Joint Mitigation and Adaptation Mechanism for the Integral and Sustainable Management of Forests and Mother Earth

Implementation progress in the Plurinational State of Bolivia
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Institutional Framework for the Plurinational Authority of Mother Earth (Joint Mitigation and Adaptation Mechanism for Integral and Sustainable Management of Forests and Mother Earth)
The Plurinational State of Bolivia is pioneering and promoting a new development vision based on the concepts of Living Well and Harmony with Mother Earth, through sustainable development that opposes commercialization, growth and accumulation of wealth deriving from the destruction and degradation of nature.

Bolivia's vision is being developed with great challenges and difficulties, trying to institutionalize coherent policies that focus on holistic development based on the principles of Living Well, sharing in community life, and respecting the rights of Mother Earth.

With these goals, on December 21st 2010 Bolivian President Evo Morales signed Law 071, which recognizes the rights of Mother Earth, as well as the obligations and duties of the Plurinational State and society to guarantee that these rights are being respected.

Nevertheless, applying Law 071 required another legal instrument that institutionalizes the mechanisms to develop this vision for the country, and thus on October 15th 2012 President Morales signed Law 300, called the Framework Law of Mother Earth and Integral Development for Living Well. This law was developed based on the analysis of a multidisciplinary technical and political team, which established the vision and foundation of integral development for Living Well, guaranteeing in perpetuity the regeneration capacity of the components
and systems of life of Mother Earth; recovering and fortifying local wisdom and ancestral knowledge, with the goal of preventing and diminishing the conditions of risk and vulnerability of Mother Earth and the Bolivian people to natural disasters and the impacts of climate change; and consolidating sustainable development of all the peoples in Bolivia.

One of the strategies to consolidate Bolivia's vision was to establish an institutional framework to address climate change. To this end, the Plurinational Authority of Mother Earth (APMT for its acronym in Spanish) was created to promote the consolidation of territorial processes and holistic management of forests and productive systems, with a focus on mitigation of and adaptation to climate change.

The technical, administrative, and management functions of the APMT are set out in the guidelines of the Plurinational Plan on Climate Change for Living Well, in which three separate programs have been established related to mitigation of and adaptation to climate change. The APMT operates through the following programs, called "mechanisms":

A. Mitigation Mechanism to Live Well, established to define climate change mitigation actions and targets through reducing greenhouse gas emissions, conserving energy, and other activities with emphasis on economically productive sectors.

B. Adaptation Mechanism to Live Well, established with the purpose of precipitating actions oriented towards supporting adaptation and resilience to climate change of Bolivia's life systems and strategic sectors, focusing on areas vulnerable to the impacts of climate change and natural disasters through programme interventions.

C. Joint Mitigation and Adaptation Mechanism for the Integral and Sustainable Management of Forests and Mother Earth (henceforth the Joint Forest Mechanism), has the goal of effectively advancing mitigation of and adaptation to climate change through holistic management and sustainable use of forests and the life systems of Mother Earth, promoting conservation and restoration of the life systems and protection of biodiversity, facilitating a transition towards better land use through development of production systems.
In this context, one of the pillars of Bolivia's vision is the construction of the Joint Forest Mechanism, since it is a central part of the UN Framework Convention on Climate Change's (UNFCCC) proposal, with an alternative approach to the commodification of environmental functions. The Joint Forest Mechanism has already been presented at the Conference of the Parties (COP), but the challenge now is to gain international approval of the Mechanism. Most international entities are investing in and promoting the development of REDD+ (Reducing Emissions from Deforestation and Forest Degradation), a program that Bolivia considers neoliberal, based on the "green economy", in contrast to the new development vision proposed by the Bolivian State.
Contribution of Integral and Sustainable Forest Management to Mitigation and Adaptation of Climate Change: Objectives and methodological approaches of the Joint Forest Mechanism
The Plurinational State of Bolivia has put forward the Joint Forest Mechanism as a holistic and integral proposal that supports progress to reduce forest degradation and poverty through improving the livelihoods of the local population without commodifying the environmental functions of Mother Earth. It promotes a proposal for development of sustainable production systems, where the holistic management of forests is important for diversification of the livelihoods of the local population. This approach to mitigation of and adaptation to climate change and management of life systems of Mother Earth recognizes the key role of community-based and grassroots organizations and the collective actions of indigenous peoples and local population in their management and use.

Thus the Joint Forest Mechanism seeks to address climate change, but also the conservation and sustainable management of biological diversity and the reduction of ecosystem degradation processes.

This proposal is based on a holistic vision of the forest and human communities, recognizing the strong connection between mitigation and adaptation. It seeks to create synergies between actions to address climate change, ecosystem degradation, and biodiversity conservation, implementing concrete actions orientated towards mitigation of and adaptation to climate change through holistic forest development.

This approach promotes articulation of the agrarian and forest conservation visions, which until now have been separated due to different political agendas.
The approach also questions the development of extensive agriculture, cattle ranching and timber harvesting, which are activities that contribute to the effects of climate change in Bolivia.

In this new model, promoting the generation of value added combined with actions for conservation of forests and rehabilitation of degraded areas indicates the need to advance holistic and sustainable forest management as a contribution to forest conservation, environmental functions, and productive, environmental and food sovereignty. This approach affects the processes of coordinated territorial management between public, community and private stakeholders, for development of sustainable production systems.
Objective and methodological approach of the Joint Forest Mechanism
Based on the vision of the Plurinational State of Bolivia, the Joint Forest Mechanism is an intrinsic part of anew civilizing model with roots in the indigenous, native and peasant population, considering the following aspects:

- The Joint Forest Mechanism has the objective to promote integral management and sustainable use of the forests and life systems of Mother Earth, and the conservation, protection and restoration of life systems, biodiversity and environmental functions. In this way the Joint Forest Mechanism is facilitating better land use through development of sustainable production systems, including agriculture and forestry, to confront the causes and reduce deforestation and forest degradation in the context of mitigation and adaptation to climate change.

- It is based on non-commodification of the environmental functions of Mother Earth, integral and sustainable management, and respect for the rights of the indigenous, native and peasant populations, including the inter-cultural and Afro-Bolivian communities. The Joint Forest Mechanism is completely opposed to the neoliberal concept of the "green economy".

- It is oriented towards strengthening sustainable livelihoods for local populations and the indigenous, native and peasant population, and the inter-cultural and Afro-Bolivian communities, in the context of mitigation and adaptation to climate change.
The Joint Forest Mechanism has the goal to efficiently advance climate change mitigation and adaptation, promoting conservation and restoration of forests and life systems of Mother Earth in the Bolivian territory, as well as control over the expansion of the agricultural frontier through development of sustainable production systems that reduce inappropriate deforestation and forest degradation.

The methodological approach of the Joint Mechanism is oriented towards developing processes for planning, coordination, management and development of interventions at different levels of the State and civil society, and with the support of forest users, for the definition of common actions and goals for climate change mitigation and adaptation, based on the classification of life zones, characterization of life systems and harmonization (or organization) of these systems, according to the areas of intervention.
Areas of intervention for the Joint Forest Mechanism
To achieve the objectives of the Joint Forest Mechanism, a unique intervention methodology has been developed, operating in five areas, with the goal of positioning the Joint Forest Mechanism as the entity for articulation between public, community and private entities that would be in charge of implementing climate change mitigation and adaptation actions. The intervention areas are:

- Governance of forests and life systems of Mother Earth, through consolidation of a favourable institutional context for integral and sustainable management of forests and Mother Earth.

- Participatory processes for territorial management in the framework of life systems, focused on mitigation and adaptation to climate change, including development of mitigation plans and actions, regulation of life systems and strategic inter-institutional activities.

- Consensus-building for local territorial agreements with objectives, development goals and activities for implementing sustainable production systems focusing on climate change mitigation and adaptation, considering autonomous territorial entities, diagnostics, participatory mapping, identification of life zones and analysis of indigenous, native, and peasant territories and community-based organizations.
- Multifaceted support for sustainable production systems and integral and sustainable management of forests and life systems of Mother Earth, promoting environmental, food, energy, technology and productive sovereignty and diversification, while strengthening and developing sustainable production systems with a bio-cultural approach, considering compliance with joint indicators for climate change mitigation and adaptation.

- Integral information and monitoring of the components, environmental functions and life systems of Mother Earth, in the framework of a plurinational holistic and integral information and monitoring system for forests and Mother Earth.

Fig 1. Methodological framework for the Joint Mechanism

1. Governance of forest and systems of life of Mother Earth
2. Territorial planning of systems of life of Mother Earth
3. Reaching multiaxcoral common agreements
4. Implementary of complementary actions: integral support to sustainable productive systems, regulation, education, and control
5. Monitoring of indicators for joint mitigation and adaptation
Process of Ascription of Territorial entities to the Joint Forest Mechanism
The ascription to the Joint Forest Mechanism is the process for territorial articulation of initiatives for integral forest management, with the vision, objectives, methodological approach and joint goal of compliance for climate change mitigation and adaptation, with the purpose strengthening regulation of life systems, for the conservation and diversified use of forest resources, connected with processes for commercialization of value-added products.

The process consists of registration, strengthening and accreditation of territorial entities, where the Joint Forest Mechanism is in charge of promoting integral and sustainable forest management and development of productive systems with a joint approach to climate change mitigation and adaptation. This process defines responsibilities between the Joint Forest Mechanism and the entities and/or participants in the territorial development (and has a time frame established between the parties, for the compliance of joint quantitative targets for mitigation of and adaptation to climate change) defined in the Ascription Plan.

Depending on the location of ascription, the scope is either the department, municipality, community, protected area, or indigenous/ native/ peasant territory.

The ascription process includes the articulation of different dynamics, considering visions and objectives based on intrinsic characteristics of each territory, resulting in a process initially defined as six steps.
To improve the success of the ascription process, **Consultative Territorial Platforms** will be established, which will guarantee the participation of central government authorities, territorial autonomous authorities, and grassroots/social organizations, depending on the situation in each case. The entities in charge of initiatives, programmes and projects for integral and sustainable forest management will also be integrated in this platform.

In practice, dynamic synergies will be established between the stakeholders (public, private, community-based, grassroots/social organizations, civil society) and the proposed initiatives, projects and programmes. To monitor the application of initiatives in the territories ascribed to the Joint Mechanism, various indicators have been established pertaining to the five areas of interaction, described below.
Table 1.
Indicators for Application of the Joint Forest Mechanism at the territorial level

<table>
<thead>
<tr>
<th>AREA</th>
<th>INDICATORS</th>
</tr>
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<tbody>
<tr>
<td>Governance of forests and life systems of Mother Earth</td>
<td>- Land tenure regularization and registration</td>
</tr>
<tr>
<td></td>
<td>- Adjustment of forest use rights</td>
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<tr>
<td></td>
<td>- Legal framework and norms for integral and sustainable forest management</td>
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<td></td>
<td>- Institutional strengthening</td>
</tr>
<tr>
<td>Participatory processes for territorial management and regulation of</td>
<td>- Classification and mapping of life zones</td>
</tr>
<tr>
<td>life systems</td>
<td>- Mapping of land vocation and/or land use aptitude</td>
</tr>
<tr>
<td></td>
<td>- Identification and characterization of life systems</td>
</tr>
<tr>
<td>Consolidation of local territorial agreements in relation to</td>
<td>- Mechanisms for planning and social-institutional consolidation</td>
</tr>
<tr>
<td>objectives and development goals for sustainable production systems</td>
<td>- Signing of complementarity agreements with Mother Earth, in the framework of a territorial unit</td>
</tr>
<tr>
<td>focused on climate change mitigation and adaptation</td>
<td>- Public, community and private action plans, assuring positive synergies between different stakeholders</td>
</tr>
<tr>
<td>Integral support for sustainable production systems and integral and</td>
<td>- Support and fortify community capacity to improve production systems</td>
</tr>
<tr>
<td>sustainable management of life systems and Mother Earth</td>
<td>- Projects to support processing of timber and non-timber forest products and agroforestry products</td>
</tr>
<tr>
<td></td>
<td>- Knowledge management, technical assistance and training</td>
</tr>
<tr>
<td>Establishment of a baseline and integral monitoring of components,</td>
<td>- Status of the components of Mother Earth (forests, biodiversity, water, soil, environmental functions)</td>
</tr>
<tr>
<td>environmental functions and life systems of Mother Earth</td>
<td>- A simple information and monitoring system</td>
</tr>
<tr>
<td></td>
<td>- Strengthening of the system for monitoring and follow-up</td>
</tr>
</tbody>
</table>

Joint Mitigation and Adaptation Mechanism for the Integral and Sustainable Management of Forests and Mother Earth
The success of entities ascribed to the Joint Forest Mechanism will be determined by the results of the monitoring system, which will be developed from the baseline assessment, with indicators regarding the situation of the forests and other factors considered in the territorial plan.

**Benefits of Ascription of Territorial Entities to the Joint Forest Mechanism**

The ascription of territorial entities to the Joint Forest Mechanism provides the following benefits:

- Permits articulation of actions by territorial autonomous entities, community and producer stakeholders, with the policies of the Plurinational State of Bolivia regarding forests and climate change.

- Based on the ascription, the territorial entities can access financial support, technology, and capacity development needed for achieving progress in integral and sustainable forest management focused on climate change mitigation and adaptation.

- The territorial entities ascribed receive technical assistance from and coordinate with the Joint Forest Mechanism in the development of processes for territorial management, management plans, and initiatives oriented towards production, processing/transformation and commercialization of forest products and life systems of Mother Earth.

- Local grassroots/social organizations that focus on production receive technical assistance for development and institutional strengthening with actions oriented towards integral and sustainable forest management and life systems of Mother Earth.
Progress in the Joint Forest Mechanism Ascription Process

Comparison between approaches: the Warsaw Framework for REDD+ and the Joint Mitigation and Adaptation Mechanism for the integral and sustainable management of forests
During the year 2014 the Plurinational Authority for Mother Earth (APMT) was established and made the Joint Forest Mechanism operative; significant progress has been achieved since.

The components and foundation of the Joint Forest Mechanism have been disseminated throughout Bolivia at the level of the nine autonomous departmental governments. Important progress has also been achieved in territorial entities, which can be described as the following:


2. Elaboration of an Ascription Plan to the Joint Forest Mechanism for five autonomous municipal governments (San Ignacio de Velasco, Concepción, San Carlos, Comarapa and El Torno), and one autonomous departmental government (Pando).
3. Conformation of Consultative Territorial Platforms for six autonomous municipal governments (Ixiamas, San Ignacio de Velasco, Concepción, San Carlos, Comarapa, El Torno)

4. Signing of an inter-governmental agreement with the Autonomous Departmental Government of Pando.

A detailed description of the ascription experiences and the process of ascription to the Joint Mitigation and Adaptation Mechanism for Integral and Sustainable Management of Forests and Mother Earth is included in Annex 1.

There are many pending tasks for 2015 for further developing the Joint Forest Mechanism. Ascription Plans will be implemented and the initiatives for integral forest management will be monitored and supported, oriented towards mitigation and adaptation to climate change.
Challenges for the Plurinational State of Bolivia regarding development of the Joint Forest Mechanism

Experiencias adscritas o en proceso de adscripción al Mecanismo Conjunto de Mitigación y Adaptación para el Manejo Integral y Sustentable de Bosques
This new development vision proposed by the Plurinational State of Bolivia is based on applying the principle of Living Well, respecting the rights of Mother Earth, and rejecting the neoliberal policies and proposals for development based on the green economy.

The proposal positions Bolivia as the first country in the world to establish mechanisms for sustainable development based on the defense of the rights of Mother Earth, proposing a new civilizing model alternative to capitalism, respecting the customary uses and ancestral knowledge of the indigenous, native and peasant communities. The challenge is to demonstrate not only that this development model is applicable, but that it generates effective results respecting the integral and sustainable management of forests and Mother Earth.

Based on these considerations, the main challenge for the Plurinational State of Bolivia is to position the holistic and integral proposal in the international context as an alternative to REDD+ and payment for environmental services. This is based on results that demonstrate that development models for adaptation and mitigation, with the vision of integral management of forests and Mother Earth, can be effective in an era when the effects of climate change translate into increasingly more severe and frequent natural disasters.
Annex 1
Experiences ascribed or in the process of ascription to the Joint Mitigation and Adaptation Mechanism for Integrated and Sustainable Management of Forests and Mother Earth

<table>
<thead>
<tr>
<th>Table Title</th>
<th>Text</th>
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</table>
| Agreements to protect water sources and sustainable economic diversification in Comarapa municipality, Santa Cruz | **Environmental Problems**  
- Water scarcity  
- Extensive cattle ranching affecting water sources  
- Expansion of agriculture in areas not apt for cultivation  

**Characteristics and Potential**  
- The municipality of Comarapa is a national model for environmental planning and policies.  
- It supports the food security of the city of Santa Cruz de la Sierra with production of vegetables, legumes, cereals and fruit.  
- 60% of the area of the municipality is designated as protected area, including Amboró National Park and surrounding buffer zone.  
- Since 2008 the municipality has implemented strategic and effective actions for water resource conservation (Reciprocal Water Agreements).  
- The municipality’s vision is to conserve and promote the sustainable management of its natural resources.

**Context**  
- Location: department of Santa Cruz, Bolivia  
- Land area 3,400 km²  
- Approximate population: 20,000 inhabitants, including Quechua, Guaraní and mestizo peoples  
- Small-scale agriculture is the principal economic activity, with Santa Cruz de la Sierra being the most important market. 70% of the people are farmers, 20% are cattle ranchers, 4% are workers, 4% are businesspeople, 2% are artisans, and others work informally or independently.

**Activities**  
The municipality of Comarapa began the process of ascription to the Joint Mitigation and Adaptation Mechanism in February 2014. To date, the municipality and the Plurinational Authority of Mother Earth have developed an Ascription Plan for a 5 year period; the plan sets out a path for holistic and sustainable development in the municipality, and highlights the political will to conserve and restore forest areas, which are of particular importance for water provision and sustainable alternative production systems.

**Expected results**  

**Objectives**  
1. Support the sustainability of the buffer zone of Amboró National Park through Complementarity Agreements with Mother Earth.  
2. Conserve the six micro-watersheds that originate within municipal jurisdiction.  
3. Restore the middle section of the Comarapa River watershed, which is of vital importance to the more than 2000 irrigators downstream.  
4. Make cattle ranching more sustainable by reducing the animal stock density in key areas of the municipality’s watersheds.

**Goals**  
1. Conserve 10,000 hectares of forest to guarantee water resource conservation and other environmental functions, with support from the Municipal Fund for Complementary Agreements.  
2. Reforest 360 ha with 400,000 native tree saplings.  
3. Improve the technical capacity of 300 producer families to sustainably process/transform their produce.  
4. Support 1,500 families with sustainable production initiatives (agroforestry systems with grass and legumes).  
5. Incorporate a holistic and sustainable focus on Mother Earth and the concept of Living Well in the educational curriculum.
Sustaining forest life and Mother Earth in San Carlos municipality, Santa Cruz

**Assessment**
The municipality of San Carlos has lost 64% of its forest cover and has degraded soils, causing a reduction in agricultural productivity and the deterioration of the livelihoods of many families. Facing this reality, local authorities and the population are changing their vision of development towards a more sustainable use of natural resources.

**Context**
- Location: department of Santa Cruz, including part of Amboró Protected Area
- Land area 1,210 km², of which 440 km² is forest which
- Population: 20,000 inhabitants (2012 census), most of whom immigrated from Potosí and Chuquisaca departments
- Economic activities: primarily agricultural production and husbandry, including annual crops such as rice, sugar cane, soy, and cattle ranching
The municipality has already established agreements to conserve the forests’ environmental functions, and at the same time ensuring the protection of water sources, air quality, and biodiversity conservation.

**Activities**
San Carlos Municipality began the process of ascription to the Joint Mitigation and Adaptation Mechanism in February 2014.

The enrollment plan sets out a period of 10 years for implementation, during which holistic and sustainable management of the municipality is to be achieved. The plan highlights the municipality’s a) desire to conserve and restore forest areas of particular importance for water production, and b) support for sustainable production alternatives such as cocoa, coffee, honey, citrus fruits, and tree plantations.

**Expected results**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Goals</th>
</tr>
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<tbody>
<tr>
<td>1. Achieve sustainable development based on regulation of life zones and systems, breaking with the extractive worldview, through the Municipality’s Consultative Territorial Platform, where various stakeholders can discuss the implementation of Complementary Agreements with Mother Earth.</td>
<td>1. Conserve 10,000 ha of forest in addition to the existing Amboró Protected Area, with complementarity agreements with Mother Earth.</td>
</tr>
<tr>
<td>2. Conserve existing primary forest and restructure the landscape to maintain a microclimate conducive to production.</td>
<td>2. Restore ecological services on 5,000 ha of deforested or degraded lands.</td>
</tr>
<tr>
<td>3. Conserve all watersheds and micro-watersheds to ensure sufficient water for domestic and productive uses.</td>
<td>3. Increase tree cover on 500 ha with the implementation of agroforestry systems, with emphasis on cocoa, coffee and fruit trees.</td>
</tr>
<tr>
<td>4. Reclaim its title as the “chocolate capital”, recovering the quality and quantity of agroforestry cocoa plantations.</td>
<td>4. With the three goals above, the hope is to restructure the landscape and achieve at least 50% tree cover.</td>
</tr>
<tr>
<td>5. Improve resilience to climate change among at least 2,500 families through diversification of their productive activities and incentives to agroforestry system development.</td>
<td>5. Improve resilience to climate change among at least 2,500 families through diversification of their productive activities and incentives to agroforestry system development.</td>
</tr>
</tbody>
</table>
### Holistic and sustainable management of forests and Mother Earth in El Torno municipality, Santa Cruz

<table>
<thead>
<tr>
<th>Assessment</th>
<th>El Torno municipality has 75% forest cover, however pressure on the forests has increased in recent years and the human population has grown considerably. Public sector and grassroots stakeholders in the municipality have decided to move forward with the implementation of Complementarity and Reciprocity Agreements with Mother Earth to achieve sustainable development among the population through the conservation, restoration and management of forest areas that provide environmental functions and support sustainable human development.</th>
</tr>
</thead>
</table>
| Context | - Location: Santa Cruz department, Bolivia  
- Land area: 993 km², of which about 600 km² is forested. About 17% is within Amboró Protected Area.  
- Population: 50,000 inhabitants (2012 census), an increase of 28% over the 2001 census (39,000 inhabitants). The majority of the population comes from the highlands of Bolivia, drawn to the area by the availability of land for agricultural production. |
| Activities | The municipality of El Torno began the ascription process in February 2014. The Ascription Plan would be carried out until year 2020, becoming a model municipality for integral environmental management. |
| Expected results | **Objectives**  
1. Achieve a sustainable balance between conserving forests and environmental functions, and improving the income of the municipality's population.  
2. Develop alternative sustainable agricultural systems, supporting the production, processing and commercialization of honey, citrus fruits and coffee.  

**Goals**  
1. Conserve the borders of all the major and minor waterways within the municipality's jurisdiction.  
2. Conserve about 5,000 ha through the Municipal Reforestation Program.  
3. Guarantee the conservation of 16,000 ha of forest to maintain water sources.  
4. Incentivize the participation of at least 200 families in honey production, improving their income and food security, through technical assistance and the creation of five community honey collection centers and one municipal honey commercialization center.  
5. Incentivize the participation of at least 500 families in the production of coffee, through technical assistance and the creation of a coffee storehouse and processing plant.  
6. Incentivize the participation of at least 500 families in the production of citrus fruits, through technical assistance and the creation of a citrus processing plant. |
Administration of the cultural and natural patrimony of humanity with active support from the local population in San Ignacio de Velasco municipality, Santa Cruz

### Assessment

**Environmental Problems**
- Loss of biodiversity through degradation of forest areas
- Loss of connectivity between areas of Chiquitano and Amazon forest
- Soil degradation
- Increasing environmental pollution
- Scarcity of water for human consumption in the dry season
- Weak institutions for the administration of conservation efforts, and focus on unsustainable development

**Characteristics and potential**
- Since 2010 it has been considered an environmental municipality, for supporting the conservation of its natural patrimony, and supporting sustainable development with the participation of the local population.
- The municipality encompasses 98.8% of the Noel Kempff Mercado National Park.
- The Chiquitano culture has been recognized, through the Jesuit missions, as part of the Cultural Patrimony of Humanity.
- Since 2009 the municipality has been carrying out effective actions and strategies to support conservation of its natural resources and culture. The development of a Territorial Organization Plan and a Municipal Development Plan, with their holistic focus, support these goals.

### Context

- **Location:** Santa Cruz department, Bolivia
- **Land area:** 48,000 km²
- **Approximate population:** 50,000 inhabitants in 116 communities, of which 100 are Chiquitano, 11 are campesino communities made up of immigrants from western Bolivia, and 5 belong to the BajoParaguá Indigenous Community Territory.
- **Economic activities:** cattle ranching, agriculture, forestry, and tourism. Of all the municipalities in the Chiquitana Region, San Ignacio de Velasco is the municipality with the most cattle, 500,000 head, as of 2014.

### Activities

San Ignacio de Velasco municipality began the ascription process to the Joint Mitigation and Adaptation Mechanism in February 2014. To date, the municipality of San Ignacio de Velasco and the Plurinational Authority of Mother Earth have developed an ascription plan with a 5 year execution period. The plan highlights the political will to conserve and restore forest areas, which are of particular importance for water provision and sustainable alternative production systems.

### Objectives

1. Improve governance of the forests and life systems of Mother Earth in the municipality of San Ignacio de Velasco.
2. Promote participatory territorial planning processes within the framework of regulation of life zones identified in the municipality.
3. Support the development of local agreements in line with the objectives and goals for development of sustainable production systems, with focus on climate change mitigation and adaptation.
4. Integral support for sustainable agricultural systems and integral and sustainable management of forests and life systems of Mother Earth.
5. Develop information systems and integral monitoring of the components, environmental functions, and life systems of Mother Earth.

### Goals

1. Conserve 1,500,000 ha of forest in protected areas.
2. Support the agricultural production of 500 families through the rehabilitation of fallow lands.
3. Assist 800 families by strengthening agricultural production chains.
4. Increase fish farming production in 50 communities in the municipality.
5. Complete ten studies in the municipality related to integrated and sustainable land management.
6. Complete and implement two protected area management plans.
7. Support the development and implementation of the Noel Kempff Mercado National Park protected area management plan.
### Protected areas and sustainable economic diversification in Concepción, Santa Cruz

#### Assessment

**Environmental Problems**
- Loss of connectivity between the Chiquitano and Amazon forest areas
- Climatic vulnerability
- Loss of biodiversity in current forest areas
- Soil degradation
- Increasing environmental pollution
- Scarcity of water for human consumption in the dry season
- Weak institutions for conservation planning

**Characteristics and potential**
- Since 2012 it has been considered an environmental municipality, for demonstrating political will and taking action on environmental issues.
- It represents a priority site for biodiversity conservation in Bolivia. It is also important for connectivity and conservation of the Amazon forest and the Chiquitano dry forest.
- There are three municipal protected areas in Concepción and it includes part of the White and Black Rivers Departmental Reserve.
- 79% of the territory of Concepción is considered to be in a highly conserved state.
- In 2014 the municipality began trying to integrate climate change and conservation into the Municipal Development Plan, which was compiled in a highly participatory manner with local stakeholders. The plan guides actions for adaptation and mitigation of climate change.

#### Context

- **Location:** Santa Cruz department, Bolivia
- **Land area:** 28.530 km²
- **Population:** 74 communities, of which 44 are indigenous communities with Chiquitano origins, 29 are peasant communities, and one is in the Zapocó Indigenous Community Territory, of Ayoreo origin.
- **Economic activities:** cattle ranching, agriculture, timber harvesting and non-timber forest products, mining and tourism

#### Activities

The municipality of Concepción began the process of ascription to the Joint Mitigation and Adaptation Mechanism in February 2014. To date, the municipality and the Plurinational Authority of Mother Earth have developed an Ascription Plan with a 5 year implementation period. The plan sets out a path for holistic and sustainable development in the municipality, and highlights the political will to conserve and restore forest areas, which are of particular importance for strengthening protected areas and sustainable alternative production systems.

#### Expected results

**Objectives**
1. Improve governance of the forests and life systems of Mother Earth in the municipality of Concepción.
2. Promote participatory territorial planning processes within the framework of organization of life zones identified in the municipality.
3. Support the development of local agreements pertinent to the objectives and goals for development of sustainable productive systems, with focus on climate change mitigation and adaptation.
4. Integral support to sustainable agricultural systems and integral and sustainable management of forests and life systems of Mother Earth.
5. Develop information systems and integral monitoring of the components, environmental functions, and life systems of Mother Earth.

**Goals**
- Conserve at least 600,000 ha of forest in protected areas.
- Equip 30 Community Forestry Organizations with technical, administrative and organizational skills for integrated management of their forest resources.
- Form three local organizations to increase the technical capacity of the Ayoreo and Intercultural groups for holistic and sustainable management of forests and Mother Earth.
- Establish six strategic alliances with technical and civil society organizations for integral and sustainable management in the municipality.
- Develop and implement three protected area management plans.
- Develop Integral Forest and Land Management Plans (PGIBT) in 15 communities, based on the life systems baseline which establishes a sustainable organization of the territory.
- Develop at least one productive initiative for the integral and sustainable management of life systems in 30% of the communities in the municipality (for example, harvesting of Chiquitana almond, copaibo tree oil and cusi palm oil; agroforestry systems; forest nurseries and reforestation).

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**Assessment**

The humid Amazon forest is suffering the impacts of human activity, particularly due to expansion of the agricultural frontier and the replacement of the native forest with crops, secondary vegetation and cattle pasture. In addition, the selective extraction of high value timber species is eroding the gene pool of these species and the total biodiversity of the forest.

One of the main challenges is to generate benefits that can reduce poverty through use and value-added production of biological resources. To do this, it is necessary to create and develop markets for those products and services that are compatible with the needs of the environment.

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**Context**

- Location: the department of Pando is situated in the far north of Bolivia, bordering Brazil to the north.
- Land area: 63,827 km², representing 5.81% of Bolivia’s territory.
- Population: 109,000 inhabitants.

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**Activities**

Pando is the first ascension of a department to the Joint Mitigation and Adaptation Mechanism since the program began in December 2013.

Results to date

From 2011 to 2013 COMSERBO Pando has benefitted seven communities, guaranteeing holistic and sustainable forest management in 70,000 ha, of which 16,000 ha are permanently conserved. 37,000 ha are designated for harvesting of non-timber forest products, and 18,000 ha are designated for timber harvesting. USD 40,000 has been provided in financial support for development projects within the communities and as an economic incentive.

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**Objectives**

1. Join the Joint Mitigation and Adaptation Mechanism as an alternative to the commercialization of the environmental functions of forests.
2. Contribute to the policies of the Plurinational State of Bolivia with proven methodological, technical and investment experiences.
3. Consolidate at the departmental level policies oriented towards the planning of life systems of Mother Earth, through integral and sustainable forest management.
4. Promote conservation and integral management of Pando’s Amazon forests, protecting their environmental, socioeconomic and cultural functions as a means of fighting poverty and climate change.

**Goals**

1. Reduce deforestation due to illegal timber harvesting and wildfires, with focus on climate change mitigation and adaption.
2. Redistribute the fee for timber harvesting directly to indigenous, native and peasant communities as financial support for the conservation and integrated forest management.
3. Promote socioeconomic and cultural development of indigenous peoples and native and peasant groups in harmony with Mother Earth.
4. Promote initiatives that progressively increase the value added to forest products.