from the wild for breeding or juveniles and eggs for ongrowing

	Modification of habitats		No	Yes	Comments
4.6	Would this project modify the surrounding habitat or production system used by existing genetic resources?		LOW RISK	MODERATE RISK Guidance to be provided	No, this project will not modify the surrounding habitat or production system used by existing genetic resources
4.7	Would this project be located in or near an internationally recognized conservation area e.g., Ramsar or World Heritage Site, or other nationally important habitat, e.g., national park or high nature value farmland?		LOW RISK	MODERATE RISK Guidance to be provided	No, the project will exclude work in protected areas and their buffer zones
4.8	A Q G R	Would this project block or create migration routes for aquatic species?	LOW RISK	MODERATE RISK Guidance to be provided	No, the project will not block or create migration

					routes for aquatic species
4.9		Would this project change the water quality and quantity in the project area or areas connected to it?	LOW RISK	MODERATE RISK Guidance to be provided	Yes, the project will change the water quality and quantity in the project areas and/or areas connected to it in positive ways.
4.10		Would this project cause major habitat / production system changes that promote new or unknown chances for geneflow, e.g., connecting geographically distinct ecosystems or water bodies; or would it disrupt habitats or migration routes and the genetic structure of valuable or locally	LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, this project will not cause major habitat / production system changes that promote new or unknown chances for geneflow

	adapted species/stocks/breeds?			
4.11	Would this project involve the intensification of production systems that leads to land- use changes (e.g., deforestation), higher nutrient inputs leading to soil or water pollution, changes of water regimes (drainage, irrigation)?	LOW RISK	MODERATE RISK Guidance to be provided	No, the project will not involve the intensification of production systems that leads to land-use changes (e.g., deforestation) , higher nutrient inputs leading to soil or water pollution, changes of water regimes (drainage, irrigation)?

SAFEGUARD 5 PEST AND PESTICIDES MANAGEMENT

	Supply of pesticides by FAO	No	Yes	Comments
5.1	Would this project procure, supply and/or result in the use of pesticides on crops, livestock, aquaculture or forestry?	LOW RISK	<p>MODERATE RISK</p> <ul style="list-style-type: none"> • Preference must always be given to sustainable pest management approaches such as Integrated Pest Management (IPM), the use of ecological pest management approaches and the use of mechanical/cultural/physical or biological pest control tools in favour of synthetic chemicals; and preventive measures and monitoring, • When no viable alternative to the use of chemical pesticides exists, the selection and procurement of pesticides is subject to an internal clearance procedure http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/E_SS5_pesticide_checklist.pdf • The criteria specified in FAO's ESM Guidelines under ESS5 must be adhered to and should be included or referenced in the project document. • If large volumes (above 1,000 litres of kg) of pesticides will be supplied or used throughout the duration of the project, a Pest Management Plan must be prepared to demonstrate how IPM will be promoted to reduce reliance on pesticides, and what measures will be taken to minimize risks of pesticide use. • It must be clarified, which person(s) within (executing) involved institution/s, will be responsible and liable for 	Yes, the project will promote an approach to Integrated Pest Management (IPM) and favouring the use of biological pest control tools over synthetic chemicals and preventive measures and monitoring.

			<p>the proper storage, transport, distribution and use of the products concerned in compliance with the requirements.</p>	<ul style="list-style-type: none">● Also, Pest Management Plan must be prepared to demonstrate how IPM will be promoted to reduce reliance on pesticides, and what measures will be taken to minimi
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				ze risks of pesticide use.
5.2	Would this project provide seeds or other materials treated with pesticides (in the field and/or in storage)?	LOW RISK	<p>MODERATE RISK</p> <p>The use of chemical pesticides for seed treatment or storage of harvested produce is subject to an internal clearance procedure [http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/E_SS5_pesticide_checklist.pdf]. The criteria specified in FAO's ESM Guidelines under ESS5 for both pesticide supply and seed treatment must be adhered to and should be included or referenced in the project document.</p>	No, this project will not provide seeds or other materials treated with pesticides (in the field and/or in storage)
5.3	Would this project provide inputs to farmers directly or through voucher schemes?	LOW RISK	<p>MODERATE RISK</p> <ul style="list-style-type: none"> FAO projects must not be responsible for exposing people or the environment to risks from pesticides. The types and quantities of pesticides and the associated application and protective equipment that users of a voucher scheme are provided with must always comply with the conditions laid out in ESS5 and be subject to the 	No, the project will not provide inputs to farmers but will rather train

			<p>internal clearance procedure [link]. These must be included or referenced in the project document.</p> <ul style="list-style-type: none"> Preference must always be given to sustainable pest management approaches such as Integrated Pest Management (IPM), the use of ecological pest management approaches and the use of mechanical or biological pest control tools in favour of synthetic chemicals 	<p>farmers in the use of Integrated Pest Management approach and the use of biological pest control tools and allelopathy .</p>
5.4	Would this project lead to increased use of pesticides through intensification or expansion of production?	LOW RISK	<p>MODERATE RISK</p> <p>Encourage stakeholders to develop a Pest Management Plan to demonstrate how IPM will be promoted to reduce reliance on pesticides, and what measures will be taken to minimize risks of pesticide use. This should be part of the sustainability plan for the project to prevent or mitigate other adverse environmental and social impacts resulting from production intensification.</p>	<p>No, the project will not lead to increased use of pesticides through intensification or expansion of production</p>

5.5	Would this project manage or dispose of waste pesticides, obsolete pesticides or pesticide contaminated waste materials?	LOW RISK	<p>MODERATE RISK</p> <p>A full environmental and social impact assessment is required.</p> <p>Please contact the ESM unit for further guidance.</p>	<p>No, the project will not manage or dispose of waste pesticides, obsolete pesticides or pesticide contaminated waste materials</p>
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SAFEGUARD 6 INVOLUNTARY RESETTLEMENT AND DISPLACEMENT

		No	Yes	Comment
6.1	<p>Would this removal* be voluntary?</p> <p>*Temporary or permanent removal of people from their homes or means of production/livelihood or restrict their access to their means of livelihoods</p>	CANNOT PROCEED	<p>MODERATE RISK</p> <p>A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.</p>	Non applicable

SAFEGUARD 7 DECENT WORK

		No	Yes	Comments
7.1	Would this project displace jobs? (e.g., because of sectoral restructuring or occupational shifts)	LOW RISK	<p>MODERATE RISK</p> <p>A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.</p>	No, this project will not displace jobs
7.2	Would this project operate in sectors or value chains that are dominated by subsistence producers and other vulnerable informal agricultural workers, and more generally	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate the likely risk of perpetuating poverty and inequality in socially unsustainable agriculture and food systems. Decent work and productive employment should appear among the priorities of the project or, alternatively, the project should establish synergies with specific employment and social protection programmes e.g., favouring access to some social protection scheme or form of social insurance. Specific measures</p>	Yes, due to its focus on family agriculture, the project will operate in sectors or value chains that are dominated by

	characterized by high levels “working poverty”?		and mechanisms should be introduced to empower in particular the most vulnerable /disadvantaged categories of rural workers such as small-scale producers, contributing family workers, subsistence farmers, agricultural informal wage workers, with a special attention to women and youth who are predominantly found in these employment statuses. An age- and gender-sensitive social value chain analysis or livelihoods/employment assessment is needed for large-scale projects.	subsistence producers and other vulnerable informal workers. In this sense, the project aims at improving the livelihoods of vulnerable smallholders and providing tools to access markets and production diversification.
7.3	Would this project operate in situations where youth work mostly as unpaid contributing family workers, lack access to decent jobs and are increasingly abandoning agriculture and rural areas?	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate likely risk of unsustainably ageing agriculture and food systems by integrating specific measures to support youth empowerment and employment in agriculture. A youth livelihoods/employment assessment is needed. Complementary measures should be included aiming at training youth, engaging them and their associations in the value chain, facilitating their access to productive resources, credit and markets, and stimulating youth- friendly business development services.</p>	Yes, the project will operate in a context where youth work, mostly as unpaid contributing family workers, lack access to decent jobs and are increasingly

				<p>abandoning agriculture and rural areas. The project aims at improving livelihoods of the most impoverished and vulnerable communities providing them alternatives to avoid migration. In this sense, the project aims at integrating specific measures to support youth empowerment and employment in agriculture.</p> <p>Activities aim at training youth, engaging them and their associations in</p>
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				the value chain, facilitating their access to productive resources and markets, and stimulating youth- friendly business development services.
7.4	Would this project operate in situations where major gender inequality in the labour market prevails? (e.g., where women tend to work predominantly as unpaid contributing family members or subsistence farmers, have lower skills and qualifications, lower productivity and wages, less representation and voice in producers' and workers' organizations, more	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate likely risk of socially unsustainable agriculture and food systems by integrating specific measures to reduce gender inequalities and promote rural women's social and economic empowerment. A specific social value chain analysis or livelihoods/employment assessment is needed for large-scale projects.</p> <p>Facilitation should be provided for women of all ages to access productive resources (including land), credit, markets and marketing channels, education and TVET, technology, collective action or mentorship. Provisions for maternity protection, including childcare facilities, should be foreseen to favour women participation and anticipate potential negative effects on child labour, increased workloads for women, and health related risks for pregnant and breastfeeding women.</p>	Yes, the project will operate in a context where major gender inequality in the labour market prevails; in this sense specific measures are included in the project activities to reduce gender inequalities and promote rural women's social and

	precarious contracts and higher informality rates, etc.)			economic empowerment . Facilitation will be provided for women of all ages to access productive resources, markets and marketing channels, training and technology.
7.5	Would this project operate in areas or value chains with presence of labour migrants or that could potentially attract labour migrants?	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate potential discrimination against migrant workers, and to ensure their rights are adequately protected, with specific attention to different groups like youth, women and men.</p>	No, the project will not operate in areas or value chains with presence of labour migrants or that could potentially attract labour migrants
7.6	Would this project directly employ workers?	LOW RISK	<p>MODERATE RISK</p> <p>FAO projects will supposedly guarantee employees' rights as per UN/FAO standards as regards information on workers' rights, regularity of payments, etc. Decisions relating to the recruitment</p>	Yes, recruitment of project workers will be

			of project workers are supposed to follow standard UN practices and therefore not be made on the basis of personal characteristics unrelated to inherent job requirements. The employment of project workers will be based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, etc.	conducting according to UN/FAO standards
7.7	Would this project involve sub-contracting?	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate likely risk of perpetuating inequality and labour rights violations by introducing complementary measures. FAO projects involving sub-contracting should promote, to the extent possible, subcontracting to local entrepreneurs – particularly to rural women and youth – to maximize employment creation under decent working conditions. Also, FAO should monitor and eventually support contractors to fulfil the standards of performance and quality, taking into account national and international social and labour standards.</p>	No, the project will not involve sub-contracting
7.8	Would this project operate in a sector, area or value chain where producers and other agricultural workers are typically exposed to significant	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate likely OSH risks by introducing complementary provisions on OSH within the project. Project should ensure all workers' safety and health by adopting minimum OSH measures and contributing to improve capacities and mechanisms in place for OSH in informal agriculture and related occupations. For example, by undertaking a simple health and safety risk assessment, and supporting implementation of the identified risk control measures. Awareness raising and capacity development activities on the needed gender-responsive OSH</p>	No, the project will not operate in areas where producers and other agricultural workers are typically exposed to significant

	occupational and safety risks ¹⁴ ?		measures should be included in project design to ensure workers' safety and health, including for informal workers. Complementary measures can include measures to reduce risks and protect workers, as well as children working or playing on the farm, such as alternatives to pesticides, improved handling and storage of pesticides, etc. Specific provisions for OSH for pregnant and breastfeeding women should be introduced. FAO will undertake periodic inspections and a multistakeholder mechanism for monitoring should be put in place.	occupational and safety risks
7.9	Would this project provide or promote technologies or practices that pose occupational safety and health (OSH) risks for farmers, other rural workers or rural populations in general?	LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, the project will not provide or promote technologies or practices that pose occupational safety and health risks for farmers or rural populations

		No	Yes	Comments
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¹⁴ Major OSH risks in agriculture include: dangerous machinery and tools; hazardous chemicals; toxic or allergenic agents; carcinogenic substances or agents; parasitic diseases; transmissible animal diseases; confined spaces; ergonomic hazards; extreme temperatures; and contact with dangerous and poisonous animals, reptiles and insects.

7.10	Would this project foresee that children <u>below</u> the nationally defined minimum employment age (usually 14 or 15 years old) will be involved in project-supported activities?	LOW RISK	CANNOT PROCEED	No, the project does not foresee that children <u>below</u> the nationally defined minimum employment age (usually 14 or 15 years old) will be involved in project-supported activities
7.11	Would this project foresee that children <u>above</u> the nationally defined minimum employment age (usually 14 or 15 years old), but under the age of 18 will	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate likely risk of engaging young people aged 14-17 in child labour¹⁵ by changing design or introducing complementary measures.</p> <p>For children of 14 to 17 years, the possibility to complement education with skills-training and work is certainly important for facilitating their integration in the rural labour market. Yet, children under the age of 18 should not be engaged in work-</p>	No, the project does not foresee that children <u>above</u> the nationally defined minimum

¹⁵ Child labour is defined as work that is inappropriate for a child's age, affects children's education, or is likely to harm their health, safety or morals. Child labour refers to working children below the nationally-defined minimum employment age, or children of any age engaging in hazardous work. Hazardous work is work that is likely to harm the health, safety or morals of a child. This work is dangerous or occurs under unhealthy conditions that could result in a child being killed, or injured and/or made ill as a consequence of poor health and safety standards and working arrangements. Some injuries or ill health may result in permanent disability. Countries that have ratified ILO Convention No.182 are obligated to develop National lists of hazardous child labour under Article 4.

	be involved in project-supported activities?		related activities in connection with the project in a manner that is likely to be hazardous or interfere with their compulsory child's education or be harmful to the child's health, safety or morals. Where children under the age of 18 may be engaged in work-related activities in connection with the project, an appropriate risk assessment will be conducted, together with regular monitoring of health, working conditions and hours of work, in addition to the other requirement of this ESS. Specific protection measures should be undertaken to prevent any form of sexual harassment or exploitation at workplace (including on the way to and from), particularly those more vulnerable, i.e., girls.	employment age (usually 14 or 15 years old), but under the age of 18 will be involved in project-supported activities
7.12	Would this project operate in a value chain where there have been reports of child labour?	LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	

		No	Yes	Comments
7.13	Would this project operate in a value chain or sector where there have been reports of forced labour ¹⁶ ?	LOW RISK	MODERATE RISK A full environmental and social impact assessment is required. Please contact the ESM unit for further guidance.	No, the project will not operate in an area or value

¹⁶ Forced labour is employed, consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. It includes men, women and children in situations of debt bondage, suffering slavery-like conditions or who have been trafficked. "In many countries, agricultural work is largely informal, and legal protection of workers is weak. In South Asia, there is still evidence of bonded labour in agriculture, resulting in labour arrangements where landless workers are trapped into exploitative and coercive working conditions in exchange for a loan. The low wages associated with high interest rates make it quite difficult for whole families to escape this vicious circle. In Africa, the traditional forms of "vestiges of slavery" are still prevalent in some countries, leading to situations where whole families (adults and children, men and women) are forced to work the fields of landowners in exchange for food and housing. In Latin America, the case of workers recruited in poor areas and sent to work on plantations or in logging camps has been widely documented by national inspection services and other actors." (ILO, Profits and poverty: the economics of forced labour / International Labour Office. - Geneva: ILO, 2014)

				chain where there have been reports of forced labour
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SAFEGUARD 8 GENDER EQUALITY

		No	Yes	Comments
8.1	Could this project risk reinforcing existing gender-based discrimination, by not taking into account the specific needs and priorities of women and girls?	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate likely risk of perpetuating or reinforcing inequality by conducting a gender analysis to identify specific measures to avoid doing harm, provide equal opportunities to men and women, and promote the empowerment of women and girls.</p>	No, the project does not risk reinforcing existing gender-based discrimination, by not taking into account the specific needs and priorities of women and girls. A detailed gender assessment and action plan have been

				developed in the context of this project to duly address women needs.
8.2	Could this project not target the different needs and priorities of women and men in terms of access to services, assets, resources, markets, and decent employment and decision-making?	LOW RISK	<p>MODERATE RISK</p> <p>Take action to anticipate likely risk of socially unsustainable agriculture practices and food systems by conducting a gender analysis to identify the specific needs and priorities of men and women, and the constraints they may face to fully participate in or benefit from project activities, and design specific measures to ensure women and men have equitable access to productive resources and inputs.</p>	No, the project <u>does</u> target the different needs and priorities of women and men in terms of access to services, assets, resources, markets, and decent employment and decision-making

SAFEGUARD 9 INDIGENOUS PEOPLES AND CULTURAL HERITAGE

		No	Yes	Comments	
9.1	Are there <i>indigenous peoples*</i> living <i>outside the project area**</i> where activities will take place? ¹⁷ ?		LOW RISK	GO TO NEXT QUESTION	Yes
	9.1.1	Do the project activities influence the Indigenous Peoples living outside the project area?	LOW RISK	MODERATE RISK A Free, Prior and Informed Consent Process is required Project activities should outline actions to address and mitigate any potential impact Please contact the ESM/OPCA unit for further guidance.	A Free, Prior and Informed Consent Process has been conducted. Project activities outline actions to address and mitigate any potential

¹⁷* FAO considers the following criteria to identify indigenous peoples: priority in time with respect to occupation and use of a specific territory; the voluntary perpetuation of cultural distinctiveness (e.g. languages, laws and institutions); self-identification; an experience of subjugation, marginalization, dispossession, exclusion or discrimination (whether or not these conditions persist).

¹⁸** The phrase "Outside the project area" should be read taking into consideration the likelihood of project activities to influence the livelihoods, land access and/or rights of Indigenous Peoples' irrespective of *physical distance*. In example: If an indigenous community is living 100 km away from a project area where fishing activities will affect the river yield which is also accessed by this community, then the user should answer "YES" to the question

					impact
9.2	Are there indigenous peoples living in the project area where activities will take place?	MODERATE RISK	<p>MODERATE RISK</p> <p>A Free Prior and Informed Consent process is required.</p> <p>If the project is for indigenous peoples, an Indigenous Peoples' Plan is required in addition to the Free Prior and Informed Consent process.</p> <p>Please contact the ESM/OPCA unit for further guidance.</p> <p>In cases where the project is for both, indigenous and non-indigenous peoples, an Indigenous Peoples' Plan will be required only if a substantial number of beneficiaries are Indigenous Peoples. project activities should outline actions to address and mitigate any potential impact.</p> <p>Please contact ESM/OPCA unit for further guidance.</p> <p>A Free, Prior and Informed Consent Process is required</p>	<p>Yes</p> <p>A Free Prior and Informed Consent process has been conducted, and an Indigenous Peoples' Plan has been developed in addition to the Free Prior and Informed Consent process.</p>	
9.3	Would this project adversely or seriously affect on indigenous peoples' rights, lands, natural resources, territories, livelihoods,	LOW RISK	<p>MODERATE RISK</p> <p>A full environmental and social impact assessment is required.</p> <p>Please contact the ESM unit for further guidance.</p>	<p>No, the project does not adversely or seriously</p>	

	<p>knowledge, social fabric, traditions, governance systems, and culture or heritage (<i>physical*</i> and <i>non-physical or intangible**</i>) inside and/or outside the project area?</p> <p><i>*Physical defined as movable or immovable objects, sites, structures, group of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance located in urban or rural settings, ground, underground or underwater.</i></p> <p><i>**Non-physical or intangible defined as "the practices,</i></p>			<p>affect on indigenous peoples' rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems, and culture or heritage (<i>physical*</i> and <i>non-physical or intangible**</i>) inside and/or outside the project area</p>
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	<i>representations, expressions, knowledge and skills as well as the instruments, objects, artifacts and cultural spaces associated therewith that communities, groups, and in some cases individuals, recognize as part of their spiritual and/or cultural heritage"</i>			
9.4	Would this project be located in an area where cultural resources exist?	LOW RISK	<p>MODERATE RISK</p> <p>To preserve cultural resources (when existing in the project area) and to avoid their destruction or damage, due diligence must be undertaken to: a)verify that provisions of the normative framework, which is usually under the oversight of a national institution responsible for protection of historical and archaeological sites/intangible cultural heritage; and b) through collaboration and communication with indigenous peoples' own governance institutions/leadership, verifying the probability of the existence of sites/ intangible cultural heritage that are significant to indigenous peoples.</p> <p>In cases where there is a high chance of encountering physical cultural resources, the bidding documents and contract for any civil works must refer to the need to include recovery of "chance findings" in line with national procedures and rules.</p>	No, the project will not be located in an area where cultural resources exist

ADDITIONAL INFORMATION	YES	NO
Is there any other potential environmental and/or social risk of this project that has not been captured in the screening checklist?		No
Is the proposed project considered potentially controversial?		No

Appendix.6: Indigenous People's Plan

Indigenous Peoples' Plan (IPP)

Project: "Increasing Ecosystem-based Climate Resilience in Vulnerable Rural Communities in the Valles Macroregion of Plurinational State of Bolivia"

La Paz, March 2021

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Annex 1. "Concept Note: Participatory Construction and Validation Process" (MMAyA - FAO - FILAC, 2019).

Annex 2. Diagnosis of the participation and role of indigenous and native peoples in family farming in the Valles Macroregion of Plurinational State of Bolivia

Annex 3. IPP implementation timetable

Annex 4. The IPP Budget

1. Background

The Plurinational State of Bolivia is highly vulnerable to climate change. Climate variability has caused changes in rainfall patterns, droughts and extreme events such as frost, hailstorms and floods, which directly affects the food security of communities dependent on agriculture, leading to more people vulnerable to the effects of climate change.

According to IPCC projections, climate change is expected to exceed 2° C by the end of the 21st century, leading to an increase in variability and extreme events, as well as negative effects on surface and groundwater, which are key elements for agricultural activities and food security. Considering that ambient temperature affects the water table and causes high evapotranspiration, this increase in temperature may result in greater water stress for people and ecosystems, causing drought and affecting food security.

At present, indigenous nations and peoples, particularly those who inhabit their indigenous territories and rural areas, are especially vulnerable to the expansion of the pandemic caused by COVID-19. This risk of vulnerability to which men and women, children and the elderly are exposed is due to limitations, including no access to a health service that lacks staff, supplies and equipment necessary to face this and other diseases. However, the indigenous organizations of the Plurinational State of Bolivia have reacted to the health emergency and, exercising their self-determination, have adopted measures of self-isolation, enhancement of traditional medicine, food production and application of community justice, as well as the elaboration of protocols.

Due to the effects of climate change, many of Bolivia's ecoregions face climate scenarios that will have an impact on food production. Likewise, the lack of adequate irrigation and drinking water infrastructure will increase communities' vulnerability. It is hoped that adaptive mechanisms will be put in place for water source conservation and responsible water management, so that the projected climate scenario will not lead to misery, migration and social unrest on a large scale. According to information from the Agricultural Census (INE, 2013) about 38.5% of families in rural areas travelled at least half a kilometer to collect drinking water in 2013, and this percentage had already increased by 6% compared to data from the 2001 census (INE, 2001).

To respond to these challenges, the Government of the Plurinational State of Bolivia and FAO have planned to submit a proposal to the Green Climate Fund that aims to **"Increase ecosystem-based climate resilience in vulnerable rural communities in the Valles Macroregion of Plurinational State of Bolivia (RECEM-Valles)"**.

The project's area of intervention is the Valles Macroregion, and its aim is to develop actions in 65 of the 111 municipalities in the region, directly benefiting 58 000 people (farmers) and indirectly benefiting 290 000 (people that require food and water for human consumption and existing irrigation systems).

The project was designed taking into account four interrelated results that seek to achieve climate change-resilient production systems compatible with ecosystems conservation and environmental functions, and that the local population and authorities can manage on their own.

- **Component 1:** Strengthened food and income security in changing climate through climate resilient agricultural systems
- **Component 2:** Smallholder water resources secured to reduce the risks from droughts and low rainfall
- **Component 3:** Restored and conserved micro-watersheds and ecosystem functions and services
- **Component 4:** Enabling conditions created to implement and upscale climate-resilient agroecological management, climate-informed integral micro-watershed management, and access to financial mechanisms

This Indigenous Peoples' Plan (IPP) has been prepared for the project as part of the preparation process, and in compliance with the Green Climate Fund (GCF) Environmental and Social Safeguards. The "Concept Note: Participatory Construction and Validation Process" (MMAyA - FAO - FILAC, 2019) was done and involved representatives of the indigenous peoples concerned, a comprehensive review of national and international conceptual, political and regulatory frameworks on the rights of indigenous peoples and the "Diagnosis of the participation and role of indigenous and native peoples in family agriculture in the Valleys Macroregion of Plurinational State of Bolivia" (FAO, 2021), which provided the information necessary for this plan to be developed.

Therefore, the main objective of this IPP was to ensure that the indigenous peoples in the area of influence of the RECEM-Valles Project are considered in each of the results and products identified and agreed to within the framework of the right to Free, Prior and Informed Consent. Thus, the IPP ensures that the project implementation process will respect the rights, knowledge and ancestral knowledge of the indigenous peoples, seeking their full participation throughout the project cycle, and in particular:

- Identify measures to ensure that affected populations receive adequate benefits;
- Identify measures to mitigate impacts that may result from high-risk activities identified during the Free, Prior and Informed Consent process;
- Identify measures to include representatives from affected indigenous communities in decision-making processes during implementation;
- Define budget allocations, within the project budget, to ensure adequate implementation of the IPP.

2. Baseline information

To develop the baseline information for the IPP, the indigenous peoples of the project intervention area were identified using data from the National Institute of Agrarian Reform (INRA), which reports on Indigenous Community Lands (TCOs) and Native Indigenous Territories (TIOCs).¹⁸ The network of organizational structures representing these indigenous peoples was also mapped and demographic

¹⁸ Between 2004 and 2009, indigenous lands were denominated TCOs. In 2009 the new constitution changed the title to TIOCs, without changing any of the requirements for collective ancestral property to be registered as such.

information was collected from the 2012 Population and Housing Census (the most recent to date) and population information projections available.

According to INRA information, 8% of the project intervention area corresponds to indigenous collective territories, in which their life systems and productive development are in accordance with life plans and ancestral knowledge, as well as cultural heritage related to the production of food.

2.1. Identification of the indigenous peoples concerned and their representatives

The "RECEM Valles" project will focus its activities on indigenous and smallholder farming communities in the Valleys Macroregion of Plurinational State of Bolivia. This region straddles several different ecoregions, including the Yungas regions of La Paz and Cochabamba, the inter-Andean dry valleys in Santa Cruz, the highlands in Potosí and Tarija, and the Tucumano-Boliviano forest in the south of Plurinational State of Bolivia. It comprises a total of 111 municipalities and covers an area of approximately 13 107 900 hectares.

Map No. 1: Macroregions of Plurinational State of Bolivia



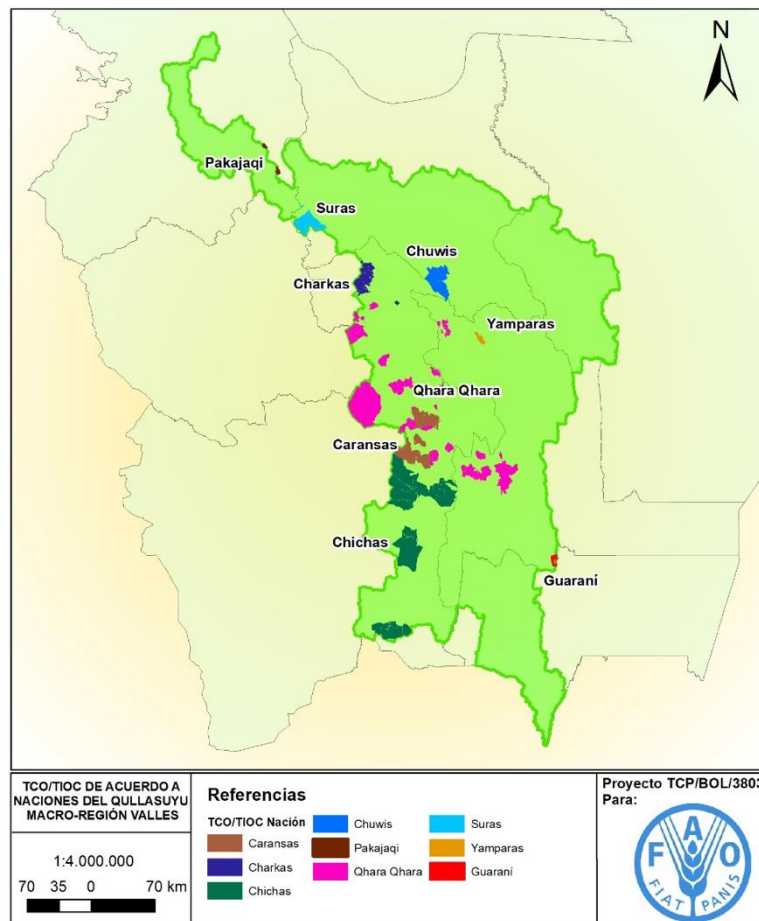
Source: Author's own, based on ESDP 2016

In line with national and international regulations, as well as the GCF Indigenous Peoples Policy, the criterion of territorial "ancestrality" was used to identify the indigenous peoples present in the

Valleys Macroregion of Plurinational State of Bolivia. Official land tenure information (INRA, 2018) was used to pinpoint TCOs and TIOCs in the Macroregion, assuming that they had followed a land registration process based on collective demands.

Having analysed the data (INRA, 2018), it was found that in the Valleys Macroregion 111 TCOs and TIOCs have been registered, covering a total of 993 223.85 hectares (7.72% of the Macroregion surface area).

Map No. 2: TCOs and TIOCs in the Valleys Macroregion



Source: Author's own using data provided by INRA, 2018.

As can be seen, the largest area of indigenous territories (TCOs and/or TIOCs) in the Macroregion is located in the Department of Potosí, followed by the Department of Chuquisaca and, to a much lesser extent, the Departments of Cochabamba and La Paz.

The requests for land titling for TCOs and TIOCs in the Macroregion were made collectively and through the organizations representing indigenous peoples, almost all of which are affiliated with

the National Council of Ayllus and Marqas of Collasuyo (CONAMAQ),¹⁹ with the Itikaguazu TCO in the lower south-east of Chuquisaca affiliated with the Guaraní Peoples' Assembly (APG); in Potosí, requests were channelled through the Chichas First Nation (in the south), the Karangas and Qhara Nations (in the centre) and the Charkas Nation (in the north); in Chuquisaca, by the Qhara Nation (in the north and southwest) and the Yampara Nation (in the northeast); in Cochabamba, by the Chuwis Nation (in the southeast) and the Suras Nation (in the extreme west) and, in La Paz, by the Pakajaki Nation.

From this information, it can be concluded that there is a significant presence of indigenous peoples' territories in the Macroregion of the Bolivian Valleys (7.72% of the area) and that the land titling processes were done by the local organizations that represent the peoples, which makes doing the consultation processes and the IPP much easier.

The project intervention area covers 60% of the total area of the Valles de Plurinational State of Bolivia Macroregion.²⁰ This is equivalent to an area of approximately **8 338 000 hectares, comprising 5 departments and 65 municipalities**, represented by different ecoregions in the centre and south of the country, with altitudes ranging from 1 400 to 3 800 metres above sea level. Climatic conditions vary with 300 mm rainfall in January, February and March and 20-50 mm from May to September. The temperature fluctuates much like the rainfall with monthly temperatures ranging from 11 °C to 18 °C. The lowest temperatures are registered between May and September (FAN, 2018). Land use differs because of this wide variety of altitude, weather and biogeography, and in the Valles Macroregion of Plurinational State of Bolivia there is also a wide range of sociocultural factors alongside the different farming systems.

Table No. 1: Municipalities in the project intervention area by Department

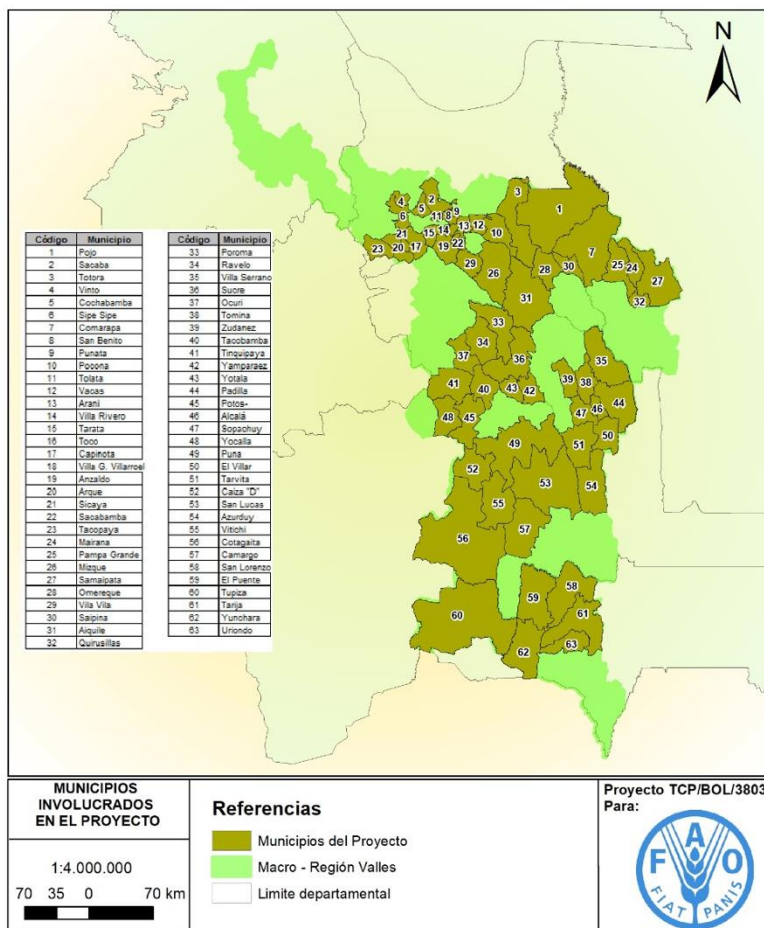
Department	N° of Municipalities in the intervention area
Chuquisaca	16
Cochabamba	26
Potosí	11
Santa Cruz	7
Tarija	5

Source: Author's own using data provided by the project.

¹⁹ National-level umbrella organization of highland indigenous peoples.

²⁰ Bolivia's Strategic Macroregions are defined by the Ministry of Development Planning (MPD) through the Agency for the Development of Macroregions and Border Zones of the Plurinational State of Bolivia (ADEMAF, 2016).

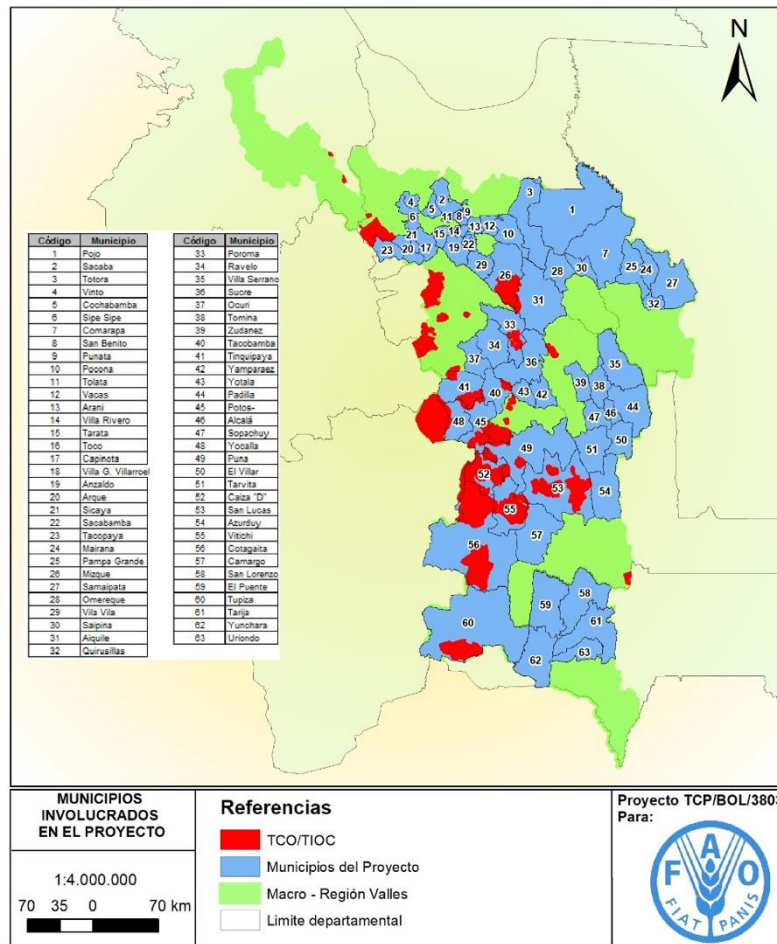
Map No. 3: Project intervention municipalities in the Valles Macroregion



Source: Author's own using data provided by the project.

Although the project refers to the Valles de Plurinational State of Bolivia Macroregion, it will actually only intervene in 65 of the 111 municipalities that make up this region. Therefore, it is necessary to know the TCOs and TIOCs in these municipalities.

Map No. 4: TCOs and TIOCs in project intervention municipalities



Source: Author's own using data provided by INRA, 2018.

The municipalities where indigenous peoples' territories have been titled are as follows:

Table N° 3: Project intervention municipalities and indigenous peoples

Department	Municipalities	Indigenous Peoples /Organizations
Chuquisaca	Poroma	Qhara Nation
	San Lucas	Qhara Nation
Cochabamba	Mizque	Chuwis Nation
	Aiquile	Chuwis Nation
Potosí	Tupiza	Chichas Nation

	Cotagaita	Chichas Nation
	Vitichi	Chichas Nation
	Caiza D	Karangas Nation
	Potosí	Karangas Nation
	Tacobamba	Qhara Nation
	Puna	Qhara Nation
	Tinguipaya	Charkas Nation

Source: Author's own using data provided by the project.

Therefore, when implementing the IPP the consultation, consent, participation and monitoring processes must include the indigenous peoples' organizations: the Qhara, Chuwis, Chichas, Karangas and Charkas in the municipalities of Poroma and San Lucas (Chuquisaca); Mizque and Aiquile (Cochabamba); and Tupiza, Cotagaita, Vitichi, Caiza D, Potosí, Tacobamba, Puna and Tinguipaya (Potosí); and information provided to CONAMAQ as the umbrella organization representing the indigenous highland peoples of Plurinational State of Bolivia.

2.2. Demographic information

The demographic information was processed, as indicated above, based on data from the 2012 Population and Housing Census, and yielded the following population data for the project intervention municipalities where there are TCOs/TIOCs.

Table N° 4: Population by gender in the project intervention municipalities with an indigenous population

Municipalities	Men	Women	Total Population
Poroma	8 714	8 663	17 377
San Lucas	15 859	16 661	32 520
Mizque	13 434	13 466	26 900
Aiquile	11 651	11 616	23 267
Tupiza	21 672	23 142	44 814
Cotagaita	15 558	16 243	31 801
Vitichi	4 985	5 661	10 646
Caiza D	5 916	6 151	12 067

Potosí	91 657	99 645	191 302
Tacobamba	6 213	5 622	11 835
Puna	10 485	11 432	21 917
Tinguipaya	14 343	12 857	27 200

Source: Author's own using data provided by the INE Census 2012.

There is no up-to-date disaggregated data for the indigenous and non-indigenous population in each TCO/TIOC; therefore, to identify the population in each municipality where TCOs and/or TIOCs straddle municipal borders, we used information from the 2012 Census to find out the percentage of indigenous people in each municipality.

Table N° 5: Indigenous population by gender and percentage of indigenous population in the project intervention municipalities

Municipalities	Total Population	Indigenous population				Cultural identity
		Men	Women	Total	Percentage	
Poroma	17 377	6 995	6 997	13 992	81%	Quechua
San Lucas	32 520	13 745	14 468	28 213	87%	Quechua
Mizque	26 900	11 500	11 476	22 976	85%	Quechua
Aiquile	23 267	8 698	8 637	17 335	75%	Quechua
Tupiza	44 814	1 728	1 701	3 429	8%	Quechua
Cotagaita	31 801	8 550	8 913	17 463	55%	Quechua
Vitichi	10 646	4 176	4 852	9 028	85%	Quechua
Caiza D	12 067	4 879	5 076	9 955	82%	Quechua
Potosí	191 302	27 307	30 917	58 224	30%	Quechua
Tacobamba	11 835	5 398	4 948	10 346	87%	Quechua
Puna	21 917	8 684	9 444	18 128	83%	Quechua
Tinguipaya	27 200	13 001	11 560	24 561	90%	Quechua

Source: Author's own using data provided by the INE Census 2012.

These data show the importance of the indigenous population in each of the project municipalities where there are TCOs/TIOC. The municipalities of Tacobamba and Tinguipaya (Potosí) and San Lucas (Chuquisaca) are the municipalities with the highest presence of indigenous peoples and the municipalities of Tupiza and Potosí (Potosí) have with the lowest indigenous population.

It is important to mention that in 9 of the 12 municipalities the% of the indigenous population is higher than 75% of the total population. However, it should also be mentioned that the information from the 2012 Census includes small farmers and other local inhabitants who identify or refer in ascending order to some indigenous people or nation with which they identify or belong.

3. Analysis of impacts, risks and opportunities

FAO policy on Indigenous and Tribal Peoples was formulated to ensure respect, inclusion and promotion of issues relevant to indigenous peoples in its work. In doing so, it joins growing international mobilization for the rights and concerns of indigenous peoples, most of whom suffer disproportionately from multiple adversities such as discrimination, poverty, poor health, limited political representation, and cultural and environmental degradation.

FAO Environmental and Social Standard No. 9 (ESS 9) applied to the "Increasing Ecosystem-based Climate Resilience of Vulnerable Rural Communities in the Valles Macroregion of Plurinational State of Bolivia" project aims to avoid, reduce, mitigate or compensate the negative effects caused by project activities to Indigenous Peoples in a culturally appropriate manner; and to ensure that Indigenous Peoples receive the benefits of the initiative in an appropriate and inclusive inter-generational and gender-sensitive manner.

According to the FAO Environmental and Social Standards Manual, to determine the level of impacts and risk of the project, ESS 9 should be applied, which defines the following criteria for this assessment:

Table N° 6: FAO Environmental and Social Standard N° 9: Risk and Impact Assessment Criteria for Indigenous Peoples

Criteria	Questions	Risk Level (based on responses)		
		If the answer is No	If the answer is Yes	
		Low Risk	Moderate Risk	High Risk
9.1.	Are there indigenous or Afro-descendant communities living in the project area?	No (Low Risk)	Yes (Moderate Risk) Go to next question	Yes (High Risk) Go to next question
9.1.1.	Do project activities affect indigenous peoples living outside the project area?	No (Low Risk)	Yes (Moderate Risk) - A CPLI process is required.	
9.2	Are there indigenous peoples in the project area where the activities will be developed?	No (Low Risk)	Yes (Moderate Risk) - Implementation of a FPIC process is required. -An indigenous peoples' action plan should be developed. - Project activities should specify actions to be taken to address and mitigate any potential impacts.	
9.3.	Would this project negatively or greatly affect the rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance	No (Low Risk)		Yes (High Risk) -A full social impact assessment is required.

	systems and culture or cultural heritage of indigenous and/or Afro-descendant peoples (*physical and **non-physical or intangible) within and/or outside the project area.			<p>-Implementation of a FPIC process is required.</p> <p>- An indigenous peoples' action plan must be developed.</p> <p>-Project activities should specify actions to be taken to address and mitigate any potential impacts.</p>
9.4	Is the project located in an area where cultural resources exist?	No (Low Risk)	<p>Yes (Moderate Risk)</p> <p>In order to preserve cultural resources (when they exist in the project area) and avoid their destruction or damage, due diligence must be carried out to:</p> <p>(a) Verify the provisions of the regulatory framework on protection of historical and archaeological sites/intangible cultural heritage, and.</p> <p>b) Through collaboration and communication with the organizations/traditional authorities of the indigenous communities, verify the likelihood of the existence of sites/intangible cultural heritage that are significant to indigenous peoples.</p> <p>c) In cases where there is a high likelihood of encountering physical cultural resources, the bidding documents and contract for any civil works should refer to the need to include chance find recovery in accordance with national procedures and standards.</p>	

The SSE impact assessment yielded the following results after the project design was submitted for consultation in a process that concluded with seven regional workshops, during which the risks and positive and negative impacts of project activities on indigenous and native peoples were identified:

Table N° 7: Results of applying the SSE 9 to the project

Criteria	Questions	Risk Level (based on responses)		
		If the answer is No	If the answer is Yes	
		Low Risk	Moderate Risk	High Risk
9.1.	Are there indigenous or Afro-descendant communities living in the project area?		Yes	
9.1.1.	Do project activities affect indigenous peoples living outside the project area?	No		
9.2	Are there indigenous peoples in the project area where the activities will be developed?		Yes	
9.3.	Would this project negatively or greatly affect the rights, lands, natural resources, territories, livelihoods, knowledge, social fabric, traditions, governance systems and culture or cultural heritage of indigenous and/or Afro-descendant peoples (*physical and **non-physical or intangible) within and/or outside the project area?	No		
9.4	Is the project located in an area where cultural resources exist?	No		

According to the SSE 9 assessment of this project, there is a project intervention area where a Free, Prior and Informed Consultation (CIPLI)²¹ has been carried out, which has generated inputs for the project IPP. The IPP will be socialised with the representative organizations of the indigenous peoples of the project intervention area to become the Action Plan.

²¹ See Annex 1. "Process of participatory construction and validation of the programme concept note" (MMAyA - FAO - FILAC, 2019).

4. Measures to avoid, minimize and mitigate negative impacts and enhance positive impacts and opportunities.

No potential negative impacts to indigenous peoples were identified in the project risk and impact assessment; however, in order to avoid or minimize potential negative impacts that may arise during the project implementation, as well as to enhance positive impacts and opportunities three lines of action have been identified and included as part of this IPP:

The incorporation of these lines of action and the implementation of the Indigenous Peoples Plan (IPP), carried out as a result of a process of Free Prior and Informed Consent with the representatives of indigenous peoples and nations, aims to guarantee the achievement of the specific indicators of the lines of action for the indigenous peoples benefiting from the project:

Line of action 1: Strengthen the participation of the indigenous population in the project and reduce cultural barriers.

- 1.1. Design and implement a programme to develop financial capabilities for indigenous producers with a focus on action at the business level.
- 1.2. Create and implement a strategy to position and segment native corn in the market, promoting price differentiation.
- 1.3. Methodological strategies to organize facilitating and managing community groups aimed at technicians.
- 1.4. Establish and execute a differentiated strategy to ensure the equitable participation of indigenous men, women, youth and older adults, and include them in the Rules of Operation.
- 1.5. Continuously review and adapt the social criteria to include the indigenous population in the policy instruments that regulate access to and allocation of project support.
- 1.6. Form inter-institutional linkages to improve attention to indigenous peoples: women, youth and older adults.
- 1.7. Train project promoters in working with the indigenous population and promote hiring indigenous technicians and outreach workers.
- 1.8. Strengthen technical support processes for the indigenous population.
- 1.9. Conduct a mid-term evaluation of the project to see how the negative impacts have been secured or mitigated and measure positive impacts.

Line of action 2: Design a culturally appropriate project dissemination strategy for indigenous producers.

- 2.1. Design intercultural audio-visual materials to disseminate the project and attract demand among the indigenous population. Dub or subtitle material in the main indigenous languages spoken in the project intervention area.
- 2.2. Design and disseminate printed intercultural material to inform indigenous producers about the project mechanisms and schedules, taking into account the cultural characteristics of the population and written in the indigenous language and Spanish.

- 2.3. Disseminate and promote key messages related to the project's objectives, highlighting the biocultural importance for different audiences.
- 2.4. Develop dissemination material to strengthen the capacities of different audiences on social safeguards issues.
- 2.5. Hold workshops to disseminate the Rules of Operation.
- 2.6. Hold courses on rights, obligations and responsibilities.
- 2.7. Hold forums or meetings that enable indigenous producers to share technical and organizational knowledge.
- 2.8. Establish a technical cooperation agreement with indigenous organizations and radio broadcasters to develop intercultural materials and broadcast and promote the project's actions in the intervention area.

Line of action 3: Implement a strategy to involve the indigenous population in the project.

- 3.1. Design, plan and budget with the organizations representing the indigenous peoples the implementation of the project's activities, holding periodic meetings (every six months or as requested) to provide information on the execution of the activities of the past six months and to plan the activities of the following six months.
- 3.2. Establish protocols, channels and means of coordination and continuous information (at least every six months) between the indigenous organizations and the project.

Incorporating these lines of action and implementing the IPP are aimed at guaranteeing achieving the following indicators for the project's indigenous beneficiaries:

No.	Indicators	Goal
1	Percentage of indigenous producers benefiting from the project	7%
2	Percentage of young indigenous producers who are beneficiaries of the project (18 to 35 years old)	15%
3	Percentage of women producers benefiting from the project	3%
4	Percentage of family farming products sold on the domestic and/or international market	5%

5. Results of the consultations

As part of the project preparation process, the "Concept Note: Participatory Construction and Validation Process" was developed in 2019: seven regional workshops were held with representatives of the actors and indigenous peoples involved in the project.

These workshops developed a participatory process to construct, validate and consult on the concept note by presenting a summary, the objectives and components of the project. Participants were able to make suggestions as to how the project could be adjusted, agreed to the consultation process, validated the project and generated inputs for the IPP. All participants signed the minutes of each workshop.

Table N° 8: Participation in workshops to construct and validate the project concept note

Place and date of the workshop	Men	Women	Total	Actors represented
Sopachuy	23	10	33	Producers' organizations, indigenous peoples' organizations, native peoples, farmers, local communities of Central Chuquisaca.
Sucre	19	12	31	Producers' organizations, Bartolina Sisa Women's Association, representatives of institutions.
Potosí	10	6	16	Chichas community and municipal authorities.
Camargo	9	12	21	Bartolina Sisa Women's Association of North and South Cinti, Camargo, San Lucas, Villa Charca, Culpina.
Tarija	21	8	29	Authorities and producers from the municipalities of El Puente, San Lorenzo, Cercado, Bermejo.
Samaipata	20	4	24	Authorities and producers from the municipalities of Samaipata, Comarapa, Quirusilla, Mairana, and Bartolina Sisa Women's Association.
Cochabamba	12	0	12	Authorities and producers from the municipalities of Anzaldo, Arque, Tarata, Tavopaya, Pojo, Omereque, Capinota, Cercado.
Total	114	52	166	
Percentage	68.67%	31.33%	100%	

Source: Author's own using based on information from the document: "Concept Note: Participatory Construction and Validation Process", MMAyA - FAO - FILAC, 2019.

As a result of this process, the following modifications, clarifications and complements suggested by the representatives of the indigenous peoples for the project to be implemented in their territories have been incorporated in order to maximize the positive impacts and benefits of the project for the indigenous population.

6. Free, Prior and Informed Consent (FPIC)

Despite the "Concept Note: Participatory Construction and Validation Process", it will be necessary to carry out a consultation process to obtain FPIC under international standards and protocols prior to project implementation and obtain more detailed information based on the final design document, in order to reach the necessary agreements for its implementation in the indigenous population identified in the intervention area. There should be documented evidence of the mutually accepted process between the project/programme and the project communities and evidence of the agreement between the parties as a result of the negotiations.

6.1. Signatory parties and customary binding practice to be used for the agreement

The signatories of the FPIC are:

- The Ministry of the Environment and Water (MMAyA), as the budget holder and representing the state (as established in the Constitution, the state is responsible for the consultation process).
- The organizations representing the indigenous peoples (with TCOs or TIOCs) in the project implementation area: the Qhara Qhara Nation, the Chuwis Nation, the Karangas Nation, the Chichas Nation and the Charkas Nation, as well as CONAMAQ as a representative entity at the national level.
- The Intercultural Service of Democratic Strengthening (SIFDE) of the Plurinational Electoral Body (OEP), as the state entity responsible for validating the consultation processes, as part of intercultural democracy.
- The Food and Agriculture Organization of the United Nations (FAO), as the accredited entity responsible for executing the project before the GCF.

The "customary binding practices" to be used for the agreement must be agreed to by the parties prior to the development of the consultation process, ensuring that they respect the norms and procedures, as well as the institutions and organizational structure of the indigenous peoples.

6.2. Mutually agreed consent

Mutual consent should be governed by the principles of self-determination and good faith, in such a way that guarantees the rights of the parties. There should be documented evidence of the mutually agreed process between the project/programme and the affected communities and evidence of agreement between the parties as a result of negotiations. FPIC does not necessarily

require unanimity and can be achieved even when individuals or groups within indigenous peoples' communities do not explicitly agree.

6.3. Communication agreements

The channels of communication and information from the project to the indigenous peoples will be agreed on with the organic representatives of the indigenous peoples:

- The indigenous peoples' own spaces and the frequency information on project progress and planning will be presented.
- The type of information and the media used to present it.
- The language used to present project communications and information.
- The channels of communication between the indigenous organizations and the project representatives for strategic and operational issues.

6.4 Terms of withdrawal of consent

Within the framework of the FPIC process, safeguards will be established for the right of indigenous peoples to withdraw consent to the implementation of the project in their territories; these safeguards will contain details of the circumstances and grounds that may lead to the withdrawal of consent.

6.5 Independent verification provisions

Likewise, within the framework of the FPIC process, independent bodies must be established for mediation and conciliation, as well as to resolve conflicts and differences regarding aspects of project implementation in indigenous peoples' territories.

7. Grievance Redress Mechanisms

The following mechanisms have been identified as mechanisms for redressing complaints:

- Design and implement a system for addressing complaints through the programme management unit and establish a line of communication dealing with complaints, doubts or clarifications from the project's beneficiary population.
- Strengthen the spaces for social, economic and environmental coordination to ensure oversight, transparency and accountability.
- Prepare guides to orient the indigenous peoples to access the redress mechanisms.

8. Operational aspects of the IPP implementation

8.1 Planning to implement the IPP

See: Annex 3. IPP implementation timetable

8.2 The IPP Budget

It should be noted that the project will generate diverse opportunities for indigenous peoples in the intervention areas, favoring the hiring of indigenous technicians, the dissemination and generation of capacities through communication tools such as local radio stations, television, social networks, among others. Likewise, the organizational capacities for good governance will be strengthened within the framework of community territorial management, equanimous and balanced administration in the redistribution of resources, as well as the practices of preservation and restoration of environmental, social and cultural functions of their territories.

The detailed actions in which indigenous peoples and nations are involved are described in the same project document and specified in Annex 4. Budget for the Indigenous Peoples Plan (PPI).

Undoubtedly, the Reference Project will also contribute to the generation of employment for indigenous professionals and the training of indigenous technicians in the implementation of climate-resilient irrigation systems, sustainable agriculture practices, conservation of environmental functions and community territorial management as a tool for strategic planning and development of indigenous peoples in a context of mitigation and adaptation to climate change.

See: Annex 4. The IPP Budget

9. Monitoring, evaluation and reporting

In the framework of indigenous peoples' full and effective involvement in defining aspects related to the project implementation, mechanisms will be established for them to monitor and evaluate the project and in particular the IPP, as well as the frequency, content and format of the information to be provided to their representatives.

Following up the IPP will be permanently monitored throughout the project as required by FAOB and MMAyA, to ensure the effectiveness of the programme, not exclude the target indigenous population and to monitor the impact on their living conditions, as well as to achieve sustainability of the actions.

Monitoring compliance with FAO and the GCF standards will take place during missions and reports to be submitted each semester. Activities and outputs will be developed as per a schedule of activities and producers derived from this Action Plan during the first six months of the project.

Annexes

Annex 1. "Concept Note: Participatory Construction and Validation Process" (MMAyA - FAO - FILAC, 2019).

Annex 2. Diagnosis of the participation and role of indigenous and native peoples in family farming in the Valles Macroregion of Plurinational State of Bolivia

Annex 3. IPP implementation timetable

Annex 4. The IPP Budget

Annex 1 of the Indigenous Peoples' Plan (IPP)

Participatory Construction and Validation Process"

(MMAyA - FAO - FILAC, 2019).

Systematization of the Participatory Construction Process
and Validation of the Project

April 11 - 27, 2019

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 - d) Indigenous Peoples Policy of the Green Climate Fund (GCF)
 - e) FAO policy on indigenous and tribal peoples.
 - f) FAO. 2014. Respecting free, prior and informed consent - Practical guidance for governments, companies, NGOs, indigenous peoples and local communities in relation to land acquisition, Governance of Tenure Technical Guide No. 3.
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Acronyms

IACHR	Inter-American Commission on Human Rights
FPIC	Free, Prior and Informed Consent
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
FILAC	Fund for the Development of the Indigenous Peoples of Latin America and the Caribbean
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
MMAyA	Ministry of Environment and Water Resources
ILO	International Labour Organization
UNFCCC	United Nations Framework Convention on Climate Change
UN	United Nations

I. SUMMARY

This document reflects the joint actions carried out by the Fund for the Development of Indigenous Peoples of Latin America and the Caribbean (FILAC) and the Food and Agriculture Organization of the United Nations (FAO), in support of the Ministry of the Environment and Water Resources (MMAyA) to carry out the process of presentation of the concept note and consultation in seven (7) sites in Plurinational State of Bolivia, of the programme *“Preservation and Restoration of Environmental Functions with Emphasis on Water security for Adaptation to Climate Change and Greater Resilience of Vulnerable Farmers in the Valleys de Plurinational State of Bolivia Macroregion”*.

During the last decades several international forums²² have drawn attention to the crucial challenges and strategies that indigenous peoples carry out for their survival and the preservation of their cultures; their common knowledge and wisdom, practices and experiences in highly unfavorable conditions of poverty, food insecurity and levels of malnutrition greater than those of the non-indigenous population. These situations are further aggravated when their territories and their livelihoods are the objectives of policies, programs, projects, which seriously threaten the ways and means of life of indigenous peoples, since there is a widespread lack of respect for their rights and cultures, which has caused many communities to be decimated, dispossessed of their lands and territories or forcibly resettled.

The above provides meaning to the effort of important collaborations²³ such as the one implemented by FAO and its allied organizations to incorporate the right to FPIC in the work of each respective organization, as regards the design and implementation of programs and projects, guaranteeing that the rights of indigenous peoples are duly respected.

The seven (7) presentation sessions of the concept note, and consultation consisted of sessions of one day each, with groups, both men and women, indigenous and non-indigenous, agricultural producers, users of irrigation systems. They met to identify the actions necessary to implement the strategic vision of the programme *“Preservation and Restoration of Environmental Functions with Emphasis on Water security for Adaptation to Climate Change and Greater Resilience of Vulnerable Farmers in the Valleys de Plurinational State of Bolivia Macroregion”*.

For this, the participants shared their knowledge, practices and expressed the results of their own experiences during their working lives and answered specific questions that allowed identifying strategies and activities that FAO Plurinational State of Bolivia and the MMAyA will develop in the proposal to be presented to the Green Fund of the weather. We thank all the people involved in the organization and development of the workshops, as well as the assistants and participants and

²² The climate change negotiations at COP 21 in Paris in 2015 recognize that indigenous peoples may have some of the present answers to future challenges. In 2007, the United Nations General Assembly adopted the United Nations Declaration on the Rights of Indigenous Peoples, recognizing their rights and making specific mention of Free, Prior and Informed Consent (FPIC) as a prerequisite for any activity that affect their ancestral lands, their territories and their natural resources.

²³ To this end, FAO established alliances with Action Against Hunger (ACF); ActionAid (AA); the Spanish Agency for International Development Cooperation (AECID); The International Federation of the Red Cross and Red Crescent Society (IFRC); the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and World Vision (WV).

support personnel from the seven sub-regions where the joint FAO - MMAYa - FILAC exercise was carried out.

The following table shows the level of participation for each of the subregions of the Macro Valleys.

FAO MMAYa FILAC
Participants in the seven consultation sessions of the programme

"Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys
Macroregion of Plurinational State of Bolivia"

Workshop Site	Men	Women	Total	Participants
Sopachuy	23	10	22	Producer organizations, indigenous peoples' organizations, native people, smallholders, local communities, Chuquisaca Centro, Tomina, Alcala, Serrano, Sopapachuy, Tarvita, Azurduy.
Sucre	19	12	31	Producers Organizations, Women's Association Bartolina Sisa, representatives of institutions.
Potosí	10	6	16	Chichas Community Association and municipal authorities
Camargo	9	12	21	Bartolina Sisa Nor and Sud Cint Women's Association, Camargo, San Lucas, Villa Charca, Culpina
Tarija	21	8	29	Authorities and producers of the Municipalities El Puente, San Lorenzo, Cercado, Bermejo.
Samaipata	20	4	24	Authorities and producers of the Municipalities Samaipata, Comarapa, Quirusilla, Mairana, and women from Bartolina Sisa.
Cochabamba	12	0	12	Authorities and producers of the Anzaldo Municipalities, Arque, Tarata, Tavopaya, Pojo, Omereque, Capinota, Cercado.
Total	114	52	166	
%	68.67	31.33	100	

All participants are from the Quechua peoples. See map of indigenous nationalities in Annex 2.

II. REPORT

Within the framework of the 2016-2020 Economic Development Plan and the Patriotic Agenda of the Plurinational Government of Plurinational State of Bolivia, for the fulfillment of rights and obligations between the State, society and nature, the Ministry of Environment and Water (MMAA) with technical support of the Food and Agriculture Organization of the United Nations in Bolivia -

FAO, has prepared the Concept Note of the Project *“Preservation and Restoration of Environmental Functions with Emphasis on Water security for Adaptation to Climate Change and Greater Resilience of Vulnerable Farmers in the Valleys Macroregion of Plurinational State of Bolivia”*, to be submitted to the Green Climate Fund (GCF).

As part of the participatory construction cycle, which was promoted by the MMAyA, on behalf of the Plurinational State of Bolivia, seven (7) construction, consultation, validation and consensus workshops were held in the Valleys of Plurinational State of Bolivia through the Associations of Communities and / or the Autonomous Municipal Governments of Sopachuy, Sucre, Potosí, Camargo, Tarija, Samaipata and Cochabamba, facilitated by the United Nations Organization for Food and Agriculture in Bolivia - FAO, and the Fund for the Development of Indigenous Peoples of Latin America and the Caribbean - FILAC.

The team was made up of Wilson Rocha, FAO Facilitator, Dennis Mairena Arauz, FILAC Facilitator, Angela Ilonka Debreczeni Rojas, logistics manager and Floria Aragón, responsible for the systematization and recording of minutes.

This document constitutes the systematization of the development of the workshops and describes the specifications of each session in which the program was presented for consultation.

1. Summary of Concept Note of the Programme *“Preservation and Restoration of Environmental Functions with Emphasis on Water security for Adaptation to Climate Change and Greater Resilience of Vulnerable Farmers in the Valleys Macroregion of Plurinational State of Bolivia”* presented in all seven sessions.

The objective of the program is to increase the resilience to climate change of the communities and small farmers of the Valleys Macroregion of Plurinational State of Bolivia through the strengthening of capacities and development of better agricultural practices to increase productivity, the sustainability of their agro-ecosystems under efficient irrigation, in order to adapt to increasing variability in temperature and rainfall.

The program is directed to 18 micro-basins identified as priorities by the Government of Plurinational State of Bolivia, located in 63 municipalities of the Macro-region Valles, of the Departments of Cochabamba, Chuquisaca, Potosí, Tarija and Santa Cruz. More than 26,000 agricultural households are expected to benefit directly from the training, implementation and improvement of irrigation systems, hydrological and agricultural information system, and water management in micro-basins.

The program has the following four components:

Components	Results
1. Preservation and restoration of Environmental Functions for Adaptation to Climate change	The water security of communities and small producers has been improved to guarantee the sustainability of their climate-resilient livelihoods due to the management of prioritized micro-basins and the preservation and restoration of environmental functions.
2. Revitalized and Resilient to Climate Change Irrigation Systems	The existing irrigation systems have been revitalized and optimized for efficient water use, reducing droughts' risks due to the variability of temperatures, prolonged dry periods, and scarce rainfall.
3. Resilient and Sustainable Production Systems	The capacities of small farmers, including women and young people, have been strengthened to increase their agroecosystems' productivity and sustainability as an adaptation measure to the variability of temperatures, rains, and droughts due to the effects of climate change.
4. Strengthening of Community and Institutional Capacities	Public and community institutional capacities have been strengthened to implement resilience and climate risk management practices by small farmers and communities.

Annex 1 presents the National Technical Sheet, basic information on the collaboration between Indigenous and/or Afro-descendant peoples and FAO.

Annex 2 presents an overview of the Plurinational State of Bolivia and Indigenous peoples, in relation to the FAO-MMAyA programme.

FAO MMAA FILAC

Resumen de las recomendaciones surgidas en las sesiones de presentación del programa (1)

Preservación y restauración de las funciones ambientales con énfases en la seguridad hídrica para la adaptación al cambio climático y una mayor resiliencia de los agricultores vulnerables de la macroregión Valles de Bolivia

Sopachuy	Sucre	Potosí	Camargo	Tanja	Samaipata	Cochabamba
Apoyo a la producción agrícola orgánica y ecológica de los pequeños productores	Cambiar terminología: lluvias por precipitaciones; utilizar frutales en vez de referirse a especies definidas.	Mejorar sistemas de alerta temprana, articulando municipios y gobernaciones	Dar prioridad de construcción de represas, atajados, reservorios	Plan de mancomunidad integrado a planes territoriales. Al menos cinco deben ser apoyados por el programa	Implementación de invernaderos	Analizar la posibilidad de incluir municipios que no son de macroregión valles, pero afectados por cambio climático.
Uso de mallas antigranizo	Cuantificar en hectáreas la necesidad de mallas antigranizo	Gestionar la certificación orgánica para la producción	Promover e implementar riego tecnificado: goteo, aspersión, asistencia técnica de riego, por comunidad.	Apoyar con malla antigranizo a 1200 hectáreas (Ha); 1 mil Ha. Con mantas térmicas.	Apoyo a la producción agrícola orgánica de 800 Ha; incrementar 490 Ha de agroforestales.	Analizar posibilidad de recuperación de tierras en riberas de ríos
Enfocarse a seguridad alimentaria	Fortalecer capacidades temáticas en riego, en universidades, escuelas técnicas y otras.	Mantener sistema de asistencia técnica en operación y mantenimiento de equipamiento en gestión de riego	Brindar asistencia técnica para raíces, tubérculos, hortalizas y otros.	Definir criterios y metodología para agricultura de conservación	Para protección de cuencas implementar cinco emprendimiento ecoturístico y apicultura.	Criterios de elegibilidad al financiamiento deben flexibilizarse de acuerdo a realidades de cada municipio
Apoyo a la comercialización	Articular actores en el sector riego	Revitalizar, tecnificar sistemas de riego por municipio	Promover industrialización y comercialización en centros de acopio y transformación de productos	Apoyar con malla antigranizo a 1200 hectáreas (Ha); 1 mil Ha. Con mantas térmicas.	Promover 4 ruedas de negocio nacional y 1 internacional; promover ferias productivas.	Incorporar a institutos tecnológicos para la generación de capacidades locales, a nivel técnico y superior
Involucramiento a jóvenes y niños	Focalizar acciones por cuenta hídrica en los planes de aprovechamiento hídrico	Intercambio de experiencias	Realiza inventario de sistemas de riego para rehabilitar	Apoyar 500 Ha., con SAF para apicultura.	Implementar sistemas de cosecha de agua de lluvia y el riego por goteo	Completar inventario de fuentes de agua y regular para el aprovechamiento.
Talleres sobre cambio climático	Revisar superficie de forestación y reforestación en las cuencas hídricas.	Realizar inventarios y caracterización de fuentes de agua	Tecnificar la construcción de reservorios de agua	Realizar estudio de productos de alto valor comercial basados en 8 estudios de la cadena agroalimenticia	Destinar áreas comunales para recarga hídrica	Dar prioridad a las acciones tecnológicas para revertir la degradación de cuencas
	Implementar equipos de monitoreo de calidad y cantidad de agua	Forestación, reforestación, preservación y restauración de fuentes de agua.	Tecnificar todos los sistemas de riego	Apoyar la constitución legal de 20 asociaciones de productores	Formular planes de riego municipal con base en aprovechamiento hídrico local.	Reconocer y rescatar los conocimientos tradicionales y recuperar buenas prácticas, usos y costumbres en la gestión del agua.
	Implementar redes de información comunal y municipal.	Diagnóstico de necesidad de zanjas de infiltración u diques de piedra	Promover capacitación técnica y práctica	Diseñar EDPT para la gestión y financiamiento a la producción	Reforestar en área de recarga hídrica	
	Implementar mecanismos financieros para acceder a crédito	Conservar 1952 hectáreas de bofedales	Establecer sistema de información y monitoreo moderno	Realizar inventario de sistemas de riego con todos los actores (SEDERI, municipio y mancomunidad).		
	Desarrollar programas de sensibilización y educación sobre cambio climático, uso eficiente del agua y suelos, y gestión de recursos naturales.	Fortalecer planes directores de cuenca.	Diferenciar sistemas de riego por tipo de suelo y brindar asistencia técnica.	Passar a 8 mil sistemas de riego tecnificado; pasar a 2 mil reservorios		
		Incidencia en normas técnicas que se aplican en toda forma territorial	Implementar reservorios de agua y represas	Promover la formación con la LGPP		
		Realizar prácticas cotidianas de adaptación para la producción	Implementar la reforestación con especies nativas.	Incorporar la preservación y restauración de fuentes de agua, en sistemas de producción agrícola, forestal, plantas medicinales y otros.		
		Conformar organizaciones y plataformas para la gestión de cuencas	Impulsar sistemas de crédito con años de gracia.	Promover la reforestación en un 30% con especies melleras y especies nativas.		
				Establecer sistema de información y monitoreo moderno		
				Realizar inventario de funciones ambientales con énfasis en seguridad hídricas		
				Elaborar al menos dos normas técnicas por cada micro región de los valles.		
				Elaborar un PTDI por municipio		

Todas estas recomendaciones se presentan en las actas respectivas.

2. FRAMEWORK OF ACTION

Consent is the right of indigenous peoples and other local communities. It has four characteristics: Give or deny consent to any project that affects their lands, livelihoods, and environment. This consent should be freely given or denied, without coercion, intimidation or manipulation, and through representatives freely chosen by the communities, such as their traditional or other institutions. It should be sought before the project goes ahead, that is, sufficiently in advance of any authorization or start of activities and respect for the time required by the consultation processes with indigenous peoples. They must be informed, which means that communities must have access to and be provided with comprehensive and impartial information about the project, including the nature and purpose of the project, its scale and location, its duration, its reversibility and its scope; all possible economic, social, cultural and environmental impacts, such as the potential risks and benefits resulting from the project, and that the costs and benefits of alternative development options can be considered by the community with other parties who so wish, or be offered by these, with which the community is free to interact.

Regarding consent, the key is the iterative processes of collective consultation, the demonstration of good faith in the negotiations, the transparent dialogue and under mutual respect, the broad and equitable participation, and the free decision of the community to give or deny its consent, which is achieved through their own decision-making mode.

The basis and framework for action to carry out the consultation process is the legal and institutional system of the Plurinational State of Plurinational State of Bolivia, which is positively related to international instruments on indigenous peoples' rights.

First, the point of departure was the reference in Chapter Four. Rights of the nations and rural native indigenous peoples. Art. 30: I. The entire human community shares cultural identity, language, historical tradition, institutions, territoriality and worldview, whose existence is before the Spanish colonial invasion, is a peasant native nation and people. II. Within the framework of the unity of the State and under this Constitution, the nations and rural native indigenous peoples enjoy the following rights: 15. To be consulted through appropriate procedures, and in particular through their institutions, whenever they are foreseen. Legislative or administrative measures are likely to affect them. Within this framework, the right to mandatory prior consultation, carried out by the State, in good faith and concert, regarding exploiting non-renewable natural resources in the territory they inhabit will be respected and guaranteed.

To carry out the consultation process, it was also taken into account:

- a) The Framework Law for Consultation Supreme Decree No. 2298, March 18, 2015, which modifies and complements Supreme Decree No. 29033, of February 16, 2007, Regulation of Consultation and Participation for Hydrocarbon Activities.
- b) Law 1257, on the ratification of Convention 169 of the International Labor Organization (ILO). Art. 6 of the ILO Convention provides that governments must: a) consult the peoples concerned, through appropriate procedures and in particular through their representative institutions, whenever legislative or administrative measures are envisaged that may affect them directly; b) Establish the means through which the peoples concerned may participate freely, at least to the same extent as other sectors of the population, and at all levels in decision-making in elective institutions and administrative and other organizations. Responsible for policies and programs that concern them; c) establish the means for the full development of the institutions and

initiatives of these peoples, and in appropriate cases provide the necessary resources for this purpose. The consultations carried out in application of this Agreement must be carried out in good faith and in a manner appropriate to the circumstances, with the aim of reaching an agreement or obtaining consent on the proposed measures.

Article 15 of Convention 169 establishes that the rights of the peoples concerned to the natural resources existing on their lands must be specially protected. These rights include the right of these peoples to participate in the use, administration and conservation of said resources. In the event that the State owns the minerals or subsoil resources or has rights to other resources existing in the lands, the governments shall establish or maintain procedures with a view to consulting the interested peoples, in order to determine if the interests of those peoples would be harmed.

- c) Law 3897, of June 2008, in which the United Nations Declaration on the Rights of Indigenous Peoples is ratified, which in its Art. 32 says: Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources. The States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent before approving any project that affects their lands or territories and other resources, particularly in relation to the development, use or exploitation of mineral, water or other resources. The States shall establish effective mechanisms for just and equitable reparation for these activities, and adequate measures shall be adopted to mitigate the harmful consequences of an environmental, economic, social, cultural or spiritual nature.
- d) The Indigenous Peoples Policy of the Green Climate Fund (GCF). In its section V. Guiding principles, subsection 22., a), it indicates: Implementation of free, prior and informed consent. The GCF will ensure and require evidence of effective consultation and application of free, prior and informed consent with appropriate procedures, particularly through its representative institutions, provided that GCF-funded activities that affect lands, territories, resources, livelihoods are considered. and cultures of indigenous peoples, or require their relocation, as described in paragraph 7.2. of the aforementioned policy.

In item 32 of the same policy, it is indicated that: Accredited entities will confirm that the measures to implement this Policy, including, as appropriate, free, prior and informed consent, meaningful consultation, disclosure of information, the commitment of the Stakeholders and the resolution of complaints are incorporated into the bidding agreements, documents and contracts with the executing entities. In more detail, the GCF establishes a series of steps to follow in section 7.1.5., Which allows the effective design of GCF-funded activities, fosters local support or buy-in to the project, and reduces the risk of delays. or controversies, the accredited entities will undertake the process of incorporation of indigenous peoples for more operational purposes, the FAO instructions contained in the following documents were also taken into account:

- FAO Policy on Indigenous and Tribal Peoples.
- FAO. 2014. Respecting free, prior and informed consent - Practical guidance for governments, companies, NGOs, indigenous peoples and local communities in relation to land acquisition, Governance of Tenure Technical Guide No. 3.

- Free, prior and informed consent. A right of indigenous peoples and a good practice for local communities. Manual aimed at professionals in the field. FAO, Actionaid, Action Against Hunger, AECID, International Federation of Red Cross Societies, World Vision.

3. Methodology

Each workshop's development was carried out under a general basic program, adapted - to the time, characteristics, and realities of each place. The active participatory methodology has been used, which has allowed and facilitated that the main actors are active protagonists from their reality, experience, uses and customs, and their own experiences. This methodology enriched the sessions' fluidity and progress and the real contribution to the project in question.

Each of the sessions began with welcome words from the host authorities, while the official opening was made by representatives of the Ministry of the Environment and Water, after registering participants.

Regarding the participants, they made a personal presentation, indicating the organization they represent. These descriptions made it possible to create an environment of greater trust and recognition among participants.

On behalf of FILAC, Dennis Mairena provided information on FILAC: Structure, institutional objectives, mission, vision, flagship programs. He explained that the reason for FILAC's cooperation with the MMAA and FAO is to facilitate the methodology for the consultation process. The Indigenous Peoples Policy of the Green Climate Fund (GCF) requires a requirement for any proposal submitted for its financing.

This consultation process mainly refers to local communities and indigenous peoples' right to be consulted, to their free expression, dissent and consensus in each action, project, program initiated by the State or other organizations, who must respect their rights, decisions and voice. He explained that minutes are drawn up, which will be sent to the GCF as documentary evidence and verification of the effective implementation of the consultation process as a result of this process.

For their part, the representatives of the Ministry of Environment and Water (MMAyA) together with Wilson Rocha (FAO Bolivia), made the presentation and explanation of the concept note and logical framework of the program, its background, scope and projections, addressing with a language according to each context, taking into account the technical complexity of the project concept note and the cultural diversity of the participants in each of the workshops, a situation that has facilitated the understanding, analysis and discussion of the document.

Subsequently, worktables were organized by a group of participants. At these tables, the participants have starred in active participation. They reviewed the project based on the facilitator's documentation regarding objectives, goals, components, results, action guidelines and indicators, project managers, and others.

After discussion in groups, the conclusions, observations, proposals and suggestions were plenary for their validation. Each group presentation in plenary was opened to participants in the plenary and had the opportunity to contribute.

Finally, the minutes were drafted and subsequently read in plenary for review, amendment, correction, validation, approval and signature by all and all participants.

4. WORKSHOPS

4.1. SESSION 1. – SOPACHUY

CONTEXTUALIZATION

Sopachuy is the third municipal section of the Tomina province, Department of Chuquisaca. It is located at a distance of 197 kms. from the city of Sucre. It has a great topographic diversity, with a climate that varies from humid to dry. The population of Sopachuy is of Quechua origin and is organized around the agrarian unions, which represent its 23 communities.

Its economy is based on agriculture, whose main crops are corn, potatoes and wheat. The fruit sector is economically important, with peach and apple plantations.

WORKSHOP SPECIFIC CHARACTERISTICS

It was the first workshop, held on April 11, 2019, from 11:30 a.m. to 3:30 p.m., in the Events Room of the Municipal Autonomous Government of Sopachuy, with the participation of Authorities of the Municipality of Sopachuy (mayor, Council Members) and representatives of the Organizations of Indigenous Peasant and Indigenous Peoples, Intercultural and local communities of the municipalities of the Chuquisaca, Association of communities of Centro Tomina, Padilla, Alcalá, Serrano, Sopachuy, Tarvita, Azurduy. Making a total of 33 participants who represented their municipality and / or organization.

The Honorable Mayor of Sopachuy, Mr. José Cáceres, welcomed the participants, and among the most outstanding aspects of his speech, the following is rescued: "I not only participate as an authority, this is temporary, but mainly as a producer, an activity that I continue to perform and will develop forever". Eng. Marina Estrada, representing the Ministry of the Environment and Water, declared the event inaugurated.

The participants, in a consensus decision, carried out the review and analysis of the conceptual proposal of the project in plenary, proposing the following contributions and recommendations:

- a) Support for organic and ecological agricultural production of small producers.
- b) Climate adaptation measures must include mitigating damage from hail and frost, for example the implementation of anti-hail mesh.
- c) The project should focus on food security
- d) The commercialization of agricultural products should be supported
- e) Involve youth and children in educational activities and awareness about climate change.
- f) Involve universities and other centers of higher education, alternative education and others in research processes.
- g) Intensify workshops on the aspect of climate change to increase the resilience of communities.

It should be noted that the majority of the representatives of the Autonomous Municipal Governments are also farmers and their analysis focused on their experience and experience as producers, as well as their interest in universities and other higher study centers to work more closely with municipalities and producers.

Finally, as a token of their agreement, acceptance and validation of the document presented, the participants proceeded to sign the minutes.

Approved Minute:

Certificate of conformity with the consultation process and validity of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia"

Session: SOPACHUY, Municipality of Sopachuy, Chuquisaca Department

In the town of Sopachuy, Municipality of Sopachuy, Department of Chuquisaca, at 11:30 a.m. On Thursday, April 11, 2019, gathered in the event room of the Municipality of Sopachuy, the representatives of the organizations of Indigenous Peoples, Indigenous Peasant Intercultural and local Communities of the municipalities of the Community of Chuquisaca Centro, according to the attached list (Annex 1) to this act, where personal data are registered as well as representatives of the Ministry of the Environment and Water (responsible for the Chuquisaca Decentralized Unit), representatives of producer associations, municipal authorities; Food and Agriculture Organization of the United Nations - FAO, to record the following:

FIRST: Mr. José Cáceres, Mayor of Sopachuy, welcomes the participants and announces the objective of the session for the participation of Indigenous Peoples, Indigenous Peoples, Intercultural Smallholders and Local Communities in the design of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia".

This was followed by the presentation and approval of the agenda.

SECOND: The development of the agenda continues so that participants are involved in the elaboration of the rules of coexistence for the development of the event, with the support of the responsible facilitator in the conduct of the program; As a core part of the session, Wilson Rocha (FAO) presents the current situation and future scenario of the effects of climate change in the region and its consequences mainly in the municipalities that have been referred to. Then, the proposal for the concept note and the logical framework are presented through which ideas are proposed to face the effects of climate change in the area.

THIRD: After the aforementioned thematic presentations, the participants asked several questions to deepen their knowledge of the ideas proposed by the speakers. There is an exchange between participants and staff from the Ministry of Environment and Water and FAO, only to clarify the information provided, stating that the objective, results, action guidelines, goals and activities are the product of participatory sessions held prior to this meeting and they match the needs of the region.

FOURTH: the facilitator reiterates the objectives, results and components of the project proposal presented; This generated a series of comments, observations, and proposals on the main points of the presentation made about the project. The participants propose and specify their own vision of the problem and the solution options that they have taken throughout their experience and that they recommend to

be included in the project. Once the contributions were completed, they were collected in short texts, related by objectives and explained in plenary by means of a speaker.

FIFTH: Based on the participatory methodology developed with the participants, contributions are obtained to be included in the project design, on the problem of climate change at the local level and the possible solutions proposed by the same actors.

The main recommendations of the participants were:

- a) Support for organic and ecological agricultural production of small producers.*
- b) Climate adaptation measures should include mitigation of damage from hail and frost, for example with the implementation of anti-hail nets.*
- c) The project should focus on food security.*
- d) The commercialization of agricultural products must be supported.*
- e) Involve young people and children in educational and awareness-raising activities on climate change.*
- f) Involve universities and other higher education educational entities in research processes, as well as alternative education centers, among others.*
- g) Intensify workshops on aspects of climate change to increase the resilience of communities.*

At that time, the participants expressed their interest and agreement to participate in the implementation, monitoring and evaluation of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia".

SIXTH: It is recognized in plenary session that the native indigenous peoples, intercultural smallholders and local communities have the right to object to any disagreement throughout the project cycle.

SEVENTH: This meeting ends at the same place and date, at 3:30 p.m., after the Minutes have been read and reviewed in plenary session, which was approved by the participants, who accept and sign at the bottom stating its validity and effective compliance for the implementation of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia".

ACTA DE CONFORMIDAD DE PROCESO DE CONSULTA Y VALIDEZ DEL PROYECTO
"Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia"

SESIÓN: En la localidad de SOPACHUY, Municipio Sopachuy, Departamento Chuquisaca

En la localidad de Sopachuy, Municipio Sopachuy, Departamento de Chuquisaca, siendo horas 11:30 a.m. del día jueves 11 de abril del año dos mil diecinueve, reunidos en salón de eventos de la Municipalidad de Sopachuy, los representantes de las organizaciones de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales de los municipios de la Mancomunidad de Chuquisaca Centro, según listado adjunto (Anexo 1) a la presente acta, en donde se encuentran registrados sus datos personales; como también representantes del Ministerio de Medio Ambiente y Agua (Responsable de la Unidad Desconcentrada Chuquisaca), representantes de asociaciones de productores, autoridades municipales; Organización de las Naciones Unidas Para la Alimentación y Agricultura – FAO, para dejar constancia de lo siguiente:

PRIMERO: El señor José Cáceres, Alcalde de Sopachuy, da la bienvenida a los participantes y da a conocer el objetivo de la Sesión de participación de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales en el diseño del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macro Región Valles de Bolivia".

Seguidamente se procede a la presentación y aprobación de la agenda.

SEGUNDO: Se continua con el desarrollo de la agenda por lo que los participantes se involucran en la elaboración de las normas de convivencia para el desarrollo del evento, con el apoyo del facilitador responsable en la conducción del programa; como parte medular de la sesión, Wilson Rocha (FAO) presenta la situación actual y escenario futuro de los efectos del cambio climático en la Macroregión Valles de Bolivia y sus consecuencias principalmente en los municipios que se ha hecho referencia. Luego se procede a presentar la propuesta de nota conceptual y el marco lógico a través de la cual se proponen ideas para enfrentar los efectos del cambio climático en la zona.

TERCERO: Después de las referidas presentaciones temáticas, las y los participantes realizan varias preguntas, para profundizar sus conocimientos sobre las ideas propuestas por parte de los expositores. Se produce intercambio entre participantes y personal del Ministerio de Medio Ambiente y Agua y FAO, únicamente para aclarar la información proporcionada, manifestando que el objetivo, resultados, lineamientos de acción, metas y actividades son

[illegible]


 Sr. Efraim Baptista Saavedra
 CONCEJAL
 G.A.M. VILLA ALCAZAR


 Sr. Julianna Paredes Rodriguez
 CONCEJAL DEL G.A.M. SOPACHUY


 Sr. Nemesio Flores
 PRESIDENTE DEL CONCEJO
 G.A.M. SOPACHUY


 Sr. Edmundo Soliz Rodas
 SECRETARIO DEL CONCEJO
 MUNICIPAL DE PADILLA


 Sr. Catalina Velazquez Torres
 VICE-PRESIDENTE DEL CONCEJO
 G.A.M. SOPACHUY


 Sr. Gertrudis Padilla Naves
 CONCEJAL
 G.A.M. SOPACHUY


 Sr. Marco A. Solis R.
 ASesor JURIDICO
 AMBUSH


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4.2. SESSION 2: SUCRE

CONTEXTUALIZATION

The municipality of Sucre is located in the Oropeza Province of the Department of Chuquisaca, has an area of 1,876.91 square kilometers and is part of the geomorphological unit called "Eastern Andean Cordillera". With a predominance of hills and mountains and reduced flat surfaces suitable for cultivation, located in the northern part of the section and on river terraces. The dominant climate is temperate sub-humid, with an average annual temperature of 15°C and an average maximum of 22°C and a minimum average of 1.9°C.

SPECIFIC CHARACTERISTICS OF THE WORKSHOP

The second workshop took place on April 12, two thousand and nineteen, of Hrs. 10.00 to 15.30 in the room of the Secretary of the Environment and Mother Earth of the Government of Chuquisaca GADCH, with the participation of Authorities, representatives of the Producers Association, the National Executive Secretary of the National Confederation of Indigenous Peasant Women of Plurinational State of Bolivia "Bartolina Sisa", representatives of organizations, institutions related to the subject of Natural Resources, Water and Production. Making a total of 31 participants.

The welcome and inauguration of the workshop was in charge of Ing. Wenceslao Torrez Director of Watersheds and Water Resources of the Autonomous Government of the Department of Chuquisaca, and Mrs. Segundina Flores, National Executive Secretary CNMCIQB "Bartolina Sisa".

After the personal presentations of each of the participants, as well as the participation of the FILAC and FAO facilitators, the participants review, analyze and discuss through four work tables, whose recommendations, amendments and contributions are the following:

GROUP 1

SUSTAINABLE PRODUCTIVE SYSTEMS

- a) Change the term rain for precipitation in vulnerable areas
- b) Handle the term "fruit trees" as a general denominative when it refers to citrus, vine and others.
- c) Quantify in hectares the implementation of anti-hail nets.

GROUP 2

MODERNIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) In the first guideline, incorporate the following "considering the type of crop."
- b) Strengthening capacities in irrigation systems issues at different levels: Universities, schools, technicians and other instances.

GROUP 3

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR ADAPTATION TO CLIMATE CHANGE

- a) Articulate the actors involved in the project implementation process.
- b) Focus actions by strategic basin for the implementation of local water use plans
- c) Review the area in hectares of afforestation and reforestation in the headwaters of the basin.

GROUP 4

STRENGTHENING INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) Implement quality and quantity monitoring equipment for water and climate quality and quantity.
- b) Implement community information and communication networks to respond promptly in times of disaster due to climate change effects.
- c) Implement financial mechanisms to have accessible credits for producers.
- d) Develop awareness and education programs on climate change, efficient use of water and soils, as well as natural resource management.

Approved Minute:

ACT OF CONFORMITY OF THE PROCESS OF CONSULTATION AND VALIDITY OF THE PROJECT "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia"

SESSION: SUCRE, Department of Chuquisaca

In the City of Sucre, Department of Chuquisaca, at 10:00 a.m. on Friday, April 12, 2019, meeting in the Hall of the Secretary of the Environment and Mother Earth of the GADCH, the authorities, representatives of the institutions, organizations related to the subject of natural resources, water and production of the department of Chuquisaca, according to the attached list (Annex 1) to the present minutes, where the personal data are registered; as well as representatives of Producers Associations, the National Executive Secretariat of the National Confederation of Indigenous Peasant Women of Plurinational State of Bolivia "Bartolina Sisa", the United Nations Organization for Food and Agriculture - FAO, record the following:

FIRST: Eng. Wenceslao Torrez Espada, Director of Watersheds and Water Resources of the Autonomous Departmental Government of Chuquisaca and Segundina Flores, National Executive Secretary CNMCIOB "Bartolina Sisa", welcomed the participants and made known the objective of the participation of State officials and representatives of Intercultural Peasant Indigenous Peoples and Local Communities in the design of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia".

This is followed by the personal presentation of the participants and approval of the agenda.

SECOND: As a core part of the session, Marina Estrada, from the Vice Ministry of Water Resources and Wilson Rocha (FAO), present the current situation and future scenario of the effects of climate change in

the Macroregion Valleys of Plurinational State of Bolivia and its consequences, mainly in the municipalities in the project intervention area. Then, the proposal for the concept note and the logical framework are presented through which ideas are proposed to face the effects of climate change in the area.

THIRD: After the thematic presentations, we proceed to the formation of four groups for the reading, analysis and proposal of the project concept note, as well as the exchange between participants and personnel of the Ministry of Environment and Water, and FAO, only to clarify the information provided, stating that the objective, results, guidelines for action, goals and activities are the product of participatory sessions held prior to this meeting and coincide with the needs of the region.

FOURTH: The participants work in groups, propose and specify their own vision of the problem and the solution options that they have made throughout their experience and that they recommend to be included in the project. Once the contributions were finalized, these were collected in short texts, related by results and presented in plenary by means of a speaker.

FIFTH: Based on the participatory methodology developed with the participants, contributions are obtained to be included in the design of the project on the problem of climate change at the local level and the possible solutions proposed by the actors themselves.

The main recommendations of the participants were:

GROUP 1: SUSTAINABLE PRODUCTIVE SYSTEMS

- a) Change the term rain for precipitation in vulnerable areas.*
- b) Handle the term "fruit trees" as a general name when it refers to citrus, vine and others.*
- c) Quantify in hectares the implementation of anti-hail nets.*

GROUP 2: MODERNIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) In the first guideline, incorporate the following: "considering the type of crop".*
- b) Strengthening thematic capacities of irrigation systems at different levels: universities, technical schools and other instances.*

GROUP 3: PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR THE ADAPTATION TO CLIMATE CHANGE

- a) Articulate the actors involved in the project implementation process.*
- b) Focus actions by strategic basin for the implementation of local water use plans.*
- c) review the area of hectares of afforestation and reforestation in the headwaters of the basins.*

GROUP 4: STRENGTHENING INSTITUTIONAL AND COMMUNITY CAPACITIES.

- a) Implement monitoring equipment for water quality and quantity, and climate.*
- b) Implement community information and communication networks to respond in a timely manner in times of disaster due to climate change effects.*
- c) Implement financial mechanisms to have accessible credits for producers.*

d) Develop awareness and education programs on climate change, efficient use of water and soils, as well as management of natural resources.

The participants expressed in plenary their interest and agreement to participate in the implementation, monitoring and evaluation of the project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

SIXTH: It is recognized in plenary session that indigenous peoples, native, intercultural smallholders and local communities have the right to object to any disagreement throughout the project cycle.

SEVENTH: This meeting ends at the same place and date, at 4:30 p.m., after having read and reviewed the minutes in plenary, which was approved by the participants, who accept and sign at the bottom stating its validity and fulfillment effect for the implementation of the project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

ACTA DE CONFORMIDAD DEL PROCESO DE CONSULTA Y VALIDEZ DEL PROYECTO

"Preservación y Restauración de Funciones Ambientales Para la Adaptación al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia"

SESIÓN: SUCRE, Departamento Chuquisaca

En la Ciudad de Sucre, Departamento de Chuquisaca, a horas 10:00 a.m. del día viernes 12 de abril del año dos mil diecinueve, reunidos en el Salón de la Secretaria de Medio Ambiente y Madre Tierra del GADCH, las Autoridades, representantes de las instituciones, organizaciones afines a la temática de Recursos Naturales, Agua y Producción del Departamento de Chuquisaca según listado adjunto (Anexo 1) a la presente acta, en donde se encuentran registrados sus datos personales; como también representantes del Ministerio de Medio Ambiente y Agua (Responsable de la Unidad Desconcentrada Chuquisaca), representantes de Asociaciones de Productores, la Secretaria Ejecutiva Nacional de la Confederación Nacional de Mujeres Campesinas Indígenas Originarias de Bolivia "Bartolina Sisa", la Organización de las Naciones Unidas Para la Alimentación y Agricultura – FAO, para dejar constancia de lo siguiente:

PRIMERO: El Ing. Wenceslao Torrez Espada, Director de Cuencas y Recursos Hídricos del Gobierno Autónomo Departamental de Chuquisaca y Segundina Flores Secretaria Ejecutiva Nacional CNMCIOB "Bartolina Sisa" dan la bienvenida a los participantes y dan a conocer el objetivo de la participación de funcionarios del Estado y representantes de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales en el diseño del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

Seguidamente se procede a la presentación personal de los participantes y aprobación de la agenda.

SEGUNDO: Como parte medular de la sesión, Marina Estrada del Viceministerio de Recursos Hídricos y Wilson Rocha (FAO) presentan la situación actual y escenario futuro de los efectos del cambio climático en la Macroregión Valles de Bolivia y sus consecuencias principalmente en los municipios del área de intervención del Proyecto.

Luego se procede a presentar la propuesta de nota conceptual y el marco lógico a través de la cual se proponen ideas para enfrentar los efectos del cambio climático en la zona.

TERCERO: Después de las referidas presentaciones temáticas, se procede a la conformación de cuatro grupos para la lectura, análisis y propuesta de la nota conceptual del proyecto, así como del intercambio entre participantes y personal del Ministerio de Medio Ambiente y Agua y FAO, únicamente para aclarar la información proporcionada, manifestando que el objetivo, resultados, lineamientos de acción, metas y actividades son producto de sesiones participativas realizadas con anterioridad a esta reunión y coinciden con las necesidades de la región.

CUARTO: Los participantes trabajan en grupos, plantean y precisan su propia visión de la problemática y las opciones de solución que ellos han tomado a lo largo de su experiencia y que recomiendan ser incluidas en el proyecto. Finalizado los aportes, estos se recogieron en textos cortos, relacionándolos por resultados y se exponen en plenaria por medio de un expositor.

QUINTO: Basándose en la metodología participativa desarrollada con las y los participantes, se obtienen los aportes para ser incluidos en el diseño del referido proyecto sobre la problemática del cambio climático a nivel local y las posibles soluciones planteadas por los mismos actores.

Las principales recomendaciones de los participantes son:

GRUPO 1. COMPONENTE SISTEMAS PRODUCTIVOS SUSTENTABLES

- a) Cambiar el término *lluvias* por precipitaciones en zonas vulnerables
- b) Manejar el término "*frutales*" como denominativo general cuando se refiere a cítricos, vid y otros.
- c) Cuantificar en hectáreas la implementación de mallas antigranizo

GRUPO 2. COMPONENTE SISTEMA DE RIEGO REVITALIZADOS Y RESILIENTES AL CAMBIO CLIMATICO.

- a) En el primer lineamiento incorporar lo siguiente "considerando el tipo de cultivo".
- b) Fortalecimiento de capacidades en temáticas de sistemas de riego en diferentes niveles: universidades, escuelas técnicas y otras instancias.

GRUPO 3. COMPONENTE PRESERVACIÓN Y RESTAURACIÓN DE FUNCIONES AMBIENTALES PARA LA ADAPTACION AL CAMBIO CLIMATICO.

Ing. Mariana Estrada Rojas
COORDINADORA UNIDAD
DESARROLLO COMUNITARIO, ASISTENTE
SOCIAL, ASISTENTE TECNICO
MINISTERIO DE MEDIO AMBIENTE Y AGUA

Segundina Flores Solamayo
SECRETARIA EJECUTIVA
CNMCIOTB - BS

CNMCIOTB - BS
SECRETARIA EJECUTIVA
SECRETARIA DE SALUD
MARTHA AGUIAR LÓPEZ

Ing. María Salinas Mancilla
COORDINADORA DE PROYECTOS
D.C.R.H.

Ing. María Salinas Mancilla
COORDINADORA DE PROYECTOS
D.C.R.H.

- Articular a los actores involucrados en el proceso de implementación del proyecto.
- Focalizar acciones por cuenca estratégica para la implementación de planes de aprovechamiento hídrico local.
- Revisar la superficie en hectáreas de forestación y reforestación en cabeceras de cuenca.

GRUPO 4. COMPONENTE FORTALECIMIENTO DE CAPACIDADES INSTITUCIONALES Y COMUNITARIAS.

- Implementar equipos de monitoreo de calidad y cantidad de agua, y clima.
- Implementar redes de información comunal y comunicación para responder oportunamente en los momentos de desastre por efectos del cambio climático.
- Implementar mecanismos financieros para contar con créditos accesibles para los productores.
- Desarrollar programas de sensibilización y educación sobre cambio climático, uso eficiente de agua y suelos, así como gestión de recursos naturales.

En ese momento, los participantes manifiestan en plenaria su interés y acuerdo en participar en la implementación, seguimiento y evaluación del proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

SEXTO: Se reconoce en plenaria que los pueblos indígena originario campesino interculturales y comunidades locales, tienen derecho de objetar cualquier inconformidad a lo largo del ciclo del proyecto.

SEPTIMO: Se finaliza la presente reunión en el mismo lugar y fecha, a las 16:30 horas, después de haber sido leída y revisada en plenaria el Acta, la cual fue aprobada por las y los participantes quienes aceptan y firman al pie manifestando su validez y cumplimiento efectivo para la implementación del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

Mauricio Villalaz
PROCESO - GIZ

M. Teresa Borda A.
Asoc. Sacrense de Ecología

Guanda Barrón
KUPUOS

Jorge Antonio T.
Aseso a la Mujer Marginada

Tec. V. H. R. / V. H. R. / V. H. R.

Román García
V. H. R. / V. H. R. / V. H. R.

V. H. R. / V. H. R. / V. H. R.

V. H. R. / V. H. R. / V. H. R.



Ing. María Salinas Mancilla
COORDINADORA DE PROYECTOS
D.C.R.H.



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4.3. SESSION 3: POTOSÍ

CONTEXTUALIZATION

The municipality of Potosí is located in the Southern Altiplano surrounded by mountains and the Kari Mountain Range. Its climate is cold, with temperatures ranging between -2 ° and 20 ° C. The most important summit is Cerro Rico de Potosí, at 4,800 m.a.s.l. Its surrounding rivers are the Huayna Mayu and La Ribera, tributaries of Tarapaya and the Pilcomayo, which are highly contaminated by residues from mining-metallurgical activity. In the Municipality there are approximately 34 lagoons that serve as drinking water reservoirs for the city, in addition to the Tarapaya hot springs lagoon.

The population is of Quechua origin, of which 90% is concentrated in the city of Potosí.

WORKSHOP SPECIFIC CHARACTERISTICS

The third workshop was held in the city of Potosí on April 15, 2019, beginning at 10:15 am and ending at 3:00 pm, at the facilities of the Association of Municipalities of the Department of Potosí (AMDEPO), with the participation of local authorities, representatives of the Chichas Community, institutions and organizations related to the subject of Natural Resources, Water and Production.

The event was welcomed by Dr. Betzabe Saavedra Estrada, Executive Director of the Association of Municipalities of the Department of Potosí AMDEPO, and the inauguration by Ing. Marina Estrada, representative of the Ministry of Environment and Water, with a total of 16 participants.

The participants carried out the review, analysis and made suggestions in two work tables, which they put into consideration in plenary, whose results are the following:

SUSTAINABLE PRODUCTIVE SYSTEMS

- a) Improve early warning systems for agricultural production articulated to municipalities and governments for the benefit of local producers.
- b) Provide permanent technical assistance in operation and maintenance of risk management equipment.
- c) Manage institutionalized organic certification processes for the commercialization of seedlings, fruit trees and products with high commercial value.
- d) Promote institutional agreements for the certification of seedlings.

REVITALIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Revitalization and modernization of irrigation systems by the Autonomous Municipal Governments.
- b) Develop capacities for the management of irrigation systems.
- c) Incorporate exchange of experiences in successful places.

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR THE ADAPTATION TO CLIMATE CHANGE

- a) Carry out inventories and characterization of water sources, framed in Law 2878 (Irrigation Law).
- b) Promote afforestation and mechanical practices for the preservation and restoration of water sources. Quantify the number of infiltration ditches and stone dikes that should be implemented based on the Project's diagnosis.
- c) Preserve at least 1952 hectares of Andean wetlands within the framework of Law 404 on Wetlands and Andean Wetlands.

STRENGTHENING OF INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) Strengthen and expand basin master plans to respond to community concerns regarding water contamination.
- b) To influence in a general way the technical norms so that they are applicable in all forms of territorial organization (TIOC, TCO and others).
- c) Carry out and promote daily practices of adaptation to climate change for food production.
- d) To form organizations and platforms for the management of basins by communities to improve the efficient use of water. One of the characteristics observed in the analysis and discussion at the work tables was the concern over water contamination by existing cooperatives and companies, leaving the entire population of Potosí at risk. Another characteristic was the presence of professionals related to the subject that allowed an eminently technical approach in the analysis and discussion.

Approved Minute:

CONFORMITY ACT OF THE PROCESS OF CONSULTATION AND VALIDITY

OF THE PROJECT "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia"

SESSION: POTOSI, Department of Potosí

In the City of Potosí, Department of Potosí, at 10:15 a.m. on Monday, April 15, 2019, gathered at the facilities of the Association of Municipalities of Potosí - AMDEPO, local authorities, representatives of municipal governments, Government of the Department of Potosí, representatives of the Community of Municipalities of Los Chichas, organizations related to the subject of natural resources, water and production of the Department of Potosí, according to the attached list (annex 1) to this act, where their data are registered personal; As well as representatives of the Ministry of the Environment and Water, the Food and Agriculture Organization of the United Nations - FAO, to record the following:

FIRST: Dr. Betzabe Saavedra Estrada, Executive Director of the Association of Municipalities of Potosí - AMDEPO, welcomes the participants and to learn about the objective of the participation of state officials and representatives of Indigenous Peoples, Indigenous Peasant Intercultural and Local Communities in the design of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia".

This is followed by the personal presentation of the participants and the approval of the agenda.

SECOND: As a core part of the session, Marina Estrada from the Vice Ministry of Water Resources Wilson Rocha (FAO) presented the current situation and future scenario of the effects of climate change in the Macroregion Valleys of Plurinational State of Bolivia and its consequences mainly in the municipalities of the area of intervention of the Project. Then he agrees to present the proposal for a concept note and the logical framework through which ideas are proposed to face the effects of climate change in the area.

THIRD: After the aforementioned thematic presentations, proceed to the formation of two groups for the reading, analysis and proposal of the project concept note, as well as the exchange between participants and staff of the Ministry of Environment and Water, and FAO, Only to clarify the information provided, stating that the objective, results, action guidelines, mints and activities are the result of participatory sessions held prior to this meeting and coincide with the needs of the region.

FOURTH: The participants work in groups, propose and specify their own vision of the problem and the solution options that they have made throughout their experience and that they recommend to be included in the project. At the end of the contributions, they are collected by results and presented in plenary by means of a speaker.

FIFTH: Based on the participatory methodology developed with the participants, the contributions are obtained to be included in the design of the project on the problem of climate change at the local level and the possible solutions proposed by the actors themselves.

The main recommendations were:

SUSTAINABLE PRODUCTIVE SYSTEMS

- a) Improve early warning systems for agricultural production articulated to unities and governments for the benefit of local producers.*
- b) Provide permanent technical assistance in operation and maintenance of risk management equipment.*
- c) Manage institutionalized organic certification processes for the commercialization of fruit seedlings and products with high commercial value.*
- d) Promote institutional agreements for the certification of seedlings.*

MODERNIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Revitalization, modernization of irrigation systems by the Municipal Autonomous Government.*
- b) Develop capacities for the management of irrigation systems.*
- c) Incorporate exchange of experiences in successful places.*

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR THE ADAPTATION TO CLIMATE CHANGE

- a) Carry out inventories and characterization of water sources, framed in Law 2878 (Irrigation Law).*
- b) Promote afforestation, reforestation and mechanical practices for the preservation and restoration of water sources. Quantify the number of infiltration ditches and stone dikes that should be implemented based on the project diagnosis.*

- c) *Conserve at least 1952 hectares of wetlands (Andean wetlands) within the framework of Law 404 of Andean Wetlands.*

STRENGTHENING INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) *Strengthen and expand the basin master plans to respond to community concerns regarding water contamination.*
- b) *To influence in a general way the technical norms so that they have their applicability in all forms of territorial organization (TIOC, TCO and others).*
- c) *Carry out and promote daily practices of Adaptation to climate change for food production.*
- d) *To form organizations and platforms for the management of basins by communities for the efficient use of water.*

The participants expressed in plenary their interest and agreement to participate in the implementation, monitoring and evaluation of the project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

SIXTH: It is recognized in plenary session that the native indigenous peoples, intercultural smallholders and local communities have the right to object to any disagreement throughout the project cycle.

SEVENTH: The present meeting ends in the same place and on the same date, at 3:00 p.m., after the minutes have been read and reviewed in plenary, which was approved by the participants who accept and sign below, stating its validity and effective compliance for the implementation of the project.

ACTA DE CONFORMIDAD DEL PROCESO DE CONSULTA Y VALIDEZ DEL PROYECTO “Preservación y Restauración de Funciones Ambientales Para la Adaptación al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia”

SESIÓN: POTOSÍ, Departamento Potosí

En la Ciudad de Potosí, Departamento de Potosí, a horas 10:15 a.m. del día lunes 15 de abril del año dos mil diecinueve, reunidos en las instalaciones de la Asociación de Municipalidades de Potosí - AMDEPO, las autoridades locales, representantes de gobiernos municipales, Gobernación del Departamento de Potosí, representantes de la Mancomunidad de Municipios de los Chichas, organizaciones afines a la temática de Recursos Naturales, Agua y Producción del Departamento de Potosí según listado adjunto (Anexo 1) a la presente acta, en donde se encuentran registrados sus datos personales; como también representantes del Ministerio de Medio Ambiente y Agua, la Organización de las Naciones Unidas Para la Alimentación y Agricultura – FAO, para dejar constancia de lo siguiente:

PRIMERO: La Doctora Betzabe Saavedra Estrada, Directora Ejecutiva de la Asociación de Municipalidades de Potosí - AMDEPO, da la bienvenida a los participantes y da a conocer el objetivo de la participación de funcionarios del Estado y representantes de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales en el diseño del Proyecto “Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia”.

Seguidamente se procede a la presentación personal de los participantes y aprobación de la agenda.

SEGUNDO: Como parte medular de la sesión, Marina Estrada del Viceministerio de Recursos Hídricos y Wilson Rocha (FAO) presentan la situación actual y escenario futuro de los efectos del cambio climático en la Macroregión Valles de Bolivia y sus consecuencias principalmente en los municipios del área de intervención del Proyecto. Luego se procede a presentar la propuesta de nota conceptual y el marco lógico a través

CUARTO: Los participantes trabajan en grupos, plantean y precisan su propia visión de la problemática y las opciones de solución que ellos han tomado a lo largo de su experiencia y que recomiendan ser incluidas en el proyecto. Finalizado los aportes, estos se recogieron por resultados y se exponen en plenaria por medio de un expositor.

QUINTO: Basándose en la metodología participativa desarrollada con las y los participantes, se obtienen los aportes para ser incluidos en el diseño del referido proyecto sobre la problemática del cambio climático a nivel local y las posibles soluciones planteadas por los mismos actores.

Las principales recomendaciones por componente son:

COMPONENTE SISTEMAS PRODUCTIVOS SUSTENTABLES

- a) Mejorar los sistemas de alerta temprano para la producción agropecuaria articulada a municipios y gobernaciones para el beneficio de los productores locales.
- b) Brindar asistencia técnica permanente en operación y mantenimiento de equipamiento en gestión de riesgos.
- c) Gestionar procesos de certificación orgánica institucionalizada para la comercialización de plantines frutales y productos con alto valor comercial.
- d) Promover convenios institucionales para la certificación de plantines.

COMPONENTE SISTEMA DE RIEGO REVITALIZADOS Y RESILIENTES AL CAMBIO CLIMATICO.

- a) Revitalizar, tecnificar sistemas de riego por Gobierno Autónomo Municipal
- b) Desarrollar capacidades para la gestión de sistemas de riego
- c) Incorporar intercambio de experiencias en lugares exitosos

COMPONENTE PRESERVACIÓN Y RESTAURACIÓN DE FUNCIONES AMBIENTALES PARA LA ADAPTACION AL CAMBIO CLIMATICO.

- a) Realizar inventarios y caracterización de fuentes de agua, enmarcados en la Ley 2878 (Ley de Riego)
- b) Promover la forestación, reforestación y prácticas mecánicas para la preservación y restauración de fuentes de agua. Cuantificar en función del diagnóstico del Proyecto la cantidad de zanjas de infiltración y diques de piedra que se deberían implementar.
- c) Conservar al menos 1952 hectáreas de bofedales en el marco de la Ley 404 de Bofedales y Humedales.

COMPONENTE FORTALECIMIENTO DE CAPACIDADES INSTITUCIONALES Y COMUNITARIAS.

- a) Fortalecer y ampliar los planes directores de cuenca para responder a preocupaciones de las comunidades referentes a la contaminación del agua.
- b) Incidir de manera general en las normas técnicas para que tengan su aplicabilidad en toda forma de organización territorial (TIOC, TCO y otras).

- c) Realizar y promover prácticas cotidianas de Adaptación al Cambio Climático para la producción de alimentos.
- d) Conformar organizaciones y plataformas para la gestión de cuencas por comunidades para mejorar el uso eficiente del agua.

En ese momento, los participantes manifiestan en plenaria su interés y acuerdo en participar en la implementación, seguimiento y evaluación del proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

SEXTO: Se reconoce en plenaria que los pueblos indígena originario campesino interculturales y comunidades locales, tienen derecho de objetar cualquier inconformidad a lo largo del ciclo del proyecto.

SEPTIMO: Se finaliza la presente reunión en el mismo lugar y fecha, a las 15:00 horas, después de haber sido leída y revisada en plenaria el Acta, la cual fue aprobada por las y los participantes quienes aceptan y firman al pie manifestando su validez y cumplimiento efectivo para la implementación del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

En conformidad firman al pie de la presente.

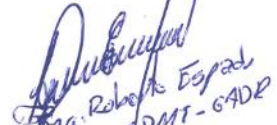

 Víctor Canspe Escaray
 RESPONSABLE DE REGISTRO
 SEDERI - POTOSÍ

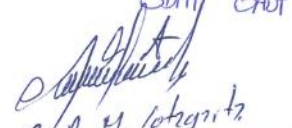

 Ing. Víctor Hugo Chocoma Llanos
 GERENTE
 MANCOMUNIDAD DE MUNICIPIOS
 DE LOS CHICHAS


 Ing. Mariana Estrada Rojas
 COORDINADORA UNIDAD
 DESCONCENTRADA CHICHAS - UNO
 DE REDUCCION DE RIESGOS
 DE DESASTRES


 Ing. Tania Jerez
 S DMT - GADP.


 Ing. Gaby Janco Ll.
 S DMT - GADP


 Ing. Roberto Espada
 G.A. - S DMT - GADP


 G. A. M. Lotegrits
 Ing. Alberto Lotegrits


 Ing. Lidy Villanueva
 RES. FORTALECIMIENTO DE
 CAPACIDADES - BOMDEPO
 ASOCIACION DE MUNICIPIOS DE POTOSÍ



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4.4.SESSION 4: CAMARGO

CONTEXTUALIZATION

Camargo is the first section of the Nor Cinti province, Department of Chuquisaca. The section capital is 351 km away. from the city of Sucre, 190 km. from Tarija and 190 km. from Potosí. More than half of the 76 communities in the Municipality have road access. It has two differentiated ecological floors, the head of the valley and the valley with an altitude that ranges from 2,700 to 2,200 meters above sea level. The communities located on the banks of its main rivers, Camargo and La Palca, have a temperate to warm climate. The form of organization is the agrarian union.

WORKSHOP SPECIFIC CHARACTERISTICS

On April 16, 2019, from 10:00 a.m. to 3:30 p.m., the fourth workshop was held, in the Ex-Prefectural Hall, with the participation of local authorities, representative of the Single Trade Union Federation of Indigenous Peasant Women, "Bartolina Sisa" from Nor y Sud Cinti, Association of Producers "Nor y Sud Cinti", representatives of the Organizations of Indigenous Peoples Indigenous Peasant Intercultural, as well as representatives of local communities of the Municipalities of Camargo, San Lucas, Villa Charcas and Culpina.

Eng. Sandra Llanos, as Director of Productive Development of the Autonomous Municipal Government of Camargo, offers a welcome to all the participants, Eng. Marina Estrada on behalf of the Ministry of Environment and Water declared the event inaugurated, with 21 participants.

The project concept note document is reviewed in four working groups and in plenary, whose contributions and recommendations are as follows:

GROUP 1: SUSTAINABLE PRODUCTIVE SYSTEMS

- a) Prioritize the construction of dams, shortcuts, reservoirs.
- b) Promote and implement technical irrigation: dripping, sprinkling, technical assistance for community irrigation.
- c) Provide technical assistance to the agricultural production of tubers, fruit trees, vegetables, among others.
- d) Promote industrialization and commercialization in collection and transformation centers of the products generated.

GROUP 2: REVITALIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Carry out an inventory of all irrigation systems for the qualification and good water management.
- b) Increase the construction of community reservoirs.
- c) Revitalization, modernization of all irrigation systems throughout the municipality according to the area destined for production.
- d) Promote training that must be at a theoretical and practical level.
- e) Place the information and monitoring system to be aware of the changes that are happening.
- f) Differentiate irrigation according to land and production.

GROUP 3: PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR THE ADAPTATION TO CLIMATE CHANGE

- a) Implement technical irrigation reservoirs and dams.
- b) Carry out reforestation activities with native EJE species: Churquis, molles.

GROUP 4: STRENGTHENING INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) Promote the monitoring of agricultural risks by the municipality.
- b) Provide technical assistance to the 63 municipalities in the PTDI design.
- c) Implement agrometeorological stations.
- d) Develop productive loans with a 5-year grace period.

During the plenary session, the call for reflection of one of the participants is rescued, which I express verbatim. "In many countries there are shortages of water and its use must be paid for and we are not aware of that, so we do not take care of this resource, we waste it inconsiderately. On the other hand, we the Cintis produce jams of all kinds, we have a lot of experience, but we do not have the necessary resources to become technologically advanced; climate change is due to large countries that seek their benefits at the expense of poor countries who are hurting us, it is also important to reflect on these points "...

Approved Minute:

CONFORMITY ACT OF THE PROCESS OF CONSULTATION AND VALIDITY

OF THE PROJECT "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia"

SESSION: CAMARGO, Department of Chuquisaca

In the Municipality of Camargo, Department of Chuquisaca, at 10:00 a.m. on Tuesday, April 16, 2019, meeting in the former Prefectural room, the attending authorities, the Unique Trade Union Federation of Indigenous Peasant Women "Bartolina Sisa" from Nor y Sud Cinti, Producers Associations "Nor y Sud Cinti", the representatives of the Organizations of Indigenous Peoples, Indigenous Peasant Intercultural and local Communities of the municipalities of Camargo, San Lucas, Villas Charcas and Culpina (according to the attached list (Annex 1) to this act, where personal data are registered; as well as representatives of the Ministry of Environment and Water (Head of the Chuquisaca Decentralized Unit), the United Nations Food and Agriculture Organization - FAO, to record of the following:

FIRST: Eng. Sandra Llanos, Director of Productive Development of the Municipal Autonomous Government of Camargo, welcomes the participants and makes known the objective of the participation of state officials and representatives of Intercultural Peasant Indigenous Peoples and local communities in the design of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia". This is followed by the personal presentation of the participants and the approval of the agenda.

SECOND: As a modular part of the session, Eng. Marina Estrada from the Vice Ministry of Water Resources Wilson Rocha (FAO) presented the current situation and future scenario of the effects of climate change in the Macroregion Valleys of Plurinational State of Bolivia and its consequences, mainly in the municipalities in the project intervention area. Then we proceed to present the proposal for a concept note and the logical framework through which ideas are proposed to face the effects of climate change in the area.

THIRD: After the thematic presentations, we proceed to the formation of four groups to read, analyze and propose the concept note of the project, as well as the exchange between participants and personnel of the Ministry of Environment and Water and FAO, only to clarify the information provided, stating that the objective, results, action guidelines, goals and activities are the product of participatory sessions held prior to this meeting and coincide with the needs of the region.

FOURTH: The participants work in groups, propose and specify their own vision of the problem and the solution options that they have made throughout their experience and that they recommend to be included in the project. Once the contributions are completed, they are collected by results and presented in plenary by means of a speaker.

FIFTH: Based on the participatory methodology developed with the participants, contributions are obtained to be included in the design of the project on the problem of climate change at the local level and the possible solutions proposed by the actors themselves.

The main recommendations of the participants were:

GROUP 1: SUSTAINABLE PRODUCTIVE SYSTEMS

- a) Prioritize the construction of dams, cuttings, reservoirs.*
- b) Promote and implement technical irrigation: drip, sprinkling, technical irrigation assistance to the community.*
- c) Provide technical assistance to the agricultural production of tubers, fruit trees, vegetables, among others.*
- d) Promote industrialization and commercialization in collection and transformation centers of the products generated.*

GROUP 2: REVITALIZED, MODERNIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Carry out an inventory of all irrigation systems for rehabilitation and good water management.*
- b) Increase the construction of community reservoirs.*
- c) Modernize all irrigation systems throughout the municipality according to the area destined for production.*
- d) Promote training that must be at a theoretical and practical level.*
- e) Place the information and monitoring system to be aware of the changes that are happening.*
- f) Differentiate irrigation according to land and production.*

GROUP 3: PRESERVATION AND RESTAURATION OF ENVIRONMENTAL FUNCTIONS FOR ADAPTATION TO CLIMATE CHANGE

- a) Implement reservoirs and dams with technical irrigation.*
- b) Carry out reforestation activities with native species. For example: Churquis, molles.*

GROUP 4: STRENGTHENING OF INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) *Promote the monitoring of agricultural risks by municipality*
- b) *Provide technical assistance to the 63 municipalities in the design of PTDI*
- c) *Implement agrometeorological stations.*
- d) *Develop productive loans with a 5-year grace period.*

It is noted that all the suggestions are for all municipalities respecting the needs and characteristics of the soil and cultivation of each municipality and community.

Participants in plenary express their interest and agreement to participate in the implementation, monitoring and evaluation of the project "Preservation and restoration of environmental functions for adaptation to climate change and achieving the resilience of vulnerable family farmers in the Macroregion Valleys of Plurinational State of Bolivia."

SIXTH: It is recognized in plenary session that the native indigenous peoples, intercultural smallholders and local communities have the right to object to any disagreement throughout the project cycle.

SEVENTH: this meeting ends in the same place and on the same date, at 3:30 p.m., after the minutes have been read and reviewed in plenary session, which was approved by the participants who accept and sign at the bottom stating its validity and effective compliance for the implementation of the Project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia".

ACTA DE CONFORMIDAD DEL PROCESO DE CONSULTA Y VALIDEZ DEL PROYECTO

"Preservación y Restauración de Funciones Ambientales Para la Adaptación al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia"

SESIÓN: CAMARGO, Departamento Chuquisaca

En el Municipio de Camargo, Departamento de Chuquisaca, a horas 10:00 a.m. del día martes 16 de abril del año dos mil diecinueve, reunidos en el salón ex Prefectural, las autoridades asistentes, la Federación Sindical Única de Mujeres Campesinas Indígenas Originarias Bartolina Sisa de Nor y Sud Cinti, Asociaciones de Productores "Nor y Sud Cinti", los representantes de las Organizaciones de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales de los municipios de Camargo, San Lucas, Villa Charcas y Culpina según listado adjunto (Anexo 1) a la presente acta, en donde se encuentran registrados sus datos personales; como también representantes del Ministerio de Medio Ambiente y Agua (Responsable de la Unidad Desconcentrada Chuquisaca), la Organización de las Naciones Unidas Para la Alimentación y Agricultura – FAO, para dejar constancia de lo siguiente:

PRIMERO: La Ing. Sandra Llanos, Directora de Desarrollo Productivo del Gobierno Autónomo Municipal de Camargo, da la bienvenida a los participantes y da a conocer el objetivo de la participación de funcionarios del Estado y representantes de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales en el diseño del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

Seguidamente se procede a la presentación personal de los participantes y aprobación de la agenda.

SEGUNDO: Como parte medular de la sesión, la Ing. Marina Estrada del Viceministerio de Recursos Hídricos y Wilson Rocha (FAO) presentan la situación actual y escenario futuro de los efectos del cambio climático en la Macroregión Valles de Bolivia y sus consecuencias principalmente en los municipios del área de intervención del Proyecto. Luego se procede a presentar la propuesta de nota conceptual y el marco lógico a través de la cual se proponen ideas para enfrentar los efectos del cambio climático en la zona.

TERCERO: Después de las referidas presentaciones temáticas, se procede a la conformación de cuatro grupos para la lectura, análisis y propuesta de la nota conceptual del proyecto, así como del intercambio entre participantes y personal del Ministerio de Medio Ambiente y Agua y FAO, únicamente para aclarar la información proporcionada, manifestando que el objetivo, resultados, lineamientos de acción, metas y actividades son producto de sesiones participativas realizadas con anterioridad a esta reunión y coinciden con las necesidades de la región.

ASOCIACION DE MUJERES

d) Desarrollar créditos productivos con 5 años de gracia.

Se hace notar que todas las sugerencias son para todos los municipios respetando las necesidades y características propias de suelo y cultivo de cada municipio y comunidad.

Los y las participantes manifiestan en plenaria su interés y acuerdo en participar en la implementación, seguimiento y evaluación del proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

SEXTO: Se reconoce en plenaria que los pueblos indígena originario campesino interculturales y comunidades locales, tienen derecho de objetar cualquier inconformidad a lo largo del ciclo del proyecto.

SEPTIMO: Se finaliza la presente reunión en el mismo lugar y fecha, a las 15:30 horas, después de haber sido leída y revisada en plenaria el Acta, la cual fue aprobada por las y los participantes quienes aceptan y firman al pie manifestando su validez y cumplimiento efectivo para la implementación del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

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F. A. O. S. A. M.

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Javier Sandoval
SECRETARIO DE ORGANIZACIONES
F.S.U.M.C.I.O. DE NOR Y SUD CINTI



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SECRETARIO EJECUTIVO
CENTRO SINDICAL ÚNICO DE TRABAJADORES
CAMPESES DE AMARCO

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Sra. María Sandoval O
SECRETARIA DE ORGANIZACION
F.S.U.M.C.I.O. DE NOR Y SUD CINTI
"BARTOLINA SISA"

[Handwritten signature]
PAULINA CHAVARRA

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Dario Villacueva Camargo
G. A. M. Camargo

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Vice presidenta
Villachorcas
Bartolina Sisa

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Ing. Sandra Llano S
Directora de D. Productivo
G. A. M. Camargo

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Erika Sandoval
Org. M. B. S. Culpina
Gente Política



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Bismundo Carrasco
CAMARCO



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Ejecutiva F.S.U.M.C.I.O.
BARTOLINA SISA
NOR Y SUD CINTI-CHUQUINACA

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Delina Ortega Miranda
SECRETARIA DE ACTAS
"BARTOLINA SISA"
MUNICIPIO CULPINA

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Amalia Cruz
SECRETARIA EJECUTIVA
SAN LUCAS
BARTOLINA SISA

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Eipriana Hualpa
San Lucas
Bartolina Sisa

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Es. activa Bartolina Sisa
Villachorcas
ABUENA





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4.5. SESSION 5: TARIJA

CONTEXTUALIZATION

Tarija is located in the extreme south of the country, bordering on the north with Chuquisaca, on the east with Paraguay up to the Trifinio Hito Esmeralda where its southern border with Argentina begins, and on the west with Potosí. With 37 623 km² it is the least extensive department, with 482 196 it is the third least populated. In the valleys of Tarija wines and *singanis* are produced that are considered to be of great quality nationally and internationally.

SPECIFIC CHARACTERISTICS OF THE WORKSHOP

The fifth workshop was held in the City of Tarija, on April 18 of the year two thousand and nineteen, from 10:00 a.m. to 3:30 p.m., with 29 participants, representatives of the Municipalities El Puente, San Lorenzo, Cercado and Bermejo, as well as representatives of the Association of Producers and organizations related to the subject of Natural Resources, water and Production. Mr. Luis Gutiérrez Cabezas, as Legal Advisor of the Association of Municipalities of the Department of Tarija, welcomed all the participants, for her part, Ing. Marina Estrada, representing the Ministry of the Environment and Water, gave by opening the event. The participants in two work tables, carried out the review, analysis, discussion to raise the following proposals and recommendations in plenary:

GROUP 1

RESILIENT AND SUSTAINABLE PRODUCTIVE SYSTEMS

- a) A plan of the beneficiary Commonwealth in Tarija, which must be articulated in the Territorial Plans for Comprehensive Development, of which 5 must be supported by the project.
- b) Increase from 600 ha with hail nets to 1200 hectares.
- c) One thousand hectares with thermal blankets prioritizing crops and areas.
- d) Define criteria and methodology of conservation agriculture.
- e) 500 hectares with SAF complemented by beekeeping activities.
- f) A study of products with high commercial value based on the 8 studies of the agri-food chain carried out in Tarija.
- g) Finance the legal constitution of 20 Producers Associations.
- h) Design EDPT for the management and financing of productive projects.

MODERNIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Specify the term revitalization of irrigation systems.
- b) Carry out the inventory of the Irrigation System with the active participation of SEDERI, Autonomous Municipal Governments and the association of municipalities Heroes de la Independencia.
- c) Increase from 4,000 to 8,000 the implementation of a technified irrigation system.
- d) Increase the implementation of community reservoirs from 1000 to 2000.
- e) Promote training by competencies together with the EGPP of the Ministry of Education. f) Develop the irrigation monitoring system with the participation of SEDERI, the Association of Municipalities and the Autonomous Municipal Governments.

GROUP 2

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR THE ADAPTATION TO CLIMATE CHANGE

- a) Incorporate non-timber productive activities, medicinal beekeeping and others into the actions of preservation and restoration of water sources.
- b) Promote reforestation and afforestation by 20% to 30% with honey species and the rest native.
- c) Develop action guidelines for the information and monitoring system of water sources and use of water sources.
- d) Include the Camacho and San Juan del Oro sub-basins in the management and conservation processes.
- e) Carry out an inventory of environmental functions with emphasis on water security.

STRENGTHENING OF INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) Support the development of at least 2 technical standards for each micro-valley region. b)
- b) Support the development of 1 PTDI per municipality.

Approved Minute:

*CONFORMITY ACT OF THE PROCESS OF CONSULTATION AND VALIDITY
OF THE PROJECT "Preservation and Restoration of Environmental Functions with Emphasis on Water
Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the
Valleys Macroregion of Plurinational State of Bolivia"*

SESSION: TARIJA, Department of Tarija

In the City of Tarija, Department of Tarija, at 10:00 a.m. on Thursday, April 18, 2019, meeting in the hall of the Association of Municipalities of the Department of Tarija, the authorities, representatives of the municipalities El Puente, San Lorenzo, Cercado y Bermejo, the institutions, organizations related to the subject of natural resources, water and production of the department of Tarija, according to the attached list (Annex 1) to this act, where their personal data are registered; as well as representatives of the Ministry of the Environment and Water, representatives of Producer Associations of the Food and Agriculture Organization of the United Nations - FAO, to record the following:

FIRST: Mr. Gutierrez Cabezas, Legal Advisor of the Association of Municipalities of the Department of Tarija, welcomes the participants and to learn about the objective of the participation of state officials and representatives of Intercultural Peasant Indigenous Peoples and Local Communities in the design of the project "Preservation and Restoration of Environmental Functions for Adaptation to Climate Change and Achieve Resilience of Vulnerable Family Farmers of the Valleys Macro-region of Plurinational State of Bolivia".

This is followed by the personal presentation of the participants and approval of the agenda.

SECOND: As a core part of the session, Eng. Marina Estrada, from the Vice Ministry of Water Resources and Wilson Rocha (FAO) present the current situation and future scenario of the effects of climate change in the Valleys Macroregion of Plurinational State of Bolivia and its consequences, mainly in the municipalities of the project intervention area. Then we proceed to present the proposal of the concept note and the logical framework through which ideas are proposed to face the effects of climate change in the area.

THIRD: After the referred thematic presentations, we proceed to the formation of groups to read, analyze and propose the concept note of the project, as well as the exchange between participants and personnel of the Ministry of Environment and Water and FAO, only to clarify the information provided, stating that the objective, results, guidelines for action, goals and activities are the product of participatory sessions held prior to this meeting and coincide with the needs of the region.

FOURTH: The participants work in groups, propose and specify their own vision of the problem and the solution options that they have made throughout their experience and that they recommend to be included in the project. Once the contributions are completed, they are collected by results and presented in plenary by means of a speaker.

FIFTH: Based on the participatory methodology developed with the participants, contributions are obtained to be included in the design of the project on the problem of climate change at the local level and the possible solutions proposed by the actors themselves.

The main recommendations of the participants were:

GROUP 1

RESILIENT AND SUSTAINABLE PRODUCTIVE SYSTEMS

- a) A plan for the beneficiary community in Tarija, which must be articulated with the territorial plans for integral development, of which 5 must be supported by the project.*
- b) Increase from 600 ha with anti-hail nets to 1200 hectares.*
- c) 1000 hectares with thermal blankets prioritizing crops and areas.*
- d) Define criteria and methodology of conservation agriculture.*
- e) 500 hectares with SAF complemented with beekeeping activities.*
- f) A study of products with high commercial value based on the 8 studies of the agro- alimentary chain carried out in Tarija.*
- g) Finance the legal constitution of 20 producer associations.*
- h) Design EDPT for the management and financing of productive projects.*

REVITALIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Specify the term revitalization of irrigation systems.*
- b) Carry out an inventory of the irrigation system with the active participation of SEDERI, autonomous municipal governments, and the Heroes de la Independencia association of municipalities.*
- c) Increase from 4 thousand to 8 thousand the implementation of the modernized irrigation system.*

- d) *Increase the implementation of community reservoirs from 1000 to 2000.*
- e) *Promote training by competencies together with the EGPP of the Ministry of Education. f) Develop the irrigation monitoring system with the participation of SEDERI, the association of municipalities and the autonomous municipal governments.*

GROUP 2

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR ADAPTATION TO CLIMATE CHANGE

- a) *Incorporate non-timber, beekeeping, medicinal and other productive activities into actions for the preservation and restoration of water sources.*
- b) *Promote reforestation and afforestation by 20% to 30% with honey species and the rest native.*
- c) *Develop action guidelines for the information and monitoring system of water sources and use of water sources.*
- d) *Include the Camacho and San Jun del Oro sub-basins in management and conservation processes.*
- e) *Carry out an inventory of environmental functions with emphasis on water security.*

STRENGTHENING OF INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) *Support the development of at least two technical standards for each micro-region of Valleys.*
- b) *Support the development of a PTDI by municipality and governorate.*

Participants in plenary express their interest and agreement to participate in the implementation, monitoring and evaluation of the project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

SIXTH: It is recognized in plenary session that the native indigenous peoples, intercultural smallholders and local communities have the right to object to any disagreement throughout the project cycle.

SEVENTH: this meeting ends in the same place and on the same date, at 3:30 p.m., after the minutes have been read and reviewed in plenary session, which was approved by the participants who accept and sign at the bottom stating its validity and effective compliance for the implementation of the Project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

ACTA DE CONFORMIDAD DEL PROCESO DE VALIDACION DEL PROYECTO

“Preservación y Restauración de Funciones Ambientales Para la Adaptación al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la *Macroregión Valles de Bolivia*”

SESIÓN: TARIJA, Departamento Tarija

En la Ciudad de Tarija, Departamento de Tarija, a horas 10:00 a.m. del día jueves 18 de abril del año dos mil diecinueve, reunidos en el Salón de la Asociación de Municipalidades del Departamento de Tarija, las autoridades, representantes de los municipios El Punte, San Lorenzo, Cercado y Bermejo, las instituciones, organizaciones afines a la temática de Recursos Naturales, Agua y Producción del Departamento de Tarija según listado adjunto (Anexo 1) a la presente acta, en donde se encuentran registrados sus datos personales; como también representantes del Ministerio de Medio Ambiente y Agua, representantes de Asociaciones de Productores, la Organización de las Naciones Unidas Para la Alimentación y Agricultura – FAO, para dejar constancia de lo siguiente:

PRIMERO: El Lic. Luis Gutiérrez Cabezas Asesor Legal de la Asociación de Municipalidades del Departamento de Tarija, da la bienvenida a los participantes y da a conocer el objetivo de la participación de funcionarios del Estado y representantes de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales en el diseño del Proyecto “Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia”.

Seguidamente se procede a la presentación personal de los participantes y aprobación de la agenda.

SEGUNDO: Como parte medular de la sesión, la Ing. Marina Estrada, del Viceministerio de Recursos Hídricos y Wilson Rocha (FAO) presentan la situación actual y escenario futuro de los efectos del cambio climático en la Macroregión Valles de Bolivia y sus consecuencias principalmente en los municipios del área de intervención del Proyecto. Luego se procede a presentar la propuesta de nota conceptual y el marco lógico a través de la cual se proponen ideas para enfrentar los efectos del cambio climático en la zona.

TERCERO: Después de las referidas presentaciones temáticas, se procede a la conformación de grupos para la lectura, análisis y propuesta de la nota conceptual del proyecto, así como del intercambio entre participantes y personal del Ministerio de Medio Ambiente y Agua y FAO, únicamente para aclarar la información proporcionada, manifestando que el objetivo, resultados, lineamientos de acción, metas y actividades son producto de sesiones participativas realizadas con anterioridad a esta reunión y coinciden con las necesidades de la región.

CUARTO: Los participantes trabajan en grupos, plantean y precisan su propia visión de la problemática y las opciones de solución que ellos han tomado a lo largo de su experiencia y que recomiendan ser incluidas en el proyecto. Finalizado los aportes, estos se recogieron por resultados y se exponen en plenaria por medio de un expositor.

QUINTO: Basándose en la metodología participativa desarrollada con las y los participantes, se obtienen los aportes para ser incluidos en el diseño del referido proyecto sobre la problemática del cambio climático a nivel local y las posibles soluciones planteadas por los mismos actores.

Las principales recomendaciones de los participantes son:

GRUPO 1.

COMPONENTE SISTEMAS PRODUCTIVOS RESILIENTES Y SUSTENTABLES

- a) Un plan de la mancomunidad beneficiaria en Tarija, la misma que deberá estar articulada a los Planes Territoriales de Desarrollo Integral, de los cuales 5 deberán ser apoyados por el proyecto.
- b) Incrementar de 600 ha con mallas antigranizo a 1200 hectáreas.
- c) 1000 hectáreas con mantas térmicas priorizando cultivos y áreas.
- d) Definir criterios y metodología de la agricultura de conservación.
- e) 500 hectáreas con SAF complementadas por actividades apícolas.
- f) 1 estudio de productos con alto valor comercial basado en los 8 estudios de la cadena agroalimentaria realizada en Tarija.
- g) Financiar la constitución legal de 20 asociaciones de productores.
- h) Diseñar EDPT para la gestión y financiamiento de proyectos productivos.

COMPONENTE SISTEMA DE RIEGO REVITALIZADOS Y RESILIENTES AL CAMBIO CLIMATICO

- a) Precisar el término revitalización de los sistemas de riego.
- b) Realizar el inventario del Sistema de Riego con la activa participación DEL SEDERI, gobiernos autónomos municipales y la mancomunidad de municipios Heroes de la Independencia.
- c) Incrementar de 4 mil a 8 mil la implementación de sistema de riego tecnificado.
- d) Incrementar de 1000 a 2000 la implementación de reservorios comunitarios.
- e) Promover la formación por competencias junto a la EGPP del Ministerio de Educación.
- f) Desarrollar el sistema de monitoreo de riego con la participación del SEDERI, la mancomunidad de municipios y los gobiernos autónomos municipales.

GRUPO 2.

COMPONENTE PRESERVACIÓN Y RESTAURACIÓN DE FUNCIONES AMBIENTALES PARA LA ADAPTACIÓN AL CAMBIO CLIMÁTICO.

- a) Incorporar a las acciones de preservación y restauración de fuentes de agua las actividades productivas no maderables, apícolas medicinales y otros
- b) Promover la reforestación y forestación en un 20% a 30 % con especies melíferas y las restantes nativas.
- c) Desarrollar los lineamientos de acción para el sistema de información y monitoreo de fuentes de agua y aprovechamiento de fuentes de agua.
- d) Incluir a las sub-cuencas Camacho y San jun del Oro en los procesos de manejo y conservación.
- e) Realizar el inventario de funciones ambientales con énfasis en seguridad hídrica.

COMPONENTE FORTALECIMIENTO DE CAPACIDADES INSTITUCIONALES Y COMUNITARIAS.

- a) Apoyar en la elaboración de al menos 2 Normas técnicas por cada micro-región valles.
- b) Apoyar a la elaboración de 1 PTDI por municipio y gobernación

Los participantes manifiestan en plenaria su interés y acuerdo en participar en la implementación, seguimiento y evaluación del proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

SEXTO: Se reconoce en plenaria que los pueblos indígena originario campesino interculturales y comunidades locales, tienen derecho de objetar cualquier inconformidad a lo largo del ciclo del proyecto.

SEPTIMO: Se finaliza la presente reunión en el mismo lugar y fecha, a las 15:30 horas, después de haber sido leída y revisada en plenaria el Acta, la cual fue aprobada por las y los participantes quienes aceptan y firman al pie manifestando su validez y cumplimiento efectivo para la implementación del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

[Firma]



Lic. Osmar Torres Rodríguez
DIRECTOR EJECUTIVO
ASOCIACIÓN DE MUNICIPIOS DE TARIJA

[Firma]
WILSON ROSA
FBO

Ing. Marina Patricia Rojas
COORDINADORA
INSTITUTO NACIONAL DE INVESTIGACIÓN Y DESARROLLO TECNOLÓGICO
INSTITUTO DE MEDIO AMBIENTE Y AGROPECUARIA

[Firma]
Luis Caza
A.A.B.C.
Benny

Lic. Pedro Segovia
TARIFA AROCA y Sabros

Mig. Jaime Andrés Baldivieso Rúa
DIRECCIÓN DE PLANEACIÓN Y MEDIO AMBIENTE
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Ing. S. Pastor Rojas
G.A.M.E.P.



Jhon Alvarez
EJECUTIVO FEDERACIÓN
DEPARTAMENTAL DE AGRICULTORES
TARIFA - BOLIVIA
[Firma]
Freddy Zarate H.
G.A.M.V.

Ing. José Solano
MIC Casa Huayco

[Firma]
L. Juan Carlos
SEDERI

4.6. SESSION 6: SAMAIPATA

CONTEXTUALIZATION

Samaipata is the capital of the municipality of Samaipata and of the Florida province of the Department of Santa Cruz, distant 119 km southwest of the city of Santa Cruz de la Sierra. It is located in the first Andean foothills at 1,670 meters altitude above sea level. It is an important tourist and artisan center. It has a temperate sub-tropical climate.

SPECIFIC CHARACTERISTICS OF THE WORKSHOP

Samaipata was the setting for the sixth workshop, held on April 25, 2019, from 10:00 a.m. to 3:30 p.m., in the facilities of the Elderly Adult Room dependent on the Municipal Autonomous Government of Samaipata, with Local authorities and representatives of the Municipalities of Samaipata, Comarapa, Quirusillas, Mairana, representatives of the Association of Municipalities of Santa Cruz, Provincial of Smallholders of Samaipata and the representative of the Organization of Indigenous Peasant Women "Bartolina Sisa", farmers, producers grassroots, and organizations related to the theme of Natural Resources and Water, making a total of 24 participants.

The person in charge of welcoming all the participants was Mr. Norberto Borda, Municipal Administrative Secretary of the Municipal Autonomous Government of Samaipata.

The event was inaugurated by Eng. Carlos Rodríguez Bacarreza, representing the Ministry of Environment and Water Resources. The participants reviewed, analyzed and discussed the document in two work tables, considering the following proposals and recommendations in plenary session:

GROUP 1

RESILIENT AND SUSTAINABLE PRODUCTIVE SYSTEMS

- a) Incorporate the implementation of greenhouses to the proposal.
- b) Increase agricultural production to 800 hectares in the Santa Cruz valleys.
- c) Increase to 490 hectares agroforestry systems in the Santa Cruz valleys.
- d) Identify and implement at least 5 eco-tourism ventures in the Santa Cruz valleys area as a watershed protection tool.
- e) Promote beekeeping development with a basin conservation approach.
- f) Promote 4 national and 1 international business rounds.
- g) Participate in productive fairs to promote the products of the Santa Cruz valleys.

REVITALIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Implement rainwater harvesting systems.
- b) Set aside communal areas for water recharge.
- c) Formulate municipal irrigation development plans based on the local water use plan.
- d) Implement drip irrigation systems.
- e) Incorporate revitalized and modernized irrigation systems (through geomembrane and other materials and facilities for irrigation provision)

GROUP 2

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR THE ADAPTATION TO CLIMATE CHANGE

- a) Prioritize reforestation in areas of water recharge.
- b) Implement enclosures (enclose, isolate and / or protect) in conservation easement areas.

STRENGTHENING INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) Support the implementation of PTDI (Territorial Plan for Comprehensive Municipal Development) in all municipalities involved in the project.
- b) Develop productive credit portfolios accessible to all producers and communities with fewer requirements.
- c) Implement the early warning system for agricultural risks for the use of producers.
- d) Develop training courses and workshops for young leaders and women.

The analysis and discussion of the participants demonstrated an approach of preservation and care of organic production and the fight to avoid the use of chemical products.

Approved Minute

CONFORMITY ACT OF THE PROCESS OF CONSULTATION AND VALIDITY OF THE PROJECT "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia"

SESSION: SAMAIPATA, Department of Santa Cruz

In the Municipality of Samaipata, Department of Santa Cruz, at 10:00 am on Thursday, April 25, 2019, meeting in the Elderly Room of the autonomous municipal government of Samaipata, the authorities, representatives of the Municipalities Samaipata, Comarapa , Quirusillas, Mairana, Association of Municipalities of Santa Cruz, Provincial of Smallholders of Samaipata and Organization of Native Indigenous Peasant Women Bartolina Sisa, and the institutions, organizations related to the theme of natural resources, water and production of the Department of Santa Cruz, according to list attached (Annex 1) to this act, where personal data is registered; as well as representatives of the Ministry of the Environment and Water Resources, and the Food and Agriculture Organization of the United Nations - FAO, to record the following:

FIRST: Mr. Norberto Borda, Municipal Administrative Secretary of the Municipal Autonomous Government of Samaipata welcomes the participants and announces the objective of the participation of state officials and representatives of Intercultural Peasant Indigenous Peoples and local Communities in the design of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia". This is followed by the personal presentation of the participants and approval of the agenda.

SECOND: As a core part of the session, Mr. Carlos Rodríguez Bacarreza, Strategic Development Specialist UCEP-Mi Riego of the Ministry of Environment and Water Resources, and Wilson Rocha (FAO) present the current situation and future scenario of the effects of climate change in the Valleys Macroregion of Plurinational State of Bolivia and its consequences, mainly in the municipalities of the project intervention area. Then proceeded to present the proposal of the concept note and the logical framework through which ideas are proposed to face the effects of climate change in the area.

THIRD: After the referred thematic presentations, we proceed to the formation of groups to read, analyze and present the proposal concept note of the project, as well as the exchange of ideas between participants and personnel of the Ministry of Environment and Water Resources and FAO, only to clarify the information provided, stating that the objective, results, guidelines for action, goals and activities are the product of participatory sessions held prior to this meeting and coincide with the needs of the region.

FOURTH: The participants work in groups, propose and specify their own vision of the problem and the solution options that they have made throughout their experience and that they recommend to be included in the project. Once the contributions are completed, they are collected by results and presented in plenary by means of a speaker.

FIFTH: Based on the participatory methodology developed with the participants, contributions are obtained to be included in the design of the project on the problem of climate change at the local level and the possible solutions proposed by the actors themselves.

The main recommendations of the participants are:

GROUP 1

RESILIENT AND SUSTAINABLE PRODUCTION SYSTEMS

- a) Incorporate the implementation of greenhouses into the proposal.*
- b) Increase production in organic agriculture to 800 ha in the Valleys of Santa Cruz.*
- c) Increase agroforestry systems in the Valles de Santa Cruz to 490 ha.*
- d) Identify and implement at least five ecotourism ventures in the Santa Cruz Valley area as a watershed protection tool.*
- e) Promote beekeeping development with a watershed conservation approach.*
- f) Promote four national business rounds and one international one.*
- g) participate in productive fairs to promote the products of the Santa Cruz valleys.*

REVITALIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Implement rainwater harvesting systems.*
- b) Allocate communal areas for water recharge.*
- c) Formulate municipal irrigation development plans based on the local water use plan.*
- d) Implement drip irrigation systems.*
- e) Incorporate revitalized and modernized irrigation systems (through geomembrane and other materials and facilities for irrigation provision).*

GROUP 2

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR ADAPTATION TO CLIMATE CHANGE

- a) Prioritize reforestation in water recharge areas.*
- b) Implement enclosures (enclose, isolate or protect) in areas of ecological easement.*

STRENGTHENING OF INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) Support the implementation of the PTDI (Territorial Plan for Comprehensive Municipal Development) in all municipalities involved in the project.*
- b) Develop portfolios of productive credits accessible to all producers and communities with fewer requirements.*
- c) Implement the early warning system for agricultural risks for the use of producers.*
- d) Develop training courses and workshops for young leaders and women.*

Participants in plenary express their interest and agreement to participate in the implementation, monitoring and evaluation of the project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

SIXTH: It is recognized in plenary session that the native indigenous peoples, intercultural smallholders and local communities have the right to object to any disagreement throughout the project cycle.

SEVENTH: this meeting ends in the same place and on the same date, at 3:30 p.m., after the minutes have been read and reviewed in plenary session, which was approved by the participants who accept and sign at the bottom stating its validity and effective compliance for the implementation of the Project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

ACTA DE CONFORMIDAD DEL PROCESO DE VALIDACION DEL PROYECTO

"Preservación y Restauración de Funciones Ambientales Para la Adaptación al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macrorregión Valles de Bolivia"

SESIÓN: SAMAIPATA, Departamento Santa Cruz

En el Municipio de Samaipata, Departamento de Santa Cruz, a horas 10:00 a.m. del día jueves 25 de abril del año dos mil diecinueve, reunidos en el Salón del Adulto Mayor del Gobierno Autónomo Municipal de Samaipata, las autoridades, representantes de los Municipios Samaipata, Comarapa, Quirusillas, Mairana, Asociación de Municipios de Santa Cruz, Provincial de Campesinos de Samaipata y Organización de Mujeres Campesinas Indígena Originaria Bartolina Sisa, y las instituciones, organizaciones afines a la temática de Recursos Naturales, Agua y Producción del Departamento de Santa Cruz, según listado adjunto (Anexo 1) a la presente acta, en donde se encuentran registrados sus datos personales; como también representantes del Ministerio de Medio Ambiente y Agua, la Organización de las Naciones Unidas Para la Alimentación y Agricultura – FAO, para dejar constancia de lo siguiente:

PRIMERO: El Señor Norberto Borda, Secretario Municipal Administrativo del Gobierno Autónomo Municipal de Samaipata, da la bienvenida a los participantes y da a conocer el objetivo de la participación de funcionarios del Estado y representantes de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales en el diseño del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macrorregión Valles de Bolivia".

Seguidamente se procede a la presentación personal de los participantes y aprobación de la agenda.

SEGUNDO: Como parte medular de la sesión, El Ing. Carlos Rodríguez Bacarreza Especialista en Desarrollo Estratégico UCEP – Mi RIEGO del Ministerio de Medio Ambiente y Agua, y Wilson Rocha (FAO) presentan la situación actual y escenario futuro de los efectos del cambio climático en la Macrorregión Valles de Bolivia y sus consecuencias principalmente en los municipios del área de intervención del Proyecto. Luego se procede a presentar la propuesta de nota conceptual y el marco lógico a través de la cual se proponen ideas para enfrentar los efectos del cambio climático en la zona.

TERCERO: Después de las referidas presentaciones temáticas, se procede a la conformación de grupos para la lectura, análisis y propuesta de la nota conceptual del proyecto, así como del intercambio entre participantes y personal del Ministerio de Medio Ambiente y Agua y FAO, únicamente para aclarar la información proporcionada, manifestando que el objetivo, resultados, lineamientos de acción, metas y actividades son

producto de sesiones participativas realizadas con anterioridad a esta reunión y coinciden con las necesidades de la región.

CUARTO: Los y las participantes trabajan en grupos, plantean y precisan su propia visión de la problemática y las opciones de solución que ellos han tomado a lo largo de su experiencia y que recomiendan ser incluidas en el proyecto. Finalizado los aportes, estos se recogieron por resultados y se exponen en plenaria por medio de un expositor.

QUINTO: Basándose en la metodología participativa desarrollada con las y los participantes, se obtienen los aportes para ser incluidos en el diseño del referido proyecto sobre la problemática del cambio climático a nivel local y las posibles soluciones planteadas por los mismos actores.

Las principales recomendaciones de los participantes son:

GRUPO 1.

COMPONENTE SISTEMAS PRODUCTIVOS RESILIENTES Y SUSTENTABLES

- a) Incorporar a la propuesta, la implementación de invernaderos
- b) Incrementar a 800 hectáreas la producción en agricultura orgánica en los valles cruceños
- c) Incrementar a 490 hectáreas en sistemas agroforestales en los valles cruceños
- d) Identificar e implementar al menos cinco emprendimientos eco-turísticos en la zona de los valles cruceños como herramienta de protección de cuencas.
- e) Promover el desarrollo apícola con enfoque de conservación de cuenca.
- f) Promover 4 ruedas de negocios nacional y 1 internacional.
- g) Participar en ferias productivas para promocionar los productos de los valles cruceños.

COMPONENTE SISTEMAS DE RIEGO REVITALIZADOS Y RESILIENTES AL CAMBIO CLIMATICO

- a) Implementar sistemas de cosecha de agua de lluvia
- b) Destinar áreas comunales para recarga hídrica.
- c) Formular planes de desarrollo de riego municipal con base al plan de aprovechamiento hídrico local.
- d) Implementar sistemas de riego por goteo
- e) Incorporar a sistemas de riego revitalizados y modernizados (a través de geomembrana y otros materiales e instalaciones para dotación de riego).

GRUPO 2.

COMPONENTE PRESERVACIÓN Y RESTAURACIÓN DE FUNCIONES AMBIENTALES PARA LA ADAPTACION AL CAMBIO CLIMATICO.

- a) Priorizar la reforestación en áreas de recarga hídrica



- b) Implementar cerramientos (encerrar, aislar y/o proteger) en áreas de servidumbre ecológica

COMPONENTE FORTALECIMIENTO DE CAPACIDADES INSTITUCIONALES Y COMUNITARIAS.

- a) Apoyar a la implementación de PTDI (Plan Territorial de Desarrollo Integral Municipal) en todos los municipios de incidencia del proyecto
b) Desarrollar carteras de créditos productivos accesibles a todos los productores y comunitarios con menos requisitos
c) Implementar el sistema de alerta temprana de riesgos agropecuarios para uso de productores
d) Desarrollar cursos y talleres de formación de líderes jóvenes y mujeres

Los y las participantes manifiestan en plenaria su interés y acuerdo en participar en la implementación, seguimiento y evaluación del proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

SEXTO: Se reconoce en plenaria que los pueblos indígena originario campesino interculturales y comunidades locales, tienen derecho de objetar cualquier inconformidad a lo largo del ciclo del proyecto.

SEPTIMO: Se finaliza la presente reunión en el mismo lugar y fecha, a las 15:30 horas, después de haber sido leída y revisada en plenaria el Acta, la cual fue aprobada por las y los participantes quienes aceptan y firman al pie manifestando su validez y cumplimiento efectivo para la implementación del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".



Lic. Portante Corda Pucallpa
SECRETARIO MUNICIPAL ADMINISTRATIVO
GOBIERNO AUTÓNOMO MUNICIPAL DE SAMAPATA

Canicio Robles Cruz
EJECUTIVO SUB-CENTRO
QUIRUSILLAS



Bernero



SECRETARIO GENERAL
C.S.U.T.C.
PROV. FLORIDA

SECRETARIO GENERAL
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4.7. SESSION 7: COCHABAMBA

The city of Cochabamba is located in the center of Plurinational State of Bolivia. It has an area of 55,631 square kilometers, and at 2,333 meters above sea level. Its geographical location places it in a great valley in the middle of the Andes Mountains.

SPECIFIC CHARACTERISTICS OF THE WORKSHOP

The seventh workshop was held in the City of Cochabamba, on April 26, 2019, from 10:00 a.m. to 4:00 p.m., at the local Centro Cuarto Intermedio, with representatives of the Autonomous Departmental Government of Cochabamba, representatives of the Municipalities of Anzaldo, Arque, Tarata, Tacopaya, Pojo, Omereque, Capinota, and Cercado, representative of the Association of Municipalities of Cochabamba AMDECO, and organizations related to the subject of Natural Resources and Water. Making a total of 12 participants.

Welcome and inauguration remarks of the event were given by Eng. Luis Grover Marka Sarabia, as General Director of Watersheds and Water Resources of the Ministry of Environment and Water Resources.

The review, analysis, and discussion of the document was carried out in two work tables, which are presented below:

GROUP 1

RESILIENT AND SUSTAINABLE PRODUCTIVE SYSTEMS COMPONENT

- a) Analyze the inclusion of municipalities that are not in the Valleys Macroregion and that are affected by the effects of climate change
- b) The Indigenous Peasant Native Autonomy of Raqaypampa is incorporated into the project.
- c) Analyze the possibility of implementing land reclamation projects on river banks.
- d) Implement and promote agro-ecological production and marketing.

REVITALIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Adapt and make flexible the eligibility criteria for financing irrigation projects according to the conditions and reality of each Municipality.
- b) That irrigation projects contemplate aspects of a “basin” approach.
- c) Incorporate technological institutes for the generation of local capacities at a medium and higher technical level.

GROUP 2

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR ADAPTATION TO CLIMATE CHANGE

- a) Complement the inventory of water sources, as well as develop regulatory instruments for the sustainability of their use.
- b) Prioritize technological actions to reverse watershed degradation.
- c) Recognize and rescue the experiences of each community.
- d) Recover good practices of uses and customs in the management of water and natural resources.

- e) Strengthen existing and / or current strategic basin platforms in the project intervention area.

STRENGTHENING OF INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) Strengthen the technical capacities of the Autonomous Departmental Government of Cochabamba and the Autonomous Municipal Governments to provide support in resilient practices to climate vulnerability.
- b) Promote the implementation of a Trust for credits in irrigation and agro-ecological production (flexible conditions in interest and capital payments)
- c) Rescue lessons learned from other programs and / or projects to scale to actions and goals to be implemented.
- d) Promote the harmonization of institutional roles between the Autonomous Departmental Government and the Autonomous Municipal Governments. In the interest of the participants to include all municipalities and especially those who did not attend the workshop, the decision was made to hold a new workshop under the convocation of the Autonomous Departmental Government of Cochabamba, with the recommendation to include female delegates, based on gender equity.

Approved Minute:

*CONFORMITY ACT OF THE PROCESS OF CONSULTATION AND VALIDITY
OF THE PROJECT "Preservation and Restoration of Environmental Functions with Emphasis on Water
Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the
Valleys Macroregion of Plurinational State of Bolivia"*

SESSION: COCHABAMBA, Department of Cochabamba

In the City of Cochabamba, Department of Cochabamba, at 10:00 a.m. on Friday, April 26, 2019, the authorities, representatives of the autonomous departmental government of Cochabamba, the Anzaldo, Arque, Tarata Municipalities gathered at the Fourth Intermediate Center , Tacopaya, Pojo, Omereque, Cercado y Capinota, Association of Municipalities of Cochabamba - AMDECO, as well as the institutions, organizations related to the subject of natural resources, water and production of the Department of Cochabamba, according to the attached list (Annex 1) to the present act, where personal data are registered; as well as representatives of the Ministry of Environment and Water Resources, representatives of Producer Associations, the Organization for Food and Agriculture of the United Nations (FAO), to record the following:

FIRST: Eng. Luis Grover Marka Saravia, General Director of Watersheds and Water Resources of the Ministry of Environment and Water Resources, welcomes the participants and announces the objective of the participation of state officials and representatives of Indigenous Peasant Native Peoples Intercultural and local communities in the design of the project "Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia". This is followed by the personal presentation of the participants and the approval of the agenda.

SECOND: As a core part of the session, Eng. Luis Grover Marka Saravia General Director of Watersheds and Water Resources of the Ministry of Environment and Water Resources, and Wilson Rocha (FAO) present the current situation and future scenario of the effects of climate change in the Valleys Macroregion of Plurinational State of Bolivia and its consequences, mainly for the municipalities of the project intervention area. Then proceeded to present the proposal of the concept note and the logical framework through which ideas are proposed to face the effects of climate change in the area.

THIRD: After the referred thematic presentations, we proceed to the formation of groups to read, analyze and propose the concept note of the project, as well as the exchange between participants and personnel of the Ministry of Environment and Water Resources and FAO, only to clarify the information provided, stating that the objective, results, guidelines for action, goals and activities are the product of participatory sessions held prior to this meeting and coincide with the needs of the region.

FOURTH: The participants work in groups, propose and specify their own vision of the problem and the solution options that they have made throughout their experience and that they recommend to be included in the project. Once the contributions are completed, they are collected by results and presented in plenary by means of a speaker.

FIFTH: Based on the participatory methodology developed with the participants, contributions are obtained to be included in the design of the project regarding climate change issues at the local level and the possible solutions proposed by the actors themselves.

The main recommendations of the participants were:

GROUP 1

RESILIENT AND SUSTAINABLE PRODUCTIVE SYSTEMS

- a) Analyze the inclusion of municipalities that are not in the Valleys Macroregion and that are affected by the effects of climate change.*
- b) The Raqaypampa Native Peasant Indigenous Autonomy is incorporated into the project*
- c) Analyze the possibility of implementing land reclamation projects on riverbanks.*
- d) Implement and promote agro-ecological production and marketing.*

REVITALIZED AND RESILIENT TO CLIMATE CHANGE IRRIGATION SYSTEMS

- a) Adapt and make flexible the eligibility criteria for financing irrigation projects according to each municipality's conditions and reality.*
- b) That irrigation projects contemplate aspects of a "watershed" approach*
- c) Incorporate technological institutes for the generation of local capacities at a medium and higher technical level.*

GROUP 2

PRESERVATION AND RESTORATION OF ENVIRONMENTAL FUNCTIONS FOR THE ADAPTATION TO CLIMATE CHANGE

- 1. Complement the inventory of water sources and develop regulatory instruments for the sustainability of their use.*

2. *Prioritize technological actions to reverse the degradation of watersheds*
3. *Recognize and rescue experiences of each community*
4. *Recover acceptable practices of usages and customs in the management of water and natural resources.*
5. *Strengthen existing and current platforms by the strategic basin in the project's intervention area.*

STRENGTHENING OF INSTITUTIONAL AND COMMUNITY CAPACITIES

- a) *Strengthen the technical capacities of the autonomous departmental government of Cochabamba and the autonomous municipal governments to provide support in resilient practices to climate vulnerability.*
- b) *Promote the implementation of trust for credits in irrigation and agro-ecological production (flexible conditions in interest and capital payments)*
- c) *Rescue lessons learned from other programs or projects to scale actions and goals to be implemented.*
- d) *Promote the harmonization of institutional roles between the Autonomous Departmental Government and the autonomous municipal governments.*

Participants in plenary express their interest and agreement to participate in the implementation, monitoring and evaluation of the project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

SIXTH: It is recognized in plenary session that intercultural rural indigenous peoples and local communities have the right to object to any disagreement throughout the project cycle.

SEVENTH: It is agreed to continue with the socialization process with the support of the autonomous departmental government of Cochabamba for those actors who could not be present and were summoned.

EIGHT: This meeting ended in the same place and on the same date, at 4:00 p.m., after the minutes have been read and reviewed in plenary session, approved by the participants who accept and sign at the bottom stating its validity and effective fulfillment for the design of the project “Preservation and Restoration of Environmental Functions with Emphasis on Water Security for Adaptation to Climate Change and Greater Resilience of vulnerable Family Farmers in the Valleys Macroregion of Plurinational State of Bolivia”.

ACTA DE CONFORMIDAD DEL PROCESO DE VALIDACION DEL PROYECTO

**"Preservación y Restauración de Funciones Ambientales Para la Adaptación al Cambio
Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la
Macroregión Valles de Bolivia"**

SESIÓN: COCHABAMBA, Departamento Cochabamba

En la Ciudad de Cochabamba, Departamento de Cochabamba, a horas 10:00 a.m. del día viernes 26 de abril del año dos mil diecinueve, reunidos en el Centro Cuarto Intermedio, las autoridades, representantes del Gobierno Autónomo Departamental de Cochabamba, los Municipios Anzaldo, Arque, Tarata, Tacopaya, Pojo, Omereque, Cercado y Capinota, Asociación de Municipios de Cochabamba – AMDECO, así como las instituciones, organizaciones afines a la temática de Recursos Naturales, Agua y Producción del Departamento de Cochabamba, según listado adjunto (Anexo 1) a la presente acta, en donde se encuentran registrados sus datos personales; como también representantes del Ministerio de Medio Ambiente y Agua, representantes de Asociaciones de Productores, la Organización de las Naciones Unidas Para la Alimentación y Agricultura – FAO, para dejar constancia de lo siguiente:

PRIMERO: El Ing. Luis Grover Marka Saravia, Director General de Cuencas y Recursos Hídricos del Ministerio de Medio Ambiente y Agua, da la bienvenida a los participantes y da a conocer el objetivo de la participación de funcionarios del Estado y representantes de Pueblos Indígena Originario Campesino Interculturales y Comunidades locales en el diseño del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

Seguidamente se procede a la presentación personal de los participantes y aprobación de la agenda.

SEGUNDO: Como parte medular de la sesión, El Ing. Luis Grover Marka Saravia, Director General de Cuencas y Recursos Hídricos del Ministerio de Medio Ambiente y Agua, y Wilson Rocha (FAO) presentan la situación actual y escenario futuro de los efectos del cambio climático en la Macroregión Valles de Bolivia y sus consecuencias principalmente en los municipios del área de intervención del Proyecto. Luego se procede a presentar la propuesta de nota conceptual y el marco lógico a través de la cual se proponen ideas para enfrentar los efectos del cambio climático en la zona.

TERCERO: Después de las referidas presentaciones temáticas, se procede a la conformación de grupos para la lectura, análisis y propuesta de la nota conceptual del proyecto, así como del intercambio entre participantes y personal del Ministerio de Medio Ambiente y Agua y FAO, únicamente para aclarar la información proporcionada, manifestando que el objetivo, resultados, lineamientos de acción, metas y actividades son

- e) Fortalecer plataformas por cuenca estratégica existentes y/o vigentes en el área de intervención del proyecto.

COMPONENTE FORTALECIMIENTO DE CAPACIDADES INSTITUCIONALES Y COMUNITARIAS.

- Fortalecer las capacidades técnicas del Gobierno Autónomo Departamental de Cochabamba y los Gobiernos Autónomos Municipales para brindar apoyo en prácticas resilientes a la vulnerabilidad climática
- Promover la implementación de un Fideicomiso para créditos en riego y producción agroecológica (condiciones flexibles en intereses y pagos de capital)
- Rescatar lecciones aprendidas de otros programas y/o proyectos para escalar las acciones y metas a ser implementadas
- Promover la armonización de roles institucionales entre el Gobierno Autónomo Departamental y los gobiernos autónomos municipales

Los participantes manifiestan en plenaria su interés y acuerdo en participar en la implementación, seguimiento y evaluación del proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".

SEXTO: Se reconoce en plenaria que los pueblos indígena originario campesino interculturales y comunidades locales, tienen derecho de objetar cualquier inconformidad a lo largo del ciclo del proyecto.

SEPTIMO: Se acuerda continuar con el proceso de socialización con el apoyo del Gobierno Autónomo Departamental de Cochabamba a aquellos actores que no pudieron estar presentes y fueron convocados.

OCTAVO: Se finaliza la presente reunión en el mismo lugar y fecha, a las 16:00 horas, después de haber sido leída y revisada en plenaria el Acta, la cual fue aprobada por los participantes quienes aceptan y firman al pie manifestando su validez y cumplimiento efectivo para el diseño del Proyecto "Preservación y Restauración de Funciones Ambientales Para la Adaptación Al Cambio Climático y Lograr la Resiliencia de los Agricultores Familiares Vulnerables de la Macroregión Valles de Bolivia".


Antonio Ustari
DIRECTOR DE DESARROLLO ECONOMICO
INDUSTRIAL Y MEDIO AMBIENTE
GOB. AUTONOMO DEPARTAMENTAL DE COCHABAMBA


Román Pineda
DIRECTOR DE DESARROLLO ECONOMICO
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Annex 1.


National Technical Sheet - Basic information gathering on collaboration between indigenous and / or Afro-descendant peoples and FAO

1. Country:	Plurinational State of Bolivia
2. % of indigenous and/or afro descendant population	41,7% of the population is indigenous (Source: INE, Year 2012; Population and Housing Census 2012).
3. Total indigenous and/or afro-descendant population	4.199.977 inhabitants of the population are indigenous. 23,330 inhabitants of the population are Afro-Bolivian. (Source: INE, Year 2012; Population and Housing Census 2012.)
4. Indigenous languages spoken	36 official languages: Aymara, araona, baure, bésiro, canichana, cavineño, cayubaba, chácobo, chimán, ese ejja, guaraní, guarasu'we, guarayu, itonama, leco, machajuyai-kallawaya, machineri, maropa, mojeño-trinitario, mojeño-ignaciano, moré, mosetén, movima, pacawara, puquina, quechua, sirionó, tacana, tapiete, toromona, uru-chipaya, weenhayek, yaminawa, yuki, yuracaré y zamuco.
5. Ratification of ILO Convention 169 (Y /N) year	Law No.1257 of July 11, 1991
6. UNDRIP (Y/N) year:	Law No. 3760 of November 7, 2007
7. National laws regarding indigenous peoples and / or Afro-descendants (briefly mention)	Political Constitution of the Plurinational State of Bolivia https://www.oas.org/dil/esp/Constitucion_Bolivia.pdf Law No.835 Ratification of the Paris Agreement, September 17, 2016 https://www.derechoteca.com/gacetabolivia/ley-no-835-del-17-de-septiembre-de-2016/ Law No.300 Framework of Mother Earth and Comprehensive Development for Living Well dated October 15, 2012. https://bolivia.infoleyes.com/norma/4126/ley-marco-de-la-madre-tierra-y-desarrollo-integral-para-vivir-bien-300 Law No. 031 Framework of Autonomies and Decentralization of July 19, 2010.

	<p>http://www.planificacion.gob.bo/uploads/marco-legal/Ley%20N%C2%B0%20031%20DE%20AUTONOMIAS%20Y%20DESCENTRALIZACION.pdf</p> <p>Law No. 144 of Community Agricultural Productive Revolution dated June 26, 2011</p> <p>https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/92466/107727/F1045538051/BOL92466.pdf</p> <p>Law No. 338 of Rural and Indigenous Economic Organizations - OECAS and of Community Economic Organizations - OECOM for the Integration of Sustainable Family Farming and Food Sovereignty, dated January 26, 2013.</p> <p>http://extwprlegs1.fao.org/docs/pdf/bol120900.pdf</p> <p>Law No. 1715 of the National Agrarian Reform Service Amended by the Community Redirection Law No. 3545 dated November 28, 2006</p> <p>https://ftierra.org/index.php/component/attachments/download/23</p> <p>National Planning System Law No. 777 of January 21, 2016</p> <p>https://observatorioplanificacion.cepal.org/es/marcos-regulatorios/ley-no-777-del-sistema-de-planificacion-integral-del-estado-spie-de-bolivia</p> <p>Forestry Law No. 1700 of June 12, 1996</p> <p>https://bolivia.infoleyes.com/norma/2491/ley-forestal-1700</p> <p>Law 3525 on the Regulation and Promotion of Ecological Non-Timber Agricultural and Forest Production dated November 21, 2006.</p> <p>http://aopeb.org/wp-content/uploads/2016/03/Bolivia-Ley-3525-y-Reglamentos-SNCPE.pdf</p>
8. Regions of the country with the largest territorial extension under the possession of indigenous peoples and / or Afro-descendants	<p>Bolivia is divided into the following regions and macro-regions: Amazonia, Plains and Savannas, Chiquitania and Pantanal, Yungas and Chapare, Andes, Chaco and Valleys. In this understanding, the regions with the largest territorial extension under the possession of indigenous peoples and Afro-descendants are the following:</p> <ul style="list-style-type: none"> - Amazonia - Plains and Savannas - Chiquitania - Chaco
9. Regions of the country with the highest population density of indigenous and / or	<p>Macro-regions and regions with the highest density of indigenous peoples are:</p> <ul style="list-style-type: none"> - Altiplano (Aymaras: 1.598 807 inhabitants) - Valleys (Quechuas: 1.837.105 inhabitants)

Afro-descendant peoples	https://bolivia.unfpa.org/sites/default/files/pub-pdf/Caracteristicas_de_Poblacion_2012.pdf
10. Area (Mha) under the possession of Afro-descendant Indigenous Peoples and Traditional Communities	<p>The surface area titled in favor of intercultural and Afro-Bolivian smallholder native indigenous peoples and nations amounts to: 20,715,950.3 (twenty million seven hundred fifteen thousand nine hundred fifty hectares with three thousand square meters).</p> <p>https://ftierra.org/index.php?option=com_mtree&task=att_download&link_id=2&cf_id=63</p>
11. % of the total area of the country under the possession of indigenous peoples of African descent and traditional communities	Approximately 19% of the total area of the country with titled land rights in favor of indigenous peoples.
12. Current emblematic situation that illustrates some conflict or tension (access to land and territory, legal recognition, poverty, food insecurity, etc.)	<p>The emblematic situations that generate conflict between the government and indigenous peoples in the territory are the following:</p> <ul style="list-style-type: none"> - Oil Exploration in protected areas. - Construction of Hydroelectric Plants in areas of influence to productive zones and territories of intercultural rural native indigenous peoples. - Construction of roads through indigenous territories. - Subjugation of Community Lands of Origin, small holders and indigenous communities. - Illegal forest activity - Illegal mining - Use of water and biodiversity by third parties outside indigenous territories.
13. Brief description of the position or relationship between indigenous peoples and the current Government	<p>Between 2000 and 2009, the indigenous smallholder intercultural movement has articulated the national popular indigenous peasant bloc, made up of the CSUTCB, CNMCIQB, Bartila Sisa, CSCIOB and CONAMAQ. Said social mechanism was established in the Pact of Unity and later in the CONALCAM made up of different social and political movements that elaborated proposals for the establishment of the new Plurinational State, emerging from the popular national indigenous bloc. In this case, the Unity Pact was organized around the objectives of elaborating proposals for the Constituent Assembly and coordinating strategies in alliance with the Movement Toward Socialism - MAS at the head of the current President Evo Morales Ayma. However, although the participating organizations were</p>

	<p>heterogeneous in their structure, they elaborated consensual demands to achieve shared objectives on the ideological and discursive level. Later, CONALCAM will respond to three conjunctural elements: on the one hand, to confront the right-wing groups that opposed the Central Government; on the other hand, to unify the country in the face of increasingly acute polarization (east-west, opposition-ruling party); and finally, to obtain the approval of the Law to call a referendum for the approval of the new Constitution. However, from 2009 to the present, there has been evidence of a fracture within the original indigenous smallholders' bloc that had achieved the new Plurinational State's establishment. However, this rupture was not and is not definitive with all, if not mainly with CIDOB and CONAMAQ, since, on June 21, 2010, CIDOB began the "VII march for the Defense of the Territory, Autonomy and the Rights of Indigenous Peoples" to achieve the treatment of the Electoral Regime Law that would institute seven special districts for the indigenous peoples in the country. This situation would be repeated in 2011 when CIDOB, CONAMAQ and the TIPNIS Subcentral (Indigenous Territory and Isiboro Secure National Park) carried out the eighth and ninth march defence of TIPNIS. To date, the Unity Pact has been reconstituted; however, the development of actions is still emphatically questioned by CIDOB and CONAMAQ central and sub-central that feel affected in their territories by the construction of hydroelectric plants, roads, among other projects without prior consultation.</p>
<p>14. Indigenist government body (Specify if FAO has or has had collaboration with it)</p>	<p>In Plurinational State of Bolivia, there is no specific governmental body, since all entities work for the entire population in general and emphasize strengthening Afro-Bolivian intercultural indigenous peoples and nations. The entities with which there is the most significant relationship and collaboration are the following:</p> <ul style="list-style-type: none"> - Ministry of Rural Development and Lands - Ministry of Productive Development and Plural Economy - Ministry of Environment and Water Resources - Ministry of Defense, Vice Ministry of Civil Defense - Ministry of Health - Ministry of Foreign Affairs - Autonomous Departmental Government - Municipal Autonomous Governments - Smallholder's Native Indigenous Governments
<p>15. Main indigenous leaders at the national level (Specify if FAO has or has had collaboration with them)</p>	<p>The main indigenous leaders at the national level are:</p> <ul style="list-style-type: none"> - Segundina Flores, National Executive Confederation of Native Indigenous Peasant Women Bartolina Sisa - CMCIO "Bartolina Sisa". - Pedro Vare, National Executive, Confederation of Indigenous Peoples of Bolivia - CIDOB.

	<ul style="list-style-type: none"> - Jacinto Herrera, National Executive, Unique Trade Union Confederation of Smallholder Workers of Bolivia - CSUTCB. 
<p>16. Main indigenous and / or Afro-descendant organizations (Specify if FAO has or has had collaboration with any of these)</p>	<p>The main indigenous organizations in Bolivia are:</p> <ul style="list-style-type: none"> - Confederation of Indigenous Peoples of Bolivia - CIDOB Unique Trade Union Confederation of Smallholder Workers of Bolivia - CSUTCB Confederation of Native Indigenous Peasant Women Bartolina Sisa - CMCIO "Bartolina Sisa" Trade Union Confederation of Intercultural Communities Native to Bolivia - CSIOB Confederation of Ayllus and Brands of Qullasuyo - CONAMAQ <p>Organizations in collaboration with FAO</p> <ul style="list-style-type: none"> - Indigenous Central of Amazonian Indigenous Peoples of Pando - CIPOAP, belonging to the CIDOB. - Central Indigenous of Amazonian Women of Pando - CIMAP, belonging to CIDOB. - Central Indigenous de Pueblos Tacanas - CIPTA, belonging to the CIDOB. - Leco Apolo Indigenous Peoples Center, belonging to the CIDOB. - Departmental Federation of Smallholders of Pando, belonging to the CSUTCB. - Regional Federation of Smallholders of the Vaca Diez del Beni Province, belonging to the CSUTCB. - CMCIO "Bartolina Sisa".
<p>17. Recent FAO projects and / or collaborations with an impact on indigenous peoples and / or Afro-</p>	<p>During the last 6 years, a series of projects with direct impact on indigenous peoples have been implemented, below we describe the most important and in the attached table the detail of implemented projects:</p> <ul style="list-style-type: none"> - Project to Strengthen the Community Social Economy in the Bolivian Amazon.

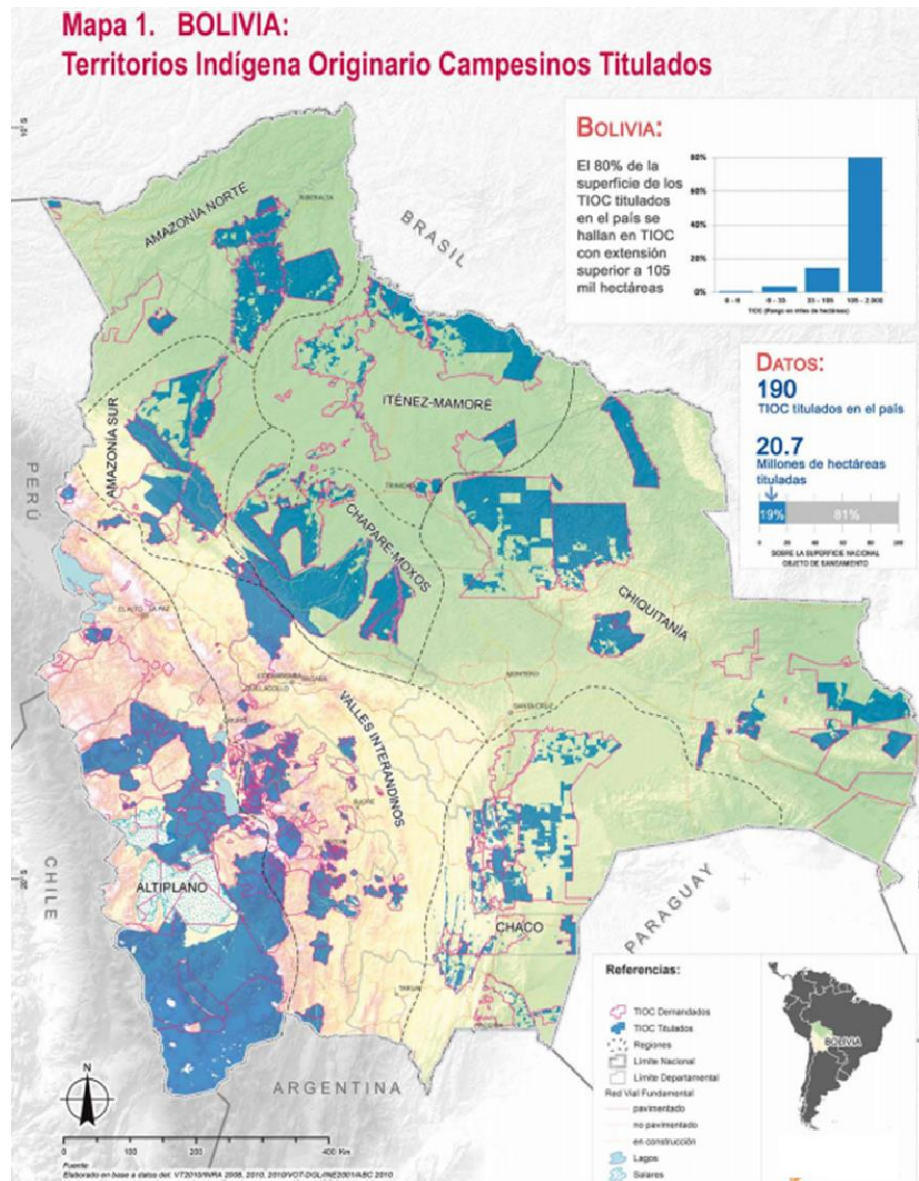
<p>descendants (last 6 years)</p>	<ul style="list-style-type: none"> - Emergency Project for Technical Assistance to Vulnerable Populations Reporting Loss of Livelihoods Due to Drought in the Chaco and Cochabamba Region. - Forest and Farm Project (FFF). - Project for the Conservation and Sustainable Management of Agrobiodiversity in Five Macroregions of Plurinational State of Bolivia. - Technical Assistance Program for the strengthening, coordination, articulation of Risk Management and increased resilience in Plurinational State of Bolivia. - Technical Assistance Project to the Ministry of Environment and Water and prioritized Sub-national Governments for the implementation of the Harvesting Life Program, Safe Water Component - Program to Strengthen the Cotton Sector through South-South Cooperation. - Quinoa / Camelidae Integrated Agri-Food System Program. - Program for the Promotion of Sustainable Community Family Agriculture in the Bolivian Altiplano.
<p>18. Recent FAO publications with an impact on indigenous peoples and / or Afro-descendants (last 6 years)</p>	<p>The publications disseminated and produced with an impact on indigenous peoples are:</p> <ul style="list-style-type: none"> - Transform food and agriculture to achieve the SDGs. - Practical guide for the implementation of Comprehensive Forest and Land Management Plans. - Post-Harvest Operations in Cocoa. - Analysis of the Technical and Institutional Capacities for the Comprehensive Management of Disaster Risk in the Agricultural Sector and Food Security. <p>https://issuu.com/ucerbolivia</p>
<p>19. Are indigenous and/or Afro-descendant peoples directly mentioned in the CPF? Y / N (if positive, mention the specific result)</p>	<p>The CPF of Plurinational State of Bolivia directly mentions and prioritizes work with indigenous, rural and intercultural peoples and nations in the following Government Priorities (PG):</p> <ul style="list-style-type: none"> - PG2 Ecological agri-food systems, community and peasant family agriculture. <p>• Output 2.3: MyPEs and the different forms of community-based Organization (OECAs, OECOM and others), with the support of FAO in coordination with the MDPyEP / MMAyA / MDRyT, implement socio-economic undertakings for the collection and transformation of their agroecological production and use integral forest with prioritization in Amazonian products, through the accompaniment and technical, financial and organizational assistance of the ETAs, within the framework of the Our Forests, Amazon and Ecological Production Programs.</p>

	<ul style="list-style-type: none"> • Output 2.4: MyPEs and the different forms of a community-based organization (OECAs, OECOM and others), with the support of FAO in coordination with the MDPyEP / MDRyT, commercialize their products in local markets and access the purchasing programs of the Status (school meals, subsidies/vouchers). - PG3 Comprehensive and sustainable management of soils, forests, water and biodiversity. • Output 3.2: MMAyA and the Ministry of Rural Development and Lands have designed and implemented, respectively, the "Preservation and Restoration Program of the environmental functions with an emphasis on water security for adaptation and mitigation to climate change and the National Management Program and Comprehensive and Sustainable Management of Water and Soils to increase the resilience of vulnerable smallholder families. - PG4 Resilience of livelihoods and comprehensive risk management. • Output 4.5: Vulnerable peasant, indigenous and intercultural communities implement strategies, plans and actions for comprehensive risk management, prevention and attention to emergencies (biological, for example, lobsters), to achieve livelihoods (forests, agriculture at the level of the basin) resilient, sustainable and inclusive in coordination with the ETAs, within the framework of the National Program for Risk Management and Our Forests.
20. Areas of possible FAO collaboration with indigenous peoples at the country level	<ul style="list-style-type: none"> - Comprehensive and Sustainable Management of Forests, Water and Biodiversity - Community Family Farming (Decade of Family Farming) - Agricultural Risk Management and Resilience
21. Is there a FAO document translated into original languages? (If positive, mention the specific document)	No
22. Observations and / or additional comments:	
23. FAO Focal Point for Indigenous and/or	Wilson Rocha

Afro-descendant peoples	
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Annex 2.

Summary overview of the Plurinational State of Bolivia and indigenous peoples, in relation to the FAO-MMAyA program



2.1 Map of Plurinational State of Bolivia
19% of the national territory is under tenure of indigenous peoples

SOLDEPANDO Cantidad de habitantes indígenas por países

<i>País</i>	<i>Población indígena</i>	<i>%</i>	<i>Población total</i>
México	16'933.283	15,1%	112'336.538
Perú	7'021.271	24,0%	29'272.000
Guatemala	5'881.009	41,0%	14'334.000
Bolivia*	4'199.977	41,7%	10'059.856
Chile	1'805.243	11,0%	16'341.929
Colombia	1'559.852	3,4%	46'448.000
Ecuador	1'018.176	7,0%	14'483.499
Argentina	955.032	2,4%	40'117.096
Brasil	896.917	0,5%	190'755.799
Venezuela	724.592	2,7%	27'227.930
Honduras	536.541	7,0%	7'619.000
Nicaragua	518.104	8,9%	5'813.000
Panamá	417.559	12,3%	3'405.813
Paraguay	112.848	1,8%	6'232.511
Costa Rica	104.143	2,4%	4'301.712
Uruguay	76.452	2,4%	3'251.654
El Salvador	14.408	0,2%	6'218.000
TOTALES	42'775.405	8,0%	538'548.394

*Dato actualizado INE-Bolivia

Soldepando.com

II.2 Percentage (%) of Indigenous and/or Afro-descendant population in Latin America

- Ministry of Rural Development and Lands
- Ministry of Productive Development and Plural Economy
- Ministry of Environment and Water Resources
- Ministry of Defense, Vice Ministry of Civil Defense
- Ministry of Health
- Ministry of Foreign Affairs
- Autonomous Municipal Governments
- Autonomous Departmental Government

2.6 Main indigenous and / or Afro-descendant organizations with which FAO maintains work on indigenous peoples.

The main indigenous organizations are the following:

- Confederation of Indigenous Peoples of Plurinational State of Bolivia - CIDOB
- Unique Trade Union Confederation of Smallholder Workers of Plurinational State of Bolivia - CSUTCB
- Confederation of Native Indigenous Smallholder Women Bartolina Sisa - CMCIO "Bartolina Sisa"
- Trade Union Confederation of Native Intercultural Communities -CSIOB
- Confederation of Ayllus and Brands of Qullasuyo - CONAMAQ

Organizations with which FAO collaborates

- Indigenous Central of Amazonian Indigenous Peoples of Pando - CIPOAP, belonging to the CIDOB.
- Central Indigenous of Amazonian Women of Pando - CIMAP, belonging to CIDOB.
- Central Indigenous de Pueblos Tacanas - CIPTA, belonging to the CIDOB.
- Leco Apolo Indigenous Peoples Center, belonging to the CIDOB.
- Departmental Federation of Smallholders of Pando, belonging to the CSUTCB.
- Regional Federation of Smallholders of the Vaca Diez del Beni Province, belonging to the CSUTCB.
- CMCIO "Bartolina Sisa".

2.7 Projects developed in Plurinational State of Bolivia with the support of FAO

- Project to Strengthen the Community Social Economy in the Bolivian Amazon.
- Emergency Project for Technical Assistance to Vulnerable Populations that Report Loss of Livelihoods Due to Drought in the Chaco and Cochabamba Region.
- Forest and Farm Project (FFF).
- Project for the Conservation and Sustainable Management of Agrobiodiversity in Five Macro-regions of Plurinational State of Bolivia.
- Technical Assistance Program for the strengthening, coordination, articulation of the Risk Management and increased resilience in Plurinational State of Bolivia.
- Technical Assistance Project to the Ministry of Environment and Water Resources and Sub-national Governments that were prioritized for the implementation of the Harvesting Life Program.
- Safe water component
- Program to Strengthen the Cotton Sector through South-South Cooperation.
- Quinoa / Camelidae Integrated Agri-Food System Program

- Program for the Promotion of Sustainable Community Family Agriculture in the Bolivian Altiplano

2.8 Direct mention of indigenous and/or Afro-descendant peoples in the CPF

The FAO CPF in Plurinational State of Bolivia has established the following government priorities (GP):

PG2 Ecological agri-food systems, community and peasant family agriculture.

- Output 2.3: MyPEs and the different forms of community-based Organization (OECAs, OECOM and others), with the support of FAO in coordination with the MDPyEP / MMAyA / MDRyT, implement socio-economic undertakings for the collection and transformation of their agroecological production and use integral forest with prioritization in Amazonian products, through the accompaniment and technical, financial and organizational assistance of the ETAs, within the framework of the Our Forests, Amazon and Ecological Production Programs.
- Output 2.4: MyPEs and the different forms of a community-based organization (OECAs, OECOM and others), with the support of FAO in coordination with the MDPyEP / MDRyT, commercialize their products in local markets and access the purchasing programs of the Status (school meals, subsidies/vouchers).

PG3 Comprehensive and sustainable management of soils, forests, water and biodiversity.

- Output 3.2: MMAyA and the Ministry of Rural Development and Lands have designed and implemented, respectively, the Preservation and Restoration Program for environmental functions with an emphasis on water security for adaptation and mitigation to climate change and the National Management Program and Comprehensive and Sustainable Management of Water and Soils to increase the resilience of vulnerable smallholder families.

PG4 Resilience of livelihoods and comprehensive risk management.

- Output 4.5: Vulnerable smallholder, indigenous and intercultural communities implement strategies, plans and actions for comprehensive risk management, prevention and attention to emergencies (biological, for example, lobsters), to achieve livelihoods (forests, agriculture at the level of the basin) resilient, sustainable and inclusive in coordination with the ETAs, within the framework of the National Program for Risk Management and Our Forests.

Annex 2 of the Indigenous Peoples' Plan (IPP)

Diagnosis of the participation and role of indigenous and native peoples in family farming in the Valles Macroregion of Plurinational State of Bolivia

Project: "Increasing Ecosystem-based Climate Resilience in Vulnerable Rural Communities in the Valles Macroregion of Plurinational State of Bolivia"

March 2020

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Diagnosis of the participation and role of indigenous and native peoples in family farming in the Valles Macroregion of Bolivia

1. Background and justification.

Plurinational State of Bolivia is highly vulnerable to climate change. Climate variability has caused changes in rainfall patterns, droughts and extreme events such as frost, hailstorms and floods, which directly affects the food security of communities dependent on agriculture, leading to more people being vulnerable to the effects of climate change. According to IPCC projections, climate change is expected to exceed 2° C by the end of the 21st century, leading to an increase in variability and extreme events, as well as negative effects on surface and groundwater, which are key elements for agricultural activities and food security. Considering that ambient temperature affects the water table and causes high evapotranspiration, this increase in temperature may result in greater water stress for people and ecosystems, causing drought and affecting food security.

Due to the effects of climate change, many of Bolivia's ecoregions face climate scenarios that will have an impact on food production. Likewise, the lack of adequate irrigation and drinking water infrastructure will increase communities' vulnerability. It is hoped that adaptive mechanisms will be put in place for water source conservation and responsible water management, so that the projected climate scenario will not lead to misery, migration and social unrest on a large scale. According to information from the Agricultural Census (INE, 2013) about 38.5 percent of families in rural areas travelled at least half a kilometre to collect drinking water in 2013, and this percentage had already increased by 6 percent compared to data from the 2001 census (INE, 2001).

To respond to these national, and indeed global, challenges the Government of the Plurinational State of Bolivia and FAO have planned to submit a proposal to the Green Climate Fund (GCF) that aims to **"Increase ecosystem-based climate resilience in vulnerable rural communities in the Valles Macroregion of Plurinational State of Bolivia (RECEM-Valles)"**

The project's area of intervention is the Valles Macroregion, (see Map 1: the Valles Macroregion of Plurinational State of Bolivia) and its aim is to develop actions in 65 municipalities, directly benefiting 58 000 people (small-holders) and indirectly benefiting 290 000 (people that require food and water for human consumption and existing irrigation systems).

Given the above, FAO looked at doing a diagnosis to: **identify and analyse the participation and role of indigenous and native peoples in family farming in the Valleys Macroregion of Plurinational State of Bolivia**, to be used to generate a proposal for an **Indigenous Peoples' Plan (IPP) in the Valles Macroregion**, which would be a document that describes the actions to minimise and/or compensate for adverse impacts, and identify culturally-appropriate opportunities and actions that would enhance the positive impacts on the indigenous peoples.

This document was developed after reviewing official and project information, and international, GCF and Bolivian conceptual, policy, legal and institutional frameworks.

2. Policy, legal and institutional aspects.

The focus on individual and collective rights proposed by the Indigenous Environmental Network was included in the Paris Agreement by the COP21 and in international climate efforts. Case studies by Johl & Lador (2012) showed that climate financial mechanisms take a rights-based approach through the Environmental and Social Standards aimed at guaranteeing projects that have no human impact; transparency and accountability; and redress mechanisms should local peoples feel that their rights have been violated.

Regarding the **policy framework**, Plurinational State of Bolivia signed the Paris Agreement in 2015, and ratified it in 2016 (Law 835). In addition, Bolivia opposes REDD++ and proposed “The Joint Mitigation and Adaptation Mechanism for the Integral and Sustainable Management of Forests and Mother Earth” as an alternative to the current carbon markets.

The Bolivian state **institutional framework** comprises a series of legal and administrative instruments, and environmental policies that recognise that the country is particularly vulnerable to the effects of climate change. The Plurinational Authority of Mother Earth (APMT) is responsible for breaking the effects of climate change and mainstreaming climate change adaptation, and mitigation actions in services such as the National Irrigation Service, the National Service for Protected Areas, the international cooperation, etc. is pending.

Finally, the **legal framework** is a package of current laws and normative documents, such as the Framework Law on Mother Earth and Integrated Development for Living Well No. 300 of 2012, the Forestry Law No. 1700, the National Agrarian Reform Service Law No. 1715 and the Constitution.

3. Legal, conceptual and policy framework regarding indigenous peoples.

To analyse the conceptual, legal and policy framework that this diagnosis and the project should respect, three different normative frameworks: 1) the international legal and conceptual framework, mainly ILO Convention 169 and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), both ratified by the Plurinational State of Bolivia; 2) the current legal and conceptual framework in Plurinational State of Bolivia, as established in the Constitution (CPE, 2009); and 3) the GCF Indigenous Peoples Policy.²⁴

²⁴ Indigenous Peoples Policy, GCF (adopted by the Board and contained in annex XI to decision B.19/11)

Analysing these three bodies enabled us to get a good overview and understanding of the importance of recognising the rights and contributions of indigenous peoples to the issue of climate change. It also enabled us to identify the indigenous peoples in the Valles Macroregion, along with the provisions and procedures needed to be included in the project's IPP.

3.1. International legal and conceptual framework.

As already mentioned, the Bolivian government's legal and conceptual framework takes its lead from: 1) ILO Convention 169 on indigenous and tribal populations in nation-states, which was ratified by Plurinational State of Bolivia through Law No. 1257 of 11 July 1991, and 2) the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) ratified by Plurinational State of Bolivia through Law No. 3760 of 7 November 2007.

The main precepts of the ILO Convention 169 are: the right to take control of their own institutions, ways of life, their economic development and to maintain and strengthen their identities, languages and religions, within the framework of the States in which they live; although the precept of this Convention is mainstreamed throughout the UNDRIP and Bolivia's Constitution, some concepts relevant to this diagnosis still need to be fine-tuned. The most relevant here is what is mentioned in Article 1, which states:

Article 1

1. *This Convention applies to:*

(a) tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations;

(b) peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

This first Article of the ILO Convention 169 describes who the rights holders are, with one of the main characteristics being *"their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries"*, which we can deduce as being the principle of ancestry (through existence and territoriality) as a requirement to demand that their rights be respected as established in the Convention.

Likewise, this Convention establishes the right to be consulted “*through appropriate procedures and in particular through their representative institutions*” (Article 6), as well as “*the right to decide their own priorities for the process of development*” as well as “*participate in the formulation, implementation and evaluation of plans and programmes for national and regional development which may affect them directly*” (Article 7).

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) is a universal declaration on the rights of indigenous peoples, and expands on some points of the rights established in the ILO Convention 169, which are points to be taken into account by this diagnosis:

Article 18: Indigenous peoples have the right to participate in decision-making in matters which would affect their rights, through representatives chosen by themselves in accordance with their own procedures, as well as to maintain and develop their own indigenous decision-making institutions.

Article 19: States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them.

Article 23: Indigenous peoples have the right to determine and develop priorities and strategies for exercising their right to development. In particular, indigenous peoples have the right to be actively involved in developing and determining health, housing and other economic and social programmes affecting them and, as far as possible, to administer such programmes through their own institutions.

As can be seen, these Articles are much more descriptive of the characteristics and qualities needed for these rights to be exercised, stating for example, that consultation should be in “good faith” and aim for “prior, free and informed” consent before adopting and implementing measures that may affect the indigenous peoples.

3.2. Bolivian legal and conceptual framework.

The Bolivian Constitution, in force since 2009, is forward-thinking regarding the rights of indigenous peoples, as it recognises and builds on the rights already established in the ILO Convention 169 and the UNDRIP, and includes a chapter dedicated exclusively to the Rights of the Nations and Rural Native Indigenous Peoples.

Table 1: Chapter on the Rights of the Nations and Rural Native Indigenous Peoples in the 2009 Constitution

CHAPTER IV: Rights of the Nations and Rural Native Indigenous Peoples

Article 30 I. A nation and rural native indigenous people consists of every human collective that shares a cultural identity, language, historic tradition, institutions, territory and world view, whose existence predates the Spanish colonial invasion.

II. In the framework of the unity of the State, and in accordance with this Constitution, the nations and rural native indigenous peoples enjoy the following rights:

- 1. To be free.*
- 2. To their cultural identity, religious belief, spiritualities, practices and customs, and their own world view.*
- 3. That the cultural identity of each member, if he or she so desires, be inscribed together with Bolivian citizenship in his identity card, passport and other identification documents that have legal validity.*
- 4. To self-determination and territoriality.*
- 5. That its institutions be part of the general structure of the State.*
- 6. To the collective ownership of land and territories.*
- 7. To the protection of their sacred places.*
- 8. To create and administer their own systems, means and networks of communication.*
- 9. That their traditional teachings and knowledge, their traditional medicine, languages, rituals, symbols and dress be valued, respected and promoted.*
- 10. To live in a healthy environment, with appropriate management and exploitation of the ecosystems.*
- 11. To collective ownership of the intellectual property in their knowledge, sciences and learning, as well as to its evaluation, use, promotion and development*

There are some points in this Chapter of the Bolivian Constitution that are relevant to this diagnosis:

- “Rural native indigenous” is a new conceptual and juridical category that implies that all rights are to be applied and therefore can be demanded by almost all peoples living in the rural areas of Plurinational State of Bolivia, especially the smallholders, which may give rise to confusion, if not conflicts, as regards who may claim and exercise these rights. Nevertheless, in the first point of this Article, this conflict is explained by establishing “ancestrality” (existence prior to the Spanish invasion) as an overriding claim for exercising these rights. For this diagnosis, this made it easier to identify the indigenous peoples in the Valles Macroregion.
- The right to consultation is recognised in II.15 when “legislative or administrative measures may be foreseen to affect them”, following the principles of the UNDRIP although consultation must be affected by the state.

An important point to note, related to the right to consultation, is that Plurinational State of Bolivia is yet to develop the legal framework necessary to ensure the effective exercise of this right (Framework Law of Consultation, and its regulations and protocols), and only has sectoral guidelines and experiences developed for hydrocarbon exploration and the TIPNIS highway.

3.3. Green Climate Fund Indigenous Peoples Policy.

3.3.1. The Green Climate Fund (GCF)

The GCF is a fund established within the framework of the UNFCCC in Cancun during the COP 16. It is a legally independent institution with a fully independent Secretariat and a 24-member Board that oversees the allocation of funding, guided and supervised by the UNFCCC COP. Currently, the GCF is one of the world’s largest funding mechanisms supporting efforts to combat the effects of climate change caused by global warming that affect weather patterns leading to changes to life on earth and food production.

Its nature and objectives make the GCF an initiative that rolls out large-scale projects globally–funded by the States–that cover and impact huge swathes of land where the States provide a decent legal framework that guarantees rights and sustainable development. The GCF has three credit lines: i) the first is to strengthen the capacities of the National Designated Authorities (NDA) and other sector authorities on aspects related to climate change (Readiness); ii) the second refers to Project Preparation Fundings (PPF); and iii) the third to Funding Proposals.

3.3.2. The GCF and its Indigenous Peoples Policy

At the fifteenth meeting of the GCF Board (Board 15), the Secretariat was asked to develop a policy on indigenous peoples. At Board 19, the Board adopted the GCF Indigenous Peoples Policy. This policy was the result of the systematic efforts of indigenous peoples’ organizations to lobby the GCF since it was founded.

The GCF has approved projects to combat climate change in different parts of the world, including some on indigenous lands and territories. Therefore, the policy reflects the right that indigenous peoples have to be consulted when projects or programmes are being designed and

implemented so that they do not affect their livelihoods or traditional governance systems. Another important point of the policy is that it recognises the need to ensure that indigenous peoples must have access to the benefits of GCF projects recognising that indigenous peoples are one of the groups most affected by climate change, and that they have invaluable and critical contributions to make to climate change mitigation and adaptation.

Therefore, the GCF Indigenous Peoples Policy looks at ways that decisions are made and how indigenous peoples are involved to anticipate and avoid any adverse impacts its activities may have on indigenous peoples' rights, interests and well-being, and when avoidance is not possible to minimise, mitigate and/or compensate appropriately and equitably for such impacts, in a consistent way and to improve outcomes over time.

To sum up, the GCF Indigenous Peoples Policy is designed and implemented to protect the rights of indigenous peoples during GCF activities, and ensure that the projects generate social, economic and environmental benefits for them in keeping with the principles and standards of the UNDRIP, whether they be activities carried out by the GCF itself or by other organizations funded by the GCF. Therefore, to identify indigenous peoples, the GCF uses some elements from international treaties and conventions, such as the ILO Convention 169 and the UNDRIP.

Below is a list of the points to be taken into consideration when designing a Funding Proposal that includes indigenous peoples:

- Self-identification
- Collective attachment to a geographic space, community-based management of land, natural resources and territory, ancestral use and occupation.
- Collectively agreed norms (political, cultural, economic or social).
- Native language or dialect.

Finally, it should be mentioned that the accredited bodies should guarantee that this policy is adhered to when carrying out actions, programmes and projects on indigenous peoples' lands and territories. Therefore, the accredited agencies should have specific policies and ways of working that respects and involves indigenous peoples to the full, guarantees that the Free, Prior and Informed Consent (FPIC) process is duly carried out, and that there are systems in place to manage and minimise risks and impacts on their land, territory and livelihood systems, and compensate appropriately.

3.3.3. GCF Environmental and Social Standards and Indigenous Peoples.

It should also be mentioned that some elements of the GCF Environmental and Social Standards are more relevant for indigenous peoples and so the analysis of the Environmental and Social Standards should be rooted in respect for human rights, recognising the risks and opportunities for the indigenous peoples, the vulnerability of the indigenous peoples and how they will contribute to the GCF targets.

In addition, the GCF Environmental and Social Standards reflect the highest standards and commitments of the United Nations, and so the Indigenous Peoples Policy includes the following components:

- A legal framework that includes the relevant international human rights standards.
- FPIC, and the full and effective participation of the indigenous peoples.
- Recognition of the contribution of indigenous peoples' traditional knowledge and livelihoods.
- Boost the capacity of the Secretariat and the NDAs.

The Environmental and Social Standards require that a specific guide on the FPIC be developed and adhered to, and that the indigenous peoples be fully and effectively involved. In addition, the Environmental and Social Standards guidelines state that all activities funded by the GCF must be geared to avoiding adverse impacts on indigenous peoples, promoting benefits and opportunities, promote respect for indigenous peoples and preserve their culture, knowledge and practices. Designing and implementing activities must be aligned with the rights and commitments established by the GCF.

The Environmental and Social Standards guidelines also establish that indigenous peoples' participation in the FPIC process must be guaranteed by doing the following:

- Describe how the project/programme will align with the country's public policy and, more importantly, with the needs of local people.
- Involve the indigenous peoples in designing and implementing the project/programme, and report on the results of the FPIC process.
- Provide documented evidence of all agreements reached by the project/programme and the affected communities, and evidence of agreements reached as a result of negotiations. The FPIC process and outcome do not require unanimous support from all members of affected communities of indigenous peoples. FPIC should be viewed as a process that both allows and facilitates indigenous peoples to build and agree upon a collective position with regard to the proposed development cognizant that individuals and groups within the affected communities may retain differing views on various issues pertaining to the proposed development.
- Provide a summary of the reports, specific cases or complaints that the Special Rapporteur has presented on the rights of indigenous peoples and that may be relevant to the project/programme.

4. Presence of Indigenous Peoples and Nations in the project area (Valles Macroregion of Plurinational State of Bolivia)

The "RECEM Valles" project will focus its activities on indigenous and smallholder farming communities in the Valles Macroregion of Plurinational State of Bolivia (PDES 2020-2025).²⁵ This region straddles several different ecoregions, including the Yungas regions of La Paz and Cochabamba, the inter-Andean dry valleys in Santa Cruz, the highlands in Potosí and Tarija, and the Tucumano-Boliviano Forest in the south of Plurinational State of Bolivia. It comprises a total of 111 municipalities and covers an area of approximately 13 107 900 hectares.

Map 1: Macroregions of Plurinational State of Bolivia



Source: Author's own, based on ESDP 2016

4.1. Demographic Information

The demographic information was processed, as indicated above, based on data from the most recent 2012 Population and Housing Census, and yielded the following population data for the project intervention municipalities where there are TCOs/TIOCs.

Table 4: Population by gender in the project intervention municipalities with an indigenous population

Municipalities	Men	Women	Total Population
Poroma	8 714	8 663	17 377

²⁵ PDES: Economic and Social Development Plan of the Plurinational State of Bolivia, 2015.

San Lucas	15 859	16 661	32 520
Mizque	13 434	13 466	26 900
Aiquile	11 651	11 616	23 267
Tupiza	21 672	23 142	44 814
Cotagaita	15 558	16 243	31 801
Vitichi	4 985	5 661	10 646
Caiza D	5 916	6 151	12 067
Potosí	91 657	99 645	191 302
Tacobamba	6 213	5 622	11 835
Puna	10 485	11 432	21 917
Tinguipaya	14 343	12 857	27 200

Source: Author's own using data provided by the INE Census 2012.

There is no up-to-date disaggregated data for the indigenous and non-indigenous population in each TCO/TIOC; therefore, to identify the population in each municipality where TCOs and/or TIOCs straddle municipal borders, we used information from the 2012 Census to find out the percentage of indigenous people in each municipality.

Table 5: Indigenous population by gender and percentage of indigenous population in the project intervention municipalities

Municipalities	Total Population	Indigenous population				Cultural identity
		Men	Women	Total	Percentage	
Poroma	17 377	6 995	6 997	13 992	81%	Quechua
San Lucas	32 520	13 745	14 468	28 213	87%	Quechua
Mizque	26 900	11 500	11 476	22 976	85%	Quechua
Aiquile	23 267	8 698	8 637	17 335	75%	Quechua
Tupiza	44 814	1 728	1 701	3 429	8%	Quechua
Cotagaita	31 801	8 550	8 913	17 463	55%	Quechua
Vitichi	10 646	4 176	4 852	9 028	85%	Quechua
Caiza D	12 067	4 879	5 076	9 955	82%	Quechua
Potosí	191 302	27 307	30 917	58 224	30%	Quechua
Tacobamba	11 835	5 398	4 948	10 346	87%	Quechua

Puna	21 917	8 684	9 444	18 128	83%	Quechua
Tinguipaya	27 200	13 001	11 560	24 561	90%	Quechua

Source: Author's own using data provided by the INE Census 2012.

These data show the importance of the indigenous population in each of the project municipalities where there are TCOs/TIOCs. The municipalities of Tacobamba and Tinguipaya (Potosí) and San Lucas (Chuquisaca) are the municipalities with the highest presence of indigenous peoples and the municipalities of Tupiza and Potosí (Potosí) have with the lowest indigenous population.

It should be mentioned that the indigenous population is over 75 percent of the total population in 9 of the 12 municipalities; however, this information from the 2012 Census includes smallholders and other local people that identify themselves as belonging to a native people or as indigenous.

4.2. Project Intervention Area and Indigenous Peoples.

The project intervention area covers 60 percent of the total area of the Valles Macroregion of Plurinational State of Bolivia.²⁶ This is equivalent to an area of approximately **8 338 000 hectares**, comprising **5 departments and 65 municipalities**, represented by different ecoregions in the centre and south of the country, with altitudes ranging from 1 400 to 3 800 metres above sea level. Climatic conditions vary with 300 mm rainfall in January, February and March and 20-50 mm from May to September. The temperature fluctuates much like the rainfall with monthly temperatures ranging from 11 °C to 18 °C. The lowest temperatures are registered between May and September (FAN, 2018). Land use differs because of this wide variety of altitude, weather and biogeography, and in the Valles Macroregion of Plurinational State of Bolivia there is also a wide range of sociocultural factors alongside the different farming systems.

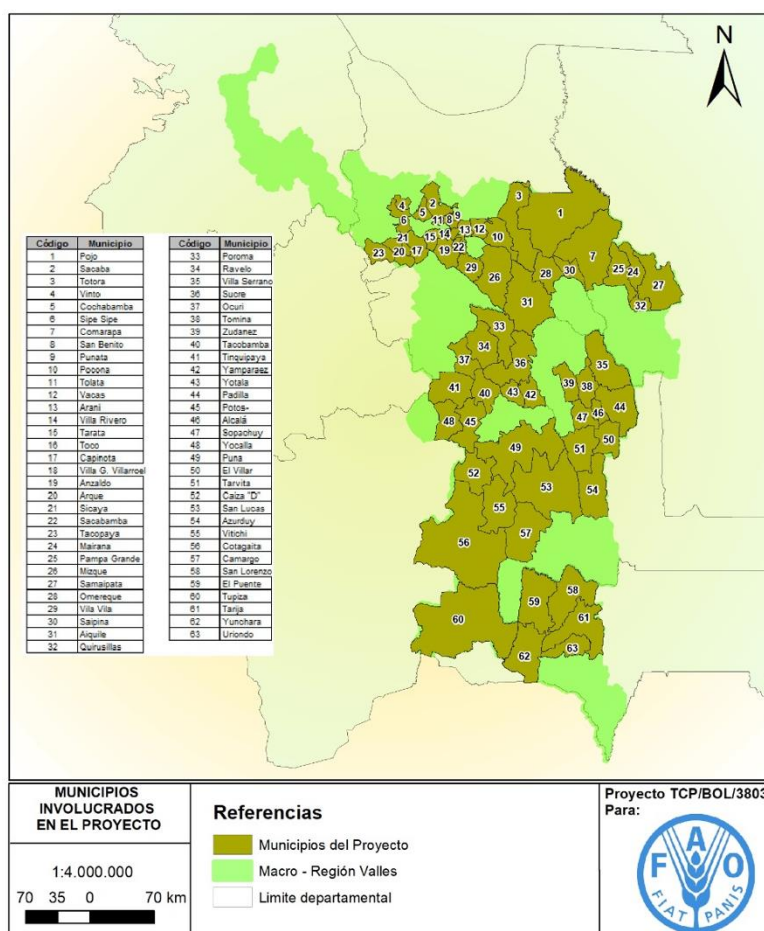
Table 2: Municipalities in the project intervention area by Department

Department	Nº of municipalities covered by the project
Chuquisaca	16
Cochabamba	26
Potosí	11
Santa Cruz	7
Tarija	5

Source: Author's own using data provided by the project.

²⁶ Bolivia's Strategic Macroregions are defined by the Ministry of Development Planning (MPD) through the Agency for the Development of Macroregions and Border Zones of the Plurinational State of Bolivia (ADEMAF, 2016).

Map 2: Project intervention municipalities in the Valles Macroregion



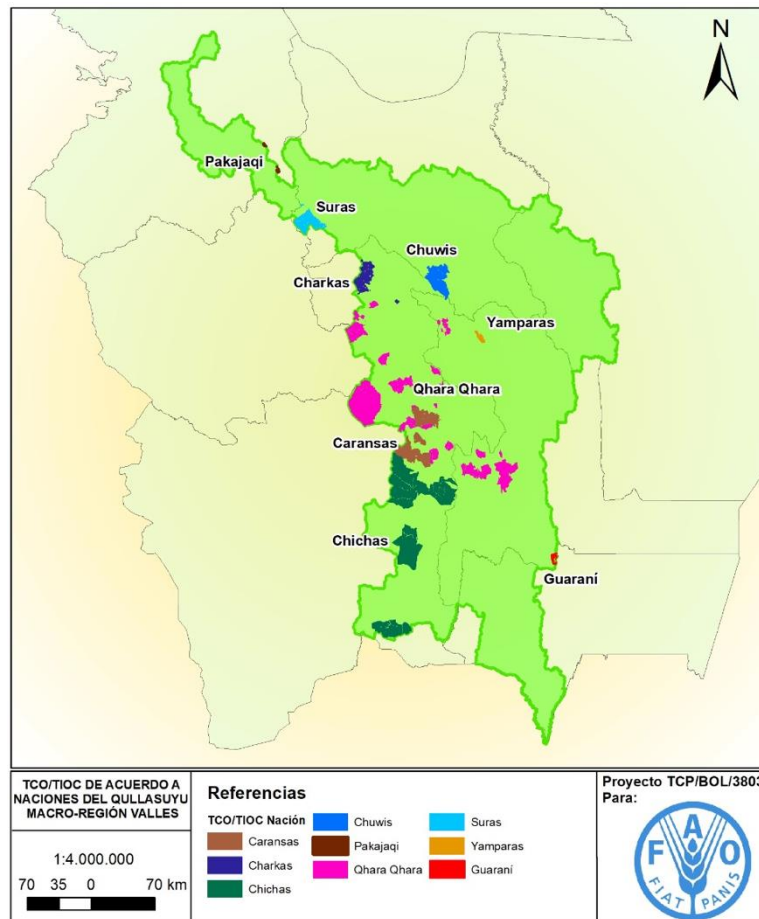
Source: Author's own using data provided by the project.

Regarding the indigenous peoples that live in the Valles Macroregion of Plurinational State of Bolivia; taking into account the conceptualization and national and international legislation, and the GCF Indigenous Peoples Policy, the main criterion used to identify indigenous peoples was the concept of territorial "ancestrality" as established in these legal frameworks. Therefore, to identify the presence of indigenous peoples in the Macroregion, data from the National Institute of Agrarian Reform (INRA, 2018), which reports on Indigenous Community Lands (TCOs) and Native Indigenous Territories (TIOCs), were used assuming that they had followed a land registration process based on collective demands.

Having analysed the data (INRA, 2018), it was found that in the Valleys Macroregion 111 TCOs and TIOCs have been registered, covering a total of 993 223.85 hectares (7.72% of the Macroregion surface area).

As can be seen in the map below, the largest area of indigenous territories (TCOs and/or TIOCs) in the Macroregion is located in the Department of Potosí, followed by the Department of Chuquisaca and, to a much lesser extent, the Departments of Cochabamba and La Paz.

Map 3: TCOs and TIOCs in the Valles Macroregion



Source: Author's own using data provided by the project.

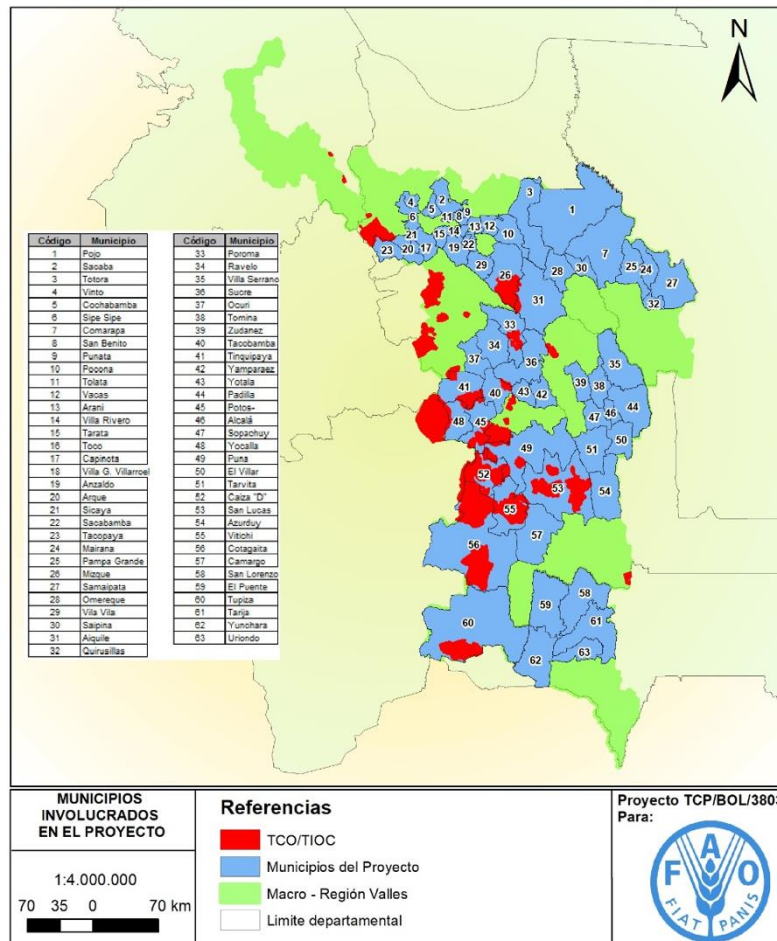
The requests for land titling for TCOs and TIOCs in the Macroregion were made collectively and through the organizations representing indigenous peoples, almost all of which are affiliated with the National Council of Ayllus and Marqas of Collasuyo (CONAMAQ),²⁷ with the Itikaguazu TCO in the lower south-east of Chuquisaca affiliated with the Guaraní Peoples' Assembly (APG); in Potosí, requests were channelled through the Chichas First Nation (in the south), the Karangas and Qhara Nations (in the centre) and the Charkas Nation (in the north); in Chuquisaca, by the Qhara Nation (in the north and southwest) and the Yampara Nation (in the northeast); in Cochabamba, by the Chuwis Nation (in the southeast) and the Suras Nation (in the extreme west) and, in La Paz, by the Pakajaki Nation.

²⁷ National-level umbrella organization of highland indigenous peoples.

From this information, it can be concluded that there is a significant presence of indigenous peoples' territories in the Valleys Macroregion of the Bolivian (7.72% of the area) and that the land titling processes were done by the local organizations that represent the peoples, which makes doing the consultation processes and the IPP much easier.

Although the project refers to the Valles Macroregion of Plurinational State of Bolivia, it will actually only intervene in 65 of the 111 municipalities that make up this region. Therefore, it is necessary to know the TCOs and TIOCs in these municipalities.

Map 4: TCOs and TIOCs in project intervention municipalities



Source: Author's own using data provided by INRA, 2018.

The municipalities where indigenous peoples' territories have been titled are as follows:

Table 3: Project municipalities where there are indigenous peoples' territories

Department	Municipalities covered by the project
Chuquisaca	Poroma
	San Lucas
Cochabamba	Mizque
	Aiquile
Potosí	Tupiza
	Cotagaita
	Vitichi
	Caiza D
	Tacobamba
	Puna
	Tinquipaya

Source: Author's own using data provided by the project.

5. Indigenous peoples and family farming in the Valles Macroregion of Plurinational State of Bolivia.

Sustainable and Community Family Farming (SCFF) in Plurinational State of Bolivia plays a crucial role in achieving food security with sovereignty, strengthens the rural economy and reduces rural poverty in the country. According to the National Institute of Statistics (INE), more than 80 percent of farming and forestry in the country is family-based, which shows that the vast majority of food that Bolivians consume comes from this mode of production and way of life, which creates jobs and promotes local development. The new constitutional jurisdiction of the state and the changes in the legal framework, Law 338 of Economic Organizations Peasant, Indigenous and Native (OECAS) and Community Economic Organizations (OECOM) for the integration of sustainable family farming and food sovereignty, and recent public policies implemented in the country are related to the strengthening of the SCFF at establishing public goods and services aimed at this activity to its full potential.

Therefore, it should be noted that at least 90 percent of the farmland in the Valles Macroregion are smallholdings, which will definitely be seen by the project as indirect beneficiaries. The Valles Macroregion of Plurinational State of Bolivia is considered to be Bolivia's most vulnerable region due to high levels of poverty (around 63% of the population is poor). Most of the country's poor live in rural areas where 56 percent are mainly farmworkers, ranchers and fishers that depend on natural resources (water, soil, biodiversity), favourable weather conditions and environmental functions where they live for their survival. The main crops grown over a surface area of 379 134.54 hectares include wheat, potatoes, corn, peas and broad beans.

At the same time, other farm produce should be mentioned here as some crops are becoming increasingly more important to farmers in this region of Plurinational State of Bolivia as they command higher prices and there has been an increase in local, regional and national demand: fruit like peaches, grapes and apples; vegetables like garlic and onion; and others, like honey and its derivatives. However, if production is to be boosted, specialist support needs to be provided. For example, the farming and indigenous families in the Valles Macroregion have a large herds of livestock, mainly sheep, goats, cattle and llamas (in that order). These are family-owned and are a major contributor to food security, and also for income when sold in urban markets. The grazing model is widespread in the region.

According to the data taken from the Agricultural Census (INE, 2013) for this diagnosis, the total land belonging to indigenous peoples (registered as TCOs and TIOCs) is 993 223.85 hectares, and during that year (2013) 66 543.72 hectares were farmed producing 470 638.21 quintals²⁸ (mainly cereals, vegetables and fruits).

6. Conclusions and recommendations.

We would like to make the following conclusions and recommendations:

- There are indigenous peoples in the Valles Macroregion of Plurinational State of Bolivia, in the departments of Potosí, Chuquisaca and Cochabamba; therefore, it is necessary to do a Free, Prior and Informed Consultation (FPIC) before implementing the project.
- As established in the Bolivian Constitution, the state is responsible for deciding which institution will do the FPIC.
- The FPIC process should be taken as an opportunity to draft laws and protocols to guide other similar initiatives in the country.
- To facilitate the FPIC process, it will be necessary to coordinate with and involve the second-level indigenous peoples' organizations (nations, *ayllus* and *marqas*). Given that there are 111 TIOCs and TCOs in the Macroregion, attempting to work directly with the first level (community level) will hamper the process as it will become cumbersome.
- Likewise, a roadmap for the consultation process should be developed that will lead to an Indigenous Peoples' Plan (IPP) for the project. The IPP will cover all the standards, protocols and provisions needed when working with the indigenous peoples in the Valles Macroregion of Plurinational State of Bolivia.

²⁸ 1 quintal = 46 kg

[illegible]

Annex 4. Budget

Annex 3. BUDGET - Indigenous Peoples Plan (PPI)			
Project: "Increase in Climate Resilience based on Vulnerable Rural Communities Ecosystems in the Macro - region Valles of the Plurinational State of Bolivia"			
N°	Strategic lines/Activities	Budget by activity	
		Required media	USD Cost
0	Consultation process, prior free and informed for the implementation of the PPI and the project		
0.1	Agreements for the consultation process with CONAMAQ and Nations	Travel costs Event costs Facilitation service	5 000,00
0.2	Presentation and information workshops (Nations Qhara Qhara, Chuwis, Chichas, Karangas, Charkas)	Travel costs Event costs Facilitation service	20 000,00
0.3	Workshops for the arrangement and establishment of agreements (Nations Qhara Qhara, Chuwis, Chichas, Karangas, Charkas)	Travel costs Event costs Facilitation service	20 000,00
0.4	Signing Agreements event for the Prior, Free and Informed Consent (CPLI) with CONAMAQ and Nations	Travel costs Event costs Facilitation service	5 000,00
1	Line of Action 1: Strengthen the participation of the indigenous population in the Project and reduce cultural barriers		
1.1	Design and implement a financial capacity development program for indigenous producers with a focus on action at the business level	Specialized services Travel costs Event costs Facilitation service	100 000,00
1.2	Create and implement a strategy to position and segment creole corn in the market, promoting price differentiation	Servicios especializados	120 000,00
1.3	Methodological strategies for the organization, facilitation and management of community groups aimed at technicians	Specialized services Travel costs Event costs Facilitation service	25 000,00
1.4	Establish and execute a differentiated strategy to ensure the equitable participation of indigenous men, women, youth and adults and, if necessary, include it in the corresponding Operating Rules	Specialized services Travel costs Event costs Facilitation service	20 000,00
1.5	Continuously review and adapt the social criteria for the inclusion of a potential indigenous population in the normative instruments that regulate access and the allocation of project support	Specialized services	20 000,00
1.6	Carry out interinstitutional links that allow improving care for indigenous peoples, women and the elderly	Travel costs	5 000,00
1.7	Train project promoters in caring for the indigenous population	Travel costs Event costs Facilitation service	15 000,00
1.8	Strengthen the technical support processes for the indigenous population	Specialized services Travel costs Event costs	50 000,00
1.9	Carry out a mid-term evaluation of the project to see how negative impacts have been guaranteed or mitigated and ponder the positive impacts detected	Specialized services Travel costs Event costs	20 000,00

2	Line of action 2: Design a dissemination strategy for the Project which is culturally appropriate for indigenous producers		
2.1	Design audiovisual materials for the dissemination of the Project and attracting demand among the potential indigenous population, dubbed or subtitled in the main indigenous languages spoken in the	Specialized services Communication costs	35 000,00
2.2	Design and disseminate printed material of the Project that guides indigenous producers in the mechanisms and times to participate in the Project, taking into account the cultural characteristics of the population, written in the indigenous language and in Spanish.	Specialized services Communication costs	35 000,00
2.3	Disseminate and promote key messages related to the objectives of the project, highlighting the biocultural importance for different audiences	Communication costs	20 000,00
2.4	Develop dissemination material to strengthen the capacities of the different audiences on social safeguards issues	Specialized services Communication costs	20 000,00
2.5	Carry out workshops to disseminate the Rules of Operation.	Travel costs Event costs Facilitation service	15 000,00
2.6	Take courses on rights and obligations	Travel costs Event costs Facilitation service	15 000,00
2.7	Hold forums or meetings that allow the exchange of technical knowledge and organization among indigenous producers	Travel costs Event costs Facilitation service	20 000,00
2.8	Establish a technical cooperation agreement for the dissemination and promotion that it has through the indigenous radio broadcasters and operational units located in the intervention areas	Communication costs	50 000,00
3	Line of action 3: Implement a strategy for participation and involvement of the indigenous population in the project		
3.1	Design, plan and budget jointly with the representative organizations of the native indigenous peoples the implementation of the project activities, holding periodic meetings (every six months) in which information is provided on the execution of the activities of the last semester and planning the activities of the following semester.	Travel costs Event costs Facilitation service	60 000,00
3.2	Establish protocols, channels and media of coordination and continuous information (at least six-monthly periods) between the indigenous organizations and the project	Travel costs Event costs Facilitation service	30 000,00
PRESUPUESTO TOTAL (\$US)			725 000,00

APPENDIX 7. PREPAREDNESS AND RESPONSE PLAN

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INTRODUCTION

An organization is susceptible when faced with an emergency situation that can cause loss of human life, material loss, decreased productivity, environmental contamination, damage to the entity's image, among others.

The entity's response time and capacity are key elements in facing, controlling or combating any emergency situation that occurs inside or outside the entity.

This plan will guarantee the correct and effective application of internal resources, assigning responsibilities and specifying the actions to follow, before, during and after each case. For this purpose, the work has been focused in accordance with the basic principles of security in general, establishing prevention measures with sufficient reaction capacity and the participatory action of all the personnel that work within it; To all this, the general evaluation of all the facilities is added, the same ones that provide greater security and habitability.

II. SCOPE

This plan applies to all emergencies that take place during the activities carried out by its own personnel and third parties in the facilities of the United Nations Organization for Food and Agriculture in Bolivia - FAO Bolivia at the headquarters of La Paz, bases operations and projects. The contracting entities that are providing services for FAO within its facilities must align with the FAO Emergency Preparedness and Response Plan. For remediation projects or other services contracted by AMSAC, the contracting companies must have their own Plan of Emergency Preparedness and Response, according to the scope of its services.

III. OBJECTIVES

- Comply with legal requirements in matters related to Emergency Preparedness and Response.
- Respond quickly and efficiently (with responsibility and the best techniques) to any emergency, with the possibility of risk to human life, health, the environment, facilities and equipment.
- Have a structured, planned organization with a distribution of responsibilities to effectively face an emergency in order to minimize post-emergence losses.
- Establish the procedures for communication, response, mitigation, handling and disposal of waste in the event of an imminent emergency.
- Re-establish operations in the shortest possible time and with an acceptable minimum of losses.

IV. REFERENCE DOCUMENTS

- State Constitution

- General Law on Occupational Hygiene and Safety and Well-being (Decree Law) (2-August-1979) Law No. 28551, which establishes the Obligation to prepare and present Contingency Plans.
- Supreme Decree No. 2936
- Comprehensive Territorial Development Plan

V. VALIDITY

This document will be effective as of the first business day after the approval date.

SAW. CONTENTS

1. Risk Assessment and Identification of Critical Areas and Activities

1.1 The Emergencies considered in this Plan, at the Lima and Project level, are the following:

- Fire or Explosion
- Accidents with personal injury
- Seismic movements
- Landslides due to extraordinary rains.
- Electric storms
- Chemical Spills
- Floods or waterlogging

1.2 The critical areas have been determined according to the risks associated with a specific hazard, as well as the associated damage agent and its magnitude, as can be seen in the following table:

Risk level	Description
HIGH	Significant damage to the environment or health, requires allocation of resources > US \$20,000
MEDIUM	Moderate damage to the environment or health, requires allocation of resources < US\$ 10,000, < US\$ 20,000
UNDER	Slight damage to the environment or health, requires allocation of resources < US \$10,000

Table 1: Critical area – Central Office

Area	Location	Associated Risk	associated damage agent
administrative	Data center	Electric shock, short circuit, fire.	Electric equipment
	Administrative office	Electric shock, short circuit, fire	Electric equipment

	Sanitary facilities	chemical spill	cleaning chemicals
Infrastructure	Administrative Office	Flooding due to broken pipes.	Water pipe connections.
Area	Location	Associated Risk	associated damage agent
warehouses	General File / Warehouses in General	Falls at different levels due to storage of loads at a higher level Muscular problems for cargo handling	materials, supplies
		Electric shock, short circuit, fire	Electrical equipment and boards
		chemical spill	cleaning chemicals
Dining room	Dining room	Fire, gas cylinder explosion.	fuel fire
		Burns	Cooking oil
		substance spill chemical	cleaning chemicals
		Electric shock, short circuit, fire	Electrical equipment and boards
Parking lot	Parking lot	Hydrocarbon spill (oil, fuel).	Hydrocarbons (oil, fuel).

Table 2: Critical areas – Projects

Area	Location	Associated Risk	associated damage agent
administrative	Administrative office	Electric shock, short circuit, fire	Electric equipment
	Sanitary facilities	chemical spill	cleaning chemicals

Infrastructure	Office Administrative /Operational Bases/ Projects	Flooding due to broken pipes or rain.	Water pipe connections, drainage systems.
	Operating bases/ Projects	Landslides due to extraordinary rains	Loose slope material / Rain.
warehouses	Stock Administrative	Falls at different levels due to load storage at a higher level	materials, supplies
		Muscular problems due to handling loads	
		Electric shock, short circuit, fire	Electrical equipment and boards
Operations	Operations Zone	collisions	Vehicles and Equipment in motion
		Level falls. Falling at different level. Blows and Cuts. Flattening. Equipment overturn. Entrapments Electric shock	Work in trenches, excavations Work with manual and electric tools Sliding of material. Electric storms
		chemical spills	chemical storage Operation of vehicles, equipment, machinery

2. Potential Risk Assessment

2.1. The risks evaluated during the delivery of technical assistance are of a diverse nature; in this plan, special attention will be paid to those associated with emergency situations.

Emergency Type	Danger	Risk level	controls
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Fires (fire, short circuit, explosions)	Electric equipment	High	Use of ground pit, differential taps, thermal taps, use of conduits attached to the ground or wall for electrical cables, use of equipment and electrical cables in good condition, use of smoke detectors, use of fire alarms, use of PQS fire extinguishers and CO2.
	Electrical installations	High	Use of ground pit, differential taps, thermal taps, use of conduits attached to the floor or wall for electrical cables, use of equipment and electrical cables in good condition, use of fire-fighting network system (in network centers), use of detectors smoke, use of fire alarm, use of PQS and CO2 extinguishers, periodic inspections.
	Storage of flammable products	High	Away from spark or flame emission points, stored in a ventilated place, use of smoke detectors, use of PQS and/or CO2 extinguishers, safety sheets.
earthquake	evacuation access	Medium	Evacuation on clear and marked routes. Free and unlocked access Free and marked meeting points Operational emergency lights Development of emergency drills
	Objects (file cabinets, equipment) stored in level and height shelves	Medium	Secure shelves with metal hardware to the wall for support Don't Overstock Shelf Storage Do not exceed the permitted height of the shelf for storage

Emergency Type	Danger	Risk level	controls
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emergencies medical	Works with manual tools	Medium	Use of certified and operational tools, inspection of tools, use of PPE, use of Safe Work Procedure.
	Work at height on stairs	Medium	Use of stairs in good condition and certified.
	use of chemicals	Medium	Use of PPE and clothing, appropriate for handling chemical products. Training in the use of chemical products and product safety sheets.
	cargo handling	Medium	Use of equipment for the transfer of loads. Training in handling and transporting manual loads.
Leak	Use of chemical products	Under	Use of PPE and appropriate clothing and equipment for handling chemical products Training in the use of chemical products and product safety data sheets Compliance with safety regulations Labeling and safety sheet, before handling. Assignment and verification of the use of security implements. Use of containment trays and anti-spill kit.
	Machines, vehicles.	Under	Equipment in good condition, anti-spill kits
flood or waterlogging	Rains, collapse of structures water eyes support	Under	Inspection and maintenance of infrastructure. Drainage system.
	broken water pipes	Under	Inspection and maintenance of infrastructure. Drainage system.
Landslides due to extraordinary rains	Loose material on slope and rain	Under	Periodic verification in the field / Scheduling of works according to seasonality of rains.

3. Emergency Protection Measures

The rapid response system to the phenomenon is made up of a team of skilled and trained workers, ready to take action at the moment an emergency occurs, which is called the EMERGENCY TEAM.

3.1 Emergency Brigade

The FAO emergency brigade has the following objectives:

- Provide adequate support to people in the affected area as a first response to an incident.
- Minimize the impact by taking timely and effective action against the factors that affect or generate the impacts.
- Identify the actions that must be taken on a larger scale than expected when the incident has the greatest impact, including specialized external support.

Executor	Activity
Brigade Coordinator	1. Direct the emergency brigade for Level II – Moderate emergencies.
	2. Performs comprehensive management of the Level I – Mild emergency situation and evacuations. This includes: <ul style="list-style-type: none">• Use of human resources, equipment, materials, supplies and local communications to deal with the emergency and ensure control of its impact as quickly as possible.• Management of accounts with brigade members at the La Paz headquarters and its Operational Bases.
Coordinator of Brigade / Specialized Team	3. Coordinate actions for Level II emergency situations and Level III. Note 1: The specialized team will be according to the type of emergency (Police, Fire, Civil Defense).

3.2. Emergency equipment


- Alarm system for fire detection.
- Smoke detectors.
- PQS, CO2, H2O, Potassium acetate fire extinguishers.
- Emergency lights.
- First aid kits.
- Stretcher.
- Anti-spill Kit, containment trays.

4. Description


4.1 Emergency Levels

The emergency levels have been classified as follows:

4.1.1. Level I (Mild):The emergency can be controlled immediately by the personnel of the affected area without the need to resort to the brigade.

	A level 1 emergency is of a small nature that can be even minor blows or cuts to a member of the body, these can be treated with first aid, without the need for support from the brigade team. In case of threats of fire, that which has been confined to a small space and has not spread to any part of the area involved (walls, floors, ceiling). These threatened fires can be easily put out with a portable fire extinguisher.
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4.1.2. Level II (Moderate):The emergency requires alerting the response team so that they are prepared to respond to the situation, but it can still be handled in the area of the occurrence.

	A level 2 emergency is of a medium nature, which could cause temporary injuries. This can be controlled with the support of the emergency brigade team. In case of fire, it is that which has spread through the building (eg walls, floors, ceilings). It can be controlled with the support of area personnel. The brigade could be called in to inspect the area to ensure there is no possibility of a fire restart.
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4.1.3. Level III (Severe):All internal and external resources are activated by activating the FAO Emergency and/or Contingency Preparedness and Response Plan.

Tier III Serious	<p>A level 3 emergency is of a high nature, which could result in permanent injury or death to the worker. To control this type of emergency, external support is required (police, etc.). In case of fire, it is an active fire that cannot be contained for several minutes, and it is threatening or involving nearby facilities. The emergency response team cannot control the incident and requests the support of external resources.</p>
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4.2 Communications

4.2.1. Communication in an Emergency:

Anyone facing or discovering an emergency, whether on day or night shift, will immediately notify their supervisor or line manager, or the contract administrator.

Likewise, the Security Specialist, the Head of the Administration and Logistics Department, and the FAO Country Representative must be informed immediately. In the case of an environmental emergency, the Closure Plans Supervisor must be additionally informed so that he can proceed to notify, as appropriate, in accordance with the provisions of the Procedure. Report and Investigation of Environmental Incidents.

The person must provide the following information:

- Declare that there is an emergency by saying “This is an Emergency”
- Emergency Type
- Location, as precise as possible
- Emergency Level (1, 2 or 3)
- Number of people involved and/or injured, severity of injuries.
- Occurrence time
- Name of the person reporting.

See Annex No. 7 Communication Protocols.

In the event of a level III emergency, the Administration and Finance Management, in coordination with the Country Representative and/or Management Committee, will assess the need to apply the Communication Manual for Crisis Situations and activate the Business Continuity Plan.

4.2.2. Communication with institutions or external support companies

Depending on the level of the emergency, the Administration and Finance Management, through the Human Resources Unit, will communicate with:

- External support institutions: firefighters, police, clinics, etc.
- External support companies: electricity, water, etc.
- neighbors etc

For communication related to an emergency in an operational base or project, the Administration Department and the Administrator of the Operating Base and the Supervision of Community Relations, as appropriate.

4.2.3. Notification of the Emergency to the Competent Authority

If it involves dangerous incidents, environmental incidents, as appropriate, work accidents or occupational diseases, the Post-Closure and Maintenance Department, with the support of the UN Security Specialist, will proceed to notify the competent authority, within the established term. in legal regulations, as provided in the corresponding Incident Reporting and Investigation Procedure.

5. Training and Drills

The personnel selection process to form the emergency brigades will be carried out considering the voluntary presentation of the members or by special invitation of each supervisor. Emergency Response personnel must be competent and capable of carrying out their assigned activities as established in this Emergency Plan.

The Emergency Brigade must comply with the training in First Aid, Evacuation and Rescue, Fire Fighting and Environmental Incidents by 2021, as indicated.

No.	Training Topic / Training	Objective group	Characteristics of training events / Training
1	Fire management and control	emergency Brigade	1 training 1 drill
2	First aid	emergency Brigade	1 training 1 drill
3	Evacuation and Rescue	emergency Brigade	1 training Drill according to programming INDECI (1 minimum per year)
4	Environmental Spill	emergency Brigade	1 training 1 drill

Consideration should be given to retraining when modifications are made that may influence emergency response.

Periodic tests of the Emergency Preparedness and Response Plan will be carried out, to ensure that the organization and external emergency services can respond appropriately to an emergency situation and prevent or mitigate the consequences of safety, health at work and the environment. For this purpose, there is a Drill Program.

6. Response Operations

The response procedure and mitigation activities contemplate emergencies and/or contingencies that may arise at the administrative headquarters in La Paz or at the operational bases.

The emergencies identified are the following:

FIRES / EXPLOSION:

BEFORE		
To do?	How to do it?	Responsible
Training for emergency brigade members and workers	Generate a training plan.	SSOMA Specialist
	Establish responsibilities for power cut in case of fire.	
Installation of fire control equipment.	Coordinate the installation of fire extinguishers taking into account the fire extinguisher installation primer.	SSOMA Specialist
Inspection of the state of essential resources (fire extinguishers).	Generate a schedule of periodic inspections.	SSOMA Specialist
	Carry out scheduled inspections.	SS specialistOMA/ emergency brigade
Implementation and maintenance of fire response drill programs.	Establish a drill schedule	SSOMA Specialist
	Follow the planning guide for the development of drills.	
Maintenance and inspections of facilities	Panel inspections, electrical installations, preventive and corrective maintenance.	Administration and Logistics Department / SSOMA Specialist / Maintenance
DURING		
To do?	How to do it?	Responsible
Sound an alarm.	The collaborator who detects the fire will give the alarm (FIRE!!) and if possible will try to put it out with the extinguisher.	any collaborator
stoppage of operational activities.	The order is given to stop activities in the area where the fire is taking place.	SSOMA Specialist / Area Manager

Cut off power supply	Go to the general board and perform the power cut. If a vehicle is involved, the battery will be disconnected.	Security guard / maintenance staff (headquarters). Watchman (bases). Driver.
Communicate to responsible.	Notify the Head of Administration and Logistics or the Administrator of the Operational Base, and brigade members.	any collaborator
evacuation of collaborators.	The members of the brigade direct the evacuation of collaborators along the established routes, taking into account the evacuation points.	emergency Brigade
Turn off the fire.	The members of the brigade will try to control the fire (in case it is threatened), operating the strategically located fire extinguishers. Otherwise they request external support.	Emergency Brigade
Communication to neighbors	Communicate to the immediate neighbors about the actions taken or about the need to evacuate their facilities.	Department of Administration and Logistics or Base Manager operational
Injured care.	First aid will be given to the injured before the arrival of medical personnel. The Physician and/or Paramedic will rely on essential resources (stretcher, emergency response bag, vehicle), etc. to carry out the transfer of the affected person to a nearest care center	Emergency Brigade Physician / Paramedic

PERSONAL ACCIDENTS:

BEFORE		
To do?	How to do it?	Responsible
Training for emergency brigade members	Generate a training plan.	SSOMA Specialist / Human Management Office
Inspection of the state of essential resources. (office kits and emergency first response briefcase)	Generate a schedule of periodic inspections.	SSOMA Specialist
	Carry out scheduled inspections.	SSOMA specialist / emergency brigade members

Implementation and maintenance of first aid drill programs.	Establish a drill schedule.	SSOMA Specialist
	Follow the planning guide for the development of drills	
Post emergency phone numbers in visible places.	Post emergency numbers in common and visible areas. Telephone Directory of Health centers in work areas, in case of emergency	SSOMA Specialist
DURING		
To do?	How to do it?	Responsible
Evaluate if medical assistance is needed.	The brigade member will evaluate the collaborator following the guidelines of his training provided in first aid and will determine if the collaborator needs medical assistance such as fainting, bleeding that does not stop, electrical burn.	emergency brigade
Transfer to the nearest Care Center	The brigade member will rely on essential resources (stretcher, emergency response briefcase, vehicle), etc., until the arrival of the doctor for transfer to the nearest care center	Emergency Brigade / Specialist S

TRAFFIC ACCIDENT / RUNNING OVER:

BEFORE		
To do?	How to do it?	Responsible
Comply with the procedure to be able to drive a team, vehicle.	Take and pass the defensive driving course, to obtain an internal license	Specialist
Carry out awareness campaigns for drivers and operators.	Generate a road safety awareness schedule.	Specialist
Comply with the general road safety regulations established in the vehicle driving instructions.	Disseminate the Vehicle Driving Instructions.	Area Manager Specialist
Signage maintenance	Acquire, replace, and maintain the vertical road signage.	SSOMA Specialist Area Manager
Have updated SCTR and SOAT Insurance.	Keep a physical record of the requested documents.	SSOMA Specialist Department of Administration and Logistics Human Management Office
DURING		

To do?	How to do it?	Responsible
secure the scene	The members of the brigade verify that there are no more risks for the injured persons by inspecting the affected area. If there are injuries, act as referred to in the Personal Accident Care Plan.	emergency brigade members
Cut off the supply of power and fixed vehicle	Disconnect the vehicle battery and proceed to place plugs to fix the vehicle.	any collaborator

EARTHQUAKE CASE:

BEFORE		
To do?	How to do it?	Responsible
Training for emergency brigade members	Generate a training plan.	Specialist
Designation of a safe area.	Determine the safe areas in the facilities, delimiting them with signage.	Specialist
Designation of a safe zone (Administrative offices, warehouse, camps).	Determine the safe areas in the facility, delimiting them with signage.	Specialist
Inspection of the state of resources necessary to respond to an emergency.	Generate a schedule of periodic inspections.	Specialist
	Carry out scheduled inspections.	emergency brigade members
DURING		
To do?	How to do it?	Responsible
Employee evacuation	The members of the brigade direct the evacuation of collaborators along the established routes, taking into account the evacuation and meeting points installed. The evacuation brigade members must lead the collaborators to an area where there are no rockfalls or where they are close to the banks of the rivers. If there are injuries, act as referred to in the Personal Accident Care Plan.	emergency brigade members

LEAK:

BEFORE		
To do?	How to do it?	Responsible

Chemical Identification	Identify, label and maintain the safety data sheets of the chemical products used by AMSAC or its third parties,	Specialist
Have containment elements in case of spills	Define the containment elements for spills and establish their quantities, according to the potential of the emergency. Implementation of containment trays.	Specialist
training to brigade members	Generate a training plan for prevention and containment of spills.	Specialist
Designation of a zone safe (Offices administrative offices, operating bases, warehouse, projects).	Determine the safe areas in the facility, delimiting them with signage.	Specialist
Inspection of the state of resources necessary to respond to an emergency.	Generate a schedule of periodic inspections of work environments, chemical storage.	Specialist
	Carry out the scheduled inspections, which include the conditions of the facilities, good practices and emergency response teams,	Specialist
DURING		
To do?	How to do it?	Responsible
Employee evacuation.	The members of the brigade direct the evacuation of collaborators along the routes	emergency brigade members
spill containment	The members of the brigade proceed to contain the spill using the anti-spill kit. If the magnitude of the spill exceeds the response capacity of the brigade, the support of external entities will be requested.	emergency brigade members

FLOODING / ANIEGO:

BEFORE		
To do?	How to do it?	Responsible
Inspection of water installations and pipes / Cleaning of drains.	It is verified that the sanitary facilities are in good condition and that the drainage system is clean. If defects are detected, timely corrective maintenance is requested.	Department of Administration and Logistics / Maintenance staff (headquarters) Database Administrator

		operational Specialist
Maintenance of sanitary and drainage facilities	Preventive (cleaning) and corrective maintenance of sanitary and drainage facilities is carried out	Department of Administration and Logistics / Maintenance staff (headquarters) Database Administrator operational
Stay informed about potential flood situations.	It is kept informed about the situation of the flows of the bodies of water in the flood season.	Contract Administrator (projects)
Training for brigade members and personnel	Carry out training or evacuation training in case of flooding or waterlogging. Responsibilities are established for the closing of keys in case of pipe breakage.	Specialist

DURING

To do?	How to do it?	Responsible
Employee evacuation	The members of the brigade direct the evacuation of collaborators along the established routes, taking into account the evacuation and meeting points installed.	emergency brigade members
Cut off power supply	Go to the general board and perform the power cut. If a vehicle is involved, the battery will be disconnected.	Security guard / maintenance staff (headquarters). Watchman (bases).
Central water tap lock	Close the main tap in case of pipe break.	Department of Administration and Logistics / Maintenance staff / Warden (headquarters) Watchman (operating bases)

LANDSLIDES DUE TO EXTRAORDINARY RAINFALL:

BEFORE

To do?	How to do it?	Responsible
Inspection of slopes or areas that represent risks in projects	If work is carried out in areas close to slopes, periodically inspect that they do not represent a risk of landslides, especially in the rainy season.	Database Administrator operational SSOMA Specialist
Removal of loose material from slopes	If there is evidence of material that represents a landslide risk in areas close to the projects, its cleaning is requested.	Database Administrator operational SSOMA Specialist
Stay informed about potential extraordinary rain situations	It is kept informed about the situation of the rains and the potential risk that they represent.	Contract Administrator (projects)
Training for brigade members and personnel	Carry out training or evacuation training in the event of a landslide	Specialist
DURING		
To do?	How to do it?	Responsible
Employee evacuation	The responsible supervisor or brigade member directs the evacuation of collaborators through the established routes.	Responsible Supervisor. emergency brigade members

7. Emergency Assessment

After the emergency occurs, the following steps are followed for the evaluation of the emergency:

FOR FIRE/EXPLOSION CASES:

LATER		
To do?	How to do it?	Responsible
Incident location verification	Verify that there are no remnants of the threat and/or fire.	Department of Administration and Logistics / Security Specialist emergency brigade members
Cleaning the affected area.	Coordinate the cleaning and disposal of rubble and waste according to AMSAC's comprehensive solid waste management procedure.	Department of Administration and Logistics
Monitor medical care.	Go to the centers where the collaborators were transferred and verify that all the attention they need is provided.	Human Management Office

Replacement of material used.	Coordinate the replacement of the material used (fire extinguishers, first aid kits, etc.).	Specialist
Evaluate the actions taken in the event of an emergency.	A meeting will be called where a report will be generated which must contain the improvement actions. This document will be delivered to the SSOMA Specialist for review and implementation of the improvements.	Department of Administration and Logistics Specialist

FOR CASES OF PERSONAL ACCIDENTS:

AFTER		
To do?	How to do it?	Responsible
Monitor medical care	Go to the centers where the collaborators were transferred and verify that all the attention they need is provided.	Human Management Office
Evaluate the actions taken in the event of an emergency.	A meeting will be called where a report will be generated which must contain the improvement actions. This document will be delivered to the SSOMA specialist for review and implementation of the improvements.	Department of Administration and Logistics Specialist

FOR CASES OF TRAFFIC ACCIDENT/RUNNING OVER:

AFTER		
To do?	How to do it?	Responsible
Monitor medical care	Go to the medical centers where the collaborators were transferred and verify that all the care they need is provided	Human Management Office
Evaluate the actions taken in response to the emergency	A meeting will be called where a report will be generated containing the improvement actions. This document is delivered to the Specialist for review and implementation of improvements	Department of Administration and Logistics Specialist

FOR CASES OF EARTHQUAKES

LATER		
To do?	How to do it?	Responsible

Identify missing people.	The Brigade performs a count to identify the missing people.	emergency Brigade
Search and rescue.	Verify and determine that the area is safe for entry and search for missing personnel.	Emergency Brigade
	If the place is not safe, the search and rescue must be carried out by specialists.	National Police - Fire Department
Cleaning of the area affected	Coordinate the cleanup and disposal of debris.	Department of Administration and Logistics
Health care monitoring.	Go to the centers where the collaborators were transferred and verify that all the attention they need is provided.	Human Management Office
Evaluate the actions taken in the event of an emergency.	After calling a meeting to carry out the evaluation of the actions, a report must be generated containing the improvement actions. This document will be delivered to Specialist for review and implementation of improvements.	Department of Administration and Logistics Specialist

FOR CASES OF ELECTRICAL STORMS:

LATER		
To do?	How to do it?	Responsible
In the event of an accident occurring during a thunderstorm,	<p>The contact telephone numbers of the Personal Accident Care Plan will be used.</p> <p>If the damage affects only non-critical equipment or facilities, the area will be entered once the storm has completely dissipated, taking all pre-established prevention measures.</p> <p>In the event of carrying out work in facilities or in places determined by order of the client, the contact number provided by the client or that has been communicated prior to carrying out the work will be notified in the first instance, following the actions determined by the established channels.</p> <p>In case of being in areas not related to the client, the collaborator will immediately notify his immediate boss superior and in case of injuries, the Brigade will be contacted and the nearest health center will be transferred.</p>	emergency brigade members

Evaluate the actions taken in the event of an emergency.	After calling a meeting to carry out the evaluation of the actions, a report containing the improvement actions must be generated and delivered to the specialist SSOMA for review and implementation of improvements.	Department of Administration and Logistics SSOMA Specialist
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FOR SPILL CASES:

LATER		
To do?	How to do it?	Responsible
Spill site verification	Verify that the spilled product has been contained with the anti-spill kit implements.	Department of Administration and Logistics SSOMA Specialist
Cleaning the affected area	Coordinate the cleaning and temporary storage of the waste product of the containment of the spill.	Department of Administration and Logistics SSOMA Specialist
waste disposal	We proceed to dispose of the waste product of spills with the corresponding waste operating companies according to integral solid waste management procedure.	Department of Administration and Logistics SSOMA Specialist

FOR CASES OF FLOODING OR FLOODING:

LATER		
To do?	How to do it?	Responsible
Verification of place of flooding or flooding	Verify that waterlogging has been controlled in the facilities. If necessary, the hiring of a team to pump water is managed.	Department of Administration and Logistics Database Administrator operational Specialist
Repair of sanitary facilities	In cases of broken pipes, we proceed to manage the necessary corrective work.	Department of Administration and Logistics

		Database Administrator operational
Inspection of electrical installations	Inspect electrical installations by an electrician and carry out the necessary corrective work.	Department of Administration and Logistics / Maintenance staff Database Administrator operational Specialist
Cleaning the affected area	Coordinate the cleaning of facilities and drainage systems.	Department of Administration and Logistics Specialist
waste disposal	Waste is disposed of according to its type and nature in accordance with the provisions of the integral solid waste management procedure.	Department of Administration and Logistics Specialist

FOR CASES OF SLIDING:

LATER		
To do?	How to do it?	Responsible
Verification of the place of the landslide	The state of the facilities that were affected is verified.	Database Administrator operational SSOMA Specialist
Cleaning the affected area	Coordinate the cleaning of the facilities, if necessary with heavy machinery.	Department of Administration and Logistics Specialist
waste disposal	Waste is disposed of according to its type and nature in accordance with the provisions of the integral solid waste management procedure.	Department of Administration and Logistics Specialist

8. Functional Scopes

8.1 Administration and Finance Manager

Approve the Emergency Preparedness and Response Plan.

Direct and coordinate response actions to level III (Serious) emergencies, in coordination with the General Management and/or Management Committee.

After a level III (Serious) emergency, in coordination with the General Management and/or Management Committee, an extraordinary meeting will be held to assess the situation, make the pertinent decisions to restore normal activities and issue the corresponding reports.

Ensure the provision of financial resources necessary to respond to emergency situations.

8.2 Head of the Administration and Logistics Department

Direct and coordinate response actions to level I (Mild) and II (Moderate) emergencies, in coordination with the Administration and Finance Management, and Specialist.

After a level I (Mild) and II (Moderate) emergency, in coordination with the Administration and Finance Management, and Specialist, an extraordinary meeting will be held to evaluate the situation, make the pertinent decisions, issue the corresponding reports and evaluate the Actions taken in the event of an emergency.

Ensure the provision of logistical resources to respond to emergencies.

Ensure the attention of requests for the purchase of elements or equipment for first aid and safety in general, for emergency situations.

Ensure that communication is carried out in the event of an emergency with external support institutions (Firefighters, Civil Defense, PNP, etc.) or companies (electricity, water, etc.).

Ensure that the place where the emergency occurred is verified.

Ensure that the affected area is cleaned.

1.1 Safeguards and Environment Specialist

- Disseminate the Emergency Preparedness and Response Plan.
- Create and organize the operation of emergency brigades.
- Keep the list of emergency brigade members updated and disseminate it.
- Plan training for brigade members and annual drills.
- Carry out inspections of first aid equipment to ensure its operation in the event of any event.
- Carry out inspections of the state of the evacuation routes, meeting point and evacuation signage.
- Prepare a report on the evaluation of the response and care of the emergency brigade.
- He is in charge of generating the order for partial or total evacuation of the establishment.

Brigade Coordinator

- Assigns the functions and responsibilities of the members of the emergency and/or contingency brigades.
- Ensures that the identity of the members of the emergency and/or contingency brigades are available to all collaborators who work for the organization.

- Maintains communication with the Safeguards Specialist.
- Coordinate all Safety, Health and Environmental Protection actions with the Safeguards Specialist, as well as the Contractor's area in the projects.
- Commands actions in coordination with those responsible for each brigade and its members.
- Responsible for communication with the areas involved.

8.5 Emergency Brigade

- Act according to this plan.
- Immediately report any event related to safety, occupational health and the environment to the Safeguards Specialist.
- Attend scheduled training in emergency response.
- Know the emergency plan and their specific participation.
- Know what you can do, but fundamentally what you can't do.
- Participate in emergency drills.
- Act in coordination with the other brigade members.
- Care for the injured as long as you can take care of the situation.
- Request medical help according to the assessment of the affected person.
- Request the replacement of first aid items in your work area.
- Make the communication to request external attention.
- Provide first aid.
- Dealing with threats of fire.
- Make preventive observations and safety suggestions.
- Inform the Safeguards Specialist if the area or location is changed.

8.6 Coordinators and Managers

- Ensure that the brigade member has the resources of the area available.
- Regardless of who assumes the role of coordinator, each Manager or Chief will be responsible for the safety of their staff during the emergency.
- Respect and disseminate the client's Emergency Preparedness and Response Plan.
- Schedule your staff for training and training in Emergency Response courses.
- Designate people to support the Brigade member when requested
- Ensure the orderly and safe evacuation of its personnel.
- Ensure that your work area is free of workers.

- Report to your immediate manager any news regarding personnel, including missing persons and/or people who normally work elsewhere.
- Notify the specialists and/or brigade members of the missing persons or those found inside the facility that have been evacuated to start the search and rescue operation.

8.7 FAO Collaborators

- Reporting the emergency immediately identifies it to the brigade member of the area, and/or immediate boss and, depending on the level, to external support when required.
- Provide help until the arrival of the Emergency Brigade. Never put yourself or others in danger, especially during fire or gas and/or chemical emergencies.
- If an alarm sounds or you are directed to evacuate the area, please proceed to designated assembly points and/or safe areas and remain there until ordered to continue work or evacuate.
- If an evacuation occurs, follow the Brigade's instructions. Make sure that when counting people your Brigade considers you and the visitors you are responsible for.
- If the Emergency Brigade is already at the scene of the emergency, do not approach to look or offer help unless you are personally asked to come.

9. Records / Annexes

- Annex 01: Emergency Telephone Directory – La Paz
 - Annex 02: Emergency Telephone Directory - Cochabamba
 - Annex 03: Emergency Telephone Directory – Santa Cruz
 - Annex 04: Emergency Telephone Directory – Chuquisaca
 - Annex 05: Emergency Telephone Directory – Tarija
 - Annex 06: Emergency Telephone Directory – Potosí
- Annex 07: Communication Protocol in an Emergency
- Annex 08: Office First Aid Kit Supplies
- Annex 09: Vehicle First Aid Kit Supplies
- Annex 10: Anti-Spill Kit Supplies – Offices and Operational Bases
- Annex 11: Anti-Spill Kit Supplies – Vehicles

ANNEX 01: EMERGENCY TELEPHONE DIRECTORY – AMSAC

ANNEX 2 NATIONAL POLICE OF BOLIVIA

MEDICAL EMERGENCY

EXTERNAL SUPPORT

LIGHT FROM 617 5000

ELECTRO 708 3400

REPSOL 613 3330

OPERATING BASES

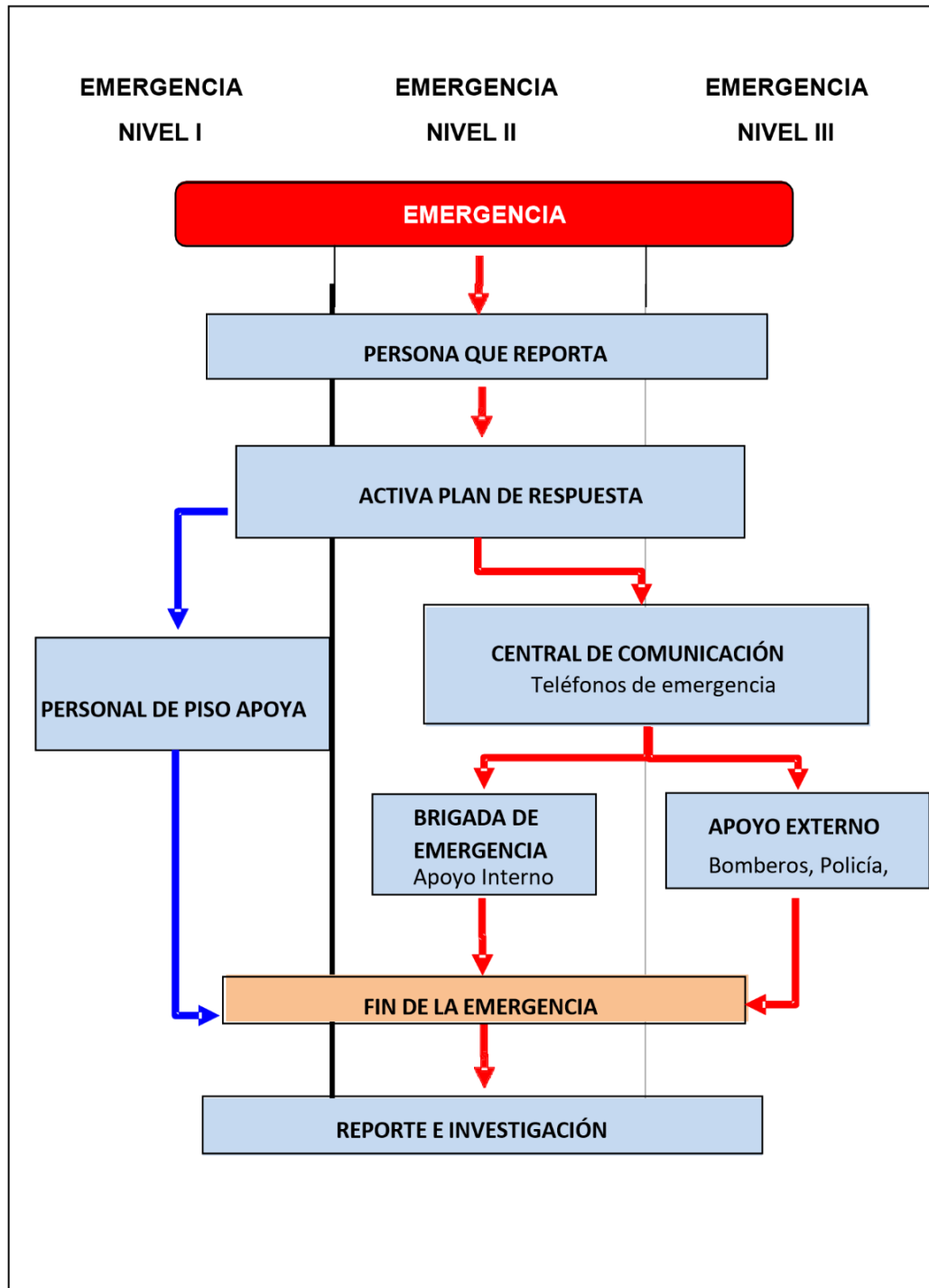
Base Cochabamba	76399513
Sucre and Potosi Base	68215865
Santa Cruz Base	72 525
	221
Tarija Base	65355491
Base Provinces	59868810

ANNEX 02: EMERGENCY TELEPHONE DIRECTORY – CERRO DE PASCO BASE

	68215865
Hill of Pasco Base	116
Firefighters	
Police station -	

global clinic	063-
	421582
Essalud Hospital	063-
	422189

ANNEX 07: COMMUNICATION PROTOCOL IN AN EMERGENCY



ANNEX 08: FIRST AID KIT SUPPLIES FOR OFFICES

AMOUNT	DESCRIPTION	PRESENTATION
01	Alcohol 96° 120ml	Unit
01	Hydrogen Peroxide 120 ml	Unit
01	Antiseptic liquid soap 120 ml	Unit
02	Hydrophilic Cotton 50 gr	Unit
04	Sterile gauze 10 x 20 cm	Unit
02	Latex Gloves No. 71/2	Unit
01	2.5 cm x 5 m adhesive tape	Unit
01	Sling	Unit
twenty	Band aids	Unit
01	Scissors	Unit
02	Elastic Bandage 4" x 5 yds	Unit
02	Elastic Bandage 3" x 5 yds	Unit
10	low wooden tongue	Unit
01	First Aid Manual	Unit

ANNEX 09: VEHICLE FIRST KIT SUPPLIES – ACCORDING TO MTC

AMOUNT	EQUIPMENT / SUPPLIES	PRESENTATION
01	Alcohol 70° of 500 ml	01 Pc
01	antiseptic soap	01 Pc
03	sterilized gauze	03 pc
01	Dressing Sterilizes	01 Pc
01	2.5 cm x 5 m adhesive tape	01 Pc
10	Band aids	10 pc
01	Pair of scissors	01 Pc
02	surgical gloves	02 pc
01	50 gr cotton	01 Pc
02	Elastic Bandage 3" x 5 yds	02 pc
02	Elastic Bandage 2" x 5 yds	02 pc

ANNEX 10: ANTI-SPILL KIT SUPPLIES – OFFICES AND OPERATIONAL BASES

No.	SUPPLIES	QTY	UND
one	Oleophilic Absorbent Pads	10	unit
2	red disposal bag	10	unit
3	White polyethylene sacks	5	unit
4	Industrial rag	one	kg
5	oleophilic absorbent cord	5	unit
6	Red tape - danger do not pass	one	roll
7	small shovel	one	unit
8	small beak	one	unit
9	disposable suit	2	unit
10	nitrile glove	2	Pair
elev en	half face respirator	one	unit
12	Cartridge for vapors and gases	one	Pair
13	Safety glasses	2	unit
14	Yellow container with wheels for anti-spill kit	one	unit

ANNEX 11: ANTI-SPILL KIT SUPPLIES – VEHICLES

No.	SUPPLIES	QTY	UND
one	Oleophilic Absorbent Pads	4	unit
2	red disposal bag	3	unit
3	Industrial rag	one	unit
4	oleophilic absorbent cord	2	unit
5	small shovel	one	unit
6	small beak	one	unit
7	Galvanized iron tray	one	unit
8	nitrile glove	one	Pair
9	Yellow case for anti-spill kit	one	unit



ESTADO PLURINACIONAL DE
BOLIVIA

MINISTERIO DE
PLANIFICACIÓN DEL DESARROLLO