

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT DOCUMENT  
FOR THE GEF COUNCIL REVIEW  
ON A  
PROPOSED GRANT

IN THE AMOUNT OF US\$13.76 MILLION

TO THE

UNITED MEXICAN STATES

FOR A PROJECT ON

CONNECTING WATERSHED HEALTH WITH SUSTAINABLE LIVESTOCK AND  
AGROFORESTRY PRODUCTION (CONECTA)

Environment, Natural Resources and Blue Economy Global Practice  
Latin America and the Caribbean Region

This document has been prepared for the review by the GEF Council and Scientific and Technical Advisory Panel (STAP), for official use only.

## ABBREVIATIONS AND ACRONYMS

AFD	French Development Agency ( <i>Agence Française de Développement</i> )
AFOLU	Agriculture, Forestry and Other Land Use
AGRICULTURA	Secretariat of Agriculture and Rural Development ( <i>Secretaría de Agricultura y Desarrollo Rural</i> )
AGROINCLUYE	Strengthening Agriculture and Food Systems by Promoting Access to Finance
AMEBIN	Mexican Alliance of Biodiversity and Business
BAU	Business as Usual
B-INTACT	Biodiversity Integrated Assessment and Computation Tool
BIENESTAR	Secretariat of Welfare ( <i>Secretaría de Bienestar</i> )
BR	Biosphere Reserve
BSSP	Business Strategy for Sustainable Production
BUR	Biennial Update Report
CC	Coordinating Committee
CONABIO	National Commission for the Knowledge and Use of Biodiversity ( <i>Comisión Nacional para el Conocimiento y Uso de la Biodiversidad</i> )
CONAFOR	National Forestry Commission ( <i>Comisión Nacional Forestal</i> )
CONAGUA	National Water Commission ( <i>Comisión Nacional del Agua</i> )
CONANP	National Commission for Protected Areas ( <i>Comisión Nacional de Áreas Naturales Protegidas</i> )
CONECTA	Connecting Watershed Health with Sustainable Livestock and Agroforestry Production
CoP	Community of Practice
CPF	Country Partnership Framework
CP	Country Project
CSA	Climate-Smart Agriculture
CSO	civil society organization
C6	Coastal Watersheds Conservation in the Context of Climate Change Project
E&S	Environmental and Social
EFA	Economic and Financial Analysis
EF	Emission Factor
ER	Ecological Reserve
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESS	Environmental and Social Standard
ESMF	Environmental and Social Management Framework
EX-ACT	Ex-Ante Carbon-Balance Tool
FAO	Food and Agriculture Organization of the United Nations
FFPA	Flora and Fauna Protected Area
FGM	Gulf of Mexico Fund ( <i>Fondo Golfo de México, A.C.</i> )
FIP	Forest Investment Partnership
FIRA	Trust Funds for Rural Development ( <i>Fideicomisos Instituidos en Relación con la Agricultura</i> )
FFM	Mexican Forest Fund ( <i>Fondo Forestal Mexicano</i> )
FMCN	Mexican Fund for the Conservation of Nature ( <i>Fondo Mexicano para la Conservación de la Naturaleza, A.C.</i> )

FOLU	Food and Land Use Coalition
FOLUR	Food Systems, Land Use, and Restoration
FONCET	El Triunfo Conservation Fund ( <i>Fondo de Conservación El Triunfo, A.C.</i> )
FONNOR	Northwest Fund ( <i>FONNOR, A.C.</i> )
GAP	Gender Action Plan
GBV	Gender-Based Violence
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEMS	Geo-Enabling Initiative for Monitoring and Supervision
GGP	Good Growth Partnership
GHG	Greenhouse Gas
GII	Gender Inequality Index
GLCC	General Climate Change Law
GLF	Global Landscape Forum
GNI	Gross National Income
GoM	Government of Mexico
GP	Global Knowledge to Action Platform Project
GPS	Global Program on Sustainability
GRM	Grievance Redress Mechanism
GRSB	Global Roundtable for Sustainable Beef
IA	Implementing Agency
IBA	Important Bird and Biodiversity Area
IDB	Interamerican Development Bank
IFC	International Finance Corporation
IICA	Inter-American Institute for Cooperation on Agriculture
ILM	Integrated Landscape Management
IMTA	Mexican Institute of Water Technology ( <i>Instituto Mexicano de Tecnología del Agua</i> )
INECC	National Institute of Ecology and Climate Change ( <i>Instituto Nacional de Ecología y Cambio Climático</i> )
INEGI	National Institute of Statistics and Geography ( <i>Instituto Nacional de Estadística y Geografía</i> )
INPI	National Institute of Indigenous Peoples
IP	Impact Program
IPCC	Intergovernmental Panel on Climate Change
IPPF	Indigenous Peoples' Planning Framework
IUCN	International Union for Conservation of Nature
IWAP	Integrated Watershed Action Plan
LCLO	legally constituted local organization
MFD	Maximizing Finance for Development
MRS�	Mexican Roundtable for Sustainable Livestock
MSMEs	Micro, Small and Medium Enterprises
NAMA	Nationally Appropriate Mitigation Action
NDC	Nationally Determined Contribution
NDP	National Development Plan
NGO	Nongovernmental Organization

NIR	National Greenhouse Gas Inventory Report
NLC	National Learning Community
NP	National Park
OCU	Operational Coordinating Unit (at FMCN)
OM	Operational Manual
PLAT	Local Provider of Technical Assistance ( <i>Proveedores Locales de Asistencia Técnica</i> )
LAC	Latin America and the Caribbean
LMP	Labor Management Procedures
LPU	Livestock Production Unit
LULUCF	Land Use, Land Use Change and Forestry
PAD	Project Appraisal Document
PES	Payments for Ecosystem Services
PF	Process Framework
PG	Producer Group
PPP	Purchasing Power Parity
PS	Private Sector
RAMSAR	Convention on Wetlands of International Importance especially as Waterfowl Habitat
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RF	Results Framework
SEA	Sexual Exploitation and Abuse
SEMARNAT	Secretariat of Environment and Natural Resources ( <i>Secretaría de Medio Ambiente y Recursos Naturales</i> )
SEP	Stakeholder Engagement Plan
SISEP	Information System for Project Follow-up ( <i>Sistema de Información y Seguimiento de Proyectos</i> )
SMP	Sustainable Management Practice
SNMB	National System for Monitoring Biodiversity
SPS	Silvopastoral Systems
SRVZ	Scenic and Recreational Value Zone
TA	Technical Assistance
TEEB MX	TEEBAgriFood Mexico
TC	Technical Committee
TCU	Technical Coordinating Unit (at INECC)
TPS	Sustainable Productive Landscapes Project ( <i>Territorios Productivos Sostenibles</i> )
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USFS	United States Forest Service
WHO	World Health Organization
WRI	World Resources Institute

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## DATASHEET

### BASIC INFORMATION

Country(ies)	Project Name	
Mexico	Connecting Watershed Health with Sustainable Livestock and Agroforestry Production	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P172079	Investment Project Financing	Moderate
GEF Focal Area		
Multi-focal area		

### Financing & Implementation Modalities

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

Expected Approval Date	Expected Closing Date
29-Apr-2021	30-Apr-2026
Bank/IFC Collaboration	Joint Level
Yes	Complementary or Interdependent project requiring active coordination

### Proposed Development Objective(s)

Improve integrated landscape management and promote climate-smart productive practices in selected watersheds

## Components

Component Name	Cost (US\$, millions)
Development and Promotion of Integrated Landscape Management	1.63
Strengthening of Business Skills for Sustainable Livestock and Agroforestry	2.30
Conservation, Restoration and Implementation of Climate-smart Productive Practices in Cattle and Agroforestry Landscapes	7.65
Project Coordination, Collaboration and Knowledge Management	2.18

## Organizations

Borrower:	The United Mexican States
Implementing Agency:	The National Institute of Ecology and Climate Change (INECC) The Mexican Fund for the Conservation of Nature (FMCN)

## PROJECT FINANCING DATA (US\$, Millions)

### SUMMARY

Total Project Cost	13.76
Total Financing	13.76
of which IBRD/IDA	0.00
Financing Gap	0.00

### DETAILS

#### Non-World Bank Group Financing

Trust Funds	13.76
Global Environment Facility (GEF)	13.76

#### Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2021	2022	2023	2024	2025	2026
Annual	1.39	3.00	3.05	2.94	2.83	0.56

Cumulative	1.39	4.39	7.44	10.38	13.21	13.76
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## INSTITUTIONAL DATA

### Practice Area (Lead)

Environment, Natural Resources & the Blue Economy

### Contributing Practice Areas

Agriculture and Food, Climate Change

## SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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

## COMPLIANCE

### Policy

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

☐ Yes ☒ No



Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

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

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

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

#### Legal Covenants

##### Sections and Description

INECC shall maintain throughout Project implementation the Technical Coordinating Unit (“TCU”) with staffing and functions set forth in the Operational Manual.

##### Sections and Description

The Recipient shall maintain throughout Project implementation the Operational Coordinating Unit (“OCU”) with staffing and functions set forth in the Operational Manual.

Sections and Description

INECC shall maintain throughout Project implementation the Coordinating Committee (“CC”) with composition and functions set forth in the Operational Manual.

Sections and Description

The Recipient shall maintain throughout Project implementation the Technical Committee (“TC”) with composition and functions set forth in the Operational Manual.

Sections and Description

Prior to carrying out any activities in the geographic area assigned to each Regional Fund, the Recipient shall enter into an agreement (“Regional Agreement”) with each of the Regional Funds under terms and conditions acceptable to the World Bank, set forth in the Operational Manual.

Sections and Description

To facilitate the carrying out of Part 3 of the Project, and prior to the carrying out of each Subproject, the Recipient shall, or shall cause the relevant Regional Fund, as the case may be, to enter into an agreement (“Subproject Agreement”) with the relevant Eligible Beneficiary, under terms and conditions acceptable to the World Bank, set forth in the Operational Manual.



## I. STRATEGIC CONTEXT

### A. Country Context

- 1. Mexico is an upper-middle-income country with a diversified economy, but economic growth has been low over the last decades and the country's per capita income has not converged to that of higher-income economies, enabling only limited progress in poverty reduction.** Growth averaged about 2 percent between 1980 and 2018, or close to 1 percent on a per capita basis. Yet the country's per capita income stands at 34 percent of U.S. per capita gross domestic product (GDP), compared to 49 percent in 1980. The official poverty rate fell from 46.1 percent to 41.9 percent between 2010 and 2018 due to increased labor income and a reduction in social deprivations. Monetary poverty amounted to 23 percent in 2018 using the upper-middle-income poverty line (US\$5.5 a day, 2011 purchasing power parity [PPP]). After a decline between 2010 and 2014, the annualized growth rate of median per capita income<sup>1</sup> reached 1.8 percent between 2016 and 2018, still well below the regional average.<sup>2</sup> Mexico's median per capita income in 2018 was US\$3,295 (in 2011 PPP terms), equivalent to US\$1,990 in nominal U.S. dollars.
- 2. The expected drop in economic activity in 2020 will have a negative impact on poverty rates as well as on households' income through the labor income effect.** Per capita GDP and gross national income (GNI) are expected to drop significantly, further hindering Mexico's convergence to higher-income countries. The Coronavirus Disease 2019 (COVID-19) pandemic is taking a heavy toll on the Mexican economy; economic activity contracted by 1.3 percent and 18.6 percent year on year in the first and second quarters of 2020, respectively. The combination of the global recession (including a drop in U.S. output, Mexico's main trading partner), disruptions in global and domestic supply chains, measures to flatten the contagion curve, financial disruptions, and investment risk aversion, among others, are heavily affecting the key components of aggregate demand. Despite a strong recovery in economic activity in the third quarter, growth is projected to contract by around 9 percent in 2020.
- 3. The COVID-19 pandemic has had significant human, poverty, and employment costs.** The official statistics as of mid-November 2020 show that close to 1 million people contracted the virus and over 95,000 died. Since mid-March the Government of Mexico (GoM) implemented measures to control the spread of the virus, including the suspension of all non-essential economic activities, move to at-home work and schooling nationwide, and a broad social distancing initiative. The GoM established a "traffic light" system for a gradual activity reactivation, which commenced in mid-May, but significant uncertainties remain ahead until the availability of a vaccine. The overall impact of the crisis has been significant on jobs. Total employment fell drastically in the early months of the pandemic. The contraction in economic activity will likely lead to a large impact on monetary poverty as well.
- 4. The authorities have implemented measures to face the crisis.** Aside from the health response, the authorities have launched a set of monetary, financial, fiscal, economic, and social measures to mitigate the impact of the crisis. On the monetary-financial side, currency swap lines, liquidity facilities, a regulatory forbearance, and other important measures were adopted. The fiscal response has been more limited. The authorities' expressed rationale is that they are trying to strike a balance between short-term larger fiscal imbalances and a sustainable fiscal framework over the medium term, considering that risks remain high and fiscal space for further action may be needed in the months

<sup>1</sup> The median is the 50<sup>th</sup> percentile of per capita household income, which implies that half the population is above the median and the other half is below the median.

<sup>2</sup> The average growth of median per capita income for 13 Latin America and the Caribbean (LAC) countries was 2.6 percent.



ahead. The fiscal response was targeted to support vulnerable households, workers, and micro, small and medium enterprises (MSMEs).

5. **The COVID-19 response measures have been paired with the adoption and implementation of medium-term reforms to support the economic recovery.** The current juncture and the recovery period ahead also present a good opportunity to rethink policies conducive to growth, inclusion, and sustainability. In this context, policies that enable access to finance, economic opportunities, and social programs to citizens, particularly youth and vulnerable populations, are critical to the aim of having a better and more inclusive recovery.

## B. Sectoral and Institutional Context

6. **Mexico is a megadiverse, climate-vulnerable country with important natural capital, including biological diversity that provides substantial opportunities for socioeconomic development.** Mexico has over 88 million ha of forests, covering almost 45 percent of its territory. It is home to around 10 percent of all known species, a significant share of which is found in forest ecosystems, hence the strategic importance of their preservation and sustainable management.<sup>3</sup> Climate change forecasts in Mexico indicate that its consequences are likely to increase with more frequent and severe extreme weather events, poverty, and rising migration.
7. **Mexico's commitment to protecting its natural capital is clearly evidenced by a broad set of initiatives put in place by several dedicated institutions in an increasing trend since the early 1990s.** To date, 11 percent of the terrestrial surface and 22 percent of the marine territory, comprising 182 protected areas managed by the National Commission for Protected Areas (*Comisión Nacional de Áreas Naturales Protegidas* CONANP), have been given federal protection status. In parallel, there is a strong movement toward promoting integrated and sustainable management of biodiversity and natural resources outside the protected area system. Since 2003, the Mexican Forest Fund (*Fondo Forestal Mexicano* FFM) and its Biodiversity Endowment Fund, the largest fund for payments for ecosystem services (PES) in Latin America managed by the National Forestry Commission (*Comisión Nacional Forestal* CONAFOR), is financing PES across the country with multi-annual agreements. Several monitoring initiatives have also been launched, including the: (a) National Forestry and Soils Inventory (*Inventario Nacional Forestal y de Suelos* INFyS) by CONAFOR; (b) National System for Monitoring Biodiversity (SNMB); and (c) National System of Information on Biodiversity (SNIB) coordinated by the National Commission for the Knowledge and Use of Biodiversity (*Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* CONABIO) with more than 13 million registries of biodiversity, accessible through the EncicloVida platform.
8. **Despite conservation achievements, Mexico's ecosystems and biodiversity face significant pressures from land use change; land degradation is among the most critical environmental hazards.** Overexploitation due to agricultural activities and overgrazing by livestock combined with socioeconomic poverty, lack of valorization of natural resources, and limited access to technical knowledge and capacity building are among the key driving factors of degradation. In the project area, national data indicate that between 36 percent and 54 percent of the territory in Chihuahua is overgrazed, in Jalisco and Veracruz this number is around 25 percent, and in Chiapas it ranges between 10 percent and 14 percent. In coffee farming, the introduction of high-yielding coffee varieties has led to severe soil erosion due to the need for herbicide. In 2018, the economic cost of environmental degradation and natural resource depletion amounted to 4.3 percent of national GDP.<sup>4</sup>

<sup>3</sup> World Bank Project Appraisal Document (PAD) of Mexico Strengthening Entrepreneurship in Productive Forest Landscapes Project (P164661), January 2018.

<sup>4</sup> <https://seea.un.org/news/inegi-releases-seea-accounts-2018>.



9. **Forests are important for supporting Mexico's climate change mitigation, adaptation, and biodiversity conservation efforts.** The National Climate Change Strategy, National Reducing Emissions from Deforestation and Forest Degradation (REDD+) Strategy, and Mexico's National Strategy on Biodiversity have shown positive results in curbing deforestation. However, though the national aggregated deforestation level has decreased to an average of 0.2 percent over the past years, localized impacts from land use pressures persist.<sup>5</sup> The annual deforestation rates in the project-targeted watersheds are estimated at 0.55 percent in Jalisco, 0.71 percent in Chiapas, 1.70 percent in Veracruz, and 6.25 percent in Chihuahua.<sup>6</sup> Agricultural expansion and extensive cattle ranching are key factors contributing to deforestation and forest degradation. Along with forestry, agricultural production has a key role in the climate change agenda. While it is among the main sources of greenhouse gas (GHG) emissions, together with forestry it is the only economic sector capable of reversing or mitigating climate change due to its ability to sequester and store carbon in soils and plant tissues. Agriculture and cattle production are also the economic activities most vulnerable to climate change with direct effects on food security and the livelihoods of both rural and urban populations.<sup>7</sup> Restoring ecosystem services in vast cattle production landscapes in Mexico is also critical for preservation of biodiversity, regulation of water retention and runoff, crop pollination, soil retention, and soil fertility. The GoM has committed to (i) reduce unconditionally 22 percent of its GHG emissions and 51 percent of black carbon below the 'business as usual (BAU)' scenario by 2030; and (ii) reach a zero-net deforestation rate by 2030 in its Nationally Determined Contribution (NDC) and its 2020 updated version.<sup>8, 9</sup> The authorities made further, but conditional commitments that would increase emission reductions by up to 36 and 70 percent in terms of GHG and black carbon emissions, respectively, if additional external resources were to become available. However, continued reduction of vegetation in pastures, commodity-driven deforestation, and increasing competition for water resources in agriculture highlight the challenges in achieving the NDC. Lastly, the link between deforestation and the spread of deadly zoonotic diseases<sup>10</sup> presents hotspots for disease emergence in Mexico.<sup>11</sup> The risks are due to increasing animal-human contact, spillover rate, toxin exposure, and threats to health-benefitting ecosystem services, prompted principally by changes in land use, agricultural industry, and international travel and commerce. Efforts to reduce deforestation and habitat degradation and fragmentation go hand in hand with improving public health outcomes by limiting related transmission pathways.
10. **Agriculture value chains are important in the rural economy and for poverty reduction.** The agricultural sector (including livestock) accounts for around 8 percent of Mexico's GDP,<sup>12</sup> considering the forward and backward linkages created through primary production, post-harvest agro-industrial processes, and food production. Mexico occupies the 11<sup>th</sup> place in global cattle production, the 8<sup>th</sup> position in milk production, and is among the 10 top exporters of coffee and one of the world's largest exporters of organic-certified coffee. The agriculture sector is of pivotal socioeconomic importance considering that more than 24 million people live in rural areas and 45 percent of the rural labor force is employed in the primary sector. The livestock sector alone employs 938,000 people directly.<sup>13</sup>

<sup>5</sup> <http://www.enaredd.gob.mx/wp-content/uploads/2017/09/Estrategia-Nacional-REDD+-2017-2030.pdf>

<sup>6</sup> Chiapas, Jalisco, and Veracruz, based on Common Carbon Metric (CCM) annex, July 2016, from the National Institute of Statistics and Geography (*Instituto Nacional de Estadística y Geografía* INEGI) series II and V and Chihuahua from de Pool et al. 2014.

<sup>7</sup> <https://www.agricultura.gob.mx/sites/default/files/sagarpa/document/2019/01/28/1608/01022019-cambio-climatico.pdf>

<sup>8</sup> <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mexico%20First/MEXICO%20INDC%2003.30.2015.pdf>

<sup>9</sup> <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mexico%20First/NDC-Eng-Dec30.pdf>

<sup>10</sup> Zoonotic diseases are infectious diseases caused by bacteria, viruses, and parasites that can be transmitted from animals and humans.

<sup>11</sup> Allen et al. 2017. "Global Hotspots and Correlates of Emerging Zoonotic Diseases." <https://www.nature.com/articles/s41467-017-00923-8>.

<sup>12</sup> Due to prevailing data gaps, this number represents a significant under-accounting given the high share of informality in the Mexican food system.

<sup>13</sup> [https://nube.siap.gob.mx/gobmx\\_publicaciones\\_siap/pag/2019/Agricultural-Atlas-2019](https://nube.siap.gob.mx/gobmx_publicaciones_siap/pag/2019/Agricultural-Atlas-2019).



11. **Meat and milk production for the domestic market and coffee production for international markets are key economic activities in the project area and have potential for growth.** Livestock is an important activity in the targeted watersheds, covering 70 percent of the territory in Chihuahua, between 40 percent and 60 percent in Jalisco and Veracruz, and 31 percent to 40 percent in Chiapas. The states of Veracruz and Jalisco are the first and second producers of beef, respectively, with 13 percent and 12 percent of the 2018 national production. The national beef industry in Mexico continues to supply largely to domestic markets as only 13.5 percent of beef production is destined for exports.<sup>14</sup> Mexico's cow-calf industry exports around 1 million live cattle to the United States, and Chihuahua is the top exporter.<sup>15</sup> Mexico is a net importer of milk (liquid and powder) as national production is not enough to meet demand. Jalisco and Chihuahua are among the top national producers of milk, representing 9.4 percent and 20 percent of the national total respectively. Milk production in Veracruz and Chiapas accounts for 6 percent and 3.6 percent, respectively, and has significant potential to increase their participation in the national market.<sup>16</sup> Chiapas and Veracruz are also the top coffee producers in the country, producing 39 percent and 30 percent respectively. General market failures identified in Mexico's agricultural value chains include: (a) lack of transparent and effective information to support decision making; (b) limited access to credit and improved technologies/practices to make value chains more efficient and sustainable; and (c) poor linkages between producers, small and medium processing enterprises, and markets.
12. **Agricultural production in the targeted value chains is characterized by small and medium production units.** Most livestock production units (LPUs) are small (less than 30 heads) and based on extensive and inefficient production systems.<sup>17</sup> Producers face difficulties in maintaining profitability due to low productivity; limited access to technologies, technical assistance (TA), and credits (78.5 percent of the rural production units); as well as fragile links to the market.<sup>18</sup> Consequently, small and medium livestock producers often resort to clearing more forest land as they cannot afford the investment needed to adopt sustainable technologies on their existing lands. The use of vaccines in smallholder production systems is also a challenge as only 30 percent to 40 percent of the production units apply them.<sup>19</sup> Coffee production is also driven by smallholders, 85 percent of them indigenous. Although the coffee value chain is well integrated in the national and global markets, producers still face significant challenges due to poorly equipped farms to handle adverse weather, climate and disease events combined with limited access to credit and TA, while some producers still lack integration in the value chain.<sup>20</sup>
13. **Women play an important role in the targeted value chains with activities that are a significant and important source of family income.** Women participate at all levels of dairy production from ownership of livestock to processing of milk or small and artisan dairy production and commercialization of dairy products mainly for local consumption. Participation of women in agroforestry activities is mostly focused on harvesting and production of artisan products. Women's participation is mainly at a small scale, geared to family consumption and thus non-remunerated. They face additional challenges as most don't have land titles or rights, which hinders their access to credit, technical support, or other services that require land titles as collaterals or requirement to access government programs. Annex 2 provides more details on the participation of women in livestock and agroforestry activities.

<sup>14</sup> United States, Japan, Hong Kong, South Korea: [https://comecarne.org/wp-content/uploads/2020/07/Compendio\\_Estad%C3%ADstico\\_2019\\_-\\_Comecarne.pdf](https://comecarne.org/wp-content/uploads/2020/07/Compendio_Estad%C3%ADstico_2019_-_Comecarne.pdf).

<sup>15</sup> [https://www.ers.usda.gov/webdocs/outlooks/37416/6818\\_ldpm20601.pdf?v=5585.9](https://www.ers.usda.gov/webdocs/outlooks/37416/6818_ldpm20601.pdf?v=5585.9).

<sup>16</sup> [https://nube.siap.gob.mx/gobmx\\_publicaciones\\_siap/pag/2018/Infografias-2018](https://nube.siap.gob.mx/gobmx_publicaciones_siap/pag/2018/Infografias-2018).

<sup>17</sup> [http://www.cedrssa.gob.mx/files/b/8/79Ganader%C3%ADa\\_familiar\\_M%C3%A9xico\\_enfoque\\_sustentabilidad.pdf](http://www.cedrssa.gob.mx/files/b/8/79Ganader%C3%ADa_familiar_M%C3%A9xico_enfoque_sustentabilidad.pdf).

<sup>18</sup> [https://www.transparenciapresupuestaria.gob.mx/work/models/PTP/Reingenieria\\_Gasto/imagenes/Ventanas/Ramo\\_8/08S260.pdf](https://www.transparenciapresupuestaria.gob.mx/work/models/PTP/Reingenieria_Gasto/imagenes/Ventanas/Ramo_8/08S260.pdf).

<sup>19</sup> <https://comadsa.mx/category/ganaderia/>.

<sup>20</sup> Blackman, Allen, Heidi Albers, Beatriz Avalos-Sartorio, and Lisa Crooks. 2005. "Deforestation and Shade Coffee in Oaxaca, Mexico." *Resources for the Future*.





14. **Introduction of environmental objectives in livestock policies and programs at the national and subnational levels is evolving.** The Secretariat of Agriculture and Rural Development (*Secretaría de Agricultura y Desarrollo Rural*, AGRICULTURA) has implemented programs (Livestock Credit Program<sup>21</sup> and Production for Wellbeing<sup>22</sup>) to address improvements in grassland management in livestock systems and coffee production, but the respective public expenditures are still small compared to conventional productive programs. A recent high-level environment-agriculture agreement between the Ministry of Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales* SEMARNAT) and AGRICULTURA strengthens intersectoral collaboration and coordination to consolidate an enabling and effective institutional and policy environment to support sustainable production in Mexico.<sup>23</sup> There are also state-level initiatives to improve livestock practices and promote private sector (PS) initiatives to support small milk producers to improve their productive practices and gains, for example, in Jalisco, but they remain limited in scope.<sup>24</sup> The Trust Funds for Rural Development (*Fideicomisos Instituidos en Relación con la Agricultura* FIRA)<sup>25</sup> has established a 'ProSostenible' credit line financed by the French Development Agency (*Agence Française de Développement* AFD) to facilitate access to credit for investment projects in rural areas generating environment benefits and/or improving capacity to climate mitigation or adaptation. FIRA's portfolio of sustainable development projects at the end of 2019 totaled an estimated US\$450 million, representing 4.2 percent of the total balance of the institution. However, upfront costs of implementing new practices continue to be a main obstacle for adoption of sustainable management practices (SMPs) despite yielding important benefits over the long term, for example implementing soil conservation measures such as construction of terraces and building of drainage ditches and use of organic fertilizers.<sup>26</sup> Mainstreaming SMPs would require stable support programs for producers to explicitly encourage their uptake. A related challenge is a general lack of farmer organizations, while conservation experiences in Mexico have shown that creation of groups of neighbors, producer associations, and local committees has proved useful to allow joint production of inputs like compost and organic pesticides and/or reduction of costs of necessary inputs.<sup>27</sup>
15. **The project builds upon prior success in advancing interinstitutional coordination at a landscape level.** The present Connecting Watershed Health with Sustainable Livestock and Agroforestry Production (CONNECTA) Project builds on the success of the Global Environment Facility (GEF) Coastal Watersheds Conservation in the Context of Climate Change Project (C6; P131709). C6 was implemented by the National Institute of Ecology and Climate Change (*Instituto Nacional de Ecología y Cambio Climático* INECC), CONAFOR, CONANP, and a private, nonprofit organization, the Mexican Fund for the Conservation of Nature (*Fondo Mexicano para la Conservación de la Naturaleza*, A.C. FMCN) during 2014–2019. It promoted integrated management of coastal watersheds to conserve biodiversity, contributed to climate change mitigation, and enhanced sustainable land use in the Gulf of Mexico and Gulf of California. C6 achieved improved management of productive landscapes in the watersheds covering more than 35,000 ha, improvement of protected areas management covering over 1,700,00 ha, and due to the emphasis on community participation, strengthened socio-ecological resilience of the watersheds in terms of climatic changes and other potential future environmental and social (E&S) perturbations. Two Regional Funds, the Northwest Fund (FONNOR)

<sup>21</sup> Note that the program may have had a different name in prior administrations. <https://www.gob.mx/agricultura/acciones-y-programas/preguntas-frecuentes-del-tramite-sader-01-001-a-programa-de-credito-ganadero-a-la-palabra>.

<sup>22</sup> This was previously under the ProAgro and ProCampo. <https://www.gob.mx/produccionparaelsenestar>.

<sup>23</sup> Capacity Building Strategy of SADER's Well-Being Program 2020, page 15.

<sup>24</sup> Sustainable Milk Supply Strategy to Improve the Quality of Life in Jalisco financed by the Interamerican Development Bank (IDB), see: <https://www.iadb.org/en/project/ME-T1385>.

<sup>25</sup> For institutional information on FIRA, see <https://www.fira.gob.mx/Nd/IndiceEn.jsp>.

<sup>26</sup> Ubertino, Simone, Patrick Mundler, and Lota Tamini. 2016. "The Adoption of Sustainable Management Practices by Mexican Coffee Producers." *Sustainable Agriculture Research*.

<sup>27</sup> <https://academicjournals.org/journal/JSEM/article-full-text-pdf/5C2428E59775>.



in Jalisco and the Gulf of Mexico Fund (*Fondo Golfo de México, A.C.* FGM) in Veracruz, were created for local project coordination and training. This collaboration resulted in the alignment of efforts in climate-vulnerable watersheds through Integrated Watershed Action Plans (IWAPs) that the INECC developed in six watersheds with comprehensive technical data to allow identification of the priority sites to invest in identified activities to maintain ecosystem services. C6 provided strong evidence of how IWAPs, paired with key activities, can reduce biodiversity loss, GHG emissions, and land degradation through strengthening sustainable land use and socio-ecological resilience at the watershed level.

### C. Relevance to Higher Level Objectives

16. **The project is consistent with the World Bank Group's Mexico Country Partnership Framework (CPF) 2020–2025** (Report No. 137429-MX), discussed by the Board on February 27, 2020. Pillar 3 of the CPF aims to promote inclusive and sustainable development. Specifically, CONECTA is aligned with World Bank's support to the GoM on climate change mitigation and adaptation. It responds directly to a planned expansion of World Bank engagement in rural areas by strengthening community management and entrepreneurship in forest landscapes. It also contributes to ongoing engagement in the agricultural sector by building the capacity of small and medium producers to access credit among beneficiaries in the beef, milk, and agroforestry-related value chains such as coffee to improve sustainable agricultural productivity and increase competitiveness.
17. **The concerted CONECTA actions of the participating institutions will create synergies between the objectives of the principal United Nations' (UN) Environmental Conventions.** The objectives of the United Nations Convention on Biological Diversity (UNCBD), United Nations Framework Convention on Climate Change (UNFCCC), and United Nations Convention to Combat Desertification (UNCCD) all converge in a landscape approach embedded in the implementation of land use tools such as the IWAPs. CONECTA activities will contribute to the achievement of the National Biodiversity Strategy and Action Plan under the UNCBD<sup>28</sup> and the National Action Program under the UNCCD.<sup>29</sup> CONECTA also aligns with the objectives of the UN Decade on Ecosystem Restoration and the Global Landscape Forum (GLF) promoting restoration of degraded ecosystems to fight the climate crisis and enhance food security, water supply, and biodiversity.
18. **The project builds on the World Bank's existing and longstanding efforts to support environmental and agricultural priorities to foster integrated landscape management (ILM) for sustainable rural economic development.** The project benefits from a vast and successful landscape portfolio of World Bank operations delivered in collaboration between the environment and agriculture sectors in the LAC region and globally. Beyond the earlier referenced C6 Project, past operations in Mexico include the Sustainable Production Systems and Biodiversity Project (P121116), Sustainable Rural Development Project (P106261), and Forests and Climate Change Project (P123760). The project will benefit from their lessons learned and complement their objectives while expanding the scope and geographies covered in the past. CONECTA will complement two ongoing operations. The GEF-6 Sustainable Productive Landscapes Project (*Territorios Productivos Sostenibles* TPS; P159835) approved in 2018 focuses on integrated landscape approaches, led by SEMARNAT with participation from AGRICULTURA and CONANP, among other agencies, to align productivity, rural livelihoods, and environmental objectives. CONECTA will look for synergies with the TPS in terms of the areas covered and approaches to ILM with productive aims and building producers' capacity to access credits for sustainable productive activities. Strengthening Entrepreneurship in Productive Forest

<sup>28</sup> <https://www.cbd.int/doc/posters/nbsap/post-mexico-02-en.pdf>.

<sup>29</sup> <https://www.gob.mx/cms/uploads/attachment/file/31167/pnacdd.pdf>.





Landscapes Project (P164661), approved in 2019, focuses on forest management. CONECTA will also ensure alignment and coordination with analytical efforts already undertaken under the Mexico portfolio to understand gender roles and differentiated gender impacts on access to natural resources and their management (Building Capacity to Mainstream Gender in Emission Reductions Programs and REDD+ Strategies, P170429).

19. **The World Bank's Agriculture and Food Global Practice is supporting AGRICULTURA's response to COVID-19 through an advisory operation focused on priority programs in agriculture.** It will provide important insights on the development of the milk value chain in the South-Southeast region, specifically Veracruz, Tabasco, and Chiapas, that can be harnessed by CONECTA during implementation. A new project, Strengthening Agriculture and Food Systems by Promoting Access to Finance (AGROINCLUYE, P175940), is under consideration with FIRA with the aim of strengthening agricultural supply systems by promoting access to finance for productive purposes in rural areas. CONECTA will look for synergies with AGROINCLUYE for engaging with FIRA. Further, CONECTA aligns with the World Bank Group's Maximizing Finance for Development (MFD) approach that helps countries leverage development resources by drawing on private financing and sustainable PS solutions to provide value for money and meet the highest environmental, social, and fiscal responsibility standards while reserving scarce public financing for those areas where PS engagement is not optimal or available. Along these lines, CONECTA collaborates with the International Finance Corporation (IFC), the PS agency of the World Bank Group that finances PS projects and offers financial services to private companies.
20. **The GEF-7 strategy includes the Food Systems, Land Use, and Restoration (FOLUR) Impact Program (IP), which seeks to promote sustainable integrated landscapes and efficient food value chains at scale.** The FOLUR IP is based on the growing recognition that food production systems and land use need to improve for the health of the planet. It seeks transformation to more environmentally sustainable production practices and resilient landscapes. The FOLUR IP is designed to respond to the global challenges and opportunities highlighted above through two main elements: (a) a Global Knowledge to Action Platform Project (GP) and (b) currently 27 Country Projects (CPs) designed to tackle challenges of achieving a global food system built on sustainable land use practices and productive, resilient landscapes using top-down and bottom-up strategies simultaneously. This objective and design respond to the related needs discussed above in Mexico. The GP works with the CPs to offer capacity building, TA, policy engagement, resource mobilization, and knowledge exchange to bring about concerted collective action and coordinated and integrated interventions; scaled-up investment with a faster pace and greater impact; policy harmonization and subsidy repurposing, financial innovation, and leverage; and knowledge exchange, communication, and outreach to existing and new stakeholders. The FOLUR IP Core Partners<sup>30</sup> and Implementing Agencies (IAs) will maintain a dialogue on providing training, guidance, and knowledge products and convening in response to CP demand and act at global and regional levels; bringing parties together; nurturing regional and multi-country partnerships; analyzing issues and developing evidence for improved practices; exchanging knowledge on practical successes that can be replicated and scaled; contributing financial and policy innovation; and leveraging resources to help the FOLUR countries achieve more than what the CPs can do by themselves. See details on the FOLUR GP-CONECTA linkages in Annex 5.
21. **The FOLUR IP has several important features that contribute to the medium-term response to COVID-19** that has reinforced the importance of advancing global efforts to achieve sustainable food production systems while

<sup>30</sup> The FOLUR IP Core Partners include the IFC, Food and Agriculture Organization of the United Nations (FAO), the Good Growth Partnership (GGP) of the United Nations Development Programme (UNDP), the Food and Land Use Coalition (FOLU) co-led by the World Resources Institute (WRI), and the GLF. They will expand the impact of country efforts by building on in-country activities and scaling up at the regional and global levels, focusing on capacity strengthening, policy and value chain engagement, as well as strategic knowledge management and communications.



contributing to economic recovery and job creation; investment at the landscape level will retain and create jobs in developing countries and increase resilience of rural communities, buffering the pressures of reverse migration from cities. The emphasis on food safety and sourcing can create new opportunities for innovation and improvement along the value chains of key agricultural commodities.

## II. PROJECT DESCRIPTION

### A. Project Development Objective

#### PDO Statement

Improve integrated landscape management and promote climate-smart productive practices in selected watersheds

#### PDO Level Indicators

1. Area of landscape under improved climate-smart practices (Hectare, Ha)
2. Farmers adopting improved agricultural technology (Number), WB Corporate Results Indicator
3. Producer groups implementing climate-smart practices that increase productivity by at least 10% (Percentage)

### B. Project Components

22. **CONECTA as a FOLUR CP follows the FOLUR theory of change.** The GEF and partner organizations have identified various food systems, particularly eight commodities that include beef, palm oil, soy, coffee, and cocoa, as a necessary focus of interventions due to the magnitude and significance of their impact resulting from the location and rate of expansion of the areas dedicated to their production. Growing demand for agriculture products, particularly beef and milk, is affecting natural ecosystems in Mexico, like in many other countries. Extensive cattle ranching is the principal activity linked to environmental and forest degradation and deforestation in the targeted project areas. CONECTA will reduce said degradation and deforestation: (a) as regenerative and sustainable livestock practices change the expansive nature of cattle ranching and (b) through linking beneficiary and other interested producer groups (PGs) with value chains that reward sustainability, while the promoted productive practices are themselves expected to be cost-efficient. CONECTA will also help align public and private funding to accelerate production of sustainable beef, milk, dairy, and agroforestry products along the principles of deforestation-free value chains in selected watersheds under high commodity-driven deforestation pressure. CONECTA will deliver economic and job opportunities for local populations in alignment with social, environmental, and health benefits. Promotion of intersectoral and public-private collaboration to link public expenditures and value chain performance to land management practices and better environmental outcomes will deliver positive impacts, for example, on soil carbon sequestration and productivity. CONECTA will support landscape restoration and connectivity, contributing to mitigation of GHG emissions, increased climate resilience of production practices, improved rural jobs and livelihoods, and conservation of biodiversity.



23. **CONECTA is a demonstrative project that will base itself on participatory ILM<sup>31</sup> and target 15 watersheds across four different ecoregions and agroecosystems to showcase and disseminate recommended good practices and create an enabling environment for replication and scale-up.** The targeted watersheds are in the states of Chiapas, Chihuahua, Jalisco, and Veracruz. Some of them may not result subject to interventions under Components 1, 2, and 3, given the demand-based nature of the project design and a need to allocate limited project funding strategically across the watersheds and ecoregions to secure achievement of at least demonstrative impact at a landscape level. CONECTA is designed to protect and restore watershed health and sustainability of ecosystem services while improving productive economic activities such as cattle ranching and farming based on silvopastoral, agropastoral, and agroforestry systems, applying a regenerative approach. CONECTA is complemented by a Technical Assistance grant from the Global Program on Sustainability (GPS)<sup>32</sup>, the World Bank's umbrella program on natural capital accounting (NCA) and the economics of sustainability. The grant's objectives are to (i) strengthen the technical and economic underpinnings of CONECTA's ILM work; (ii) identify and contribute to development of innovative financing sources and schemes; and (iii) promote related knowledge management. CONECTA will build key actors' ILM-relevant capacities, coalesce action to integrate biodiversity and ecosystem service criteria into policies and incentive programs, promote creation of sustainable value chains, strengthen and train PGs to adopt climate-smart productive practices, leverage private and public investments, and provide related knowledge management. Supported by the FOLUR GP, the project aims at demonstrating and scaling up sustainable productive approaches and emerging value chain partnerships.
24. **CONECTA will collaborate with existing initiatives that work on sustainable value chains to maximize synergies and impact**, including, for example, the Mexican Alliance of Biodiversity and Business (AMEBIN),<sup>33</sup> which the FMCN will co-chair in 2021 together with Nestlé and TEEB AgriFood Mexico (TEEB MX);<sup>34</sup> the Mexican Association for Fair Trade; Mexican Roundtable for Sustainable Livestock (MRSL) that has initiated its work but is still to be legally established; and relevant Nationally Appropriate Mitigation Actions (NAMAs). A NAMA on sustainable livestock is currently under preparation by AGRICULTURA and the Inter-American Institute for Cooperation on Agriculture (IICA) and will be adopted in its early stages by the MRSL as one of its projects. Collaboration is also expected with the IFC that is identifying investment opportunities in the CONECTA intervention area supporting productive alliances between large, PS companies and smallholder producers. The CONECTA Coordinating Committee (CC) will play a key role in coordinating and aligning relevant actions in the project area and beyond, particularly through AGRICULTURA and

<sup>31</sup> There are many definitions of ILM. The project uses the definition adopted, for example, for a World Bank study, Integrated Landscape Management in Drylands in Africa (2016), based on the definition presented by the Landscapes for People, Food and Nature Initiative, a collaborative partnership of leading environmental and agricultural nongovernmental organizations (NGOs), UN agencies, and governments: "A long-term collaboration among different groups of land managers and stakeholders is required to achieve the multiple objectives required from the landscape. These typically include agricultural production, provision of ecosystem services (such as water flow regulation and quality, pollination, climate change mitigation and adaptation, cultural values); protection of biodiversity, landscape beauty, identity, and recreation value; and local livelihoods, human health, and well-being. Stakeholders seek to solve shared problems or capitalize on new opportunities that reduce trade-offs and strengthen synergies among different landscape objectives. Because landscapes are coupled with socio-ecological systems, complexity and change are inherent properties that require management."

<sup>32</sup> <https://www.worldbank.org/en/programs/global-program-on-sustainability>

<sup>33</sup> Launched in 2016, AMEBIN is the most important forum that facilitates dialogue and action between the PS and civil society organizations (CSOs) to contribute to the conservation, sustainable use, and restoration of biodiversity in Mexico. Twenty-nine members integrate the AMEBIN that meets regularly and maintains working groups on relevant topics, and it is also a forum for dialogue and experience-sharing among members.

<sup>34</sup> An initiative of The Economics of Ecosystems and Biodiversity hosted by the United Nations Environment Programme (UNEP), where the PS, civil society, and academia collaborate to understand how agricultural value chains could have positive effects on the environment, socioeconomic well-being, and human health. The FMCN and AMEBIN are part of the TEEB MX.



FIRA, the latter focusing on PS actors.

25. **CONECTA will systematize a diverse set of relevant productive practices that have been tested and proved beneficial both in environmental and economic terms.** The initial set of these practices is identified and analyzed in the project's Environmental and Social Management Framework (ESMF).<sup>35</sup> CONECTA will cover actions on strategic planning, capacity building, investment, and coordination of policies and programs within SEMARNAT (INECC, CONANP, National Water Commission [*Comisión Nacional del Agua* CONAGUA], Mexican Institute of Water Technology [*Instituto Mexicano de Tecnología del Agua* IMTA], CONAFOR) in close collaboration with AGRICULTURA, FIRA, and the Secretariat of Welfare (*Secretaría de Bienestar* BIENESTAR) that form part of the CONECTA CC, and the other entities that have committed or are expected to commit parallel financing<sup>36</sup>. Biodiversity, soil carbon, water, and/or soil quality will be monitored according to nationally recognized methodologies, while internationally recognized technologies adjusted by the participating institutions for appropriateness in the project ecosystems will be outlined in the calls for proposals as defined in the ESMF. CONECTA will also provide space for new and innovative practices, while the CC will review, guide, and validate all the technologies proposed for use under Components 2 and 3. Innovation will be embedded in: (a) promoting cross-sectoral coordination for ILM by ensuring inter-ministerial coordination from the project design to the implementation stage between the key agencies that form the CC and with other development partners and across federal, state, and local governments; (b) offering tailor-made TA to PGs through four-year accompaniment strategies, going beyond the traditional provision of TA; and (c) promoting broad-based and active stakeholder engagement through cost-effective action by three Regional Funds that will contribute critical local knowledge and relations and facilitate active participation of local organizations and communities.
26. **The targeted watersheds have a population of 5.9 million people and cover a total of 10,047,474 ha, of which the project targets 450,000 ha.** They were selected in concurrence with the main funding sources received from the following GEF Programming Directions: BD1-1 to mainstream biodiversity across sectors, CM2-6 to demonstrate mitigation options, and LD-1-1 to maintain or improve flow of agro-ecosystem services.<sup>37</sup> Consequently, the selection of the watersheds is based on the (a) high presence of biodiversity, (b) high level of cattle production, (c) vulnerability to climate change and potential contribution to GHG emission reductions relevant to other areas in the country, and (d) high risk of land degradation. Annex 1 provides greater detail on the selection criteria, state-level characterization, and data sources up to the intervention area. Table A1.1 provides some detail on the commodities produced within the targeted areas, the type of production, key environmental degradation pressures, and expected results in each watershed.<sup>38</sup> The ecosystems represented include tropical rainforest, grasslands, dry deciduous forest, cloud forest, and pine-oak forest, the unique biodiversity of which is highly endangered. Some of these forests are critical for water provision to local communities, economies, and ecosystems they host.

<sup>35</sup> All the CONECTA E&S risk management instruments are available at: <https://projects.worldbank.org/en/projects-operations/document-detail/P172079>.

<sup>36</sup> Financing that supports the implementation of CONECTA and the achievement of its objectives, but with no relation to CONECTA's results framework nor implying fiduciary or environmental and social oversight responsibility for the World Bank; called "GEF co-financing in GEF terms".

<sup>37</sup> The other GEF source was from the FOLUR IP to promote effective coordination and will be transversal across all components.

<sup>38</sup> It is to be noted that project-financed subprojects under Component 3 will be demand-based on one hand and selected with the intention of maximizing project results on improved landscape connectivity on the other hand. Consequently, some of the targeted watersheds might end up without subprojects.



27. **The targeted watersheds host 24 protected areas and rich biodiversity.** Annex 1 and Table A1.3 present the key characteristics of the CONECTA watersheds, including in terms of biodiversity. The protected areas have a total surface of 677,922 ha, around 6 percent of the targeted area, and include Biosphere Reserves (BRs), National Parks (NPs), Natural Resources Protected Areas, Flora and Fauna Protected Areas (FFPAs), Ecological Reserves (ERs), State Parks, Scenic and Recreational Value Zones (SRVZs), and Voluntary Conservation Areas (VCAs). Some 29 percent of them are protected at the federal level and 42 percent at the state level, and 29 percent are VCAs. Conservation efforts beyond the protected areas extend to the following terrestrial priority conservation areas: 14 regions and 112 sites (83 medium, 19 high, and 10 extreme priority sites) with important physical and biotic characteristics; 800 priority aquatic sites (475 medium, 184 high, and 141 extreme priority sites); 10 areas of importance for bird conservation; eight Important Bird and Biodiversity Areas (IBAs); three mangroves sites with biological relevance; four sites registered under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR); and three priority areas under the Alliance for Zero Extension. Protected areas in Mexico include many communities of small agricultural producers engaged in cattle rearing, fishing, and/or forestry. The producers from these areas will be eligible to participate in the calls for proposals for TA and/or subprojects in regenerative ranching and sustainable agroforestry when within the targeted watersheds. Endowment provided by KfW—the German development bank—and CONANP funds will support complementary management activities in protected areas. The project will promote sustainable management of living natural resources, including due attention to animal health and well-being by the beneficiary ranchers. It is expected to contribute to conservation of the species listed in Table A1.3, but presenting specific biodiversity benefits that will be achieved is not possible during project preparation as the actual landscapes where the project will work depend on the results of demand-based calls for proposals. Results of biodiversity monitoring under Component 3 will be reported at mid-term and closure.
28. **CONECTA consists of four components aligned with the FOLUR IP:** (a) Development and Promotion of Integrated Landscape Management; (b) Strengthening of Business Skills for Sustainable Livestock and Agroforestry; (c) Conservation, Restoration, and Implementation of Climate-smart Productive Practices in Cattle and Agroforestry Landscapes; and (d) Project Coordination, Collaboration and Knowledge Management. The project components are aligned with the following GEF-7 Focal Area objectives, intended for achievement through the FOLUR IP: (a) Biodiversity: manage biodiversity in production landscapes, harness biodiversity for sustainable agriculture, and secure high conservation value forest areas in production landscapes; (b) Climate Change: land-based and value chain GHG mitigation; and (c) Land Degradation: restoration of degraded production landscapes.
29. **Component 1: Development and Promotion of Integrated Landscape Management (GEF US\$1.63 million).** The objective of Component 1 is to promote and implement ILM<sup>39</sup> by: (a) developing two new and improving four existing land use instruments covering at least 10 of the targeted priority watersheds (due to the ecological characteristics/dynamics and the watershed approach, some of the IWAPs will cover various basins); (b) operationalizing those instruments by coordinating public and private programs for better alignment at the watershed level; and (c) aligning incentives for implementation of ILM. This will be accomplished through local/state/national level commodity value chain policies, certifications, standards, etc. informed by CONECTA.
30. **Subcomponent C.1.1: Development and Improvement of Land Use Instruments.** The activities under C.1.1 will support the development or enhancement and subsequent implementation of specific land use instruments named IWAPs<sup>40</sup> in at least 10 of the prioritized watersheds. A regenerative livestock component will be integrated into four

<sup>39</sup> See footnote 30 for the applied definition.

<sup>40</sup> IWAPs are planning instruments that identify the activities required to conserve the most critical ecosystems and environmental services





existing IWAPs that cover seven watersheds and at least two new IWAPs with said component developed to cover at least three additional basins. The IWAPs will be developed or improved through a systematic process as per a methodology established by the INECC among the first project activities. Relevant existing studies and models, for example, on climate change scenarios applying the National Atlas of Vulnerability to Climate Change and impacts of livestock production on water bodies will be used, updated, and completed according to the latest methods for developing IWAPs. Models used in the IWAPs will be fundamental for establishing priority sites for project interventions considering data on ecosystem services and existing land use activities. They will incorporate variables most sensitive to climate change, allowing for projections to increase adaptation capacity and reduce vulnerability. Inputs from the IWAPs will guide the final selection of beneficiaries and financed activities under Components 2 and 3, while they are not a preemptive condition for proposals to be approved under CONECTA, that is, though location in a watershed with an IWAP and clear alignment of the proposal with inputs from the IWAP will be an asset to any proposal, proposals deemed strong and/or strategically important can be approved in watersheds that do not have an IWAP. The GPS grant will allow valuation of selected ecosystem services to contribute to the IWAP implementation of IWAPs.

31. **The project will promote wide stakeholder engagement in consultative activities to inform the IWAPs and build broad ownership for their implementation.** The stakeholders presented under project beneficiaries will be conveyed to (a) review and provide feedback on the models; (b) co-develop the IWAPs including data related to local knowledge and social capital and perspectives of the public, civil, private, and financial sectors; and (c) subsequently define priority sites for the promotion of biodiversity and climate-friendly productive practices, as well as conservation and restoration activities supported under Components 2 and 3. The monitoring of results from the project sites carried out under Component 3 and other data will inform the models to document changes over time and update IWAPs as necessary. The IWAPs will also highlight the areas that require alignment of and between public or private incentives under C.1.2 and will facilitate implementation of strategies to address those arrangements, for example, to recognize the value of ecosystem services and prompt markets to demand and incentivize sustainable practices.
32. **Subcomponent C.1.2: Coordination of Public and Private Programs for Alignment at the Watershed Level.** The activities will focus on coordination between public and private actors to promote partnerships for the implementation of IWAPs, relevant programs/initiatives/incentives, and replication and scale-up of the key project activities. C.1.2 is expected to lead to new or modified interinstitutional agreements, policy instruments, and programs to support and leverage activities that promote connectivity in the watersheds. These will include productive and restoration and conservation practices supported under Components 2 and 3. Engagement with development banks such as FIRA will prompt demand and a shift toward sustainable investment criteria, sourcing, and financial incentives to advance the FOLUR IP objectives at different scales. FIRA is working with the AFD to increase the funding of its existing credit program to promote regenerative ranching, which is expected to incorporate inputs from CONECTA and will add to its parallel financing<sup>41</sup> during implementation. CONECTA will benefit from the FOLUR GP by accessing relevant analytical material, including assessment, design, refinement, or rollout of financial tools and mechanisms that promote more sustainable practices and value chains, such as a challenge program, investor forums, training products, convening and brokering services, and business case studies.

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while considering climate change impacts. Through the project, the IWAPs will guide climate-smart land use changes to conserve/strengthen ecosystem services in parts of the 15 watersheds targeted by the project. Under the C6 Project in Mexico, implemented through the World Bank with GEF resources, similar work was carried out designing and piloting IWAPs in six of the 16 selected watersheds of the C6 Project.

<sup>41</sup> "GEF co-financing"



33. **C.1.2 will test and mainstream innovative approaches to enhance interinstitutional collaboration.** It will provide technical support and training to key national, state-level and local actors: legislators, policymakers, civil society organizations (CSOs) and PS to adopt IWAPs and align policies and subsidy programs with their and/or other relevant recommendations. The Regional Funds will be key actors in identifying the potential for relevant alignment of incentives and prompt coordination. Examples include support for development of programs that allow landowners to restore upstream areas to receive Payments for Ecosystem Services (PES) from national/local agencies, and support from state-level Secretariats of Agriculture and Rural Development or Environment to adopt climate-smart livestock practices. PS strategies and dialogue will be promoted on financing regenerative ranching, for example, through incorporation of IWAPs' criteria by financial institutions and sustainable tourism through hotels and ecotourism businesses in the lower watersheds paying for ecosystem services provided under Component 3. Strengthened linkages with private and public partners at the landscape level is expected to leverage investments in line with ILM objectives.
34. **Component 2: Strengthening of Business Skills for Sustainable Livestock and Agroforestry (GEF US\$2.3 million).** The objective of Component 2 is to (a) build business and organizational capacity of livestock and/or agroforestry PGs for sustainable rural production and (b) improve their value chain and market linkages. PGs may be formal groups or groups in the process of being formalized, dedicated to livestock and/or agroforestry, and willing to adopt or improve the application of climate-smart technologies (see Table 1 on beneficiaries), including family businesses and enterprises from *comunidades* or *ejidos*.<sup>42</sup> They can be working on any stage of the productive chain, including primary production (for example, shadow coffee), transformation of sustainably produced meat/milk, and commercialization for local, national, or international markets, as well as enterprises whose line of business adds value to products, for example, packing of cheese from sustainably produced milk or certified coffee.
35. Component 2 will be implemented through (a) an open and voluntary call for proposals to Local Providers of Technical Assistance (*Provedores Locales de Asistencia Técnica* PLATs), which can be consultants, consulting firms or legally constituted local organization (LCLOs)<sup>43</sup> focused on promoting organizational and business management skills of PGs in an integral manner; the application and selection process of the PLATs and a full list of potential activities, adjustable during project implementation as pertinent, will be included in the project's Operational Manual (OM); PLATs will be contracted applying the relevant World Bank Procurement Regulations based on their long-term accompaniment strategies with one or more livestock and/or agroforestry PG(s) at the community level, going beyond traditional TA for four-year engagements; and (b) financing of demand-driven advisory services and TA to improve management and organizational capacities of PGs through development of business strategies for sustainable production (BSSPs) supported by the PLATs. Among potential topics of assistance are managerial aspects, organization and governance, financial and accounting training, marketing, land management, animal well-being and veterinary services, and value chain and market access.
36. Based on an initial diagnostic of the strengths and weaknesses of the interested PGs, PLATs will prepare their proposal(s), and the selected PLATs will develop them further to design a four-year accompaniment strategy in close

<sup>42</sup> A *comunidad* is a population grouping with a legal personality and is the holder of agrarian rights recognized by executive or restorative order, or by resolution confirming their ownership of forest lands. An *ejido* is an association of peasant farmers who are owners of a common property assigned to them by the state.

<sup>43</sup> The project will consider a LCLO any legally organized group constituted with the capacities to receive, manage, and apply resources according to the law. They may be civil associations, social solidarity societies, intermunicipal boards, rural production companies with limited liability, civil societies, etc.



collaboration with the PGs. Specialized consultancies and technical inputs can be financed with project funding in parallel for the selected PGs, including but not limited to value chain/market analysis, sustainable milk processing, cheese production, eco or agritourism services, marketing and commercialization of sustainably produced goods, and access to credit markets for sustainable production. This approach will allow enhancing the beneficiary PGs' market linkages, increasing demand for sustainable value chains, and implementing a tailor-made plan adapted to the needs of each PG depending on their development stage (from initiatives to consolidation) and using participatory techniques.<sup>44</sup> The PGs may also be selected under Component 3 to implement activities related to regenerative ranching, agroforestry, or other sustainable production practices included in their BSSP. Some PGs may leverage the skills gained through the project to access other sources of financing to implement the BSSP, including parallel financing from project partners like FIRA.

37. **Component 3: Conservation, Restoration, and Implementation of Climate-smart Productive Practices in Cattle and Agroforestry Landscapes (GEF US\$7.65 million).** Component 3 will finance subprojects covering a variety of activities to increase connectivity in the watersheds to implement the IWAPs developed under Component 1. It can also support the implementation of some of the BSSPs developed under Component 2. The beneficiaries will be landowners and PGs, including *comunidades*, *ejidos*, small landowners, and community enterprises that are either organized as a LCLO (see footnote 43) or grouped by an existing LCLO that allows non-organized producers to access project funding. The supported actions will promote sound environmental practices to increase the area under sustainable landscape management, reduce GHG emissions, promote climate adaptation, and improve water quality and biodiversity. Component 3 will be implemented through a voluntary call for proposals to CSOs that will promote synergies with the call for proposals under Component 2 and group beneficiaries to accompany them with a four-year plan to adopt sustainable practices in livestock, agroforestry systems, and forest preservation and management. The subprojects will have a watershed logic and complement each other to maximize connectivity benefits. The application and selection process of the LCLOs will include an adaptable list of eligible activities designed by the Technical Coordinating Unit (TCU) and the CC and categorized by their implementation at farm, sub-watershed, or landscape level. After the close of the call for proposals, the Regional Funds and FMCN will organize a virtual or face-to-face workshop in each state for external evaluation of the proposals. Relevant experts from different sectors will be invited to evaluate the proposals using a format agreed upon by the CONECTA Technical Committee (TC) and as detailed in the OM.
38. Diverse packages will finance support for: (a) regenerative ranching with an integrated approach in the production unit and promoting the adoption of climate-smart technologies, including initial inputs, finance of wages by the day (*jornales*), for example, for establishment of living fences, improvement of pastures (evaluation, grass enrichment, rotations, introduction of trees) and animal health, and building of watering troughs to avoid animals entering streams; TA, training, workshops, and experimental farms to promote the transition to sustainable ranching practices; (b) agroforestry systems, including for example, TA and inputs for the establishment and improvement of shade coffee, cacao, and pepper plantations and/or production, as well as agroecological practices to conserve soils and restore degraded pasture lands; and (c) practices that improve the connectivity in livestock and agroforestry landscapes, that is, promotion of agreements with landowners for establishment of voluntary areas for conservation; training for fire prevention, control, and management; inputs to build nurseries for a group of communities; and inputs and TA for soil restoration and reforestation. Select beneficiaries will be trained in community monitoring of biodiversity and/or water quality.

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<sup>44</sup> This PG accompaniment model has been successfully tested under the Forest Investment Partnership 4 (FIP4) in Mexico, implemented by the FMCN and FINDECA C.A. with funding from the IDB during 2014–2019.





**39. Component 4: Project Coordination, Collaboration and Knowledge Management (GEF US\$2.18 million).**

Component 4 will cover project management activities, including implementation support and supervision of E&S risk management, upgrading of FMCN's existing Information System for Project Follow-up (*Sistema de Información y Seguimiento de Proyectos* SISEP) and overall monitoring and evaluation (M&E) activities, counting independent midterm and final evaluations. Further, it will enhance stakeholder participation and inclusion in watershed management by strengthening existing local stakeholder platforms, contributing to the work of existing platforms, for example, AMEBIN, TEEB MX, and the MRSL, and creating a National Learning Community (NLC) for regenerative ranching and agroforestry production to allow systematic exchange of experiences between the targeted watersheds through digital platforms, social networks, and annual gatherings at different levels, including a biennial national gathering. Further, it will have a permanent virtual platform, where beneficiaries from Components 2 and 3, academics, associations of producers and other PS representatives, PLATs, LCLOs, and different levels of government representatives can interact. Every year, the project will organize an exchange of knowledge and experiences between and beyond the targeted watersheds and will systematically document and share good practices and lessons learned. The NLC and local platforms will complement the project's participation in the FOLUR GP, led by the World Bank, which will provide access to practical solutions and strategic communication. The project will seek to address gender and social inclusion issues to reach out to women and indigenous peoples' groups. Supported by the FOLUR GP, the design of the communication efforts will be tailored to the intended audience, from high-level political and PS forums through to smallholder farmers and producers. The project's Technical Committee (TC), NCL, MRSL, and forums in each watershed will ensure coordination between federal and state agencies.

**40. CONECTA will contribute to learning, lessons for wider replication, leveraging, and disseminating FOLUR IP actions and results**

through the NLC and other existing national and local platforms such as the AMEBIN, TEEB MX, MRSL, and state-level roundtables to scale up, mainstream, and incentivize demand for and application of improved practices for better landscape-level outcomes and greener commodity supply chains. As a complement to the quantitative reporting, the project will document success stories and provide other inputs as contributions to annual overview progress reports of the FOLUR GP. The project leads will also participate in an annual face-to-face GP meeting with all FOLUR IAs, CPs, and partners. The Results Framework (RF) includes a relevant knowledge management indicator: Members of FOLUR-supported Communities of Practice (Number; % female).

**41. CONECTA will generate, share, and scale up knowledge through the following approach:**

Under Component 1, CONECTA will promote wide stakeholder engagement in consultative activities to inform the IWAPs, including public, civil, private, and financial sectors. The stakeholders will co-develop the IWAPs to include data related to local information to improve their quality, ensure ownership of the IWAPs, and promote their implementation. Component 1 will also provide training to key actors including legislators, policymakers, CSOs, LCLOs, and the PS to adopt IWAPs and align policies and subsidy programs. Through Components 2 and 3, the project will generate new knowledge by providing TA to beneficiaries through four-year accompaniment strategies. CONECTA will seize the opportunity provided by the FOLUR IP through active participation in the FOLUR GP, including work through it to access relevant international actors and platforms like the Global Roundtable for Sustainable Beef (GRSB) to complement and reinforce domestic efforts and participation with the MRSL. A knowledge management approach with a budget and timeline for the key deliverables has been prepared for the OM, and a communication and knowledge management strategy will be formulated as implementation starts to ensure effective outreach and dissemination and promote visibility among stakeholders.



**42. Component 4 will be instrumental in strengthening deforestation-free and sustainable value chains at three levels:**

**(a) At the watershed level:** Once PLATs, PGs, producers, and processors/traders have been selected; yearly meetings will take place that allow establishing links along CONECTA-prompted value chains. The Regional Funds will be instrumental in detecting such links and promoting new market connections. An ongoing value chain study financed by the FMCN will serve as a starting point, and the value chain connections will be enriched as needed once the beneficiary producers and processors/traders have been selected. Common needs to strengthen supply chains will be identified at the yearly meetings and supported through consultancies.

**(b) At the national level:** PLATs, PGs, producers, processors and other key stakeholders in the watersheds will participate in multi-stakeholder biannual meetings. The identified supply chains being developed in every watershed will interact with those of other watersheds across states. Linkages will be built for exchange of knowledge and development of business opportunities. Through the TC and CC, the biannual meetings will ensure that the supply chains at the watershed level interact with relevant national networks, such as AMEBIN, TEEB MX, National Council of Small Producers, MRSL, Thematic Network of Agroforestry Systems of Mexico, the Biodiversity Finance Initiative (BIOFIN), as well as with investors identified by FIRA, SVX MX, Viwala, and Adobe.

**(c) At the international level:** The FOLUR GP, led by the World Bank, presents a unique opportunity to link the bottom-up design of CONECTA with the GP's top-down approach. Needs identified at the watershed and national levels will be analyzed by the TC and CC to match them with TA provided by the GP. The committees will also select the representatives to be supported by the project to participate in global and regional engagement events. It will be mandatory that the CONECTA representatives share the knowledge and contacts acquired with the pertinent project stakeholders. Topics already detected that are of interest for CONECTA are certification of sustainable enterprises and products, impact investment opportunities, and communication to urban consumers interested in sustainable products.

**Private sector linkages**

- 43. Establishing a market transformation for sustainably produced meat, milk, dairy products, and coffee is challenging for Mexico due to the nascent nature of demand for these products.** CONECTA will engage with relevant actors along the beef, dairy, and coffee value chains at various levels to promote their sustainability and strengthen related forward linkages. Farmers are by far the largest private investors in agriculture with on-farm investments being more than three times as large as all other sources of public and private investment in low- and middle-income countries. Farmers must therefore be central to efforts to increase private investment in the sector with a view to accelerating progress toward development outcomes.<sup>45</sup> Farmers and PGs are thus important PS actors with whom CONECTA will work as direct beneficiaries. Given the domestic nature of the beef and dairy value chains in Mexico, CONECTA will focus on strengthening domestic market linkages and working largely with short supply chains at the local, regional, and national levels, emphasizing also the importance of consumption of local food to reduce food miles. Due to the demand-based nature of the project design, collaboration with specific enterprises will be defined during implementation as part of the preparation and selection of the proposals to be financed under Components 2 and 3. A preliminary analysis of market opportunities in the intervention areas identified a total of 69 businesses that can be linked to the targeted value chains and producers/processors/traders supported under Components 2 and 3: 35

<sup>45</sup> 'Maximizing Finance for Development: Making it Operational in the Agriculture and Food Sector' Guidance Note V.2.0 disclosed by the Agriculture and Food Global Practice in June 2020.



percent of them are micro/small and 36 percent medium-scale businesses that participate in local and regional markets (Figure 1), while only 17 percent participate in national and international markets. Forty-five percent operate with livestock-related products and 23 percent with coffee (Figure 2). The main lines of business are commercialization (33 percent) and sales (23 percent) (Figure 3).

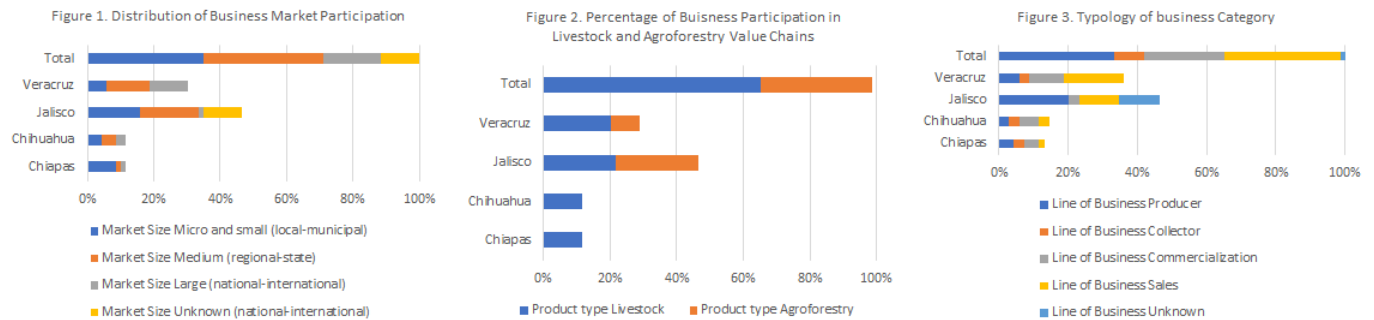
44. **During implementation, CONECTA will prepare a PS engagement strategy for sustainable livestock-linked commodities** to identify opportunities and solutions for leveraging PS participation to strengthen linkages along the project targeted key value chain. The strategy will support public-private dialogue to strengthen collaboration and inform future investment programs in line with the World Bank MFD approach.<sup>46</sup> It will draw strongly from a value chain analysis of sustainable livestock and agroforestry systems and their market linkages under preparation in the targeted watersheds by the FMCN. Under Component 2, CONECTA will help farmers and small processing enterprises to become bankable and coordinate particularly with FIRA to promote their access to finance. It will also support technology adoption and generation of information that will contribute to reduce market distortions and help create more sustainable and efficient value chains.
45. **Building on the ongoing value chain analysis, potential collaboration is being explored with existing projects that involve companies present in the four states.** Once the PLATs and subprojects under Components 2 and 3 have been selected, the PS engagement strategy will be designed. It will incorporate relevant primary and secondary information for value chain mapping and will: (a) provide information on products, recommendations on market niches for identified products or strategies with greater potential, prices, investment needs, profits, and possibly competitors according to their product differentiation and market positioning; (b) establish the distribution of value added among the different actors on the different productive chains identified in (a); (c) locate the actors at each link or nodal point of the chain and identify their roles, activities, interests, indigenous and women's participation, as well as the interactions between them; (d) characterize potential opportunities for better coordination between actors identified in (c) and possible spaces where it would be possible to incorporate actions for more efficient alternatives economically, socially, and environmentally; (e) obtain relevant information to identify strategies from farm to fork and provide recommendations on market niches that improve the competitiveness of regenerative products; (f) identify potential future demand (internal and external) in niche meat, milk, and coffee markets and mechanisms to enhance market opportunities through making nodal points of these value chains more efficient; and (g) assess the main obstacles for the integration of sustainable producers at the regional and national levels, and propose an improvement plan with adjustments to the regulatory framework, policies, incentives support services, and institutional arrangements to overcome these obstacles. The PS engagement strategy will use the above information and improvement plan to propose actions for the project to deepen PS engagement along identified value chains, especially for sustainable livestock, coffee, and dairy products. Results and experiences gained along the implementation of the PS engagement strategy will be shared through the NLC and FOLUR GP under Component 4.
46. **The World Bank and IFC have initiated FOLUR-related collaboration in Mexico,** aiming at promoting coordination and synergy between the objectives of the FOLUR IP and CONECTA and potential complementary and interdependent IFC investments in companies trading on sustainable meat, milk, dairy products, or coffee in the CONECTA intervention area and beyond. To this end, the PS engagement strategy will be developed in collaboration with IFC and that could align its support to both Components 2 and 3 of CONECTA. Under Component 2, an IFC client could partner with beneficiary PGs to strengthen their productive alliances with global, national, and up to international

<sup>46</sup> This work will refer to the World Bank MFD Guidance Note referenced in footnote 45.



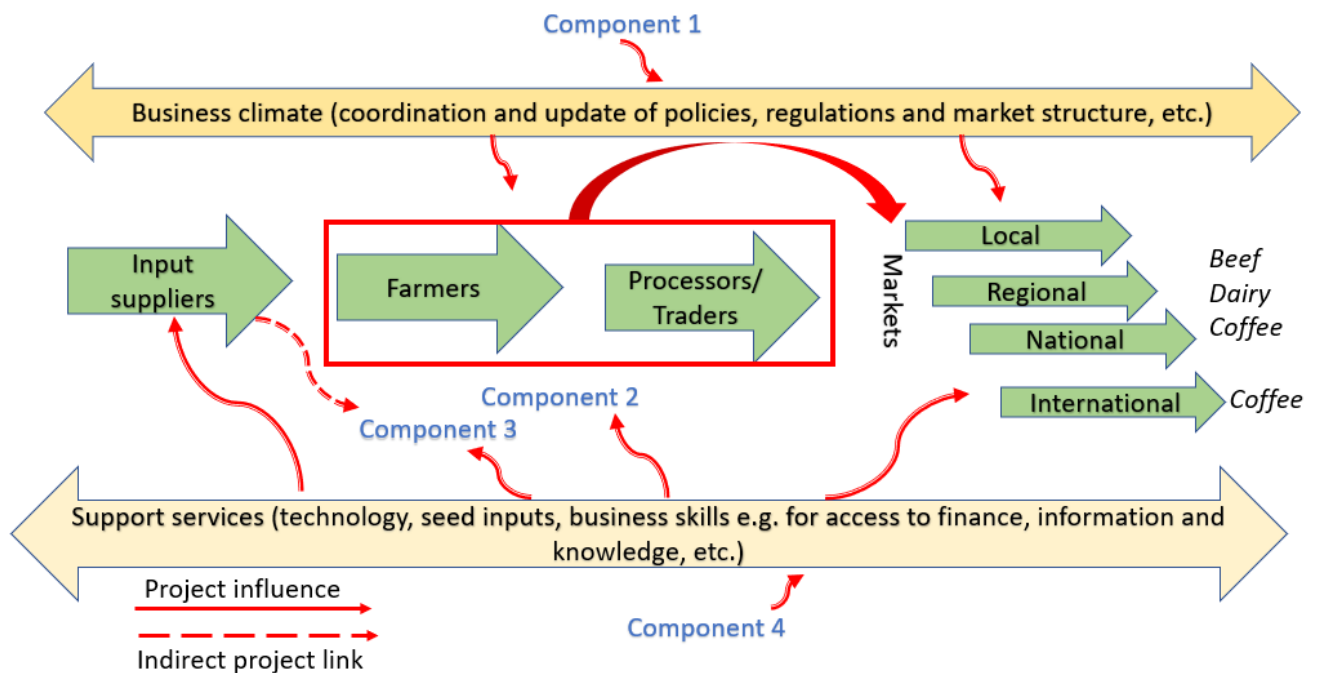
markets and/or finance and scale up similar subproject activities as CONECTA finances under Component 3.

**Figures 1-3: Preliminary diagnostic of key market characteristics in the targeted value chains and watersheds**



47. Through the PS engagement strategy, the project will aim to integrate the following activities, among others, that come out of recommendations of the strategy: (a) collaboration will be sought with national platforms such as the MRSI that is being legally established, AMEBIN, TEEB MX, the National Council of Small Producers, and the Thematic Network of Agroforestry Systems of Mexico; through Component 4, the project will provide resources to develop an NLC for regenerative ranching and agroforestry and (b) through Component 2, PLATs will be sought, that in addition to providing business and organizational capacity for livestock and agroforestry farmers, will work to develop market linkages for their PGs and associated producers with special focus on short value chains at the local level. Figure 4 presents a depiction of the CONECTA components and articulation with stakeholders along the value chains.

**Figure 4: Depiction of CONECTA support and interactions along the targeted value chains**





48. **Net carbon balance.** An ex ante mitigation potential assessment was carried out by the World Bank team in close collaboration with the INECC and the FMCN and the Regional Funds to estimate the result of a GEF indicator, Greenhouse Gas Emissions Mitigated (metric tons of CO<sub>2</sub>e), that the project will report at midterm and closure. The net carbon balance quantifies GHGs emitted or sequestered as a result of a project compared to the 'without project' scenario applying the Ex-Ante Carbon-balance Tool (EX-ACT) of the FAO. The project is expected to provide sustained benefits for a period of 20 years and constitute a net carbon sink of 1.64 million tCO<sub>2</sub>e, 1.2 percent of the NDC mitigation target for the Agriculture, Forestry and Other Land Use (AFOLU) sector by 2030.<sup>47</sup> Over the implementation period of five years, the project is estimated to constitute a net carbon sink of 411,035 tCO<sub>2</sub>e (3.3 percent of the 2030 target). On average, the annual GHG emission reduction is estimated at 82,207 tCO<sub>2</sub>e. From these, 17 percent will be indirect contributions by reducing the loss of grass and shrublands and forest areas (14,236 tCO<sub>2</sub>e annually). The activities implemented under Component 3 will directly contribute 82 percent of the GHG emission reduction (67,971 tCO<sub>2</sub>e.) The largest emission reductions are attributed to the avoided loss of the referred ecosystems and promotion of agroforestry and silvopastoral systems (SPS). The ex-ante analysis is based on a set of assumptions and data generated from specific watershed diagnostics and national observations and information revised and verified by the INECC mitigation team. The analysis applied Tier 2 level emission factors (EF) for Mexico as reported in the 2018 National Greenhouse Gas Inventory Report (NIR).<sup>48</sup> The GHG analysis is presented in detail in Annex 3.

### C. Project Beneficiaries

49. **The project is estimated to reach 15,000 direct beneficiaries supported through the project, mainly micro and small producers and processors/traders.** Beyond the targeted 10,000 farmers that will be supported to adopt improved agricultural technology, an additional 5,000 producers are expected to benefit from training and capacity building under Components 1 and 4. Some medium producers may also be selected as direct beneficiaries where their participation results are strategic for environmental gains. Women represent 51 percent of the total population of 5.9 million people living in the 15 targeted watersheds and will be encouraged to benefit from project activities. In Veracruz, indigenous populations live in various municipalities (Benito Juárez, Texcatepec, Tlachichilco, Ixhuatlán de Madero, Castillo de Teayo, Chicontepec, Álamo Temapache y Tepetzintla, based on information provided by the National Institute of Indigenous Peoples [INPI] and UNDP 2006) in the watershed of Tuxpan; Afro-Mexican populations live in two municipalities in the watershed of Tuxpan (Tepetzintla and Tamiahua) and in 10 municipalities in Jamapa (Córdoba, Yanga, Cuitlahuac, Carrillito Puerto, Soledad del Doblado, Camarón de Tejeda, Boca del Río, Alvarado, Tlalixcoyan, and Veracruz; CDI 2012),<sup>49</sup> and their participation will be promoted in project activities. Other stakeholders will include local communities, academia, interested PS representatives, local and national governments, as well as LCLOs (see footnote 43). Table 1 details the various types of beneficiaries per component.

50. **Gender Approach.** The project has developed a Gender Analysis and Gender Action Plan (GAP) to address gender inequalities and gaps in livestock and agroforestry value chains. Annex 2 provides a summary of the project's Gender Analysis and GAP. The GAP identified the gender gaps in the livestock, agroforestry, and agriculture sectors in Mexico, mainly related with ownership of land, productive assets, participation in decision making processes at the household

<sup>47</sup> The CONECTA cost of mitigation is US\$8.5/tCO<sub>2</sub>e, which is low when compared to the range of US\$30–40 of the shadow price of carbon in economic analysis used by the World Bank and in the Economic and Financial Analysis (EFA) of CONECTA.

<sup>48</sup> <http://cambioclimatico.gob.mx:8080/xmlui/handle/publicaciones/226>.

<sup>49</sup> There is no precise information about the number of indigenous and Afro-Mexican populations in these municipalities. The Census conducted in 2020 collected disaggregated data for indigenous and Afro-Mexican populations, the results of which remain to be published.



and community levels, and in terms of access to credits and technology. The GAP was informed by the Environmental and Socioeconomic Diagnostics on Regenerative Livestock that the FMCN contracted in the targeted states and watersheds that looked at the participation of women in livestock value chains and identified business opportunities with extensive participation of women (for example, dairy businesses as detailed above).

51. **Based on the gender analysis conducted, project activities are designed with a gender lens to promote strategies and approaches to strengthen the role and participation of women in livestock and agroforestry value chains.** This will include: (a) giving priority to awarding resources to proposals that aim to strengthen PGs where women are significantly represented among the beneficiary producers; (b) not requiring land titles as a prerequisite to benefit from the project, ensuring that a significant number of women in *ejidos* and communities are not excluded; (c) the two calls for proposals that will be disseminated through communication channels and spaces that are relevant to women, for example, WhatsApp, community radios, community savings banks (*cajas de ahorros*), places where women usually meet, among others, and as detailed in the project's Stakeholder Engagement Plan (SEP); (d) providing immediate information and handholding to women interested in knowing more about the project and participating in it; (e) including translators of indigenous languages in the dissemination meetings on the benefits and mechanisms of participating in the project in areas with the presence of indigenous peoples; (f) to the extent possible, identifying and encouraging mechanisms well established at the community level that can incentivize economic independence of women and improve well-being of their families; (g) encouraging payment parity both within the two Coordination Units and at the community/farm levels as per details included in the Labor Management Procedures (LMP); and (h) encouraging the use of inclusive language in all communications and including a gender lens in all project communications. The project staff in the FMCN also includes a gender focal point that will be tasked with mainstreaming gender across all project activities, while identifying potential areas for further analysis related to gender differences and gaps in livestock and agroforestry activities. Finally, the project will also provide PLATs and LCLOs with relevant information of existing service providers as part of referral paths in case of potential cases of sexual exploitation, abuse, or harassment at the community and farm levels, and as a result of backlash caused by project activities. Capacity building and training to be provided by the project will also be designed in a gender-sensitive manner by providing capacity building (for example, in the form of financial literacy and support for creation of business plans to access financial support) to existing and new producer associations, including those formed by women producers.

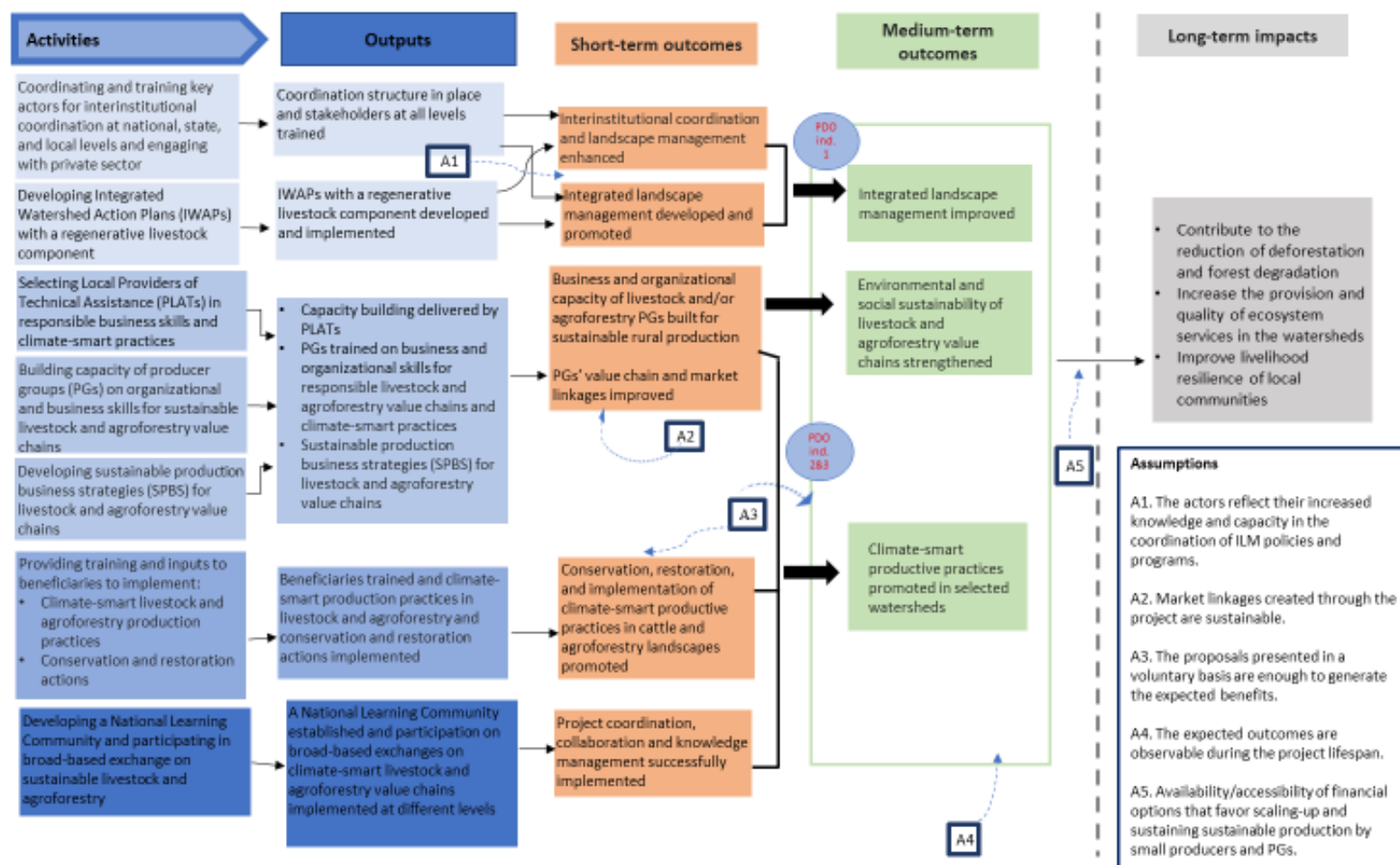
#### D. Results Chain

52. **Figure 5 presents the CONECTA theory of change** that depicts the results chain as described through the component description. The problem statement is “unsustainable livestock and cropping systems cause environmental degradation and natural resource depletion in watersheds in Mexico.”





**Figure 5: CONECTA theory of change**





## **E. Rationale for Bank Involvement and Role of Partners**

53. **The World Bank has wide knowledge and experience serving as the GEF IA for a range of environmental projects across the LAC region and globally.** Since GEF-5, these projects have started to integrate a stronger focus on transforming business-as-usual productive practices into more environment-friendly, resource-efficient, and climate-resilient practices. Under GEF-7, the World Bank serves as the lead IA for the FOLUR IP, which counts with eight IAs<sup>50</sup> and builds on the momentum and growing commitment by governments and the PS toward a transformational shift in food systems. FOLUR engages directly with 27 countries,<sup>51</sup> selected based on their strong alignment with the program vision and high potential to generate global environmental benefits through investments in promoting transformational change. Consequently, the World Bank can bring Mexico global knowledge and experience and transfer technical and strategic knowledge through the participation of specialists with ample experience in these areas and allow other countries to learn and benefit from the FOLUR work conducted in Mexico. Synergy is also expected from the World Bank-IFC FOLUR collaboration in Mexico, where IFC participates in the delivery of CONECTA's PS engagement strategy. In addition, IFC will work on identifying private companies operating in the mentioned sectors that can benefit from IFC Investments, Advisory Services, or Upstream Work.
54. **The project creates additionality** by: (a) enhancing the social and natural capital in the project areas; (b) fostering the transformation and value aggregation of economic activities through strengthening access to markets; and (c) linking local, regional, and federal actors to PGs to derive benefits from information and knowledge exchange on biodiversity, sustainable productive practices, and related legislation and programs to generate behavioral changes in implementation of value chains in productive economic activities. Thus, these incremental benefits strengthen both the environmental basis and the beneficiary PGs' capacities for productive improvements, including potential access to credit among beneficiaries in the beef, milk, and agroforestry-related value chains, such as coffee.

## **F. Lessons Learned and Reflected in the Project Design**

55. **The project will apply multiple lessons from projects in Mexico and elsewhere.** One significant lesson learned through past projects in Mexico is the importance of institutional capacity building and institutional memory for carrying forward subsequent projects and aligning to past ones. The agencies involved in CONECTA have accumulated experience, presenting an unprecedented opportunity for efficient and effective coordination. Institutional arrangements in place through the C6 Project (P131709) are continued and adapted for the project. Similarly, arrangements for successful implementation of the PES have been established in the Mexico Forests and Climate Change Project (P123760) with CONAFOR. These arrangements, described in the C6's legal and subsidiary agreements and OM, have served as the main model for agreements between the INECC and the FMCN. The FMCN's 25-year experience with subprojects comprises 2,163 subprojects, channeling US\$177.9 million to 62,515 beneficiaries.
56. **Working through Regional Funds in Mexico for efficient resource allocation and using them as a vehicle to provide direct, highly technical hands-on support to subprojects and their beneficiaries is critical,** and an important lesson for CONECTA. The FMCN has successfully designed and launched three Regional Funds, which serve as effective

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<sup>50</sup> Conservation International (CI), FAO, International Fund for Agricultural Development (IFAD), UNDP, UNEP, UN Industrial Development Organization (UNIDO), World Bank, and World Wildlife Fund (WWF-United States).

<sup>51</sup> Brazil, Burundi, China, Colombia, Cote d'Ivoire, Ethiopia, Ghana, Guatemala, Guinea, India, Indonesia, Kazakhstan, Kenya, Liberia, Malaysia, Mexico, Nicaragua, Nigeria, Papua New Guinea, Paraguay, Peru, Tanzania, Thailand, Uganda, Ukraine, Uzbekistan, and Vietnam.





financial mechanisms to address regional needs, strengthening local capacities and complementing local public investments. Key institutional arrangements and operating features, such as public-private partnerships, transparent management of funds, and guidelines accepted by all participating institutions (the FMCN OM was used as a reference for other environmental funds worldwide), support effective collaboration toward environmental, social, and economic objectives. Independent evaluations highlight the importance of strong policy and advisory bodies and subproject selection criteria, including linkage to local networks that can provide long-term support, engagement of the protected areas' management teams in projects in their influence zone, and regular collection and interpretation of ecological data as key success factors for this type of projects. Continuity of partnerships established under C6 into the current project is an important factor mitigating the risk of complex institutional arrangements.

57. **The project design incorporates lessons learned from previously referred Bank-supported projects**, including the MX-Strengthening Entrepreneurship in Productive Forest Landscape (P164661), and the closed MX-Sustainable Production Systems and Biodiversity Project (2012–2018): (a) the opportunities to implement a variety of interventions at the landscape level to better address drivers of deforestation and degradation; (b) the importance of community engagement and collective planning to create buy-in and enable long-term sustainability of landscape planning and management; (c) the need to secure creation of critically important enabling environment, including appropriate economic incentives, to support ILM approaches; where local communities see tangible economic benefits from biodiversity conservation, their conservation efforts are more sustainable; and (d) the need for strong policy coordination at the national, subnational, jurisdictional, and landscape levels for lasting landscape management. Governments can help promote successful landscape planning and programs by facilitating, funding, and rewarding interagency coordination and collaboration, sharing examples of documented synergies between sectors, and reinforcing the importance of cross-sectoral priorities. Interagency working groups can improve communication and collaboration.
58. **Additional lessons learned from global World Bank operations in productive landscape and livestock operations<sup>52</sup> were also incorporated into the project design:** upfront formalization of institutional partnerships with well-defined roles and responsibilities and common targets; active participation of the FMCN, INECC, and Regional Funds in the project design to secure their full ownership and shared understanding of all the project concepts and approach; and promoting a bottom-up approach with strong participation from regional and local partners and community engagement during implementation. The latter will cover a systematic approach encompassing water resources management, land management, climate change considerations, and taking into consideration livelihood concerns and economic aspects to promote conservation in a strategic manner, focus on a few key areas sufficient to generate benefits for the population and environment rather than an expansive intervention with multiple work fronts, facilitate local administrative capacity for watershed governance, and use of available World Bank Group instruments including from the IFC to strengthen PS engagement, among others.
59. **Lessons from IFC show that investing in the capacity development of actors in value chains, particularly small and medium producers, is strategic to support the establishment of market linkages.** Interventions that provide a comprehensive set of activities (technical, financial, and entrepreneurial capacity) tailored to the specific needs of the beneficiaries are necessary to promote participation in value chains.

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<sup>52</sup> Brazil Rio de Janeiro Sustainable Integrated Ecosystems Management in Production Landscapes of Northwester Fluminense Project (P075379); Brazil Sustainable Cerrado Initiative (P091827); Resilient Productive Landscapes in Haiti (P162908); Ethiopia: Integrated Silvopastoral Approaches to Ecosystem Management (P072979); and Ethiopia: Oromia National Regional State Forested Landscape Program (P156475).

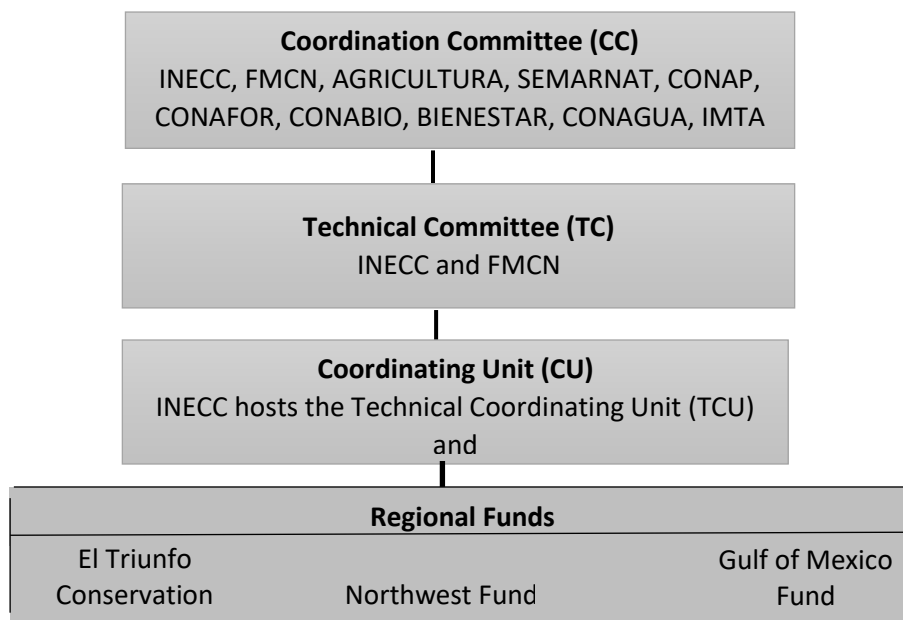


### III. IMPLEMENTATION ARRANGEMENTS

#### A. Institutional and Implementation Arrangements

60. **The FMCN will be the IA that administers the GEF resources and the INECC will be the lead GoM agency in charge of strategic and technical guidance.** The details on the division of tasks between the FMCN and the INECC will be defined in the OM. Additionally, to administer the GEF funds and implement the project components, the FMCN will delegate part of the execution tasks to three Regional Funds that have participated closely in the project design and will facilitate coordination and project implementation with local actors: (i) El Triunfo Conservation Fund (*Fondo de Conservación el Triunfo*, A.C. FONCET), Chiapas; (ii) the FONNOR, Jalisco; and (iii) the FGM, Veracruz. For Chihuahua, the FMCN will have among its staff a Coordinator responsible for overseeing the actions to be developed in the region. In the mid-term evaluation, the FMCN will assess the need for operational support from a potential organization in Chihuahua. The FMCN will continue training the Regional Funds in different aspects as needed, including supporting and monitoring the implementation of the relevant Environmental and Social Standards (ESSs).
61. **The governance structure of CONECTA includes a CC, a TC, and a TCU, and an Operational Coordinating Unit (OCU).** The CC will comprise the INECC, the FMCN that also serves as its Technical Secretariat, and the following key government agencies: SEMARNAT, AGRICULTURA, BIENESTAR, CONANP, CONAFOR, CONABIO, CONAGUA, IMTA, and FIRA. The INECC will coordinate the CC; be responsible for providing strategic and policy guidance; promote coordination, collaboration, and alignment of project-related work among the participating agencies to achieve the project objectives within the project areas across governance levels; and promote replication and scale-up of successful project activities across the country as relevant. The INECC has convened the CC agencies through a process of formal invitations and responses, and the first CC meeting took place at the end of September 2020. The CONECTA governance structure is presented in Figure 6. An OM will include a detailed description of the CONECTA institutional arrangements, bodies, and rules and procedures to govern the project.

**Figure 6. CONECTA governance structure**





62. **The TC will comprise the INECC and the FMCN and will be governed by its internal regulations to oversee the project's technical and operational aspects, including E&S risk management.** The TC will rely on the CC to coordinate actions in the watersheds to facilitate compliance with the ESMF and work with the participating agencies to assure that appropriate local and regional bodies are engaged or launched where needed. It will also assure that they have the necessary technical and logistical support to comply with their project-related responsibilities to ensure its adequate governance, regional coordination, compliance with ESSs, and local participation. The TC will be chaired by the INECC and it will select the personnel of the TCU and OCU, review the two calls for proposals, and select the service proposals and subprojects under Components 2 and 3, as well all contracted consultancy services. It will meet three times a year and receive reports from the TCU and OCU, as well as from the Regional Funds, which will participate in the TC meetings.
63. **The TCU and OCU will be established at the INECC and the FMCN and report to the CC and TC, respectively.** The TCU will be made up of five specialists selected by the INECC with the approval of the TC and hired by the FMCN: an Integrated Landscapes Director, Mitigation Coordinator, Institutional Coordinator, Markets and Economic Analyst, and Technical Analyst. They will report to the official designated by the INECC. The TCU will oversee the generation of technical information for the project components and be equipped with computers and specialized technology packages financed by the project. The FMCN will house the OCU comprising a Director, Project Officer, Coordinator for E&S Management, Technical Assistant, and Accounting Assistant hired by the FMCN. The OCU will also be supported by FMCN staff to carry out all project-related administrative tasks; monitoring and reporting; compliance with financial management and audit, procurement, fiscal, and legal aspects; as well as guidance, supervision, and reporting on the implementation of the ESSs. The OCU will train, support, and supervise the personnel of the Regional Funds to secure compliance with the project's E&S management instruments. Technical staff of the CC agencies are also expected to provide related support through designated focal points, for example, to contribute to environmental assessment and management of the subprojects.
64. **Three Regional Funds, supervised by the OCU, and the FMCN in Chihuahua will be responsible for the administration, implementation support, and supervision of the selected subprojects.** FONCET in Chiapas, FONNOR in Jalisco, and the FGM in Veracruz have been established by the FMCN to support coordination with local stakeholders<sup>53</sup>. They will be trained in the design, implementation support, and monitoring of the subprojects in compliance with the project's E&S management instruments. The Regional Funds have different levels of experience, and it will be a key responsibility of the FMCN to ensure that each of them complies with the applicable project requirements in each situation. The Regional Funds will be responsible for: (a) socializing the IWAPs and aligning public and private incentives for their implementation under Component 1; (b) the main outreach on the call for proposals, the selection process, as well as the follow-up, administration, and supervision of the selected proposals under Component 2 and subprojects under Component 3; and (c) promoting social participation, coordination of stakeholders, and exchange of learning in each watershed under Component 4. Depending on the watersheds where PLATs and subprojects are selected, on average each Regional Fund will have a Coordinator, a Technician, and an Accountant hired for CONECTA-related tasks. The main functions of the Regional Funds are to: (a) ensure that the activities and the use of resources meet the objectives in accordance with the applicable project documents; (b) report to the CC and TC on time; (c) ensure adequate compliance with the ESMF, technically supporting the

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<sup>53</sup> During project implementation, the World Bank, INECC and FMCN will evaluate if a not-for-profit organization with a strong presence in the targeted watersheds and the necessary implementation capacity may assume some of the FMCN responsibilities in Chihuahua for example in supporting and supervising the implementation of the selected proposals under Component 2 and subprojects under Component 3 and exchange of learning under Component 4.



stakeholders involved; (d) with support of the TC, identify opportunities for accessing subsidies, investments, or activities present in the watersheds; (e) promote interinstitutional coordination and agreements with institutions capable of supporting CONECTA's objectives at the state and local levels; (f) support and strengthen learning communities; and (g) participate in the leveraging of additional funds for CONECTA. Depending on the number of proposals and subprojects selected in each state, the FMCN will determine the amount of resources to be channeled to each Regional Fund and sign respective contracts with them.

65. In an advisory capacity, the project will coordinate regional forums that include representatives of stakeholders and key local and regional entities to help align project-related activities among local, state, and federal agencies at the watershed level. An NLC will be created for regenerative ranching and sustainable agroforestry, and local networks or forums currently in place or new ones to be established through the project will provide further important channels to share information.

## **B. Results Monitoring and Evaluation Arrangements**

66. During implementation, the FMCN with support from the Regional Funds will be responsible for the overall project monitoring in conjunction with the INECC based on an M&E plan. Progress will be measured against the RF, the PDO, PDO indicators, and intermediate indicators (see Section VII). CONECTA uses relevant GEF/FOLUR indicators to contribute to the global FOLUR IP results in comparable terms across the participating countries. The RF also includes gender and citizen engagement indicators. Technical reports will be prepared by the Regional Funds with oversight from the TCU and OCU; the reports will be presented to the TC and the World Bank every six months. The FMCN will conduct a midterm and a final evaluation, including a quantitative assessment of outcomes and analysis of achievements and difficulties encountered, compliance with ESSs, and lessons learned. The final review will focus on the achievement of indicators, sustainability of results, and final lessons learned and recommendations.
67. The FMCN has developed strong M&E systems and capacity; the results information on Components 1, 2, and 3 will rely on the FMCN SISEP developed for the GEF-funded Consolidation of the Protected Area System (SINAP II) Project and improved under the GEF-funded C6 Project, both implemented by the FMCN through the World Bank. The community monitoring of water quality and biodiversity under Component 3 will be designed by the TCU and OCU, selecting the monitoring points based on scientific models and cost-effectiveness, and implemented by selected Component 3 beneficiaries. The Regional Funds will help to collect and analyze said information.
68. For M&E, the World Bank is supporting the FMCN and INECC to be trained in the use of novel platforms that enhance project M&E in multiple ways, including the Geo-Enabling Initiative for Monitoring and Supervision (GEMS) and the Biodiversity Integrated Assessment and Computation Tool (B-INTACT) developed by the FAO ex ante team. B-INTACT is planned to be piloted by CONECTA, expecting that the project can also support its further improvement through provision of user feedback. As further detailed in Annex 1, this pilot is expected to add value to biodiversity monitoring conducted under the National Monitoring System for Biodiversity (SNMB) of CONABIO through BIOCUMUNI, a protocol for community monitoring of biodiversity developed in collaboration by CONAFOR, FMCN and the United States Forest Service (USFS).



## C. Sustainability

69. The project is central to the current government's efforts to link growth with environmental objectives as per the National Development Plan (NDP) 2019–2024. The project's approach and outcomes contribute to Mexico's rural growth, social and environmental agendas, and international commitments on climate change, biodiversity, and poverty reduction. The project's design incorporates several elements of technical and financial sustainability:
- a. **Building the capacity of relevant stakeholders**, particularly local ones, leads to increased and more sustainable knowledge and capacity to promote aggregated landscape-level outcomes. The project will generate and systematize evidence, for example, on the cost-benefit implications of the promoted climate-smart activities and inform local, state, and national policies to support scale-up of sustainable livestock and agroforestry production practices, strengthen PGs, and help producers develop BSSPs to improve their access to markets and credits.
  - b. **Investments on improved/sustainable productive practices** for local beef, dairy, and agroforestry PGs will be underpinned by the actions defined in the IWAPs and BSSPs. The demand-driven nature of the IWAPs and BSSPs at the local level will help ensure the investments are sustained.
  - c. **Enhancing coordination between landscape interventions** through strong implementation arrangements that bring together the most relevant national agencies and ensure efficient state- and local-level action that provides inputs to the national-level efforts to align programs and incentives serves as the basis for long-term sustainability by creating lasting partnerships between federal, state, and local institutions.
  - d. **Strong M&E systems** will help verify results achieved related to biodiversity, water quality, and GHG emissions. Strong monitoring and solid results can open opportunities to scale up nationally, support reporting of global commitments and potentially access green finance and/or carbon markets, and so on.

## D. Global Environmental Benefits and GEF Incremental Analysis

70. Land use changes for productive activities and construction together with closely related climate change are among the main threats to biodiversity, the conservation of which is critical to support most of the ecosystem functions upon which humans rely. CONECTA aims to attend to both threats and generate environmental benefits from the local to the global level. It will focus strategically on addressing agricultural expansion, one of the root causes of land use change, by helping the beneficiary PGs and other stakeholders gain understanding and know-how of sustainable practices whose dissemination will decrease pressure on land use changes. PGs' increased environmental knowledge and awareness of their dependency on functioning ecosystem services together with enhanced capacity to take related positive action will also help PGs adapt to climate change. CONECTA will serve as a pilot to identify and implement solutions and systematize the applied practices and lessons learned in diverse priority ecosystems and climatic conditions in Mexico. Potential for scaling up project results is embedded in the project design that focuses on demonstrating and disseminating experiences in diverse ecosystems and creating the conditions and enabling environment for replication and leverage at scale by different actors at the landscape level. Through Components 2 and 3, the project will contribute pilot experiences in testing improved productive practices in different agroecosystems. Through Components 1 and 4 and engagement through the FOLUR GP, the ILM model will be shared through a strong knowledge management approach from the local to the global level with the aim of scaling up the experience and approach in other watersheds.



71. The project is designed to protect watershed health and sustainability of ecosystem services while improving productive economic activities such as cattle ranching and farming based on silvopastoral, agropastoral, and agroforestry systems, with a regenerative approach. Among these activities, existing literature for Mexico shows that SPS generate higher income for producers than conventional systems, as an integrated land use practice that combines trees, forage, and livestock improves sustainability and quality of pasture (González 2013; Ávila and Revollo 2014). This activity allows the intensification of cattle production based on an integrated approach to sustainable land use (Nair et al. 2009). Therefore, SPS will be promoted to decrease pressure to continue deforestation and for beneficial ecological interactions that manifest themselves in increased yield per unit area, improved resource use efficiency, and enhanced provision of environmental services both on small and large scales (Chará et al. 2019; Jose and Dollinger 2019).
72. In the absence of the project, beneficiaries would likely remain without access to TA, capacity building, and financing for initial inputs to transition to practices that support ILM in the targeted watersheds where proposals for services under Component 2 will be approved. The watersheds would continue on a decreasing track of ecosystem health and sustainability of the ranching and farming activities that would lead to further pressure on the agricultural frontier; conventional extensive cattle grazing would continue with low tree cover on pasture lands and thus limited capacity to absorb carbon; a limited number of sustainable forest operations would be incorporated into the economic activities of local communities; and, therefore, land use conversion would remain subject to ranching and farming activities with intensive use of water and even illegal activities.
73. The project creates additionality as described in paragraph 53 above. The GEF's incremental support will assist the GoM in strengthening the watersheds' health with sustainable practices and their long-term economic and financial sustainability. The GoM budget is limited but the project will support alternative instruments to overcome any further limitation, involving new cross-sectoral actors to address policies related to ILM. Without the project, the budget forecast to be allocated for watershed conservation by the GoM (the baseline scenario) would be very limited. The proposed GEF investment will leverage additional resources from other partners over the same period. This financing will help develop the necessary institutional capabilities, set up policy frameworks for the sustainable watershed ecosystems, and develop mechanisms for sustainable productive systems.

## **E. Legal Operational Policies**

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



## F. Environmental and Social

74. **CONECTA is likely to have multiple positive E&S impacts.** The project will promote the adoption of sustainable and resilient land use and rural production practices aiming at: (a) organization of productive activities under a landscape vision; (b) improvement of land use planning and other measures to prevent expansion of the cattle raising frontier and forest and soil degradation, including control of erosive processes; (c) conservation of ecosystems and biodiversity of both local and national importance to strengthen provision of ecosystem services; (d) reduction of use of chemical herbicides and pesticides; and (e) contribution to reducing GHG emissions and increasing resilience to climate risks. On the social side, CONECTA will: (a) improve the management and organizational skills of PGs to develop BSSPs; (b) implement and promote sustainable and regenerative practices in livestock and agroforestry value chains; (c) improve livelihoods of members of PGs by adopting sustainable and regenerative practices as well as improving PGs' management and business skills; and (d) improve social inclusion of women (mostly active in dairy value chains and to some extent in other activities as detailed in the project GAP, see Annex 2), indigenous peoples, and Afro-Mexicans as participants of the selected PGs.
75. **Both E&S risks of the project are considered Moderate under the World Bank Environmental and Social Framework (ESF).** All the ESSs are relevant for the project, except ESS9 on Financial Intermediaries. Beyond the number of expected positive impacts, E&S risks have been identified and avoidance of negative impacts is being carefully considered. In case of any management failure, negative impacts will in every case be site-specific, short-term, and reversible. Potential risks include:
- (a) labor and working conditions that are not aligned with the principles of ESS2, particularly at the level of PGs; the project will conduct close monitoring and pay attention to cases of generational ranching where family members, including teenagers, help their parents in cattle raising as a way to learn about the practices and management of livestock businesses to be ready to take them over when needed; in any case, project activities won't allow or finance child labor and will follow the minimum working age stated in the Mexican Labor Law (15 years old, under certain conditions as per the Mexican federal laws);
  - (b) inefficient use of living natural resources and all materials, and non-consideration of good practices (sustainable livestock, agroforestry systems, riparian protection, and so on) end up encouraging further expansion of the agricultural frontier, GHG emissions, and/or overexploitation of water resources in case producers do not or cannot assume ownership of the pursued considerations of environmental protection;
  - (c) negative impacts on community health and safety particularly related to fires and inadequate application of agrochemicals (addressed principally under ESS4);
  - (d) involuntary restriction of access to Natural Protected Areas (ESS5);
  - (e) exclusion of vulnerable populations as direct beneficiaries of the project, resulting from potential selection of LCLOs and PLATs that might not present proposals under Component 2 and/or 3 for PGs that include/benefit directly vulnerable populations;
  - (f) barriers to develop an inclusive and culturally adequate stakeholder engagement strategy (ESS7);
  - (g) conflicts with producer associations and small and medium producers who might not agree with the project-promoted practices;
  - (h) difficulties in getting cattle raisers and agroforestry producers to associate and work in groups;
  - (i) lack of credibility in the process of selecting LCLOs and PLATs if the selection criteria is not broadly communicated at the watershed level;
  - (j) inappropriate management of cultural heritage, particularly intangible heritage (ESS8); and

(k) since March 2020, exposure to COVID-19 is considered among the key risks that require specific management in compliance with evolving national regulations and international good practices, particularly those of the World Health Organization (WHO).

76. **The World Bank deems the FMCN to have a solid capacity in terms of the E&S management needs of CONECTA.** As a result of earlier World Bank-financed projects and a recent accreditation process the FMCN has completed with the Green Climate Fund (GCF) to become the first direct access entity for Mexico, the FMCN has an overarching OM for the institution that includes E&S safeguards and gender considerations. To secure compliance with the ESF, the FMCN has completed the preparation of an ESMF and complementary social management instruments described below in close collaboration with the World Bank team.
77. **CONECTA will implement the ESMF and other instruments to identify and mitigate potential risks and impacts and maximize E&S value added.** The ESMF provides detailed information on how the ESSs are relevant for the components and activities and the guidelines developed for securing ESS compliance at the subproject level. The ESMF builds upon environmental and socioeconomic diagnostics conducted with a focus on regenerative ranching in the project states and the targeted watersheds. The ESMF includes LMP and related Grievance Redress Mechanism (GRM), and guidance for E&S management for the subprojects, covering for example, efficient water use, hazardous and non-hazardous waste management, integrated pest and vector management, monitoring of biodiversity, animal welfare, and contingency or emergency response at community level particularly regarding fire prevention and fighting. The FMCN has also prepared a draft Indigenous Peoples' Planning Framework (IPPF); Process Framework (PF); and SEP. The draft ESMF and IPPF were disclosed and consulted in March and April 2020, respectively, and the final documents were disclosed in-country and on the World Bank external website before project Appraisal. The Environmental and Social Commitment Plan (ESCP) was also disclosed in-country and by the World Bank.<sup>54</sup> The ESMF contains guidance to include the content of Environmental and Social Management Plans (ESMPs) in the proposals of subprojects to be financed under Component 3. When applicable, the content of all other plans such as Indigenous Peoples Plans (ESS7) and Action Plans (ESS5) will also be included in the proposals of TA and subprojects funded under Components 2 and 3, respectively.
78. **Applying an exclusion list of activities for the subprojects based on the relevant IWAP is integrated in the ESCP as a key task during project implementation.** The subproject cycle will incorporate E&S screening and an exclusion list that will condition subprojects' approval and financing. The necessary budget resources are estimated in the ESMF to secure adequate support and monitoring activities and processes for its implementation.
79. **Gender, gender-based violence (GBV)/sexual exploitation and abuse (SEA) and sexual harassment (SH).** A screening for the level of risks related to GBV and SEA/SH in CONECTA was conducted by the World Bank, determining that such risks are low. Beyond the referred risks, the environmental and socioeconomic diagnostics that have informed the preparation of the ESMF under ESS1 and the GAP paid attention to the role played by women along the livestock-related value chains to determine the necessary measures to be included in the project design to improve such roles, usually invisible and non-remunerated. As such, the

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<sup>54</sup> The ESMF, IPPF, PF, SEP, GRM description, and ESCP were disclosed by the FMCN on August 14, 2020 at <https://fmcn.org/es/proyectos/conecta>. The World Bank disclosed the instruments on November 3, 2020 at <https://documents.worldbank.org/en/publication/documents-reports/documentlist?qterm=P172079,P172079>.



project will encourage active participation of women as part of the PGs as beneficiaries of TA under Component 2 and initial investments under Component 3 to improve their capacities, including the promotion of their access to credit in the future. CONECTA will also require the establishment of codes of conduct in the various agreements with the PLATs and LCLOs that will lead the work conducted with PGs and will provide information on available services as part of a referral pathway in case GBV or SEA cases occur during project implementation.

80. **Indigenous peoples and Afro-Mexicans.** Indigenous peoples and Afro-Mexicans are present in various municipalities in Veracruz, in the watershed of Tuxpan in case of indigenous peoples, and Tuxpan and Jamapa in case of Afro-Mexicans. The project will give a special effort to encourage both groups to participate in either or both calls for proposals under Components 2 and 3 to access project benefits through capacity building and initial inputs for implementing sustainable production practices. However, potential risks are associated with the project's inability to break prevailing social dynamics that exacerbate discriminatory practices against indigenous peoples and Afro-Mexicans. To address risks related with indigenous peoples, the IPPF introduces guidelines to support communication with and outreach to these populations, including use of indigenous languages and culturally appropriate communication channels, provision of project services in culturally adapted manners, including the GRM, and leveraging the experience and presence of community-level organizations to support project implementation as PLATs and LCLOs.
81. **The COVID-19 pandemic and subsequent health and economic crisis emerged and expanded globally and in Mexico during project preparation.** The FMCN has introduced measures to address the COVID-19 challenges while continuing the project preparation in compliance with national requirements and international good practice recommendations in line with the objectives of the relevant ESSs. For instance, the IPPF consultations were conducted virtually with relevant stakeholders in the Tuxpan watershed (Veracruz) with successful results. The FMCN also prepared a COVID-19 mitigation strategy for the project that consists of cross-cutting measures embedded in CONECTA's E&S management instruments to address immediate challenges and impacts and response strategies for longer-term actions. Among the latter, as the project starts implementation, the World Bank team will support the FMCN and INECC in incorporating the One Health approach in project activities, relevant to the consideration of multiple interlinkages between human, animal, and ecosystem/environmental health, to take advantage of CONECTA to raise awareness and contribute to building of related knowledge to effectively address threats and reduce risks of zoonotic diseases at the animal-human-ecosystem interfaces within the project context.

#### IV. KEY RISKS

82. **Overall, the project is considered to imply Moderate residual risks for achieving the expected outcomes.** Only "other" risk related with COVID-19 is considered Substantial at the portfolio level in Mexico as described below, while CONECTA counts with a solid COVID-19 mitigation strategy as part of the OM. Risks related to the technical design of the project and stakeholders are the key Moderate risks associated with the ambition of reaching landscape-level outcomes.
83. **Other COVID-19 related risks: Other risks stemming from the health side of the COVID-19 pandemic are also Substantial.** There is a high degree of uncertainty as to the duration of the pandemic in different countries, including in Mexico, and to its economic, social, and health ramifications in each economy. The



gradual availability of vaccines, domestic constraints, and early opening of the social and economic activity could translate into a longer period of social distancing policies being needed, with stubbornly high infection rates, further social and economic effects, and increases in out-of-pocket health expenditures for affected households. One risk mitigating factor is that Mexico was able to rapidly scale up its hospital capacity, intensive care (beds with ventilators), and other required treatment equipment. This has kept hospital occupation at manageable rates.



## **ANNEX 1: Selection and Key Characteristics of the Project Sites**

1. The criteria and inputs for selecting the intervention territories were agreed between the INECC and the FMCN through a series of workshops based on data provided by consultants conducting an Environmental and Socioeconomic Diagnostic for Promotion of Regenerative Ranching in the four targeted states.

### **Methodology**

2. In each of the targeted states, a spatial analysis was conducted. The information related to the basins of each state was overlapped with the map of priority regions for biodiversity conservation to identify the watersheds that hold the highest biodiversity according to the national maps developed by the CONABIO. Next, the municipalities with the highest livestock production were overlapped with the watersheds of highest importance for biodiversity conservation. From the basins/sub-basins resulting from this exercise, the INECC and the FMCN selected those with highest vulnerability to climate change and with highest potential for GHG sequestration due to their high degradation. To target project activities strategically, the INECC and the FMCN developed criteria that will be used during project preparation to identify potential areas of intervention within each basin/sub-basin.

### **Basins/Sub-basins within the Targeted States of Chiapas, Chihuahua, Jalisco, and Veracruz**

#### Selection criteria

- (a) Delimitation of basin/sub-basin
- (b) High presence of biodiversity
- (c) High level of cattle production
- (d) Vulnerability to climate change and with high potential for GHG sequestration
- (e) High risk of land degradation

#### Inputs (data source)

- (a) Delimitation by basins of CONAGUA, INEGI, and INECC
- (b) Priority Regions for the Conservation of Biodiversity by CONABIO
- (c) Data from AGRICULTURA
- (d) National Atlas of Vulnerability to Climate Change by the INECC
- (e) Soil Erosion and Vegetation Series by the INEGI

### **Potential Areas of Intervention within the Selected Basins/Sub-basins**

#### Selection criteria

- (a) Priority municipalities for cattle raising
- (b) Number of producers
- (c) Level of organization of producers: high, medium, and low
- (d) Number and area of LPUs
- (e) Type of vegetation and land use per LPU
- (f) Type of management (extensive, intensive livestock, among others)
- (g) Degraded area (soils and vegetation cover) according to the Soil Erosion and Vegetation Series of the INEGI
- (h) Presence of previous regenerative/sustainable/alternative/climate-smart livestock interventions



(i) Productive Value Chains

**Table A1.1 Key project-related characteristics of the 15 targeted watersheds**

State & watershed*	Area (ha) and % of the total per state	Commodity	Type of production	Key environmental degradation pressure	Expected results based on data provided for the GHG analysis
Chiapas					
Coapa	31,091.81	Upper watershed: coffee. Mid watershed: beef. Lower watershed: shrimp complemented with beef-milk; also maize, cacao, and palm oil.	Extensive cattle ranching dual purpose milk-beef. Small producers with less than 20 heads of cattle. Mix coffee production systems with maize and other crops.	Deforestation due to expansion of livestock production, particularly in upper watershed, displacing shaded grown coffee. Forest degradation and overgrazing.	Restoration: 1,500 ha
Novillero	43,316				Indirect prevention of loss of grass and shrublands and forest areas (10 percent of the vegetation cover in the watersheds considered in the calculation): 5,870 ha
Pijijiapan	25,817				Agroforestry: 1,000 ha Silvopastoril: 300 ha
Total	100,224.81 (1 percent)				8,670 ha
Chihuahua					
Santa María	2,137,915.83	Export live cattle to the United States.	Extensive cattle ranching and small subsistence production units in private and/or communal lands.	Expansion of commercial irrigated agriculture and water scarcity that leads to overexploitation of aquifers, grassland degradation due to overgrazing, and grassland fires.	Restoration: 1,500 ha
Del Carmen	1,600,780.88				Indirect prevention of loss of grass and shrublands and forest areas (10 percent of the vegetation cover in the watersheds considered in the calculation): 219,681 ha
Casas Grandes	2,496,129.12				Sustainable grasslands: 400 ha
Carrizos y Otros	2,219,344.89				
Total	8,454,170.72 84 percent				221,581 ha
Jalisco					
Pitillal	43,519.40	Dairy products and beef. Other production includes maize, beans, sugarcane, sorghum, tobacco, rice, tomatoes, and other horticulture, as well as fruits.	Rotational grazing, where livestock grazes in pastures during most of the year and on fallow agricultural land after harvest during the dry season. Family-type	Forest degradation from livestock production, overgrazing, and forest fires.	Restoration: 1,500 ha
Cuale	26,870.76				Indirect prevention of loss of grass and shrublands and forest areas (10 percent of the vegetation cover in the watersheds considered in the calculation): 32,834 ha
Las Juntas	33,011.05				Agroforestry: 1,000 ha
El Tuito	44,814.57				Silvopastoril: 400 ha
Ameca-Mascota	275,228.71				



<b>Total</b>	422,444.49 (4 percent)		businesses with typical dairy production of 6.5 l/cow.		35,734 ha
<b>Veracruz</b>					
<i>Jamapa</i>	384,984	Coffee, beef, and dairy, as well as maize. Some live cattle export to the United States.	Extensive cattle ranching for dual purpose milk-beef production and small family production units.	Expansion of agriculture and livestock.	Restoration: 1,500 ha Indirect prevention of loss of grass and shrublands and forest areas (10 percent of the vegetation cover in the watersheds considered in the calculation): 51,465 ha Agroforestry: 2,500 ha Silvopastoral: 400 ha
<i>La Antigua</i>	175,010				
<i>Tuxpan</i>	510,640				
<b>Total</b>	1,070,634 (11 percent)				55,868 ha
<b>Total</b>	<b>10,047,474.02</b>				<b>321,450**</b>

Note: \* The watersheds that were included in the calculations for the GHG analysis are marked with Italic.

\*\* The total expected hectares in this table differ from the target of 450,000 ha of the first PDO indicator 'Area of landscape under improved climate-smart practices' as the GHG analysis only considers area with vegetation cover, while the PDO indicator can also consider areas of intervention with no vegetation but still important for other ecosystem services.

## Selected Basins per State

### Jalisco

- Jalisco has an extension equivalent to 4 percent (8 million ha) of the total surface area of Mexico. It is an important state in terms of biodiversity because it contains close to 7,000 species of vascular plants, approximately 25 percent of the Mexican flora.
- Jalisco is second in beef production and first in milk production in Mexico. In 2018, Jalisco registered 76,082 LPUs (PNG 2018), 3,206,495 heads of cattle (SIAP 2018), and 104,718 farmers, of which 16,000 are milk producers and 88,718 produce beef (UGRJ 2019).
- In Jalisco, the average milk production in family-type businesses is 6.5 l/cow/day. Forty-six percent of the producers are profitable, while 40 percent are unprofitable (Cervantes et al. 2016). The primary processing and industrial milk plants are in Guadalajara and belong to the companies Purity, Parmalat, Nestlé, 19 Brothers, Lala, and Alpura.
- Livestock grazes in pastures in the upper and middle parts of the basins during most of the year and on fallow agricultural land after harvest during the dry season. The expansion of livestock in the municipalities of the region has been the main factor of land use change and degradation of forests and deciduous oak forest in the last 40 years. Livestock is also a form of private appropriation of communal forest lands, given the prevailing concentration of the cattle herd in a few hands.



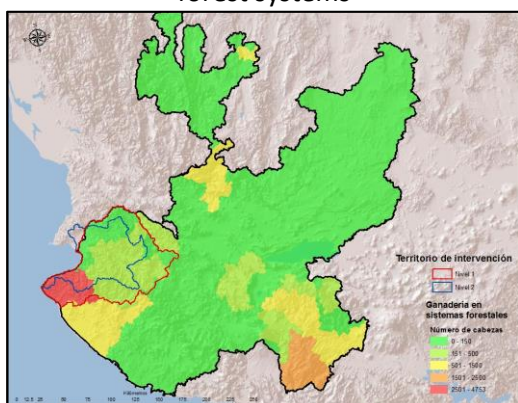
7. The selected basins of intervention are Ameca-Mascota, Pitillal, Cuale, Las Juntas, and El Tuito, located on the northern coast of Jalisco (Figure 1.1), selected based on the importance of biodiversity, livestock, and climate change considerations (Figures 1.2 and 1.3). These basins comprise 422,444.49 ha and 5,277 cattle farmers, 64.7 percent of whom are small producers (<20 head of cattle), 33.5 percent are medium-scale farmers (20–100 heads of cattle), and 1.8 percent are large producers (>100 heads of cattle) (SADER, previous to AGRICULTURA 2018).



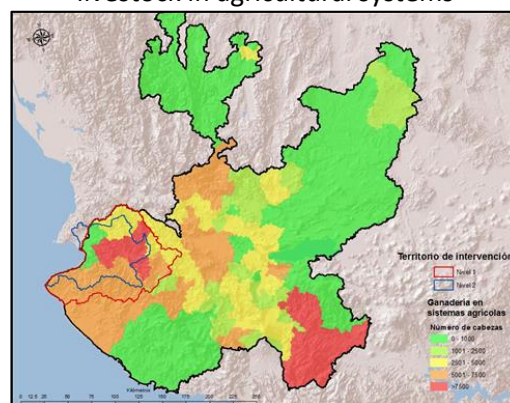
**Figure 1.1. Selected basins in Jalisco based on the importance of livestock, biodiversity, climate change considerations, and existing productive alliances in livestock**



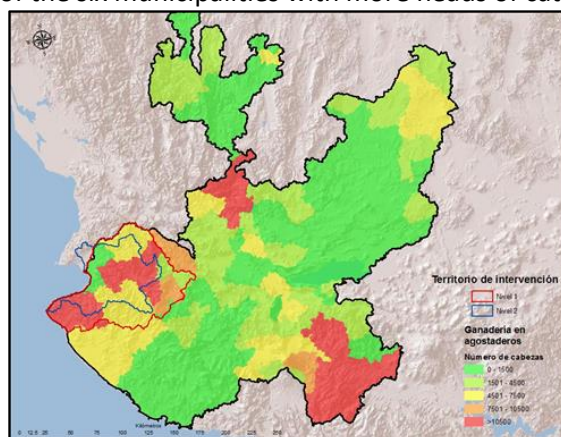
a) Municipalities with more livestock in forest systems



b) One of the four municipalities with more livestock in agricultural systems



c) Two of the six municipalities with more heads of cattle in pastures



**Figure 1.2: Site selection based on the importance of livestock production**

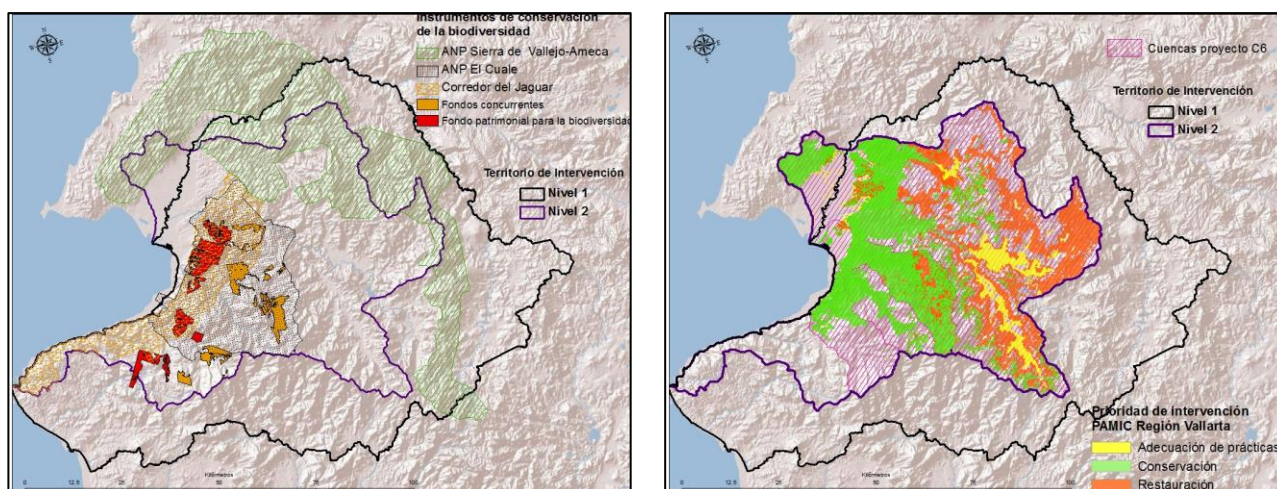
**Instruments that allow conservation of biodiversity and environmental services:**

- Natural protected areas
- Jaguar Corridor
- Payment program for concurrent environmental and biodiversity services

**Tools that incorporate climate change:**

- C6 Project basins
- Priority sites for implementation of actions of the IWAPs





### Background and alliances of collaboration with livestock:

- Biocultural Landscape
- Biodiversity Endowment Fund
- IWAP of the Vallarta region Intermunicipal Environment Board

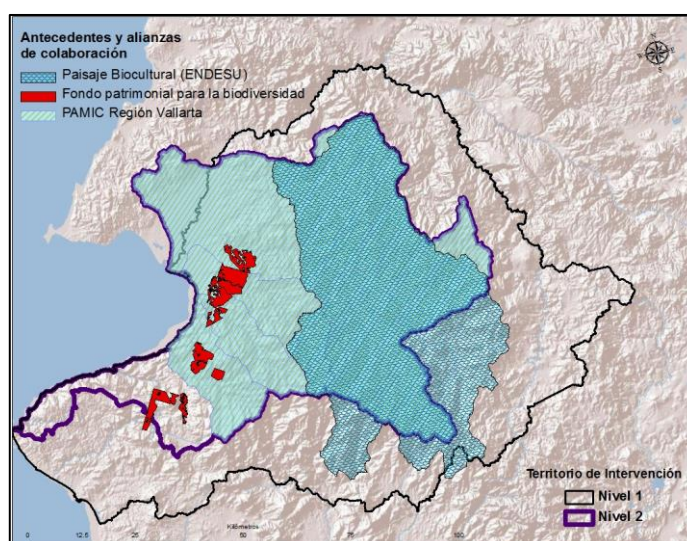


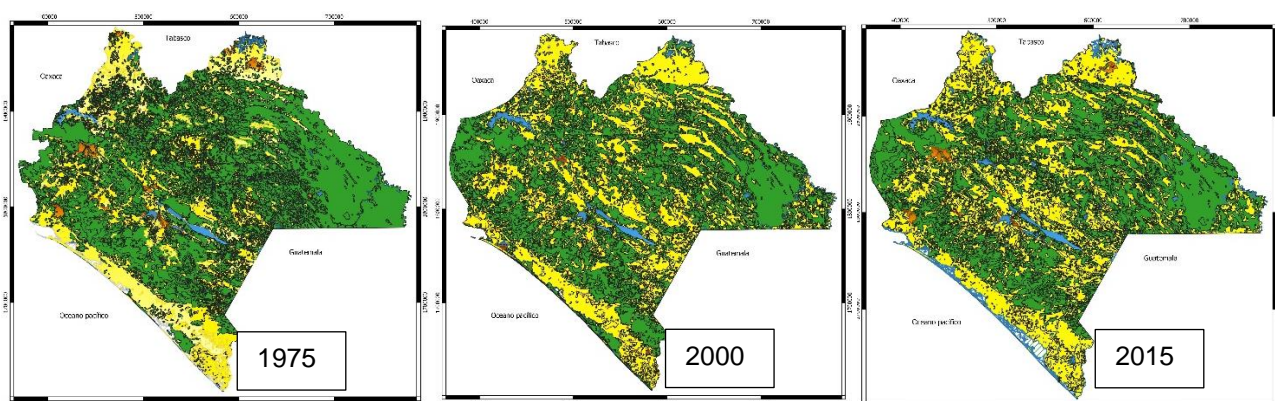
Figure 1.3: Site selection based on biodiversity, climate change considerations, background and collaborative partnerships with livestock

### Chiapas

- Chiapas has an extension equivalent to 3.8 percent (7.3 million ha) of the total surface area of Mexico. Its mountainous zones create different altitudinal gradients, microclimates, ecotones, and transitional spaces favorable for the development of exceptional biodiversity with 11,223 species, including endemic species and a unique ensemble of cloud and temperate forests, natural and cultivated pastures, as well as humid and sub-humid rain forests (CONABIO 2013).

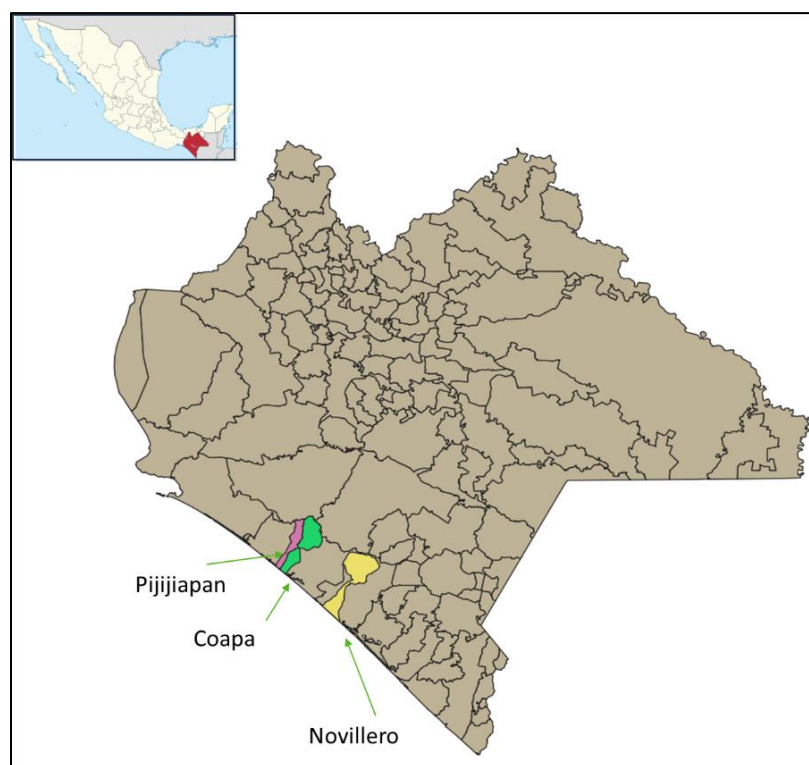


9. Chiapas is third in terms of beef production and occupies the ninth position in milk production in Mexico. About 1,589,849 heads of cattle (PNG 2019) occupy 33 percent of the state territory (2.9 million ha) within 75,096 LPUs (INEGI 2018). Most of these livestock activities are described as subsistence economy, dominated by self-consumption, with the active participation of family labor.
10. The dominant system of livestock production is extensive rearing of calves with permanent milking and sale of weaning calves (dual-purpose). This production system is characterized by its simplicity, stability, flexibility, and daily liquidity, which allows cattle farmers to face adverse economic, social, and climatic conditions. The conventional model of agricultural production has caused loss of vegetation cover, mainly in the coastal and central watersheds of the state (Borja and Moreno 2009; Padilla, 2009) (Figure 1.4).

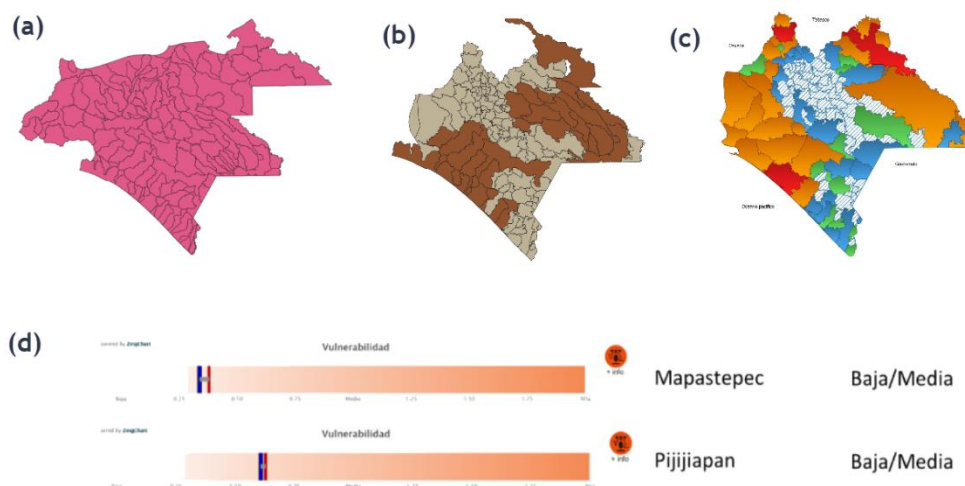


**Figure 1.4. Changes in the vegetation cover (green) to establish agricultural lands and cattle pastures (yellow) from 1975 to 2015**

11. Cattle management is semi-stabled, with cattle grazing freely in cultivated pastures with *Cynodon spp*, *Brachiaria spp*, *Digitaria spp*, *Panicum spp*, *Pennisetum spp*, and other grass species, as well as occasionally feeding on fodder trees in the pastures. Cattle is only confined in enclosed spaces outdoors during milking. However, most of the livestock areas are associated with low quantity and poor quality of the available forage (Martínez 2012). The cattle need to receive additional nutritional supplement especially in the dry season.
12. The basins selected for intervention are Pijijiapan, Coapa, and El Novillero (Figure 1.5), located on the southern coast of Chiapas, selected based on the importance of biodiversity, livestock, and climate change considerations (Figure 1.6).



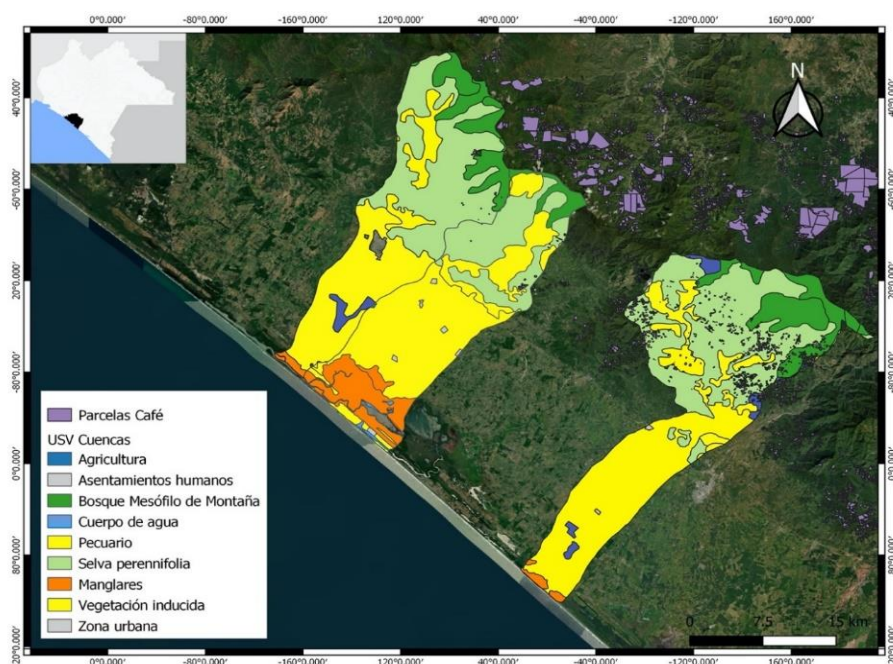
**Figure 1.5. Selected basins in Chiapas**



**Figure 1.6. Site selection based on the importance of (a) basins delimitation, (b) biodiversity conservation, (c) livestock production, and (d) vulnerability to climate change at the municipal level**

13. These basins comprise 100,224.81 ha and embrace different ecosystems (Figure 1.7) from grasslands to deciduous forests, mangroves, cloud forests, high and medium tropical forests, and secondary vegetation (Figure 1.7).





**Figure 1.7. Land use and vegetation in the Pijijiapan, Novillero, and Coapa watersheds**

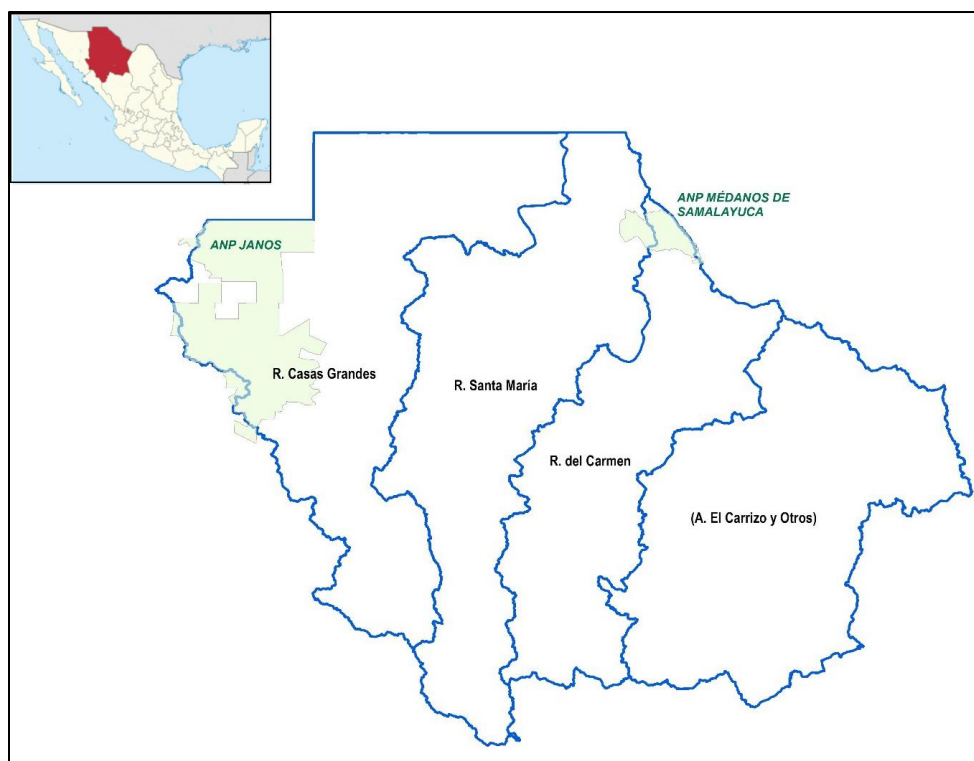
14. About 1,669 cattle farmers live in these watersheds, 80.8 percent of whom are small producers (<20 head of cattle), 16.8 percent are medium-scale farmers (20–100 heads of cattle), and 2.4 percent are large producers (>100 heads of cattle) (SADER 2018). Most of them have low educational levels, consisting of truncated elementary school or high school. Some have a university degree, but few are specialized in livestock production.
15. In these watersheds, extensive systems of grazing for dual-purpose production predominate, covering milk commercialization and fattening of growing bulls for sale with intermediaries. The average area of livestock farms is 22.5 ha with a herd of 50.5 animals. One of the main problems of livestock production in this region is the low prices in the purchase of products of the LPUs and theft of growing cattle, which is why the producers tend to reconvert pastures to oil palm plantations or other land uses.
16. In these basins, there are also different instruments of public policy and local efforts that support conservation of biodiversity and environmental services, that is, protected areas such as the El Triunfo Biosphere Reserve and La Encrucijada Biosphere Reserve. Moreover, a Management Plan is implemented in the basin of Coapa. The plan is prepared by the Coastal Basins Interagency of Chiapas and initiatives such as the Environmentally Friendly Productive Systems Project of the Mesoamerican Biological Corridor of CONABIO and the project Innovative Mechanisms for a Cooperative Program on Adaptation to Climate Change in the Coast of Chiapas, Mexico by the Nature Conservancy.

### **Chihuahua**

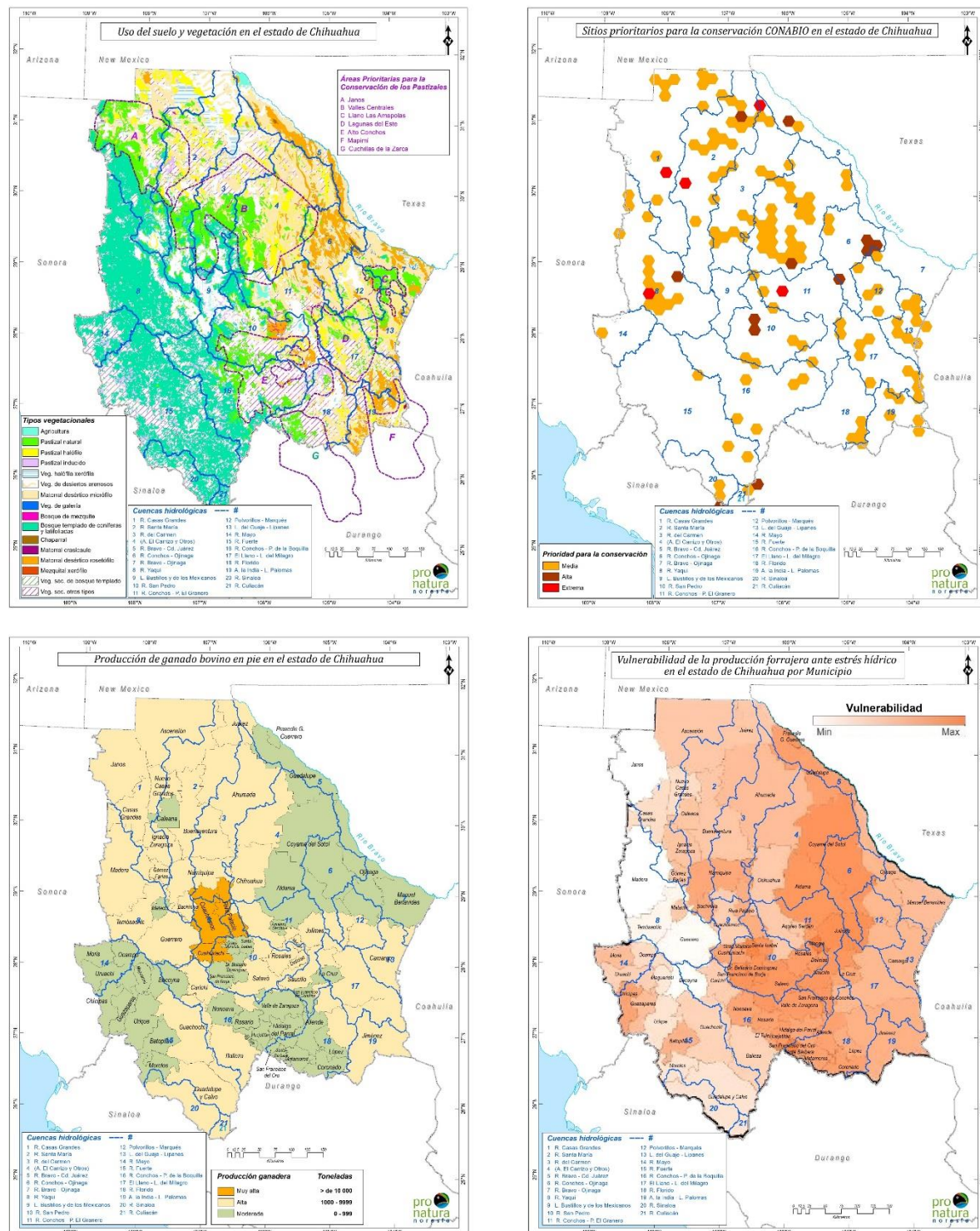
17. With an extension of 24.7 million ha (12.6 percent of the country's surface), Chihuahua is the largest state in Mexico. The diversity of climates, altitudes, geology, and soils in the region has led to the development of three types of ecosystems: forests, grassland and shrublands, and one of the desert areas with the most exceptional biodiversity in the world (CONABIO 2014; Olson and Dinerstein 1998).



18. Chihuahua is sixth in terms of beef production and fourth in milk production in Mexico. About 2,388,411 heads of cattle (SIAP 2018) occupy an area of approximately 12.6 million ha (51 percent of the state territory). Livestock activities take place in extensive natural grasslands located mostly in the northeast and, on a smaller scale, in the center, east, and south arid and semi-arid regions of Chihuahua.
19. The arid climate, water scarcity, and periods of intense drought in the state are not suitable for fattening of livestock (UACH 2010), since the average annual precipitation in Chihuahua is 427 mm. Thus, cattle are produced for export to the United States (Sanchez-Granillo 2010), with ranchers selling between 50 and 75 percent of their calves each year. In the first trimester of 2019, Chihuahua exported 188,476 animals to the United States (SIAP 2019).
20. The selected basins of intervention are Santa María, El Carrizo y Otros, Del Carmen, and Casas Grandes (Figure 1.8), located in the northern part of Chihuahua, selected based on their importance in terms of biodiversity, livestock, and vulnerability to climate change (Figure 1.9).



**Figure 1.8. Selected basins in Chihuahua**



**Figure 1.9. Site selection based on the importance of (a) land use, (b) biodiversity conservation, (c) livestock production, and (d) vulnerability to climate change**



21. These basins comprise 8,454,170.72 ha and 13,397 LPUs, 89.8 percent of which correspond to small producers (production value <Mex\$1,000,000) and 10.2 percent to large ranchers (production value >Mex\$1,000,000). In these basins, the most used production system is free grazing for fattening, primarily for beef production. Nevertheless, one of the main problems is water availability since only nine of the 15 aquifers at present have availability.
22. The more significant part of the income of the producers comes from agriculture, but they also obtain income from other activities. Moreover, based on the application of 70 surveys, some ranchers (43 percent) even use loans from commercial banking, Multiple Purpose Financial Societies (SOFOM for the acronym in Spanish; companies contemplated in Mexican legislation whose main objective is the granting of credit), and Shared Risk Trust of AGRICULTURA ("Fideicomiso de Riesgo Compartido", FIRCO) or subsidies and grants (40 percent) from AGRICULTURA, and CSOs and LCLOs for livestock production, especially for infrastructure, machinery, and equipment (46 percent) and cattle breeding (30 percent). Those who have not asked for a loan claimed not needing one (21 percent), that the process to obtain one was difficult (25 percent), or they do not meet the applicable requirements (32 percent).
23. In these basins, there are also different instruments of public policy and local efforts that support conservation of biodiversity and environmental services. 554,754 ha (6.5 percent) are part of the Janos Biosphere Reserve and the Protection Area of Flora and Fauna Médanos de Samalayuca.

### **Veracruz**

24. Veracruz has an extension equivalent to 3.7 percent (7.2 million ha) of the total surface area of Mexico. Its landscape is agricultural, with almost 80 percent of the total land area of the state devoted to livestock and crop production. The natural vegetation represents less than one-fifth of the territory and includes tropical, temperate, and cloud forests, as well as mangroves. Veracruz ranks third in terms of diversity of species after the states of Chiapas and Oaxaca.
25. Veracruz is first in beef production and the thirteenth in milk production in Mexico. About 4.3 million heads of cattle occupy 44 percent of the state territory (3.2 million ha) within 162,403 LPUs (PNG 2019). Most of the livestock activities have developed extensively in pastures with non-native forage grasses (*Poaceae*) and, to a lesser extent, legumes (*Fabaceae*).
26. The basins selected for intervention are Tuxpan, La Antigua, and Jamapa (Figure 1.10), based on the importance of biodiversity, livestock, and climate change considerations (Figure 1.11).





**Figure 1.10. Selected watersheds in Veracruz**



**Figure 1.11. Site selection based on the importance of grasslands**

27. These basins comprise 1.07 million ha, including 314,000 ha of grasslands. There are 11,076 LPUs in 602,742 ha, holding around 961,960 heads of cattle (INEGI 2017; SIAP 2019; SADER 2019; PGN 2019).
28. In these watersheds, extensive systems of grazing for dual-purpose (milk and beef) predominate. In general, livestock production is based on cattle being fed almost exclusively with grasses of low forage value, which is entirely dependent on seasonality and changes in climate throughout the year (Salazar et al. 2015). Thus, the cattle need to receive additional nutritional supplement especially in the dry season.
29. The management of the pastures in these basins is carried out mainly by livestock owners with the help of their families, usually the father and sons. Women also participate, and especially in processing milk for dairy products such as cheese, cream, and butter.



### **Biodiversity in the targeted project area**

30. **CONECTA's biodiversity conservation efforts will focus on the protection of priority species for Mexico.** Appendix A of the project's ESMF presents the key information on biodiversity present in the targeted watersheds, which host 24 protected areas with a total surface area of 677,922 ha, around 6 percent of the targeted project area. These areas include BRs, NPs, Natural Resources Protected Areas, FFPAs, ERs, State Parks, SRVZs, and VCAs. The protected areas are: (a) Chiapas: BR La Encrucijada, BR El Triunfo, and VCA Las Nubes; (b) Chihuahua: Médanos de Samalayuca FPPA, BR Janos; (c) Jalisco: BR Sierra Vallejo, Watershed Caption Irrigation District 042, Cañada Larga VCA, Penas Blancas VCA, Arroyo Texas VCA, Vallejo VCA; and (d) Veracruz: Pico de Orizaba NP, ER Tembladeras Laguna-Olmeca, Arroyo Moreno ER, Punta Canales o Isla del Amor SRVZ, ER Rio Atoyac, Cofre de Perote NP; Molino de San Roque, Cerro Macuiltepetl ER, Francisco Javier Clavijero Park, Predio Barragán SRVZ, Cerro de las Culebras ER, and Sierra de Otontepec ER. Approximately 29 percent of these areas are protected at the federal level, 42 percent at the state level, and 29 percent are VCAs.
31. **Conservation efforts beyond the protected areas extend to the following terrestrial priority conservation areas:** 14 regions and 112 sites (83 medium priority, 19 high priority, and 10 extreme priority sites) with important physical and biotic characteristics; 800 priority aquatic sites (475 medium priority, 184 high priority, and 141 extreme priority sites); 10 areas of importance for bird conservation; eight IBAs; three mangroves sites with biological relevance; four RAMSAR sites; and three priority areas under the Alliance for Zero Extension.
32. **Based on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, the 15 watersheds host 97 species of global conservation importance.** Sixty percent of them are listed as of least concern, 13 percent as endangered, 10 percent critically endangered, 6 percent vulnerable, and 5 percent near threatened. Eighty percent of these species represent birds followed by amphibians (14 percent), plants (3 percent), and mammals (2 percent). Eighty percent of them are in Important Bird Conservation Areas and 20 percent registered under the Alliance for Zero Extinction. From a national perspective, considering the Official Mexican Standard on Environmental Protection-Native Species of Mexico of Wild Flora and Fauna-Risk Categories and specifications for Inclusion, Exclusion or Change-List of Species at Risk (NOM-059-SEMARNAT-2010), 98 additional species of national conservation importance are present in the 15 watersheds: 33 percent are birds, 27 percent reptiles, 21 percent mammals, 12 percent amphibians, and 7 percent plants. Thirty percent of the 98 species are classified as in danger of extinction. The detailed lists of the referred species are provided in Tables 11 and 13 in Appendix A of the ESMF.
33. **Approximation to the baseline biodiversity loss in the targeted project area.** Despite the progress made in the construction and development of biota inventories, calculating the rate of loss of species of flora and fauna is a complex task that involves long-term studies, often on organisms with almost no available information (Llorente-Bousquets and Ocegueda 2008). In the absence of baseline data, the lists of species at risk have been used as indicators of biodiversity status. Therefore, the species classified within some category of risk represent the actual or potential reduction in the biodiversity of a country or region. At least 127 species have become extinct in Mexico, including 38 fish, 29 amphibians, 26 plants, 19 birds, and 15 mammals, of which 58 percent were endemic (CONABIO 2017). There are another 2,606 species that are at risk of disappearing (NOM-059-SEMARNAT-2010):



**Table A1.2 Species at risk of extinction in Mexico**

Species group	Number of species at risk
Plants	987
Reptiles	443
Birds	392
Mammals	291
Fish	204
Amphibians	194
Invertebrates	49
Fungi	46
<b>Total</b>	<b>2,606</b>

34. **In Chihuahua, at least 195 species are in danger of extinction:** 43 birds, 22 mammals, 16 fish, 33 reptiles and amphibians, as well as 81 species of cactus, tree, herbaceous, and shrub plants. In particular, grassland birds are suffering one of the largest declines in the hemisphere, being affected by a population loss of more than 70 percent in the last 50 years (Pennisi 2019). Experts estimate that if the conversion of grasslands to agricultural fields in the Chihuahua's desert continues at the current rate of 6 percent annually, these grasslands will disappear completely by 2025, affecting all its associated biodiversity.
35. **In Chiapas, at least 654 species are threatened or in danger of extinction:** 204 birds, 60 mammals, 14 fish, 145 amphibians and reptiles, and 231 vascular plants. In 2019, Chiapas lost 67,500 ha of natural forests (GRFW 2020), affecting a wide range of environments and types of habitat, but above all, species that are a priority due to their limited distribution at the national level.
36. **In Jalisco, at least 311 species are in danger of extinction:** 88 birds, 21 mammals, 20 fish, 75 reptiles and amphibians, as well as 107 species of vascular plants. According to data from the University of Guadalajara (UdeG), 1.5 percent (30,000 ha) of jungles and forests are lost each year. This deforestation affects, firstly, the low deciduous forest, secondly, the oak forests and, in little proportion, the pine forests of the high mountain areas. While a wide variety of animals and birds found homes in these forests, their populations dwindle as humans continue to remove the trees and use the land for other purposes.
37. **In Veracruz, at least 505 species are threatened or in danger of extinction:** 170 birds, 64 mammals, 144 amphibians and reptiles, 11 fish, and 116 plants. In 2019, the loss of natural forests was equivalent to 34,600 ha (GFW 2020). The most threatened, due to its restricted location, is the tropical mountain cloud forest, which is the most diverse type of vegetation per unit area and holds high rates of plant, amphibian, reptilian, and avian endemism (Vázquez-García 1995).
38. **The major causes of biodiversity loss in the 15 targeted watersheds are of anthropogenic nature.** Particularly, pervasive change in land use and land cover is the largest driver of biodiversity loss due to fragmentation, degradation, and reduction of available habitable areas for food, shelter, and breeding sites. The conversion of forests and natural grasslands to extensive animal husbandry and farming also causes soil's compaction and erosion, decline in soil fertility, loss of riparian vegetation, siltation of rivers, pollution with agrochemicals toxic to the environment and human health, introduction of invasive alien species, and increased frequency of forest fires and extreme hydro-meteorological events caused by climate change, all affecting negatively on the remnant species.



39. **CONECTA will devise net positive impacts on biodiversity within the intervention areas** over the project's lifetime through reducing pressure on land use change, protecting remnant ecosystems, and restoring degraded environments to increase connectivity between habitats and create wildlife corridors. It will also enhance climate-smart production practices to recover and increase biodiversity within the agricultural and agroforestry landscapes.
40. The GEF Sub-indicator 4.1 'Area of landscapes under improved management to benefit biodiversity' that CONECTA will report to the GEF measures the hectares of land that result with a reduced pressure on deforestation and forest degradation through project activities, including the implementation of IWAPs and policy alignment under Component 1. The application of climate-smart management practices for cropping and ranching is expected to increase yields while conserving biodiversity. This approach helps to recover soil, reduce habitat fragmentation, support that at least 50 percent of all native species found in forests also occur in agricultural landscapes, and provide refuge, feeding areas, accessibility, and suitable corridors for species mobility. Some of the biodiversity-friendly management practices that will be eligible for support by CONECTA are: (i) land sparing to recover natural vegetation; (ii) establishment of protective areas and buffer zones around a farm/ranch; (iii) creation of corridors between farms/ranches and forested areas; (iv) conservation, reforestation, and restoration of natural habitats close to a ranch/farm; (v) protection of riverine areas and recovery of riparian strips; (vi) establishment of living fences with native species; (vii) implementation of integrated pest management plans; (viii) reduction of soil tillage; (ix) reduction of use of inorganic (synthetic) chemical inputs; and (x) use of organic fertilizers. Thus, providing TA, capacity building and initial financing to farmers and ranchers to apply biodiversity-friendly management practices may break the degradation cycle while improving production systems. Moreover, such shift in productive practices will allow ranchers and farmers to participate in certification markets and receive PES in the future.
41. **CONECTA will conduct biodiversity monitoring that will contribute to the SNMB<sup>55</sup> through BIOCOMUNI, a protocol for community monitoring of biodiversity** developed in collaboration with CONAFOR, the FMCN and the United States Forest Service (USFS) to strengthen shared efforts for sustainable use of natural resources. The SNMB collects periodic information on the structure and representativeness of biodiversity in Mexico through two complementary data collection protocols (SAR-MOD and SAC-MOD) and collaboration by CONAFOR, protected areas and CSOs. CONABIO receives, stores and analyzes the data to calculate the index of ecosystem integrity at the national level. BIOCOMUNI builds on this experience and offers a monitoring protocol focused on "ejidos" and agrarian communities. It is ideal for projects due to its easy application and low cost and allows assessing changes in species resulting from project activities, as well as the effectiveness of the measures taken to maintain or enhance identified high-value biodiversity present in a project area. CONAFOR and CONANP use BIOCOMUNI, and new partners/initiatives as CONECTA are joining the effort. To ensure continuity and linkage between different efforts to monitor biodiversity in Mexico, BIOCOMUNI is designed to contribute real time information also to other national platforms, such as aVerAves of CONABIO. CONECTA also plans to at least pilot the use of the B-INTACT developed by the FAO.
42. **CONECTA will foster the protection of species at risk listed in the NOM-059-SEMARNAT-2010**, for example, the pronghorn, bison, prairie dog, and golden eagle in Chihuahua; tapir, spider monkey, quetzal, and the rare homed guan in Chiapas; the lynx, coyote, armadillo, chachalaca, woodpeckers, parrots, and owls in Veracruz; and the jaguar, ocelot, and jaguarundi in Jalisco, among others. For further information on how CONECTA will manage and protect biodiversity, see Section 8 of its ESMF on the livestock and agroforestry principles to be promoted.

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<sup>55</sup> Developed by CONABIO, CONAFOR, CONANP and the FMCN with a US\$2.1 million grant from the Gordon and Betty Moore Foundation.

**Table A1.3. Characteristics of the CONECTA watersheds**

State	Watersheds	Municipalities	Watersheds' Area (ha)	# Protected Areas in the Watersheds	Portion of Protected Areas in the Watersheds (ha)	Global Relevant Species in the Watersheds #	National Relevant Species in the Watersheds #
<b>Chihuahua</b>	Casas Grandes Del Carmen Santa María Carrizos	15	8,454,170.72	2	551,217	19  19 birds	16  3 amphibians 7 birds 5 mammals 1 reptile
<b>Veracruz</b>	Tuxpan Antigua Jamapa	68	1,070,634	13	16,560	26  14 amphibians 9 birds 2 mammals 1 plant	68  23 plants 16 birds 12 mammals 12 reptiles 5 amphibians
<b>Jalisco</b>	Ameca- Mascota El Tuito Pitillal Las Juntas Cuale	7	422,444.49	6	73,407	2  2 plants	22  7 birds 6 mammals 5 reptiles 4 amphibians
<b>Chiapas</b>	Pijijiapan Coapa Novillero	2	100,224.81	3	29,312	54  54 birds	24  8 mammals 8 reptiles 4 plants 3 birds 1 amphibian
<b>Total</b>	<b>15</b>	<b>92</b>	<b>10,047,474.02</b>	<b>24</b>	<b>670,496</b>	<b>101<sup>56</sup></b>	<b>130</b>

<sup>56</sup> The values represent the total species found in the 15 watersheds. Some species identified in the IUCN Red List of Threatened Species and NOM-059-SEMARNAT-2010 were present in more than one watershed.



## ANNEX 2: Summary of the CONECTA Gender Analysis and Gender Action Plan

### A. Overview and Context

1. **Gender equality and economic empowerment are critical to ensure inclusive growth.** In 2017, women constituted 48.6 percent of Mexico's total population (INEGI 2017), making evident that investments on women are instrumental for the inclusive economic growth and development of the country. However, despite recent progress, gender differences in endowments, economic opportunities, and agency are still a challenge in Mexico, particularly among rural, less well-educated indigenous women. Mexico ranks 76 out of 162 countries in the Gender Inequality Index (GII), which reflects gender equality gaps in three dimensions: reproductive health, empowerment, and labor market.<sup>57</sup> High levels of teenage pregnancy and maternal mortality, low educational attainment and learning are prevalent among rural women, especially in lagging areas of the country. This has led to only around 46 percent female participation rates in the labor force—one of the lowest in the region, high levels of informality, low-productivity and entrepreneurship, and low access to productive inputs. Overall, and because of the accentuated gender gaps in Mexico, there has been an economic loss of up to 22 percent of income per capita because of low female labor force participation.<sup>58</sup> Mexico also has high levels of GBV. Among women aged 15 years or more, 66 percent have experienced at least one violent incident, 44 percent have suffered intimate partner violence, and 34 percent of women have experienced sexual violence in a public space (ENDIREH 2016).
2. **Women's economic empowerment and participation in economic activities in rural areas of Mexico is challenged by land rights, significant participation in non-remunerated activities, and low educational endowments.** Various factors limit women's participation in decisions at the community level, potentially directly affecting them and their families, while many social norms define gender roles and stereotypes and are detrimental to gender equality. Land rights in Mexico are important, particularly under communal and collective structures, as they are tied to the right of participating and voting in decision-making spaces, for example, at *Asambleas Ejidales*. Most women part of *comunidades* and *ejidos* don't have land titles or rights and therefore cannot participate or vote in the mentioned decision-making spaces. For instance, in 2013, only 18 percent of the 4.2 million members of communal structures (*comunidades*) with land titles were women. Furthermore, only 12.5 percent of women held any administrative position in decision-making bodies such as *Asambleas*. Table 2.1 compares land rights and participation in decision-making bodies between men and women in agricultural and livestock farming activities. These situations also impact the possibilities of rural women in Mexico in accessing credits, technical support, or other services that require land titles as collaterals or are considered criteria to participate in or to access these programs. By the same token, in rural areas, women are usually responsible for tasks within the household, for example taking care of children and elders. These tasks are usually non-remunerated and associated with women because of their gender. Low levels of educational attainment and learning also directly impact women's economic participation and advancement in rural economies in Mexico.

<sup>57</sup> The GII shows the loss in potential human development due to disparity between female and male achievements. Overall, it reflects how women are disadvantaged in the referred three dimensions. See: UNDP, GII.

<sup>58</sup> The World Bank Group's Mexico CPF 2020–2025, Report No. 137429-MX, is informed by a gender assessment and covers policies that may help reduce gender gaps.





**Table 2.1. Land rights and participation in decision-making bodies between men and women in agricultural and livestock farming activities**

	Total	Male	Female
<i>Ejidatarios and comuneros</i>	4,210,830	3,377,035	833,795
<i>Ejidatarios</i> with an individual piece of land	3,392,126	2,780,931	611,195
Land ownership in <i>Ejidos</i>	1,442,807	1,111, 237	331,570
<i>Avencindados*</i> in <i>Ejidos</i>	2,447,226	1,423,298	1,023,928
President of a decision-making body at the <i>Ejido</i>	31,514	30,716	798
President of a decision-making body at the <i>Ejido</i> who speaks an indigenous language	n.a,	16.5%	0.2%

Note: \**Avencindados* are not allowed to vote or participate in decision-making bodies at the community level.

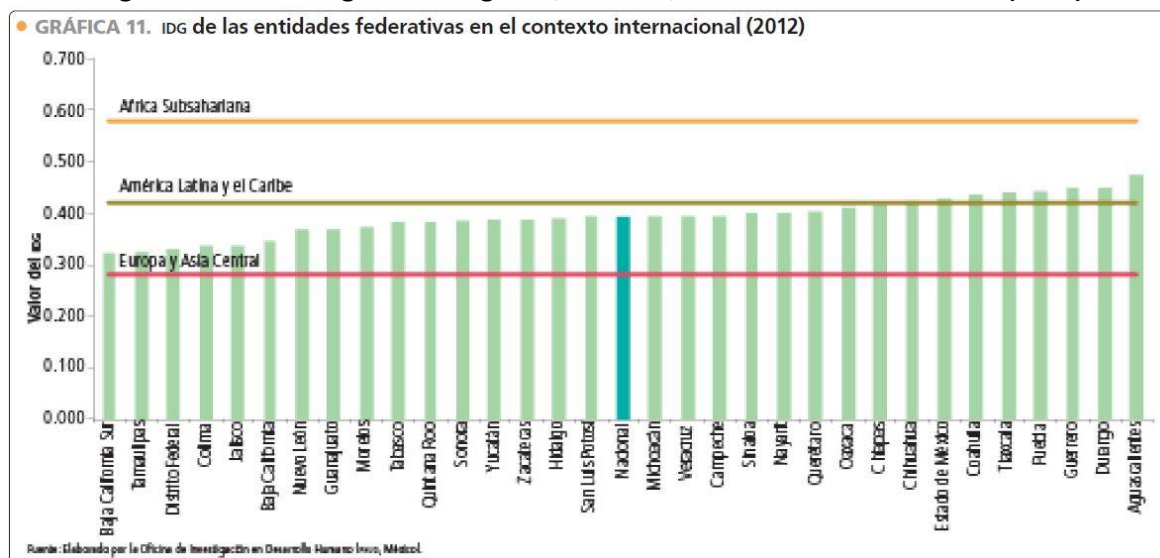
## **B. Women in CONECTA's states and supported production activities**

- In the states where CONECTA will be implemented, gender disparities are more pronounced in Chiapas and Chihuahua.** Mexico is better positioned in terms of gender equality (GII) than countries in the LAC region (average). However, if disaggregated at the state and municipal levels, gender inequality levels in Chiapas and Chihuahua are like those in the LAC region, while GII levels in Veracruz are similar to the national average and Jalisco's levels are closer to Europe and Central Asia (Figure 2.1). This is important considering that 51 percent of the total population in the watersheds targeted by CONECTA are women (National Population Council CONAPO and National Institute of Women INMUJERES).





Figure 2.1. GII average at the regional, national, and state levels in Mexico (2012)



4. In the CONECTA states, and particularly in the targeted value chains, the described gender gaps and barriers impact women's income, participation in decision making, access to technology, and participation in more productive activities. As for most of the agriculture sector, women's participation in livestock and agroforestry activities also evidences significant gender gaps and inequalities. Women's labor in agriculture is usually non-remunerated as it is considered part of family or community work. Furthermore, income derived from agriculture activities is paid for daily work or *jornales* and administered by the heads of family (men). In the livestock value chain, women mostly participate in dairy production activities, where women make decisions about profits and management of the production activities, yet at a very small scale. In other activities, such as beef production, women participate mostly in administrative and non-managerial activities, and if they own land, they usually rent it. Overall, these factors also limit women's participation in decision making even at the household level, which in turn limits their access to technology, credits, and productive assets and deepens the gender gaps identified.
5. Table 2.2 describes in more detail the characteristics of women's participation in the various value chains supported by CONECTA.

Table 2.2. Women's participation in livestock and agriculture production in CONECTA's watersheds

Economic Activity	Men's participation	Women's participation
Commercial Agriculture	<ul style="list-style-type: none"> <li>- Ownership of lands and crops</li> <li>- Overall management and decision making over production and commercialization</li> <li>- Transport of goods and usually acting as intermediaries</li> <li>- Management of profits resulted from production activities</li> </ul>	<ul style="list-style-type: none"> <li>- Harvest of crops. If family or communal land, this work is usually non remunerated</li> <li>- Income derived from participation in productive activities is usually handed (if <i>jornales</i>) to family heads (usually men), and administered by them</li> <li>- Decision making is only allowed in activities developed in the</li> </ul>



	- Producer organizations	backyard ( <i>traspatio</i> )
Livestock (beef)	- Ownership of livestock and management and decision making over the whole process of commercialization, including participation on exhibition and selling events	<ul style="list-style-type: none"> <li>- Women that own land usually rent it. Some women (in an exceptional basis) participate in intermediate activities in the value chain, for example packing.</li> <li>- Most women participate in administrative activities with few possibilities of holding management positions</li> <li>- Chihuahua and Jalisco have a higher level of women owning cattle heads</li> </ul>
Livestock (dairy)	<ul style="list-style-type: none"> <li>- Men usually make decisions associated with cattle breeds</li> <li>- Men also commercialize dairy products, including acting as intermediaries between small producers and established buyers (for example, Nestle, Liconsa)</li> </ul>	- Participation in the dairy business either at a small or a medium scale (if done by organized producer organizations) or in an artisan way (if individual producers)
Agroforestry	- Ownership of land and control over resources	<ul style="list-style-type: none"> <li>- Participation in commercialization activities and in cases mostly focused on local and family consumption</li> <li>- Participation in artisan business for local markets</li> </ul>

### C. Gender Action Plan

6. **CONECTA has developed a GAP that details specific activities through which the project will address gender gaps in the project watersheds.** The GAP includes specific indicators to monitor progress of the mentioned activities besides the gender-sensitive indicators already included in the project's RF. These indicators will be included in the CONECTA's OM to ensure regular monitoring and checking. Analytical activities are also envisioned to better understand women's participation in the project-supported production activities. Table 2.3 details the activities to be implemented as part of the GAP, including the corresponding monitoring indicators. The full GAP is available in Spanish.<sup>59</sup>
7. The principal project activities will be framed within the following overall gender strategies:

<sup>59</sup> <https://www.dropbox.com/sh/i2ouig7be27ga1c/AAAAGSYmv5mWhadxTeYqSoTWa?dl=0>.



- Provision of technical and advisory support in agriculture, agroforestry, and livestock value chains to enhance women's managerial and technical skills in these value chains, including support to backyard activities (*actividades de traspatio*) and other activities where women are already participating
- Promotion of creation and strengthening of PGs with women as participants and women's participation in managerial positions
- Promotion of participation of women in decision-making processes at the farm level and within the participating LCLOs and PLATs; specifically, CONECTA will prioritize proposals that benefit women producers and PGs with female leaders
- Alleviation of time with double burden, offering options for childcare during workshops and training sessions
- Implementation of sensitization activities on gender equality through the development of a communication plan for awareness raising in a gender-sensitive way that uses communication channels that address women's needs and promotes the use of inclusive language
- Promotion of equal remuneration of women and men in project activities, including at the farm level as possible
- Reduction of administrative requirements to participate in the project, including demonstration of land ownership as a condition to access project benefits when it is not legally required
- Management of GBV risk by provision of related training and information on service providers as part of referral path to LCLOs and PLATs participating in CONECTA

**Table 2.3. GAP activities and indicators**

Activity	Indicator	Estimated Budget
1. Hiring to serve the project, conducted by the Operational Coordinating Unit (OCU) at the FMCN, will be based on competences, skills and objective criteria as to address gender bias in hiring processes. 2. Payment and salary parity regardless of gender.	Number of individuals hired by the project disaggregated by sex	N.A.
3. Gender disaggregation of all project indicators as relevant.	Project information and indicators disaggregated by gender	N.A.
4. Subproject indicators disaggregated by gender.	Subproject information and indicators disaggregated by gender	US\$2,000
5. Gender Assessment and Analysis conducted as part of the technical assistance under Component 2 and regenerative and sustainable productive subprojects under Component 3, including differentiated impacts based on gender, barriers women face to move along project supported value chains, gender roles at the family level and impacts on women as decision makers in production activities, and participation of women in decision making spaces. 6. Provision of gender training. 7. Implementation and supervision of the recommendations.	Gender Assessment and Analysis	Assessment: US\$230,405 (including US\$192,405 of parallel financing ["GEF co-financing"] from the GCF-funded RÍOS project)



<b>Component 1: Development and Promotion of Integrated Landscape Management</b>		
8. Promote women's participation in events related with the Integrated Watershed Action Plans (IWAP) at the community level to ensure women can participate in these forums. Participation will be incentivized by disseminating information, using communication channels used by women, designing the events in a way that is gender sensitive, and encouraging women's overall participation, including expressing their views.	Participants in the IWAP events disaggregated by gender	US\$500
<b>Component 2: Strengthening of Business Skills for Sustainable Livestock and Agroforestry</b>		
9. PLATs (consultants, consulting firms or LCLOs) composed of or including female professionals will be encouraged to submit calls for proposals	Submitted PLAT proposals disaggregated by gender in terms of the contributing professionals	N.A.
10. Encourage the participation of PLATs with female leadership to support female champions and promote positive examples of gender roles	PLAT selection disaggregated by gender in terms of the contributing professionals	
11. Capacity building and sensitization on gender approaches to PLATs.	PLATs who have received and applied gender approaches disaggregated by gender	US\$2,400 (4 workshops)
12. Proposals with women participants as beneficiaries will be prioritized.	Number of proposals that include women participants and leaders submitted and selected	N.A.
13. Project activities (workshops) will be conducted considering women's needs (E.g. schedules, places).	Number of participants in project events disaggregated by gender	US\$500
14. Promote child-care activities in the context of the project activities to facilitate participation by women.		
15. Promote women's participation in decision-making processes, including in community groups.		
16. Disseminate information on service providers for GBV cases.	Number of beneficiary producers who have received information on GBV service providers	N.A.



Component 3: Conservation, Restoration, and Implementation of Climate-smart Productive Practices in Cattle and Agroforestry Landscapes		
17. Communicate project activities and requirements through communication channels, in places and at times, that meet women’s needs.	Submitted subproject proposals disaggregated by gender in terms of the contributing professionals  Subproject selection disaggregated by gender in terms of the contributing professionals	US\$1,000
18. Reduce administrative requirements to participate in project activities and hand hold if needed.		
19. Communicate and disseminate that land ownership is not a requirement to participate in project activities.		
20. Include as eligible activities those in which women are more likely to participate (e.g. tree nurseries).		
21. Ensure and monitor payment parity even among temporary workers.		
22. Selection of the LCLOs to execute Component 3 will prioritize organizations with female members/leaders.		
23. Capacity building and sensitization on gender approaches to CSOs.	LCLOs that have received and applied gender approaches  Subprojects with gender indicators	US\$2,400 (8 workshops related with environmental and social risk management)
24. Project activities (workshops) will be conducted considering women’s needs (e.g. schedules, places) and using inclusive language.	Participants in workshops under Component 3 disaggregated by gender	N.A.
25. Promote child-care activities to facilitate women’s participation in project activities.		
26. Promote women’s participation in decision-making processes, including in community groups.		
27. Disseminate information on service providers for GBV cases.	Percentage of beneficiaries who have received information on GBV service providers	N.A.
28. Codes of conduct and referral paths to prevent cases of sexual exploitation and abuse and harassment.		
Component 4: Project Coordination, Collaboration and Knowledge Management		
29. Capacity building and training for all personnel in the Operational Coordinating Unit (OCU) and Technical Coordinating Unit (TCU) on gender approaches.	Project staff in OCU and TCU trained on gender approaches (percentage)	US\$2,000
30. Gender- related capacity building and training for all personnel in the three Regional Funds.	Project staff in the Regional Funds trained on gender	US\$4,000



	approaches (percentage)	
31. Promote participation of women in activities focused on knowledge management and dissemination of lessons learnt in the project-related learning communities at different levels and supported by the FOLUR Global Platform.	Number of participants in project activities focused on knowledge management and dissemination of lessons learnt in the project-related learning communities supported by FOLUR Global Platform (disaggregated by gender)	US\$35,000 (2 workshops)
32. Active participation in activities focused on gender engagement and equity within the framework of the FOLUR Global Platform.		
Total cost		US\$280,205
Parallel financing by the GCF-financed RÍOS project		US\$192,405
<b>Total cost for CONECTA</b>		<b>US\$87,800</b>



## ANNEX 3: Greenhouse Gas Accounting Analysis

### Background and Methodology

1. In its 2012 Environment Strategy, the World Bank adopted a corporate mandate to conduct GHG emissions accounting for investment project financing. The quantification of GHG emissions is an important step in managing and ultimately reducing them and is becoming a common practice for many international financial institutions. The World Bank adopted the EX-ACT, which was developed by the FAO in collaboration with the World Bank in 2010. The EX-ACT is an automated tool aimed at measuring the impact of agricultural and forestry investment lending on GHG emissions and carbon sequestration. It is a land-based accounting system measuring carbon stocks, stock changes per unit of land, and CH<sub>4</sub> and N<sub>2</sub>O emissions expressed in t CO<sub>2</sub>-e per hectare and year. Generic Intergovernmental Panel on Climate Change (IPCC) methodologies are used to account conversions between categories in five pools: above-ground biomass, below-ground biomass, soil, deadwood, and litter. The main output of the tool is an estimation of the C-balance that is associated with adoption of alternative land management options, as compared to a BAU scenario.

2. The CONECTA Project aims to promote and increase the connectivity of cattle and agroforestry landscapes in selected watersheds in the states of Chiapas, Chihuahua, Jalisco, and Veracruz. The project is designed to support the protection of watersheds and sustainability of ecosystem services while improving productive economic activities for cattle ranching and coffee farming based on SMPs to prove their benefits environmentally, socially, and economically. It will also support the preparation of IWAPs to promote sustainability in managing natural resources for conservation, restoration, and productive uses. CONECTA will also strengthen the entrepreneurial skills of producers, producer organizations, and local micro and small processing businesses to enhance connectivity to local and regional markets and access to finance. At the broader level, an exchange knowledge platform will be created to reach out to multiple value chain stakeholders to promote development of sustainable beef, dairy, and coffee value chains.

3. Mexico's NDC includes an unconditional reduction contribution from the agriculture and livestock sector of 86 million tCO<sub>2</sub>e by 2030 as part of its economy-wide targets. The NDC also includes a target to reduce the gross emissions from land use, land use change and forestry (LULUCF) by 14 million tCO<sub>2</sub>e by 2030. Mexico has also submitted a forest emission reference level (FREL) related to REDD+ under the UNFCCC, which includes deforestation and emissions caused by fires. In addition, Mexico included a target to reach 0 percent deforestation rate by 2030 as part of the adaptation component of its NDC.<sup>60</sup> In order to ensure consistency across these commitments, the present analysis was carried out in close collaboration with the INECC, FMCN, and the Regional Funds. This collaboration ensured that the assumptions and variables used are consistent with the relevant information available in the country and the situation on the ground. The analysis benefited from substantial technical guidance provided by the INECC mitigation team in charge of the national GHG inventories to ensure that the EF and key assumptions are aligned to the national mitigation agenda and international commitments mentioned above. Particularly, careful attention was paid to the assumptions on the level of avoided grass and shrubland and forest losses. The analysis followed a process in which various filters were considered to ensure that the results are appropriate and agreed upon with the GoM. Thus, the results presented herewith were verified and confirmed with both the INECC adaptation and mitigation teams.

<sup>60</sup> México (2015): Intended nationally determined contribution. Submission under the UNFCCC: <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Mexico/1/MEXICO%20INDC%2003.30.2015.pdf>.



## Application of the EX-ACT

4. **Project boundaries.** The GHG accounting analysis considers activities under Components 1 and 3. Component 1 promotes ILM, developing new and improving existing land use instruments named IWAPs covering at least 10 of the 15 targeted watersheds in the selected states. The IWAPs aim to reduce degradation and loss of vegetation in the selected watershed; safeguard conservation areas; and improve biodiversity, ecosystem, and hydrological services through coordination and alignment of projects, programs, and public policies. Component 3 includes activities to promote sustainable cattle and farming systems through the application of sustainable practices including regenerative ranching approach and agroforestry and silvopastoral systems, among others.<sup>61</sup>

5. **Basic assumptions.** Mexico has diverse climatic zones that span throughout its territory. The climate varies in the different intervention sites of the project ranging from warm, temperate, and dry climates to tropical moist climates. For the GHG analysis, each state was treated separately to try to capture the unique climatic and agroecological diversity. The selected dominant soil type for the project is Low Activity Clay. The project implementation period will be five years, and an additional 15 years of capitalization is included for a total analysis period of 20 years.<sup>62</sup> The 'without project' scenario is assumed to be equal to a 'BAU' scenario. This default assumption is deemed reasonable as changes in agricultural activity crucially depend on information, knowledge, and technology available to beneficiaries, which are expected contributions of the project.

6. **Inputs to the analysis.** Based on demand and strategic selection of proposals to secure enough impact at landscape level, CONECTA will implement activities in 10–15 watersheds in the four selected states. Based on the project description, the potential GHG benefits identified were: (a) reduction of degradation and loss of grass and shrublands and forested areas, (b) restoration of degraded ecosystems, and (c) implementation of SMPs in productive livestock and agroforestry systems.

7. Component 1 is mainly expected to result in reduction of degradation and loss of grass and shrublands and forested areas in the watershed areas covered by an IWAP through coordination and alignment of projects, programs, and public policies and overall better governance supported by a participatory approach promoted among key stakeholders. The project assumes that the IWAPs would reduce deforestation pressure in 10 percent of the vegetation in the watersheds, in an estimated area of 309,850 ha. Based on national observations, it was agreed that the reduction of degradation and loss of referred ecosystems derived from implementation of the IWAPs will be around 10 percent of the annual deforestation rate associated with each watershed. The annual deforestation rates were provided based on the Environmental and Socioeconomic Diagnostics on Regenerative Livestock that the FMCN contracted in the selected states and targeted watersheds, carried out by the Regional Funds<sup>63</sup> as summarized in Table 3.1.

**Table 3.1: Annual deforestation rates applied per state**

State	Annual deforestation rate without Project, %	Annual deforestation rate with project, %
Chiapas	0.71	0.64

<sup>61</sup> The project's ESMF includes an initial list of eligible interventions under Component 3.

<sup>62</sup> The period of the GHG analysis matches with the period analyzed in the EFA.

<sup>63</sup> FONCET in Chiapas, FONNOR in Jalisco, and the FGM in Veracruz.



<b>Chihuahua</b> <sup>64</sup>	6.25	5.63
<b>Jalisco</b>	0.55	0.5
<b>Veracruz</b>	1.70	1.53

8. For Component 3, the following activities were considered: restoration of forest and grassland, sustainable ranching practices through regenerative approach, and agroforestry and SPS linked to sustainable coffee production or a mix of them. Table 3.2 provides detailed information on the assumptions and data inputs used in the GHG accounting analysis.

**Table 3.2: Assumption and data inputs used in the GHG accounting analysis**

<b>Activities</b>		<b>Description</b>
<b>Component 1: Indirect contributions from IWAPs</b>		
Avoided deforestation		Development of ILM through elaboration of new and improvement of existing IWAPs with a participatory approach and providing related capacity building are expected to indirectly contribute to reduce drivers for degradation and loss of grass and shrublands and forested areas. It is assumed that 'with project' the annual loss <i>rate will be reduced by 10 percent</i> compared to 'without project' scenario.
<b>Component 3: Direct contributions</b>		
Productive Systems	Sustainable forest management	Restoration of forest ecosystems
	Perennial agroforestry systems (that is, coffee)	Agroforestry systems will be introduced mostly linked to shaded coffee and to replace annual crops
	Regenerative livestock production and management	<p>SPS are expected to replace annual crops</p> <p>Regenerative livestock production and management is assumed to reduce degradation of pastures, apply mitigation practices and techniques to improve livestock feed and breeding and better management of reproductive practices.<sup>65</sup></p> <p>Herd management: It is assumed that the project will have 100 percent improvements in feeding compared to 0 percent in 'without project' scenario and 100 percent breeding improvements compared to 0 percent 'without project'.</p>

<sup>64</sup> Grassland from Pool et. al 2014.

<sup>65</sup> Smith, P., D. Martino, Z. Cai, D. Gwary, H. H. Janzen, P. Kumar, B. McCarl, S. Ogle, F. O'Mara, C. Rice, R.J. Scholes, O. Sirotenko, M. Howden, T. McAllister, G. Pan, V. Romanenkov, U. Schneider, S. Towprayoon, M. Wattenbach, and J. U. Smith. 2007a. "Greenhouse Gas Mitigation in Agriculture." *Philosophical Transactions of the Royal Society B*: 363. doi:10.1098/rstb.2007.2184.



9. Table 3.3 presents the expected distribution of area with supported project activities based on assumptions by the FMCN and RFs.

**Table 3.3: Distribution of area (ha) per state and activity**

State	Reduction of degradation and loss of ecosystems (ha)	Agroforestry (ha)	Silvopastoril (ha)	Grassland restoration (ha)	Livestock # heads	Forest restoration (ha)
Chihuahua	219,681	0	0	400	40	1,500
Chiapas	5,870	1,000	300	N.A.	400	1,500
Jalisco	32,834	1,000	400	N.A.	170	1,500
Veracruz	51,465	2,500	400	N.A.	600	1,500
<b>Total</b>	<b>309,850*</b>	<b>4,500</b>	<b>1,100</b>	<b>400</b>	<b>1,210</b>	<b>6,000</b>

Note: \* This is the total area in the watersheds (10 percent) where reduction of degradation and loss is expected as an indirect impact of the implementation of the IWAPs.

10. **Characteristic of the vegetation in the targeted watersheds:** The Regional Funds provided a synthesis of the typology of vegetation found in the 15 watersheds, disaggregated by primary and secondary vegetation. This classification was made in accordance with the classification used by the 2018 NIR.<sup>66</sup>

11. **Calculation of degradation and loss of ecosystems:** The percentage of the vegetation cover in the watersheds was used to determine the distribution (ha) of vegetation in 309,850 ha. Using the weighted annual average of deforestation rate, the areas of shrubland, grassland, and forest loss with and without project were calculated as presented in Table 3.4. This data was used in the EX-ACT module of Land Use Change under the submodule of Deforestation.

**Table 3.4: The loss areas (ha) with and without project per state and type of vegetation**

Vegetation	Chiapas		Chihuahua		Jalisco		Veracruz	
	with	With out	with	With out	with	With out	with	With out
<b>Primary vegetation</b>								
Pine forest			538	597	61	68	375	417
Oak forest			8,063	8,959	293	325	322	358
Deciduous forest					17	18	268	298
Mountain forest	17	19			6	6	563	626
Evergreen forest	69	77					858	954
Sub-deciduous					144	160	27	30

<sup>66</sup> <http://cambioclimatico.gob.mx:8080/xmlui/handle/publicaciones/226>; <https://unfccc.int/documents/199243>.



forest								
Grasslands (natural, planted)	92	102	18,814	20,904	33	37	80	89
Xerophilic shrubland			20,426	22,696				
Hydrophilic vegetation woody	9	10					107	119
Xerophilic shrubland non-woody			3,225	3,584				
Hydrophilic vegetation non-woody							80	89
Riparian vegetation			3,225	3,584				
<b>Secondary vegetation</b>								
Pine forest			80	89	29	32	729	810
Oak forest			1,205	1,339	138	153	625	694
Deciduous forest					8	9	521	578
Mountain forest					3	3	1,093	1,215
Evergreen forest							1,666	1,851
Sub- deciduous forest					68	75	52	58
Grasslands			2,811	3,124	16	17	156	174
Xerophilic shrubland			3,052	3,391				
Hydrophilic vegetation woody							208	231
Xerophilic non-woody			482	535				
Hydrophilic vegetation non-woody							156	174
Riparian vegetation			402	446				

12. **Agroforestry and silvopastoral production systems.** The assumption was that these systems will elicit other land use change by converting original annual crop land to silvopastoral or agroforestry systems.



13. **Livestock management.** Estimates were also made on the climate benefits of improved livestock management in the EX-ACT module of Grasslands under the submodule of Livestock. As the project will focus on livestock activities for dual-purpose milk/meat production, this was represented assuming 50 percent dairy cattle and 50 percent beef cattle in the EX-ACT. It was assumed that the project actions would support better livestock management and reduction in enteric fermentation emissions. For this, it was assumed that 100 percent of best practices in feeding and reproduction would be implemented in the situation ‘with project’ compared to the BAU situation and ‘without project’. Table 3.5 summarizes the expected impact in terms of number of heads under improved management per state. The other variables used to calculate the livestock impact are found in Table 3.6.

**Table 3.5: The expected impact under the scenarios in the number of heads under improved management/state**

Scenario	Chiapas	Chihuahua	Jalisco	Veracruz
BAU/without project No improvements	64,985	156,855	83,480	434,273
With project: No improvements	64,858	156,814	83,310	434,673
Improvements*	400	41	170	600

*Note:* \* Number of cows of the beneficiary producers with which the project is estimated to work.

**Table 3.6: The other variables used to calculate the livestock impact per state**

	Heads	Average temperature °C	Dairy average weight, kg	Average milk production kg/head/ year	Excrete rate dairy Kg/head/day
Chihuahua	40	18.2	510	915	82
Chiapas	400	24.5	369	902	59
Jalisco	170	20.8	425	916	68
Veracruz	600	23.6	415	985	67

14. **Restoration: Forest and Grassland.** The impact of this section was calculated manually using the available restoration information and adsorption factors. It was assumed that without project there would be ‘0’ restoration compared to with project situation. The measurement is based on above-ground and below-ground biomass factors. In the case of grassland, information from the Second Biennial Update Report (BUR II) for the UNFCCC includes an estimation of soil absorption related to sustainable management, which was also considered in the accounting.

15. **Emission factors.** Tier 2 EFs from the NIR 2018 were applied to calculate carbon from biomass pools from below- and above-ground and in terms of dead material and litter according to vegetation cover. Soil pool factors for most available vegetation categories were provided by the INECC mitigation team on an annual basis, which were projected to the total period of 20 years as presented in Tables 3.7–10. For deciduous, sub-deciduous and evergreen forests the same soil carbon pool factor was used as only one value was available. The data was used in the EX-ACT to carry out the calculations except for the forest and grassland restoration that were carried out manually.



**Table 3.7: EFs utilized for accounting avoided loss of grass and shrubland and forested areas**

Type of Vegetation	Tons of C per ha				
	BA	BS	Litter	Dead wood	Soil
<b>Primary</b>					
Pine forest	32.85	7.86	1.88	6.20	49.80
Oak forest	20.10	5.04	1.53	2.61	27.80
Xerophilic shrubland	2.02	0.59	0.34	1.23	1.80
Mountain forest	45.31	10.65	3.40	10.45	42.80
deciduous forest	11.77	3.18	0.86	3.50	27.80
Evergreen forest	34.90	8.70	2.75	12.30	27.80
Sub-deciduous forest	25.85	6.61	1.62	6.86	27.80
Hydrophilic vegetation wo	15.50	3.97	0.21	5.61	21.40
Xerophilic non woody	0.22	0.06	0.24	0.48	1.80
Riparian vegetation	2.35	0.63	0.05	2.11	0.00
Grasslands (natural, plant	6.68	1.73	0.66	3.17	1.30
<b>Secondary</b>					
Pine forest	21.75	5.34	1.66	3.75	49.80
Oak forest	14.67	3.73	1.19	2.28	27.80
Xerophilic shrubland	1.59	0.45	0.25	1.64	1.80
Mountain forest	21.01	5.07	3.07	6.53	42.80
Deciduous forest	8.90	2.44	0.72	2.75	27.80
Evergreen forest	15.42	3.97	1.54	7.36	27.80
Xerophilic non woody	0.22	0.06	0.24	0.48	1.80
Hydrophilic vegetation non woody	2.35	0.63	0.05	2.11	0.00
Sub-deciduous forest	14.53	3.83	1.48	5.07	27.80
Grasslands (natural, planted)	6.68	1.73	0.66	3.17	1.3
Riparian vegetation	12.44	3.25	0.00	5.04	21.40

*Note:* BA = Aerial Biomass; BS = Below-ground biomass.

**Table 3.8: EFs utilized to calculate benefits of forest and grassland restoration**

Restoration Emission Factors				
Vegetation	% coverage secondary vegetation	estimated ha to restored	EF BA tC/ha/ano	EF BS tC/ha/ano
Pine forest	8%	504	1.06	0.25
Oak forest	20%	1190	0.85	0.21
Mountain forest	10%	588	1.85	0.44
Xerophilic shrubland	15%	880	0.25	0.06
Evergreen forest	15%	882	1.11	0.27
Sub-deciduous forest	5%	279	1.06	0.27
Deciduous forest	5%	305	0.55	0.14
Hydrophilic vegetation woody	2%	111	1.15	0.29
Riparian vegetation	3%	198	0.36	0.34
Xerophilic shrubland non woody	2%	139	0.01	0.11
Grasslands (natural, planted)	15%	1324	0.82	0.21





**Table 3.9: EFs utilized to calculate livestock management impact**

	Enteric fermentation kg CH <sub>4</sub> head/year	Manure methane management kg CH <sub>4</sub> head/year	Dairy excretion factor kg N 1,000 kg live weight/day	Manure management N <sub>2</sub> O kg N <sub>2</sub> O-N (kg nitrogen/ excreted	% volatilization NH <sub>3</sub> and NOx slurry management	EF indirect N <sub>2</sub> O kg N <sub>2</sub> O-N (kg nitrogen/ excreted
Dairy livestock						
Chihuahua	99	71				
Chiapas	128	93	0.44	0.005	40	0.01
Jalisco	117	78				
Veracruz	128	85				
Beef livestock						
Chihuahua	99	71				
Chiapas	128	93	0.44	0.005	40	0.01
Jalisco	117	78				
Veracruz	128	85				

**Table 3.10: EFs utilized to calculate impacts from silvopastoril and agroforestry systems**

Production System	Initial Land use	EF biomass tC/ha	Soil carbon tC/ha	Fire	Final Land Use	EF BA* tC/ha	EF BS tC/ha
Silvopastoril	Annual Crop	1.1	22.6*** 20.30**	no	0.477	22	0.1
Agroforestry - shade grown coffee		2.1	22.6	no	2.43	24	0.5

Note: \*1st year, \*\*Jalisco, \*\*\*Veracruz and Chiapas.

## Results

16. **Net carbon balance.** The net carbon balance quantifies GHGs emitted or sequestered as a result of a 'project compared to the 'without project' scenario. **Over the period of 20 years, the project constitutes a net carbon sink of 1.63 million tCO<sub>2</sub>e**, 1.2 percent of the NDC mitigation target for the AFOLU sector by 2030.<sup>67</sup> On average, the annual GHG emission reduction is estimated at 81,262 tCO<sub>2</sub>e. The largest contributors to the expected emission reduction come from installation of agroforestry and silvopastoril production systems followed by restoration of secondary vegetation. Reservoirs from above-ground and below-ground biomass contribute 92 percent of the benefit, while soil reservoirs comprise 7 percent and livestock only 0.4 percent of the total climate benefit.

<sup>67</sup> The CONECTA cost of mitigation is US\$8.5/tCO<sub>2</sub>e; low compared with the range of US\$30-40 of the shadow price of carbon in economic analysis used by the World Bank and in the EFA of CONECTA.



**Table 3.11: Results of the GHG accounting analysis**

	Chiapas	Chihuahua	Jalisco	Veracruz	Total 20 years
<i>Component 1 – Avoided loss of grass and shrublands and forested areas</i>					
Primary vegetation	2,856	182,610	8,369	31,987	225,822
Secondary vegetation		19,003	3,082	36,821	58,906
<i>Component 3 – Interventions</i>					
Agroforestry/ Silvopastoril	181,657	0	194,828	442,877	819,362
Cattle	1,353	201	986	3,765	6,305
Restoration of secondary vegetation	128,710	128,710	128,710	128,710	514,842
<b>Total</b>					<b>1,625,237</b>

*Note:* In the case of Chiapas, disaggregated level data was only available for primary vegetation.



## ANNEX 4: Climate Risk Screening

### Overview

1. The climate risks of CONECTA were screened using the World Bank Climate and Disaster Risk Screening Tool for Agriculture Rapid Screening Assessment.<sup>68</sup> The screening concluded that the project's climate-related risk is Moderate. This is due to high climate change exposure of the targeted watersheds, particularly to drought, which will entail implications to agricultural activities, including water stress, heat stress on livestock, and reduced crop productivity. The climate risk is reduced to Moderate as the CONECTA design integrates climate change considerations as a key transversal development challenge across its four components: most of the project activities focus on promoting climate-smart practices such as ILM, conservation of soil moisture, and efficient water use related with regenerative livestock ranching and agroforestry systems to enhance climate resilience in the watersheds that will be selected for the main project interventions.

### Step 1: Exposure of the Project Location

#### Climate baseline

2. As the 15 targeted watersheds are located in the states of Chiapas, Chihuahua, Jalisco, and Veracruz across diverse ecoregions and climate zones of Mexico, the climate risk screening considers relevant information on temperature and precipitation changes at the national level with specific state-level references. The national climate baseline relates to a diverse topography and geography. The northern and central parts are very arid, arid, and semi-arid and occupy 56 percent of the territory. Thirty-seven percent of the area is sub-humid, found in the mountains and coastal plains of the Pacific, the Gulf of Mexico, and the northeastern Yucatan. Humid areas are in the remaining 7 percent of the territory. The country's location between two oceans and complex topography increases its exposure to extreme hydro-meteorological events such as tropical cyclones, frosts, heatwaves, and floods, and its climate is characterized by large regional differences.

3. **Temperatures in Mexico range** from 15°C to 20°C in the central upland areas to 23°C to 27°C in the coastal lowlands. The mean annual temperature is 20.6°C, with average monthly temperatures ranging between 15°C (January) and 25°C (June). The mean maximum annual temperature is 28.3°C, and the mean minimum annual temperature is 12.9°C. Seasonal temperature variations are minimal in the south but range from less than 10°C to 30°C in the summer in the country's northernmost areas. In the far north, rainfall is less than 50 mm per month throughout the year, while the southern regions and central highlands experience a distinct wet season from June to October, which averages 550 mm per month in the southernmost regions. From July to October, both the Atlantic and Pacific coasts are vulnerable to hurricanes and Mexico's weather is strongly influenced by El Niño events. El Niño brings relatively cool, wet weather to Mexico in the winter, followed by hotter and drier conditions in the summer. El Niño years are also likely to see an increase in the number of Pacific hurricanes.

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<sup>68</sup> The agriculture screening tool covers subsectors related to crops and land management, irrigation and drainage, livestock, rural transport, and storage and processing. The Rapid Screening Assessment is for users familiar with the screening process and with a good understanding of the risks that may impact their project. The screening applied an August 2020 guidance note for agriculture and was based on the relevant project and climate information available at the World Bank Climate Change Knowledge Portal, including Mexico Climate Risk Country Profile 2020, Climate-Smart Agriculture Country Profile 2015, and national documents.



4. **Rainfall is constant throughout the year** in Mexico and occurs predominantly in June through October. The mean annual precipitation is 725 mm, with steady rainfall occurring throughout the year, but occurring mostly from June to October.

#### Main projected climatic changes

5. **Mexico is projected to get hotter and drier throughout the rest of the century with a high likelihood of increased occurrence of extreme events.** Based on a CMIP5 Ensemble Projection 2020–2039 under the high emission scenario (RCP8.5), the annual temperature anomaly relative to current conditions is between +0.5 to +1.8 °C with a mean of +1.2°C. The projected rate of warming is similar in all seasons, but more rapid in the north (Chihuahua) and central regions (Veracruz) of the country. By midcentury, mean annual temperatures are projected to rise by 2.0°C and 4.0°C by end century. Warming is expected to occur most significantly and rapidly along the coast and in the northern arid zones. Increasing temperatures may also increase the likelihood for higher rates of evapotranspiration in some areas and increased period of aridity and drought in other areas, and agricultural productivity is expected to be adversely affected. All long-term projections by the 2060s and 2090s indicate decreases in the frequency of days and nights that are considered “cold” in the current climate.

6. **According to climate projections, precipitation will decrease in most of the country.** Some regions will be more severely affected than others. Precipitation changes include: (a) rainfall fluctuations between -14 mm and +33 mm in the northwestern parts of the country, including Chihuahua, and (b) severe decreases in rainfall of up to -114 mm in important food-producing states, including Jalisco and Veracruz. The annual precipitation anomaly (mm) between 2020 and 2039 is projected between -23.2 to -20.3 with a mean of -2.0 mm. Relative changes in projected rainfall show the strongest decreasing signal in dry season (December–February and March–May) rainfall. Maximum one- and five-day rainfalls tend toward negative changes in the dry seasons and positive changes during September–November. Consecutive dry days are projected to increase by 3 to 5.5 days. Extreme rainfall events are also expected to increase, with an estimated 13–18 percent increase in total annual precipitation occurring on extreme rainfall days by mid-century. The change in tropical cyclones and hurricanes are uncertain, although rainfall intensity is expected to increase in the Gulf of Mexico and East Pacific. Heavy precipitation events are expected to increase with an additional occurrence of extreme rainfall and extreme events such as flooding and are expected to impact rivers and surface water runoff during the summer rainy seasons. Under the RCP8.5, annual average precipitation is expected to decrease slightly by the end of the century.

#### Climate hazards and vulnerability

7. **Hydro-meteorological disasters occur with high frequency in Mexico.** These events range from severe tropical cyclones along both the Pacific and Atlantic coasts to heavy rainfall events occurring throughout the territory to high intensity storms, among others. Additionally, tsunamis continue to be an important threat along Mexico’s Pacific coasts. Drought is also a significant concern particularly for agriculture. Other hazards with notable impacts on the country include forest fires and landslides. Vulnerability from these hazards pose major challenges for economic stability and fiscal sustainability and have had adverse social and fiscal consequences. However, it has been typical that lower-income populations reside in more hazard-prone locations, with high potential for significantly increased exposure. Veracruz and Jalisco are among the states that have pockets of high population density and face significant potential disaster losses.



8. **Mexico is highly vulnerable to climate variability and change that is expected to significantly impact agriculture, water, and forestry, among other sectors.** Decreasing rainfall and increasing risk and intensity of flooding and likelihood of extreme events, especially heavy rainfall, are expected. Intense rainfall and flooding may increase the likelihood of mudslides and landslides particularly in mountainous areas. Increased incidence of extreme rainfall may also result in soil erosion and water logging of crops, thus decreasing yields and increasing food insecurity. Rising temperatures are also likely to increase the periods of aridity in some areas. Importantly, higher temperatures and drought threaten to reduce water storage capacity, which may result in significant economic losses, damage to agricultural lands and infrastructure, as well as human casualties. Furthermore, land degradation and soil erosion, exacerbated by recurrent flood, adversely impacts agricultural production, disproportionately affecting the livelihoods of the rural poor. In particular, the availability of freshwater resources has cascading impacts on other sectors. Environmental degradation, declining water resources, and loss of biodiversity and ecosystem services constitute serious obstacles to developing tourism in Mexico. Consequences of increases in temperature and flood and drought risk lead to loss of forest ecosystems and have adverse implications for human health. The increase in temperature can have a negative impact on key economic activities, including forestry, agriculture, and livestock. Changes in precipitation parameters can have far-reaching consequences for ecosystems and biodiversity, food production, the water industry, and rivers.

#### Agriculture and climate change

9. **Agriculture is critical to Mexico's economy and food security as the third most important economic activity, while it is expected to be among the hardest hit sectors from climate change, especially among smallholder farmers** heavily dependent on rainfed agriculture. Deforestation and watershed degradation exacerbate climate concerns through increased effects of flooding and droughts. Among recent severe sector impacts, one of the worst droughts in nearly 50 years in 2017 in Oaxaca resulted in the loss of over 1,500 head of cattle in the Isthmus region. In Veracruz, the effects of heat stress on livestock could reach 'danger level', in which significant losses occur. The southern parts of the country face tropical storms that often damage crops and livestock extensively. Coffee is an important export crop that supports 500,000 primarily indigenous households and is projected to decline in production by 34 percent as temperatures continue to rise and rainfall continues to decrease. Water shortages are expected to become a critical concern for Mexican agriculture and is of strong concern in Chihuahua and Chiapas, while farmers in Chiapas also face sudden and heavy rains, floods, and rising temperatures.

10. **Climate change is expected to further exacerbate agriculture and food security challenges.** Potential threats include: (a) increases in average temperature that can affect crop yields and exacerbate dry seasons; (b) changes in seasonal precipitation that can force shifts in planting seasons and trigger pest outbreaks; and (c) more frequent or extreme weather events, such as floods, droughts, and heat waves, which can harm agricultural and livestock systems as well as impact food shortages.

11. **Increased temperatures are expected to increase pests and incidence of drought, which coupled with reduced rainfall are expected to reduce yields in key crops such as coffee.** An increase in the frequency and duration of extreme storms is likely to increase food insecurity for subsistence farmers and/or indigenous communities, possibly leading to urban migration. The projected increased heat will increase livestock mortality and stress on crops and alteration of the length of the growing seasons. Decreased water availability and increased temperatures are likely to reduce yields or result in crop failure through increased evapotranspiration and may even alter suitable areas for agriculture or the production of specific crops.



12. **Smallholder farmers are highly vulnerable to climate variability and change.** Potential climate impacts related to crops and land management in the targeted project area include: (a) higher temperatures that can increase evapotranspiration (reducing soil moisture), shift or change the length of growing season, adversely affect ground cover, and cause crop yields to fall; (b) higher temperatures combined with flooding that can increase the prevalence of pests and invasive species; (c) increased precipitation that can cause heavy soil erosion, landslides in mountainous and hilly areas, loss of crops and vegetation, and increased runoff of pollutants such as fertilizer. Potential impacts related to livestock include: (a) higher temperatures that increase heat stress on livestock, reducing their productivity; (b) drought that can reduce or eliminate sources of water for livestock; and (c) flooding that can cause loss of livestock. In northern Mexico including Chihuahua, farmers are vulnerable to extreme climate events, such as drought and frost. In southern states including Chiapas, farmers lack access to information and new technologies to improve production. In the southwestern state of Veracruz, farmers also face severe climate risks, such as floods and pest infestations.

13. **The exposure risk of the watersheds targeted by the project is rated as High** as vulnerability to climate change was among the key criteria the INECC applied to select the 15 watersheds targeted by CONECTA. In said areas, climate change scenarios project varying ranges of increase in temperature and decrease in precipitation. In Chihuahua, worsening drought conditions combined with ongoing depletion and overexploitation of the aquifers represent a latent E&S problem, exacerbated by the concessions granted for agricultural purposes without due consideration of water needs for human consumption and environmental flows.

14. **The National Atlas of Vulnerability to Climate Change<sup>69</sup> of the SEMARNAT and INECC will be used** to consider the best available climate information at the municipal level to guide the development of new and strengthening of existing IWAPs, which will guide the design and selection of the eligible activities under Components 2 and 3.

## **STEP 2A: Modulation of Risks by Soft Components**

15. **The CONECTA design incorporates recent trends and future projected changes in the relevant identified climate hazards.** The IWAPs developed under Component 1 will guide the implementation of the project activities under the other components. The IWAPs will integrate the best available climate information with technical leadership from the INECC, the national entity in charge of the climate change agenda. Relevant existing studies and models, for example, on climate change scenarios applying the National Atlas of Vulnerability to Climate Change and impacts of livestock production on water bodies will be used, updated, and completed according to the latest methods for developing IWAPs.<sup>70</sup> Further, the project activities under Components 2 and 3 build upon generally recognized climate-smart practices,<sup>71</sup> and climate-related capacity building will form an integral part of all the training and TA delivered to the beneficiaries.

<sup>69</sup> See <https://atlasvulnerabilidad.inecc.gob.mx/>.

<sup>70</sup> See <https://cuencas.cms.matrushka.com.mx/> for additional information on the IWAPs.

<sup>71</sup> Climate-smart agriculture (CSA) aims to simultaneously achieve three outcomes: (a) increased productivity: produce more food to improve food and nutrition security and boost the incomes of 75 percent of the world's poor, many of whom rely on agriculture for their livelihoods; (b) enhanced resilience: reduce vulnerability to drought, pests, disease, and other shocks; and improve capacity to adapt and grow in the face of longer-term stresses like shortened seasons and erratic weather patterns; (c) reduced emissions: pursue lower emissions for each calorie or kilo of food produced, avoid deforestation from agriculture, and identify ways to absorb carbon from the atmosphere.





16. Under Component 1, cross-sectoral policy dialogue and strategic planning will cover, for example: (a) integration of climate change considerations at regional and national levels, for example, within development strategies for water; (b) mainstreaming climate change considerations in all agricultural sector management plans and programs to improve drought-resilient agricultural production and incentivize climate-smart practices; (c) promotion of agricultural sector policies benefit local-level production and CSA; and (d) supporting producers' access to rural finance that integrates climate-smart criteria to increase their ability to cope with climate hazards.

33. As relevant to specific productive activities, the beneficiary PGs under Components 2 and 3 will be familiarized, for example, on: (a) risks associated with slow-onset changes such as shifting seasons, that is, delayed onset/early cessation of rains, drier/wetter than normal conditions, and changes in evapotranspiration; (b) climate risks affecting crop/livestock production and scale-up of good practices for improved productivity (for example, improved seed/breed/planting material); (c) interlinkages of non-climate threats to agricultural production, such as loss of soil nutrients; (d) impacts of drought on the quantity and quality of pasture; and (e) soil and water conservation practices to improve water security amidst changes in precipitation patterns. Importantly and considering insecurities embedded in climate projections, activities under CONECTA will not 'lock in' certain decisions for the future that might decrease adaptive capacity, but they promote continued learning and capacity building for adaptive management in productive decisions among different stakeholders at different levels. Additionally, RÍOS, a parallel project that will be implemented by the FMCN and INECC during 2021–2026 with financing from the GCF, will implement complementary activities to measure climatic vulnerabilities in selected areas in Jalisco and Veracruz.

34. Capacity building, training, and outreach to the beneficiary producers/processors will cover, for example: (a) locally suited drought/flood-resistant crops among Climate Resilient Agriculture (CRA) practices; (b) coping with increasing irregularity of rainfall and efficient water use; and (c) capacity to access and apply climate information, including long-term weather forecasting and better seasonal forecasts. Promoting land and crops management practices will cover, for example: (a) investments in sustainable land use/CSA practices (agroforestry, SPS, intercropping, crop rotation, and diversification/biodiversity enhancements); (b) early control and detection systems for pests and diseases; and (c) optimization of farm management practices conditioned by climate. Climate-smart livestock practices will cover, for example: (a) animal health; (b) adoption of breeds better adapted to the prevailing climate; (c) mixed crop-tree-livestock systems (including silvopasture); and (d) on-farm water, feed, and animal management.

35. Regarding improved organization of PGs, CONECTA will tackle opportunities for adaptation planning by horizontal integration of producers regarding the management of water to prioritize the development of water management models at a basin level. Improved practices regarding sustainable land management and prioritization of adequate use of livestock production systems in environmentally sound grazing systems and crop sequences can support the conservation of natural grasslands and native forests.

36. Specific to promotion of CSA practices, CONECTA will promote: (a) policies that create relevant incentives, for example, for agroforestry and SPS; (b) management of animal diet and use of biodigestors; (c) knowledge exchange strategies for increasing the productivity and resilience of Mexico's agricultural sector, including creation and support for communities of practice (CoPs) at different levels comprising public, private, and academic actors to maximize knowledge generation, collection, and dissemination; (d) strengthening participative governance and management at landscape and watershed levels, including farmers associations, *comunidades*, and *ejidos*, to help increase productivity by creating economies of scale promoting landscape connectivity across



fragmented land tenure in Mexico dominated by small farm plots; and (e) creation of business skills, for example, to access agricultural loans to promote sustainable farmer-led investments.

#### Gender considerations

37. The gender analysis conducted for CONECTA during project preparation identified gender disparities in terms of access to productive and financial assets that limit women's participation in productive agricultural activities. Climate change has exacerbated such disparities as well as the barriers women face in rural areas of Mexico to access said assets. CONECTA will actively search for and integrate female beneficiaries' feedback and data inputs, covering also potential incidence of GBV. The project will address the barriers women face by considering their requirements for CSA support through specific outreach, training, and prioritizing engagement by female beneficiaries. CONECTA has a GAP (see Annex 3) that includes, for example, a more detailed gender assessment and analysis as part of the TA under Component 2 and regenerative and sustainable productive subprojects under Component 3, including differentiated impacts based on gender, barriers women face to move along project-supported value chains, gender roles at the family level and impacts on women as decision makers in production activities, and participation of women in decision-making spaces. Based on said results, gender training will be provided, and the recommendations will be implemented with proper monitoring and supervision of the results.

#### **Step 2B: Sector and country context of the project**

38. **Mexico counts with a core enabling environment to reduce climate-related risks to the main project activities**, while the latter will actively promote further strengthening of said enabling environment at different levels as presented under Step 2A above. The project's agriculture sector and social, economic, and political context is expected to reduce the current and future climate-related risk as there is a strong demand for planned project activities at each level and among the broad set of the stakeholders engaged that support the project objectives. Further, the national-level climate change agenda has been stronger than in many peer countries since the late 2000s, with such highlights as Mexico being one of the first countries to adopt a voluntary mitigation target in 2008 and approval of a General Climate Change Law (GLCC) in 2012. The GLCC defines the planning and policy instruments and institutional arrangements to provide Mexico the general guidance for the implementation of climate activities and related policies. Related efforts are led by the SEMARNAT, whose mandate is to formulate and guide national climate change policy, while the INECC, a decentralized public agency, and the National Climate Change System support effective coordination between the three levels of government and cooperate with the public sector and PS.

39. Mexico has established, for example, the National Strategy on Climate Change, Vision 10-20-40, and has presented six National Communications with respective GHG inventories to the UNFCCC. In 2015, Mexico was the first country to develop and release its post-2020 climate action plan; the Intended Nationally Determined Contributions. Mexico's climate change adaptation strategies focus on the preparation and strengthening of institutional frameworks for responsible environmental management, improved management of climate change effects, and economic development targets. Institutions and mechanisms are in place to monitor the reduction in GHG emissions and strengthen the country's social and economic structures against vulnerability. At the sub-national level, states and municipalities have also embarked on state-level GHG inventories and climate programs, which are reflected in individual state-level climate change plans.

40. Regarding identified climate-related gaps, CONECTA will contribute to: (a) strengthen environmental monitoring capabilities for more effective and climate-smart environmental management; (b) implement, systematize, and disseminate cross-sectoral climate-smart solutions at the national and subnational levels; and (c) integrate climate change concerns into relevant policies and planning processes at the state and national levels.

### **Step 3: Risk to the Outcome/Service Delivery of the Project**

41. As presented above and along the PAD, many of the CONECTA soft components directly focus on promoting climate-smart practices and reducing climate-related vulnerability and impacts. However, particularly short-term development outcomes, for example, in terms of increased productivity of the beneficiary PGs may still result subject to negative impacts of extreme weather events during the four-year period the groups receive active project support. As many of the climate-smart practices the project will promote require some years of implementation on the ground before yielding full benefits particularly in degraded agricultural lands, an important target for CONECTA, **the project's climate-related risk is rated as Moderate.**



## **ANNEX 5: Summary of the CONECTA Linkages with the FOLUR Global Platform**

1. The GEF-7 FOLUR IP has two main elements: (a) a GP and (b) 27 CPs until October 2020. The design of the IP reinforces that the global projects and CPs need to work together so that the whole of FOLUR achieves impacts that are 'greater than the sum of the parts'.
2. To achieve transformation in food systems and commodity production practices at a global scale, the country-level efforts and global efforts need to work together on key issues and strategies, engage key private and public sector actors, and advise on policies that shift producers' incentives toward sustainability. This two-level approach facilitates innovations and collaborations that can reach further with greater impact than either the global engagement or the country engagement alone. For example, working together, regional/commodity groups of countries can work with the GP to influence value chain policies and practices from the top down and the bottom up. The GP and CPs can work together to influence financial institutions at the global level to have impacts on the sustainability practices of producers at the commodity and landscape levels. Similarly, in global events, such as the Conferences of Parties of Multilateral Environmental Agreements or the UN Food Systems Summit, the FOLUR partners, both GP and CPs, will present a stronger vision and message backed by sound analysis and evidence built on concrete examples and experience from the field.
3. The GP will act at global and regional levels, bringing parties together, nurturing regional and multi-country partnerships, analyzing issues and developing evidence for improved practices, and facilitating the flow of knowledge and lessons learned across boundaries. Working with the CPs, it offers capacity building, TA, policy dialogue and engagement, resource mobilization, and knowledge exchange to facilitate more concerted collective action, and more coordinated and integrated interventions; scaled-up investment with a faster pace and greater impact; and the need for policy harmonization and subsidy repurposing, financial innovation and leverage, and outreach to existing and new stakeholders.
4. The GP will also provide the oversight, coordination, monitoring, and reporting functions needed for the IP to achieve its objectives. It provides the means for involving the Core Partners,<sup>72</sup> IAs, and CPs in a collaborative network to facilitate and scale up implementation, two-way communication, and a flexible and adaptive work planning process. The GP team will manage the liaison and reporting to GEF Secretariat, including M&E of progress and results for the entire FOLUR IP. At the same time, CPs will be responsible for including appropriate M&E indicators in their design for reporting on progress to the GP regularly and on time; the CONECTA budgeted M&E plan describes the applicable indicators.
5. The World Bank as the GEF IA in case of CONECTA will be the focal point for liaison between the GP and CONECTA. Below Table 5.1 closely replicates the latest guidance received from the GP on areas where the CPs and the GP can work effectively together on cross-country learning, supporting regional commodity value chains, and aggregating messages to global venues and players. Table 5.1 presents the expected engagement opportunities for CONECTA to make the most of the interaction with the GP during implementation, while related budget needs have been incorporated in the CONECTA budget.

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<sup>72</sup> IFC, FAO, the GGP of the UNDP, the FOLU co-led by the WRI, and the GLF



CONECTA Opportunities for Strengthening Engagement between CPs and GP for Mutual Benefit in Achieving FOLUR IP Objectives		
FOLUR Activities	Global Platform Responsibilities & Actions	CONECTA Responsibilities & Actions
<b>Pillar A: Program Capacity Strengthening</b>		
<ul style="list-style-type: none"> <li>• Increase capacity to deliver on program objectives through training for CPs</li> </ul>	<ul style="list-style-type: none"> <li>• Identify training programs/products available.</li> <li>• Organize and promote training sessions to CPs or relevant value chain actors.</li> </ul>	<ul style="list-style-type: none"> <li>• Allocate staff time to participate in trainings and capacity-building events.</li> <li>• Bring learning back to relevant audiences (CONECTA team, targeted landscapes, stakeholders and commodity value chain actors).</li> <li>• Consider where CP learning or experts can contribute to global/ regional training events.</li> </ul>
<ul style="list-style-type: none"> <li>• Address key gaps and promote innovations through targeted TA to CPs</li> </ul>	<ul style="list-style-type: none"> <li>• Design and staff TA initiatives in areas where groups of CPs have identified demand and specific needs.</li> <li>• Link TA opportunities to global and regional gatherings for efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with the GP &amp; other CPs to identify joint TA and training needs to fill gaps or implement innovations.</li> <li>• Respond to needs assessments on TA demands.</li> <li>• Share knowledge and lessons learned within project landscapes, value chain actors and relevant national audiences.</li> </ul>
<ul style="list-style-type: none"> <li>• Launch Communities of Practice - CoPs</li> </ul>	<ul style="list-style-type: none"> <li>• Launch and organize CoPs and maintain online platform.</li> <li>• Launch CoPs on gender, commodities and other issues identified through demand.</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in relevant CoPs by sharing knowledge and incorporating learning into project and sharing knowledge with project stakeholders and commodity actors.</li> </ul>
<b>Pillar B: Policy and Value Chain Engagement</b>		
<ul style="list-style-type: none"> <li>• Engage private sector agents and organizations on policies, practices, &amp; financing toward sustainability outcomes, at global, regional and country level</li> </ul>	<ul style="list-style-type: none"> <li>• Catalyze country level engagement with private sector to transform commitments into actions by providing dialogue opportunities, regular participation in round tables.</li> <li>• Consult with Core Partners, IAs and CPs to align on strategic engagements and plan TA or advisory services to catalyze opportunities for scaling, leveraging, replicating.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and mobilize relevant partners at country level; link with global events and processes.</li> <li>• Lead on country level engagement with producers, SMEs, local finance institutions to complement outreach and engagement at regional and global scale.</li> <li>• Collaborate with GP opportunities for engagement with national or multinational companies.</li> <li>• Participate in needs assessment surveys related to private sector engagement needs and opportunities.</li> </ul>



	<ul style="list-style-type: none"> <li>• Advance sustainability dialogue and practices through private sector forums, targeted analytics and KM.</li> <li>• Leverage responsible investments through regular, regional finance forums, deal brokering.</li> </ul>	
<ul style="list-style-type: none"> <li>• Participate in commodity roundtables to access private sector audiences</li> </ul>	<ul style="list-style-type: none"> <li>• Lead on engagement with regional and global roundtables.</li> <li>• Highlight CPs' work strategically with roundtables and identify opportunities for training, outreach and private sector partnerships.</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in relevant national or regional commodity roundtables and multi-stakeholder platforms.</li> <li>• Participate in the work of the Mexican Roundtable for Sustainable Livestock (MRSL).</li> <li>• Share results, findings and impacts with other CPs and the GP through CoPs and regular exchanges.</li> </ul>
<ul style="list-style-type: none"> <li>• Advance country policy reforms and incentives toward achieving sustainability and restoration commitments.</li> </ul>	<ul style="list-style-type: none"> <li>• Consult with Core Partners, IAs and CPs to align on strategic engagements.</li> <li>• Stimulate public sector investment through upstream planning plus investment mobilization, where opportunities at CP level are identified.</li> <li>• Advance country dialogue on sustainability and policy reforms toward improved production, restoration practices, standards and incentives.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and share key public sector issues limiting FOLUR agenda from scaling in-country through CoPs and regular dialogue with the World Bank, Core Partners and the GP.</li> <li>• Identify and promote opportunities for policy reform or public sector engagement based on local knowledge and specific engagement/TA needs for global expertise available through the GP.</li> </ul>
<ul style="list-style-type: none"> <li>• Targeted flagship reports on key issues for public and private sector engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Lead flagship studies addressing key issues and opportunities in FOLUR landscapes / commodities.</li> <li>• Collaborate with Core Partners, CPs, and external parties for data, successes, case studies.</li> </ul>	<ul style="list-style-type: none"> <li>• Suggest relevant topics for reports.</li> <li>• Contribute case studies to reports.</li> </ul> <p>Promote flagship report findings in-country through seminars and outreach.</p>
<ul style="list-style-type: none"> <li>• Create innovation funds on key issue areas like private sector and gender</li> </ul>	<ul style="list-style-type: none"> <li>• Support the design phase of innovation funds.</li> <li>• Consult / survey CPs on practical needs for access to / use of innovation funds</li> <li>• Engage private sector / financial sector / and other relevant financial institutions in the mobilization of these innovative instruments</li> </ul>	<ul style="list-style-type: none"> <li>• Contribute ideas for innovation fund topics.</li> <li>• Respond to surveys and follow up focus groups or comment processes to ensure the practicality and responsiveness of the instrument to CONECTA needs.</li> <li>• Promote innovation fund domestically, where relevant based on CONECTA aims and focus on sustainable livestock and agroforestry value chains.</li> </ul>





Pillar C: Strategic Knowledge Management and Communications		
<ul style="list-style-type: none"> <li>Conduct communication and outreach to manage and expand public outreach on FOLUR issues</li> </ul>	<ul style="list-style-type: none"> <li>Consolidate work on sharing of lessons and best practices, and outreach for strategic knowledge products.</li> <li>Identify and prioritize evidence-based KM and communications products that CPs can use to engage policymakers with timely links to local decision processes.</li> </ul>	<ul style="list-style-type: none"> <li>Through the WB, share updates regularly with the GP Communications Officer.</li> <li>Use communications and outreach materials for in-country engagement.</li> <li>Participate in periodic needs assessment surveys and FOLUR IP Annual Meetings to guide knowledge and outreach product development.</li> </ul>
<ul style="list-style-type: none"> <li>Focused KM on prioritized issues and gaps</li> </ul>	<ul style="list-style-type: none"> <li>Establish technical working groups on regions, themes and commodities with IAs / Core Partners</li> <li>Provide direct KM and communications support on cross-cutting issues facing CPs - gender and private sector engagement.</li> <li>Develop guidance notes and policy briefs on key technical approaches &amp; best practices.</li> </ul>	<ul style="list-style-type: none"> <li>Identify opportunities for communications support on gender and private sector engagement based on local and national context.</li> <li>Review and feedback on development of guidance notes and integrate into implementation.</li> </ul>
<ul style="list-style-type: none"> <li>Engage strategically in events to strengthen linkages across partners and scales</li> </ul>	<ul style="list-style-type: none"> <li>Lead representation in global and regional events to strengthen linkages across partners, at country, regional, and global levels, and increase the overall reach of the Program.</li> </ul>	<ul style="list-style-type: none"> <li>Participate in regional and global events in coordination with the GP. Share suggestions for upcoming events where GP or CP participation can add value regionally/globally.</li> </ul>
<ul style="list-style-type: none"> <li>Document lessons learned and project achievements; produce and exchange Knowledge Products</li> </ul>	<ul style="list-style-type: none"> <li>Gather information from CPs and share via newsletter, website, other outreach materials.</li> <li>Populate and cross-link website to cite / reference CP achievements.</li> <li>Develop knowledge products to share lessons &amp; best practices, conduct outreach, use tools for scale up and replication through web presence and knowledge bank.</li> <li>Synthesize success stories, achievements, and lessons learned from CPs for global events and outreach and across the CPs.</li> </ul>	<ul style="list-style-type: none"> <li>Develop, consult, edit and refine brief documents for lessons learned.</li> <li>Regularly exchange information about lessons learned and provide feedback on relevance/format of knowledge products through CoPs, plus regular dialogue channels.</li> <li>Document and share lessons, insights and achievements regularly.</li> </ul>



<ul style="list-style-type: none"> <li>• Ensure coordinated communications and outreach strategy and overall narrative of impact</li> </ul>	<ul style="list-style-type: none"> <li>• Share comms strategy and branding guidelines with IAs.</li> <li>• Lead global social media presence.</li> <li>• Develop and share global narrative on FOLUR cumulative impact and integrate similar CP-level stories to demonstrate synergies.</li> </ul>	<ul style="list-style-type: none"> <li>• Train relevant staff in communications and branding guidelines. Cross link websites. Follow FOLUR social media channels.</li> <li>• Relay to GP communications officer proactively about any project press coverage to amplify or mitigate.</li> <li>• Use CONECTA Communications Officer to create achievement stories regularly.</li> </ul>
<b>Pillar D: Program oversight, Coordination and M&amp;E</b>		
<ul style="list-style-type: none"> <li>• Annual meeting and work planning process</li> </ul>	<ul style="list-style-type: none"> <li>• Plan and execute annual meeting.</li> <li>• Lead consultative annual work planning process with CP inputs through IAs and Core Partners.</li> </ul>	<ul style="list-style-type: none"> <li>• Send CONECTA representatives to annual meeting.</li> <li>• Prepare planning inputs and assess needs in advance.</li> <li>• Constructively participate in work planning process through the WB and Core Partners.</li> <li>• Respond to surveys and needs assessments timely.</li> </ul>
<ul style="list-style-type: none"> <li>• Annual report development and dissemination</li> </ul>	<ul style="list-style-type: none"> <li>• Engage with CPs to gather and document success stories to feature in the annual report.</li> <li>• Reflect the results reporting of CPs and amplify their ability to communicate with GEF, partner agencies, and the wider community about achievements and strategies.</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare CONECTA Annual Report and submit to the GP in a timely manner.</li> <li>• Respond to requests for information in a timely manner.</li> <li>• Disseminate annual report to relevant stakeholders.</li> <li>• Share similar CP Annual Reports through FOLUR website cross links.</li> </ul>
<ul style="list-style-type: none"> <li>• Regular check-in calls and field visits</li> </ul>	<ul style="list-style-type: none"> <li>• Schedule and lead regular contacts for GP – CP engagement through IAs.</li> <li>• Conduct periodic visits (incl. virtual) to facilitate collaboration &amp; cross-country learning.</li> </ul>	<ul style="list-style-type: none"> <li>• Dedicate staff time to participate in coordination calls.</li> <li>• Identify opportunities or field sites relevant for showcasing CONECTA best practices, innovative approaches, or needs for TA and troubleshooting.</li> </ul>
<b>Monitoring &amp; Evaluation</b>		
<ul style="list-style-type: none"> <li>• M&amp;E plan implemented with annual data collection and synthesis.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide guidance note on M&amp;E to all IAs/CPs.</li> <li>• Facilitate the reporting of CP progress and help ensure that this reporting is timely, adequate and allows for aggregation of data.</li> </ul>	<ul style="list-style-type: none"> <li>• Include relevant FOLUR IP indicators in the design of CONECTA Results Framework.</li> <li>• Implement M&amp;E plan and report on any issues or divergences in timely fashion.</li> <li>• Allocate staff time to regular follow-up conversations with the GP M&amp;E coordinator.</li> <li>• Collect data to fulfill M&amp;E reporting requirements for all relevant field sites and participants.</li> </ul>



<ul style="list-style-type: none"><li>• Data verification and formatting</li></ul>	<ul style="list-style-type: none"><li>• Provide guidance on verifying and formatting data to CP M&amp;E officers.</li></ul>	<ul style="list-style-type: none"><li>• Allocate staff time to review and clean data before sharing with the GP and GEF.</li></ul>
<ul style="list-style-type: none"><li>• Aggregation and public reporting of data</li></ul>	<ul style="list-style-type: none"><li>• Collect and review CP M&amp;E data.</li><li>• Package data for public and funder review as part of annual report.</li></ul>	<ul style="list-style-type: none"><li>• Share M&amp;E results with relevant stakeholders.</li></ul>

## ANNEX 6: CONECTA Map

