

## Fostering sustainable, legal and traceable use and trade of wild native species in Mexico

### Part I: Project Information

**GEF ID**

10689

**Project Type**

FSP

**Type of Trust Fund**

GET

**CBIT/NGI**

☐ CBIT

☐ NGI

**Project Title**

Fostering sustainable, legal and traceable use and trade of wild native species in Mexico

**Countries**

Mexico

**Agency(ies)**

UNDP

**Other Executing Partner(s)**

SEMARNAT

**Executing Partner Type**

Government

**GEF Focal Area**

Biodiversity

**Taxonomy**

Focal Areas, Biodiversity, Mainstreaming, Forestry - Including HCVF and REDD+, Species, Wildlife for Sustainable Development, Protected Areas and Landscapes, Terrestrial Protected Areas, Productive Landscapes, Community Based Natural Resource Mngt, Influencing models, Strengthen institutional capacity and decision-making, Stakeholders, Indigenous Peoples, Local Communities, Type of Engagement, Participation, Information Dissemination, Consultation, Communications, Awareness Raising, Public Campaigns, Private Sector, Individuals/Entrepreneurs, Financial intermediaries and market facilitators, Beneficiaries, Civil Society, Community Based Organization, Academia, Non-Governmental Organization, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Gender results areas, Access and control over natural resources, Participation and leadership, Capacity Development, Access to benefits and services, Capacity, Knowledge and Research, Learning, Knowledge Exchange, Knowledge Generation

**Rio Markers****Climate Change Mitigation**

Climate Change Mitigation 1

**Climate Change Adaptation**

Climate Change Adaptation 1

**Duration**

60 In Months

**Agency Fee(\$)**

881,257.00

**Submission Date**

9/28/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-1-1	GET	6,854,220.00	34,090,000.00
BD-2-7	GET	2,937,523.00	14,610,000.00
Total Project Cost (\$)		9,791,743.00	48,700,000.00

## B. Indicative Project description summary

### Project Objective

To promote the sustainable, legal and traceable use and trade of wild native species in order to reduce biodiversity loss and improve livelihoods in selected landscapes throughout Mexico.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Ecosystem integrity	Technical Assistance	<p>1.1. Increased biodiversity conservation and ecosystem connectivity through newly created UMA/UMAFORES in key biodiversity areas (KBA) adjacent to Natural Protected Areas (PAs).</p> <p>Indicators:</p> <p>GEF Core Indicator 1.1 50,000 Ha of protected areas under improved management for conservation and sustainable use;</p> <p>GEF Core Indicator 4.1 500,000 Ha. of landscapes under improved practices (excluding protected areas)</p> <p>Project Indicator: Fragmentation Index rating (estimated by GIS).</p> <p>1.2. UMA/ UMAFORES systems strengthened to conserve, reproduce, reintroduce (if necessary and feasible) and sustainably use selected species, as indicated by:</p>	<p>1.1.1 New UMA/UMAFORES created in key biodiversity areas serve as productive buffer zones around Natural Protected Areas (PA) and as biological corridors between them, improving landscape connectivity.</p> <p>1.1.2 Maps of UMA / UMAFORES show:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Increased area coverage under conservation and sustainable management schemes.</li> <li><input type="checkbox"/> Strengthened connectivity between UMA/ UMAFORES and neighboring PAs.</li> </ul> <p>1.2.1 The UMA / UMAFORES model, and selected units recognized for satisfactorily meeting conditions of sustainable management and recognized as other effective area-based conservation measures.</p>	GET	3,263,915.00	16,233,333.00



GEF Core Indicator 1.2 Change in METT score of selected PAs.  
 Project Indicator: Population level of selected species and their habitat improved / not deteriorated, as a result of project's focused biodiversity conservation interventions through sustainable use.  
 Project Indicator: # of management plans created and updated with standardized methodologies by group of species.  
 Project Indicator: # of forestry and wildlife technicians trained to manage UMA / UMAFORES and # of government personnel to evaluate their operation.  
 Project Indicator: # of management plans per UMA/UMAFOR updated in line with standard management plans created

1.2.2. Management plans with standardized methodologies and best practices for the sustainable use of selected species by Indigenous Peoples and Local Communities (IPLC).  
 1.2.3. Effective technical capacities of wildlife and forestry technicians for UMA/ UMAFORES management and of government personnel in charge of evaluating their operation.  
 1.2.4 Capacities created in target IPLC to carry out participatory monitoring of the state of their ecosystems and species.  
 1.2.5 Module 1 of MACOVIS is generated.

Governance and trade	Technical Assistance	<p>2.1. Community-based business models established to allow small enterprises to sustainably use biodiversity with enhanced value chains through strategic alliances with multiple stakeholders and multiple sectors.</p> <p>GEF Core Indicator 11: 3,000 direct beneficiaries (1,500 women) as co-benefit of GEF investment.</p>	<p>2.1.1. Analysis of national and international markets for selected species (including current market limitations).</p> <p>2.1.2. UMA/UMAFORES groups with similar conditions organized to meet needs, training and get support.</p> <p>2.1.3. Technical and commercial information exchange networks established.</p>	GET	2,797,641.00	13,914,286.00
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Project Indicator # of technical and commercial information exchange networks established	2.1.4. IPLC capacities strengthened for self-governance and trade.
Project Indicator: # of sustainable business plans developed	2.1.5. Sustainable business plans (realistic and grounded) developed and implemented.
Project Indicator: # of distribution networks established with tracing mechanisms	2.1.6. Value chains and fair-trade opportunities identified for products of selected species.
2.2. Diversified sources of income (species and products) for UMA/UMAFORES by increasing access to national and international markets	2.1.7. Long-term financing for UMA/UMAFORES:
Project Indicator: % increase in net income IA # producers/ IPLC implementing business plans for sustainable products	i. UMA/UMAFORES-generated production and expanded legal trade provides sufficient income to ensure long-term budget to sustain the UMA/UMAFORES.
Project Indicator: # of selected species and new species/products under management per UMA/UMAFORES	ii. Public-private partnerships between Indigenous Peoples and Local Communities (IPLCs) and investors, companies and markets established to provide increased income streams from legal and sustainable natural resource use activities occurring in the targeted UMA/UMAFORES.
Project Indicator: # of diversified business plans that include access to preferential markets and products made for end users	2.1.8. Distribution networks established with tracing mechanisms (labelling, document traceability, etc.)
	2.2.1 Capacities created in target communities to carry out participatory monitoring of the

economic impact of the projects.

2.2.2 Catalog of selected species and new species/products under management for legal and sustainable use made available to fair marketing mechanisms and with redistributive principles

2.2.3 Diversified business plans for communities include access to preferential markets and products made for end users

2.2.4 Sustainable production models implemented for selected species, allowing the inclusion of more species in the short term and diversification of the supply.

2.2.5 Report of the developed business plans and maps of value chains generated.

2.2.6. Module 2 of MACOVIS is generated.

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Inspection and surveillance capacities	Technical Assistance	<p>3.1 Effective community-based participatory inspection and surveillance committees for legal species trade (LST) in place to support law enforcement actions.</p> <p>Project Indicator:</p> <p># of UMA/ UMAFORES with functional and funded community- based LST surveillance committees and monitoring system.</p>	<p>3.1.1 Toolkit to strengthen the inspection and surveillance capacities of LST at national and international level (species and product identification guides, trafficking routes).</p> <p>3.1.2 Functional and funded community-based LST inspection and surveillance committees.</p> <p>3.1.3 Module 3 of MACOVIS is generated.</p>	GET	1,865,094.00	9,276,190.00
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Monitoring and knowledge management (KM): dissemination, outreach and replication	Technical Assistance	<p>4.1 Systematized and shared information on legal, sustainable and traceable trade of wild species with relevant international and national partners.</p> <p>Project Indicator: # of materials created and made available in the main indigenous languages</p> <p>Project Indicator: MACOVIS established and receiving uploads from stakeholders, particularly IPLC</p> <p>4.2 Monitoring and Evaluation (M&amp;E) assesses project impact and guides adaptive management, measured by % implementation of the project's M&amp;E Plan, Indigenous People and Local Communities Plan (IPLCP), Stakeholder, Stakeholder Engagement Plan (SEP) and Gender Action Plan (GAP).</p>	<p>4.1.1 Dissemination and communication strategies are established on trade and species, available in the main indigenous languages</p> <p>4.1.2 Strategy for disseminating knowledge generated at various local, national and international levels (e.g. website, reports, monitoring of results in international forums).</p> <p>4.1.3 Information on UMA projects and/ or products are publicly accessible and meet transparency standards.</p> <p>4.1.4 The Comprehensive System for Monitoring, Sustainable Use and Trade of Wild Species (MACOVIS) is developed, implemented and financed.</p> <p>4.1.5 Capacity created among IPLC, technical service providers, state and municipal authorities to upload information to MACOVIS, and monitor it.</p> <p>4.2.1 Project's M&amp;E Plan, IPLC Engagement Plan and Gender Action Plan implemented, ensuring the achievement of the planned goals.</p>	GET	1,398,821.00	6,957,143.00
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Sub Total (\$)

9,325,471.00

46,380,952.00

Project Management Cost (PMC)

GET	466,272.00	2,319,048.00
Sub Total(\$)	466,272.00	2,319,048.00
Total Project Cost(\$)	9,791,743.00	48,700,000.00

**C. Indicative sources of Co-financing for the Project by name and by type**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Ministry of Environment and Natural Resources (SEMARNAT) – General Directorate of Wildlife and General Directorate of Forestry and Soil Management	Public Investment	Recurrent expenditures	17,000,000.00
Recipient Country Government	National Commission for the Knowledge and Use of Biodiversity (CONABIO)	In-kind	Recurrent expenditures	800,000.00
Recipient Country Government	National Commission of Natural Protected Areas (CONANP)	Public Investment	Recurrent expenditures	500,000.00
Recipient Country Government	National Forest Commission (CONAFOR)	Public Investment	Recurrent expenditures	500,000.00
Recipient Country Government	Federal Authority for Environmental Protection (PROFEPA)	In-kind	Recurrent expenditures	200,000.00
Recipient Country Government	Ministry of Agriculture and Rural Development (SADER)	Public Investment	Recurrent expenditures	5,500,000.00
Recipient Country Government	Ministry of Welfare	Public Investment	Recurrent expenditures	5,500,000.00
Recipient Country Government	State Governments	Public Investment	Recurrent expenditures	6,500,000.00

Private Sector	Private Sector	Other	Investment mobilized	12,000,000.00
Donor Agency	UNDP	In-kind	Recurrent expenditures	200,000.00
Total Project Cost(\$)				48,700,000.00

#### Describe how any "Investment Mobilized" was identified

It is expected that private sector and community financial entities such as Fomento Social BANAMEX, FINDECA, and TOSEPAN could mobilize around \$12-15 million USD in loans, guarantees and investments during the 5-year period of this project. State governments of regions targeted by project interventions are expected to leverage resources linked to conservation and sustainable development activities. All cofinancing figures will be formally confirmed through cofinancing letters with a clear definition of each contribution by type and component. "Recurrent expenditure" for public institutions and state governments relies on the fact that these are yearly budgets approved by Congress and are tagged within spending categories that are related to operational costs. We understand as "Investment mobilized", additional private sector resources that can be added to the project and that are expected to generate a ROI.



D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Mexico	Biodiversity	BD STAR Allocation	9,791,743	881,257	10,673,000.00
Total GEF Resources(\$)					9,791,743.00	881,257.00	10,673,000.00

## E. Project Preparation Grant (PPG)

PPG Required



PPG Amount (\$)

300,000

PPG Agency Fee (\$)

27,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Mexico	Biodiversity	BD STAR Allocation	300,000	27,000	327,000.00
Total Project Costs(\$)					300,000.00	27,000.00	327,000.00

Please provide justification

"We kindly request exceptional approval of \$300,000 for the PPG of Mexico's Fostering sustainable, legal, and traceable use and trade of wild native species (PIMS 6610), from the GEF TF. This amount will enable the PPG team to do basically two fundamental follow-up activities: 1) Continue to generate strong baseline data, which due to fiscal cutbacks to environmental institutions in Mexico (due to COVID-19), has challenged continuous data collection activities that partners like CONABIO and others have had. Therefore, there is a need to consider generating data recollections strategies that depend on other additional actors, until the current historic national budget directed towards data collecting activities can be restored (next fiscal year). 2) To re-engage and facilitate strong in-country ownership. This is basically aimed also at two fundamental areas. During these past two weeks there has been a change of Environment Minister in Mexico, with a potential cascade effect in current strategic high-level positions within the Ministry. We are anticipating that current positions might change so there is a need for additional efforts (translated in project workshops and consultations) with new stakeholders that the new government may want to include. The second area, and perhaps the most crucial, is to fully engage with the indigenous and local communities, across the five different sites where IWT takes place. It is important to highlight that there will be a need to develop five different and specific engagement strategies in each area, given the high cultural diversity in Mexico. This specific and multiple prong approach will, in turn, ensure their full and active participation in project development and implementation. The PPG Phase will be particularly challenging in COVID19 in Mexico; therefore, the PPG resources will help reach vulnerable groups in remote environmental and forest management units (UMAFOREs) and complete the detailed social and environmental safeguards analysis, and introduce effective FPIC measures to address the indigenous peoples' concerns as gender and other critical matters affecting vulnerable people. Strong engagement of indigenous and local communities is particularly important in light of the recent government changes and illegal wildlife traffickers operating in the project's targeted areas. PPG Phase will emphasize security, biosafety, and socio-economic or cultural matters (e.g., human rights and gender). The PPG phase also requires gathering baseline information and data not gathered during PIF development due to COVID restrictions. The additional funds are critical to support the logistical and technical effort that the PPG Phase will require."



Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
50,000.00	0.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
50,000.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
			50,000.00						

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
500000.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

500,000.00

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

## Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	1,500			
Male	1,500			
Total	3000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Core Indicator 1.2 corresponds to approximately 50,000 hectares of UMA/UMAFORES under improved management within PAs, to be confirmed during the PPG. Core Indicator 4 corresponds to existing UMA/UMAFORES implementing improved practices outside of PAs as well as new UMA/UMAFORES to be created during the project, to be confirmed during the PPG. Core Indicator 11 corresponds to the number of people trained to develop sustainable business models; number of people trained to carry out participatory monitoring of the social impact of the projects; number of people trained in participatory monitoring of the economic impact of the projects; number of people trained to upload information to MACOVIS; number of people trained to strengthen inspection and surveillance of LST, especially community-based surveillance committees in selected UMA/UMAFORES; among others to be confirmed during the PPG. The Project's trainings will follow the guidelines of the SESP and the related FPIC, Indigenous People and Local Communities Plan (IPLCP), Stakeholder, Stakeholder Engagement Plan (SEP) and Gender Action Plan (GAP). It is expected that the multi-focal and integrated nature of the proposed project would contribute to the achievement of Aichi Targets 2, 3, 4, 8, 9, 10, 11, 14 and 15.



## Part II. Project Justification

### 1a. Project Description

#### 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description);

##### *Context*

Mexico is the fourth most biodiverse in the world and is home to an estimated 12% of the world's species. These include an estimated 544 species of terrestrial and marine mammals (second only to Indonesia and Brazil), 804 species of reptiles, between 300,000 and 425,000 estimated species of insects and 23,522 known species of plants. The country is the richest in the world in terms of reptile species, the second in terms of mammal species and the fourth in terms of amphibians and plants. An estimated 32% of the national vertebrate fauna is endemic to the country and 52% is endemic to Mesoamerica. The country also includes 51 of the 191 terrestrial ecoregions recognized worldwide and is of high global agrobiodiversity importance as the center of origin of many species and varieties with great use potential in both the agricultural and forestry sector.

Natural Protected Areas (PAs) constitute a cornerstone of Mexico's efforts to conserve its globally-important biodiversity endowment. The country's national protected area estate consists of 182 Natural Protected Areas (both marine and terrestrial), representing 11.14% of the national land surface and 22.05% of the national sea surface (90,839,521.55 ha), which are protected and managed by the National Commission of Protected Natural Areas (CONANP), a federal agency.

Complementary to these PAs are the Management Units for Wildlife Conservation (UMA) and Units for Sustainable Forest Management (UMAFORES), which are properties managed by owners or holders who voluntarily dedicate their lands to conservation through the sustainable use of the wild species found within them, addressing the need to conserve biodiversity and boost the country's socio-economic production and development. These habitat management activities carried out have positive impacts on ecosystems and provide legal markets for goods and services, either through the direct extraction of specimens, parts or derivatives of wild species or by offering services such as ecotourism and wildlife observation, among others. Mexico has 13,703 of these sites that represent 19% of the national territory. UMA/UMAFORES generate income in the sites and areas of influence where they are located, through the creation of temporary and permanent jobs, and for services such as lodging, food, and transportation, among others. For example, in the state of Nuevo León, for the 2017-2018 period, an UMA reported an income of \$145,000 pesos from harvesting 95 kilos of Biznaga (*Echinocactus platyacanthus*), which were reinvested in species conservation, reforestation and habitat monitoring.

##### *Threats*

As a megadiverse country, Mexico faces major challenges and responsibilities such as ensuring the effective management of natural resources in line with sustainable development policies and international commitments, particularly those related to biodiversity conservation and poverty reduction. Indeed, despite global significance and national importance of biodiversity, Mexico still faces numerous challenges and threats to its biological resources and natural capital. Of the country's 544 mammal species, 100 are listed as threatened by the IUCN, second only to Indonesia; the country also has 211 threatened species of amphibians and 61 threatened species of birds.

Mexico's Sixth National Report to the Convention on Biological Diversity (CBD) concluded that the drivers of ecosystem change, and transformation continue to advance rapidly. According to the report, about 50% of the vegetation cover was strongly impacted by agriculture between 1976 and 2014, and by 2016 around 44% of the country's soils showed some type of degradation. The report also shows that the overexploitation of natural resources persists and continues to increase, and that unsustainable value and consumption chains prevail. This stresses the need to promote and strengthen alternative productive activities with social and economic benefits for indigenous peoples and local communities (IPLCs). The present project will focus on conserving, by sustainably using, a number of wild species that IPLCs from potential intervention areas express interest in managing and working with, and which they have selected from an indicative list developed for the project considering specific criteria, including commercially relevant species as well as the national list of priority species for conservation<sup>[1]</sup>, as well as threatened species from the more than 2,000 contained in Mexico<sup>[2]</sup> (NOM-059), in the IUCN Red List and in CITES Appendices. Some of the threats and the root causes of biodiversity loss are briefly described below:

1. Habitat loss due to changes in vegetation and land use (fragmentation): The main driver of biodiversity loss is the transformation and deterioration of habitats and ecosystems into agricultural fields, livestock grazing, cattle ranches, farms, roads and urban areas, among others. This habitat loss and changes in the composition, structure or function of ecosystems have negative impacts on species populations and their habitats. While LGEEPA and associated rules and regulations contemplate changes in land use, the proposed standardization of wildlife management methodologies and strengthened governance mechanism among local communities, government and civil society will contribute to reduce habitat loss and fragmentation.

From 1960 to 1980, the tropical forests of southern Quintana Roo were subject to concessions granted to private companies. The interest in harvesting wood was centered on the use of precious species (mahogany and cedar) to produce plywood, causing a decrease in the wild populations of these species. The lack of proper regulation and their implementation, as well as the lack of commitment and responsibility of these companies resulted in an overexploitation of the highest value timber species, which caused a devaluation of tropical forest resources. When the forest extraction works were finished, the forests were very deteriorated and only a few trees remained standing, which at that time had no commercial value and the forest lost value for the IPLC, which led to a process of land use change through the introduction of other production processes (livestock, agriculture and others). All these represented a significant loss of the very rich natural capital of these ecosystems of high biodiversity, resulting in 80% reduction in the forests containing mahogany. In the last 30 years, many of the tropical forests of the region have managed to recover and many IPLC have worked the forest, extracting timber and non-timber products, thus enhancing the forest use on their territories. Today, the valuation of forest land use by IPLC is a key element in any strategy that seeks to conserve forest resources. Also, since 2003, the Neotropical populations of mahogany have been included in Appendix II of CITES, under annotation # 6 (which regulates only logs, sawnwood, veneer sheets and plywood), with the aim of conserving the species through sustainable, legal and traceable harvest and trade.

2. Overexploitation of natural resources persists and continues to increase: The extraction of individuals from a population at a higher rate than their reproduction persists and continues to increase. The overuse (hunting, gathering, collecting, logging) and illegal wildlife trade (IWT), due to high demand of native and endangered species, results in the decrease of populations and drives some species to extinction. While restrictions on the commercialization of species at risk have been set at the national level through NOM-059 and at the international level through CITES, buyers of illegal organisms and products continue to promote overexploitation. Illegal wildlife trade (IWT) in Mexico affects a variety of native species, particularly reptiles, psittacines, cacti, and sea animals. Thus, UMA/UMAFORES represent an alternative pathway for producers and buyers to sustainably and legally fulfill this demand.

For example, the introduction of livestock and uncontrolled hunting during the colonization era led to rapid decline of Bighorn Sheep, from roughly 1 million individuals (1800) to fewer than 25,000 (1950). Effective conservation efforts began with the reintroduction of Bighorn in Tiburon Island, where population grew and has been a source for repopulation on the mainland range. Wildlife management, powered by hunting activities, is carried out mainly by local communities (ejidos) and private landowners, as well as the indigenous population (Seri Indians). Trophy hunting provides important economic revenues, from USD 10,000-40,000 per hunt, with communities retaining around 85% after commissions to hunting brokers, and providing with permanent and temporal jobs.

In the Mexican states where hunting is permitted, the wildlife Bighorn sheep population has steadily grown: since 1995, and with an export of 100-200 trophies per year, Sonora populations grew from 1,500 to almost 3,500 individuals on the mainland (up to 600 in Tiburon Island); Chihuahua state has more than 600 individuals (from zero), and Coahuila state have reintroduced at least 300 individuals. Captive breeding operations double the number of wildlife Bighorn sheep. Incentives from trophy hunting and trade have also led to large-scale habitat restoration, improved connectivity, reduced livestock and overgrazing.

### 3. Weak governance and value chains as well as unsustainable production/ consumption patterns prevail.

In Mexico, the legal use of a significant number of wildlife species is carried out in an intensive closed-cycle scheme (in captivity or nurseries) within Management Units for the Conservation of Wildlife (UMA). This approach has been successful; however, its impact on the conservation of wild populations and their habitats at the landscape level is still limited. The current structural weaknesses in the governance framework and the value chain cause this limited impact because they do not promote adequate *in situ* conservation to ensure a sustainable supply. Resolving these structural weaknesses is an essential first step proposed by the Project. The Project's interventions will improve the governance framework and the interlinks within the value chain to ensure *in situ* conservation of selected biodiversity at the landscape level. The Project's causal pathways promote sustainable use of selected legal species in their natural habitat and the generation of socioeconomic incentives for the local communities and indigenous peoples that live in the targeted areas.

Further, the Project's pathways will increase sustainable legal production to address increasing market demands for sustainably produced legal species. The increased market demand has become evident after analyzing official data on seizures and imports/exports of wildlife species in Mexico. The proposed Project would work with selected IPLC to build upon experiences such as the marsh crocodile, summarized next.

In the 1970's, the Mexican marsh crocodile (*Crocodylus moreletii*) was included in CITES Appendix I because it was in danger of extinction due to illegal skin trade. After demonstrating healthy recovery due to an outright ban in illegal hunting on all Mexican crocodiles, and coupled with other actions such as reproduction in captivity and the establishment of natural protected areas, populations in Mexico transferred from CITES Appendix I to Appendix II (thereby allowing commercial trade of wild specimens if requirements are met). Consequently, they are currently the object of sustainable productive projects for the benefit of local communities and the conservation of the species and its habitat. After almost 50 years of prohibition, in 2017, the UMA "Cocodrilos Chacchoben" in Quintana Roo was the first one in Mexico to sustainably and legally harvest Morelet's crocodile from wild populations through the implementation of a Ranching Protocol. Ejido Chacchoben was supported with infrastructure and training in monitoring and breeding of the species; local communities were engaged in the conservation of the species and its habitat through the sustainable use of eggs from a percentage of nests (ranching) in compliance with national legislation and CITES provisions. This initiative was multidisciplinary, since it had the collaboration of the Academy, and civil society to train the community, with the support of the state and federal government to provide infrastructure and equipment, as well as businessmen who supported the active purchasing of offspring. The UMA that buys the offspring is then responsible for their growth and development in compliance with established standards with the aim to obtain a high-quality skin that will later be sold by the UMA to the fashion industry. The case of Ejido Chacchoben (Cocodrilos Chacchoben) illustrates a sound and scalable pathway that will be part of the Project's intervention.

4. Vulnerability to climate change (CC) and introduction of invasive alien species (IAS): The increase of the average atmospheric and oceanic temperature has resulted in the change of climatic patterns, causing extreme weather events such as hurricanes, droughts, floods, and fires, which also result in radical changes in the distribution of ecosystems and species. Climate change affects all organisms on the planet, many of them responding to these new dynamics through changes in their distribution and migrations, sometimes accidentally or deliberately moving to distant places and becoming invasive species, changing species dynamics, modifying habitats, and causing economic and social disruptions. Inadequate and uncoordinated monitoring and knowledge management limits informed decision-making for mitigation and resilience to CC and IAS. Within this context, the project recognizes the need to increase

monitoring and coordinated knowledge management so as to enhance a conservation culture with inclusive, legal management and sustainable use which will contribute to reduce social and environmental conflicts (including land tenure conflicts), increase species' and habitats' resilience to climate change, and reduce the introduction of invasive alien species due to unregulated productive activities.

### *Long-term Solution*

The relentless global demand for biodiversity products, may result in overexploitation, posing a threat to wildlife and forest goods. However, when legally and sustainably managed, biodiversity represents an immense opportunity for rural development<sup>[3]</sup>. In Mexico, where the natural capital is safeguarded mostly by IPLCs, it is imperative to develop commercial strategies with a multidisciplinary approach, improving value chains and ensuring fair and equitable sharing of benefits for IPLCs. In turn, this approach will contribute to conserving globally significant biodiversity and contributing to the sustainable and legal trade of wild native species.

The proposed project will dismantle the four key barriers impeding the change needed to achieve the long-term solution. These key barriers are described below:

#### *Barriers*

##### 1. Gaps in ecosystem coverage

- Incomplete information of UMA/UMAFORES; some of which are not currently active and some other which still have deficiencies and do not effectively conserve areas/species.
- Unstandardized methodologies for monitoring wild species and not enough technical capacities in technicians and government personnel, thus some are not effectively conserving areas/species.
- Inadequate management of the surrounding areas for conservation: Need to expand or increase the conservation units or actions, and need to promote corridors between PAs, UMA, UMAFORES, and other conserved and sustainably managed areas).
- Fragmentation due to challenges related to ownership, access to financing/financial support to create and maintain an UMA/ UMAFORES.
- Need to promote a vision of the territory that takes into account communities and gender issues and vulnerabilities
- Isolated conservation actions

##### 2. Weak governance, financial mechanisms and market access for mainstreaming biodiversity conservation in the planning and management of UMA/UMAFORES

- Lack of financial mechanisms and market access to promote sustainable productive projects:
- Weak productive/commercial chains: Limited local capacity to shift to sustainable and profitable value chains and fair trade (fair distribution of net benefits)
- Unsustainable consumption prevails

- Limited market access; Weak positioning of sustainable products in the markets, need to find the best way to promote products; Ensure equitable participation; Limited access to markets due to administrative records, defining target customers, marketing and brand development
- Weak production/ Lack of productive diversification; Fewer than 20 native species per year are present in Mexico's exports (from wild origin and for commercial purposes)<sup>[4]</sup>; existence of a dominant productive system in a region, lack of establishment of collaboration networks
- Lack of investment and public and private investor interest
- Undervalued payments for goods of illegal origin: lack of fair valuation; Greater economic benefit for participation in illegal activities; Prohibitions aimed at trade in some species promoted by animal welfare radical groups lacking of scientific bases, which causes the disappearance of legal national markets, the thrive of illegal trade and the importation of exotic species that can become invasive.
- Inadequate regulatory / governance framework:
  - Lack of coordination between development plans (federal and local) and environmental programs; Lack of coordination between different government agencies; Lack of inter-institutional coordination to establish integrated territorial management mechanisms/Several management units and division of the territory by institution; Conflicting sectoral incentives and lack of follow up-on the impacts of public policies adopted/ Financial support contrary to conservation/ Perverse subsidies / incentives; Lack of coordination / articulation between legislators and the environmental sector / experts and disconnection between policies / amendments and needs; Uninformed changes in state and municipal government policies - without proper monitoring of the impact of existing public policies, changes are not necessarily justified or warranted.
- Lack of self-management capacities by communities/ Lack of social cohesion, communities in internal conflict
- Dissociation between IPLC priorities and federal priorities; Communities not involved from the beginning of planning projects and activities, lack of consideration for issues of cultural adequacy and gender perspective;

### 3. Inadequate inspection and surveillance (I&S) capacity/Monitoring failures:

- Need to strengthen systems for the integration and analysis of information for management decision making, information on UMA / UMAFORES is currently not systematized and outdated
- Lack of technical capacities and standardized methodologies for monitoring and estimating rates of exploitation of wild species results in inconsistent / inadequate follow-up through field monitoring. This is due, in part to:
  - Inertia, lack of capacity development
  - Lack of technical tools for law enforcement (ID Guides, techniques to identify parts and derivatives in trade),
  - Lack of personnel to implement inspection and surveillance

- Lack of local capacities (personal and budgetary) to keep systems powered
- Need to strengthen local participatory oversight committees
- It is necessary to develop more tools and strengthen personal and technical capacities for effective inspection and surveillance.
- Lack of tools, lack of technology transfer
- lack of monitoring projects due to administrative changes
- Conflicts between communities and / or presence of organized crime
- Lack of data on how illegal activity discourages legal trade in species.
- Local confrontation between traditional knowledge and the contributions of scientific knowledge
- Inadequate strengthening of indigenous communities (defense of the territory)

#### 4. Scattered knowledge and limited awareness about the potential for sustainable use of wildlife

- Lack of knowledge about the potential for sustainable use of wildlife; lack of knowledge about the benefit of collaborating on conservation initiatives; Little dissemination of technical knowledge for the sustainable use of wildlife; Limited vision of territory management.
- Incomplete information <sup>[5]</sup>:
- Limited information on the socioeconomic impact
- Lack of information on densities, trends and population sizes of species under management
- Lack of information on activities and methods of population monitoring and surveillance.
- Imposition of projects instead of joint construction, lack of multidisciplinary vision, grass root engagement, lack of interest of certain key actors leads to:
- Lack of trust in project managers;
- Lack of monitoring and continuity of projects over time, non-self-sufficient projects, dependence on outsiders / Extreme dependence on technical service providers
- Distrust of sharing traditional knowledge;
- Exacerbates misperceptions about natural elements (fear, myths);

## **2) the baseline scenario and any associated baseline projects**

Mexico has a strong legal baseline for this project, namely:

General Environment Law (*Ley General de Equilibrio Ecológico y Protección al Ambiente* - LGEEPA), which establishes a basic framework for the comprehensive management of the territory and its resources, as well as a strategic tool for the convergence between the State and society by being the highest environmental law in Mexico. Mexico's wild flora and fauna have been protected by this law since 1988, which establishes the framework for the conservation and restoration of the ecological balance and for the protection of the environment, recognizing sustainable use as one of the mechanisms to achieve it. Of particular interest is Section V on the Establishment, Administration and Management of Areas Voluntarily Destined for Conservation (AVDC), particularly Chapter III on Wild Flora and Fauna, articles 79 to 87, which sets the criteria for the conservation and sustainable use of flora and fauna.

Wildlife Law (*Ley General de Vida Silvestre y su reglamento* - LGVS), which aims to conserve wild flora and fauna through its protection and sustainable use. This law regulates the UMA registries, as well as the exploitation, exports, imports and re-exports of species, parts, derivatives and byproducts of wild flora and fauna. It is worth highlighting Titles V, VI and VII on the Common Provisions for the Conservation and Sustainable Use of Wildlife, Conservation of Wildlife and Sustainable Use of Wildlife, respectively.

- Mexican Official Standard 059 - List of Native Wild Species at Risk (Norma Oficial Mexicana NOM-059-SEMARNAT-2010 - Categorías de riesgo y especificaciones para su inclusión, exclusión o cambio - Lista de especies en riesgo), which identifies the Mexican species or populations of species that are at risk through the application of the Method Evaluation of Risk of Extinction of Wild Species of Mexico (MER).

Sustainable Forestry Law (*Ley General de Desarrollo Forestal Sustentable* - LGDFS), which aims to regulate and promote the comprehensive/integral and sustainable management of forest territories, the conservation, protection, restoration, production, management, cultivation, planning and use of Mexico's forest ecosystems and their resources; as well as distributing the competencies that correspond to the Federation, States, Municipalities and Territorial Delimitations of Mexico City in forestry matters, in order to promote sustainable forestry development.

This legal baseline is complemented by the following baseline reference tools, programs and initiatives:

- Management Programs within Natural Protected Areas, which determine the strategies for the conservation and use of protected areas serving as a guiding instrument for planning and regulation that establishes the activities, actions and basic guidelines for the management and administration of the respective natural protected area.
- Agreement by which the list of priority species and populations for conservation is disclosed (Acuerdo por el que se da a conocer la lista de especies y poblaciones prioritarias para la conservación), which defines the list of priority species and populations of species for conservation, giving priority to promoting the development of projects for the conservation and recovery of species.
- CITES Resolution Conf. 16.7 (Rev. CoP17) on Non-Detriment Findings (NDFs), which recommends that scientific authorities take into account several concepts and non-binding guiding principles in considering whether trade would be detrimental to the survival of a species. For example, a NDF for an Appendix-I or -II species should be the result of a science-based assessment that verifies whether a proposed export is detrimental to the survival of that species or not; whether the species would be maintained throughout its range at a level consistent with its role in the ecosystems in which it occurs; and consider the volume of legal and illegal trade (known, inferred, projected, estimated) relative to the vulnerability of the species (intrinsic and extrinsic factors that increase the risk of extinction of the species); among others.
- Sustainable use and conservation subsidies (estimated values during the lifetime of the GEF project):



o Subsidy of Wildlife Conservation and Use (*Subsidio de Conservación y Aprovechamiento de la Vida Silvestre*), which currently allocates funds to the UMA/UMAFORES. Current budgetary resources are channeled to maintaining the existing UMA/UMAFORES, performing inspections and assessments and managing the overall system. This program grants resources for the establishment and strengthening of UMA/UMAFORES as productive projects that provide an alternative and complementary source of income to IPLCs besides traditional rural activities, contributing to foster economic development and social rights to a healthy environment. It has an estimated value of US\$11 million.

o Subsidy of Wildlife Conservation and Use (*Subsidios de conservación y aprovechamiento sustentable de la vida silvestre nativa*), which aims to strengthen the comprehensive management of habitats, populations and species of native wild flora and fauna through their conservation and sustainable use, in order to strengthen the legal market for goods and services generated through UMAs and Premises or Facilities that Manage Wildlife (PIMVS). It has an estimated value of US\$ 22.5 million.

o Assistance Program for Sustainable Forest Development (*Programa Apoyos para el Desarrollo Forestal Sustentable*, also known as *Programa Nacional Forestal* - PRONAFOR), which supports the owners and possessors of forests, rainforests, mangroves, wetlands and arid zones, to protect, improve and sustainably use the forest resources present in these ecosystems. The budget for 2020 is estimated at \$41.2 million <sup>[6]</sup>.

o Conservation Program for Sustainable Development (*Programa de Conservación para el Desarrollo Sostenible* - PROCODES), which is a subsidy program that constitutes a public policy instrument that promotes the conservation of ecosystems and their biodiversity in PAs and Priority Regions for Conservation, through their sustainable use, with equal opportunities for the women and men, with emphasis on the indigenous population of the localities. It has an estimated value of US\$300,000.

o Program for the Protection and Restoration of Ecosystems and Species at Risk (*Programa para la Protección y Restauración de Ecosistemas y Especies en Riesgo* - PROREST): which promotes the conservation and restoration of representative ecosystems of PAs, as well as the protection and conservation of their biodiversity, by supporting technical studies and actions. It has an estimated value of US\$100,000.

- Taxa-specific Action Plans:

- National Strategy on Biodiversity of Mexico (ENBioMex) and its Action Plan 2016-2030, is a guiding document that presents the main elements to conserve, restore and sustainably manage biodiversity and the services it provides in the short, medium and long term. ENBioMex is the result of a participatory planning process between various sectors and actors on the importance of the biological diversity of our country, which is essential to guarantee its permanence.

- Standardized Management Plans (*Planes de Manejo Tipo*), which include the procedures required to carry out management, conservation and use of different species. They include information such as background and legal framework, biological and ecological aspects of the species, general and specific objectives, goals and indicators of success, physical and biological description of the area, sampling methods, general management measures, contingency measures, surveillance mechanisms, means, forms of use and branding systems.

- Action Plans for Species Conservation (*Programas de Acción para la Conservación de Especies* - PACE), which are structured strategies for each of the species considered in PROCER, designed for the recovery of their populations at the national level. Their objective is to consolidate, promote and implement specific actions and conservation strategies for the populations of priority species. They are executed with the active participation of all the stakeholders related to the species, in a scheme of co-participation and co-responsibility.

- CEC's North American Action Plans for the Sustainable Trade of CITES Species, which promote legal, sustainable and traceable trade in selected North American species that are listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).



### 3) the proposed alternative scenario with a brief description of expected outcomes and components of the project;

While the use and trade of wild species represents a multimillion-dollar global market, it also represents one of the main threats for biodiversity. The improvement of sustainability, traceability and legality criteria, represents an important opportunity to promote the legal use and trade of wild native species, and support the development of IPLCs that safeguard and depend on biodiversity as their main source of income.

Mexico has a large potential to legally use wild native species with high commercial value, as well as legal and economic instruments that promote sustainable use of species and incentivize the engagement of relevant stakeholders. UMA/UMAFORES management plans guarantee the conditions and viability of species, the diversification of economic activities and promote governance. However, the commercial information on exports and imports of wild species is not standardized with market data, impeding the consolidation of major projects based on production capacities, profitability, sustainability, business marketing and commercialization capacities.

The baseline scenario and programs (described above) aim to consolidate effective conservation and sustainable use to increase connectivity, reduce pressure on ecosystems and discourage illegal trade of wild flora and fauna, while promoting social cohesion, greater environmental culture and awareness, equitable economic benefits, and the insertion into relevant markets and productive chains.

The GEF increment will complement and integrate these programmes by systemizing available data, harmonizing their objectives and facilitating their implementation. This will translate into additional financial resources, simplified procedures, effective management, increased area under sustainable use and conservation of species. The effective operation of selected UMA/UMAFORES and the consolidation of healthy value chains, is expected to result in their self-sufficiency and sustainable operation in the long term.

The project will promote long term conservation through legal, sustainable and traceable trade of native species of wild flora and fauna involving IPLCs, while addressing the drivers of biodiversity and habitat loss. For this, it will focus on selected species and landscapes identified for the project, which are considered flagship species. UMA and UMAFORES can manage multiple species and favor a diversified production. Thus, this project has a great potential for scaling up by working with other species in these and other key areas.

The objective is to promote sustainable, legal and traceable use and trade of native species in order to reduce biodiversity loss and improve livelihoods in selected landscapes throughout Mexico.

The specific objectives are:

1. Encourage the creation and effective operation of UMA/UMAFORES, by focusing on those that manage species selected for the project and located within key biodiversity areas (KBA) of global importance for conservation.
2. Promote the sustainable, legal and traceable use and trade of selected species through value chains with fair and equitable sharing of benefits; particularly for IPLCs.
3. Strengthen inspection and surveillance capacities to promote the sustainable, legal and traceable trade of native species of wild flora and fauna.

The identified four barriers, the causal pathways and their key underlying assumptions are as follows:

#### 1. Gaps in ecosystems coverage

Causal Pathway 1: Increased areas under conservation + sustainable use of natural resources + better management of productive-protected frontiers (UMA/UMAFORES) > Less loss/conversion of vegetation > Less habitat fragmentation > Increased habitat area and connectivity for wildlife passage (corridors are maintained or increased) > Habitat/ecosystems integrity, and stable or increased species populations.\_

Key assumptions:

- Improved management of existing UMA/UMAFORES + creation of new UMA/UMAFORES will provide sufficient coverage and connectivity to ensure ecosystem integrity to foster habitat and species conservation.
- UMA / UMAFORES will have the necessary technical capacity for the management and sustainable use of wild species, as well as with homologated techniques and data that allow monitoring trends and conservation status.
- Project activities will result in the conservation or improvement of the populations of selected wild species and their habitats.

-

Causal Pathway 2: Increased access to sustainable and profitable value chains (including national and international markets) > sustainable use of legal species > better financing/management of UMA/UMAFORAS > sustainable business models > increased community benefits > decreased hunting/capture pressure on selected species > species populations are maintained or increased > Biodiversity conservation mainstreaming and improved governance and sustainable trade of LWS.

## 2. Weak governance, financial mechanisms and market access for mainstreaming biodiversity conservation in the planning and management of UMA/UMAFORES

Key assumptions:

- Institutions and users with updated and more accurate information and tools can make informed decisions to ensure the sustainable and legal use and trade of Mexican wild species through UMA / UMAFORES.
- Communities with increased capacities and knowledge are able to manage business models related to focal species.
- The identification or creation of markets for focal species is feasible.
- The creation or shift to sustainable and profitable value chains for defined focal species is feasible.
- Increased and diversified UMA / UMAFORES can support sustainable production models for focal species legal trade and biodiversity mainstreaming.

Causal Pathway 3: Improved information management systems and tools + increased community-based capacity for I&S at UMA/UMAFORES level > informed planning of I&S > more effective inspections and accurate surveillance of supply chains > More cost-effective and efficient community-based I&S > Sustainable value chains.

## 3. Inadequate inspections and surveillance capacity and monitoring failures

Key assumptions:

- Updated and functional I&S systems/tools and UMA/UMAFORES with strengthened capacities and funding can improve community-based inspection and surveillance.
- Effective community-based I&S leads to sustainable sourcing and improves value chains.

-

Causal Pathway 4: Improved monitoring tools, systematization of lessons on sustainable sourcing/LWT and feedback > Informed decision-making + low-carbon anthropogenic activities + increased climate change mitigation + sustainable sourcing > Habitats conservation + more resilience > Higher integrity of habitats + increased species population + less migration > More efficiently monitored and participatory KM on LWT/value chains.

#### 4. Scattered knowledge and limited awareness about the potential for sustainable use of wildlife.

Key assumptions:

- A Comprehensive System for Monitoring, Sustainable Use and Trade of Wild Species (MACOVIS), that integrates data from the four components, can support the systematization of lessons exchange and KM; and public access to MACOVIS ensures transparency standards.
- KM and informed decisions can contribute to mitigate the impact of anthropogenic activities on climate change and generates additional environmental benefits.

The proposed pathways are based on the analysis of structural/root causes and barriers. The supporting outputs and outcomes for each Pathway are illustrated in Figure 1. We believe these links, and the assumptions that they are built upon, are sufficiently explicit and properly address the problems and barriers, as described above.

Figure 1, below, illustrates the Theory of Change for this project. It has been constructed following the recommendations of the Theory of Change Primer (STAP document 2019). This intervention aims to generate multiple biodiversity benefits by developing commercial strategies with a multidisciplinary approach, capturing value throughout market chains, and ensuring fair and equitable sharing of benefits for IPLCs while conserving globally significant biodiversity. The pathways to achieve the project's impacts are based on identifying barriers and linking to the structural/root causes of biodiversity loss. The above-indicated assumptions underpin the proposed pathways to enable the use of commercial strategies to strengthening value chains. Besides, give rise to the project outcomes and impacts (GEF Core Indicators).

The outcomes include an increase in biodiversity conservation and ecosystem connectivity through the creation of new UMA/UMAFORES in key biodiversity areas adjacent to protected areas and existing UMA/UMAFORES strengthened to better conserve, reproduce, reintroduce and sustainably use selected species (Component 1 Ecosystem integrity).

Component 2 (Governance and trade) includes activities that address and provide access for community-based business models for SMEs; and provides diversified sources of income for UMA/UMAFORES owners by increasing access to national and international markets.

Component 3 (Inspection and surveillance capacities) will address activities to provide effective community-based participatory monitoring and surveillance committees for legal species trade.

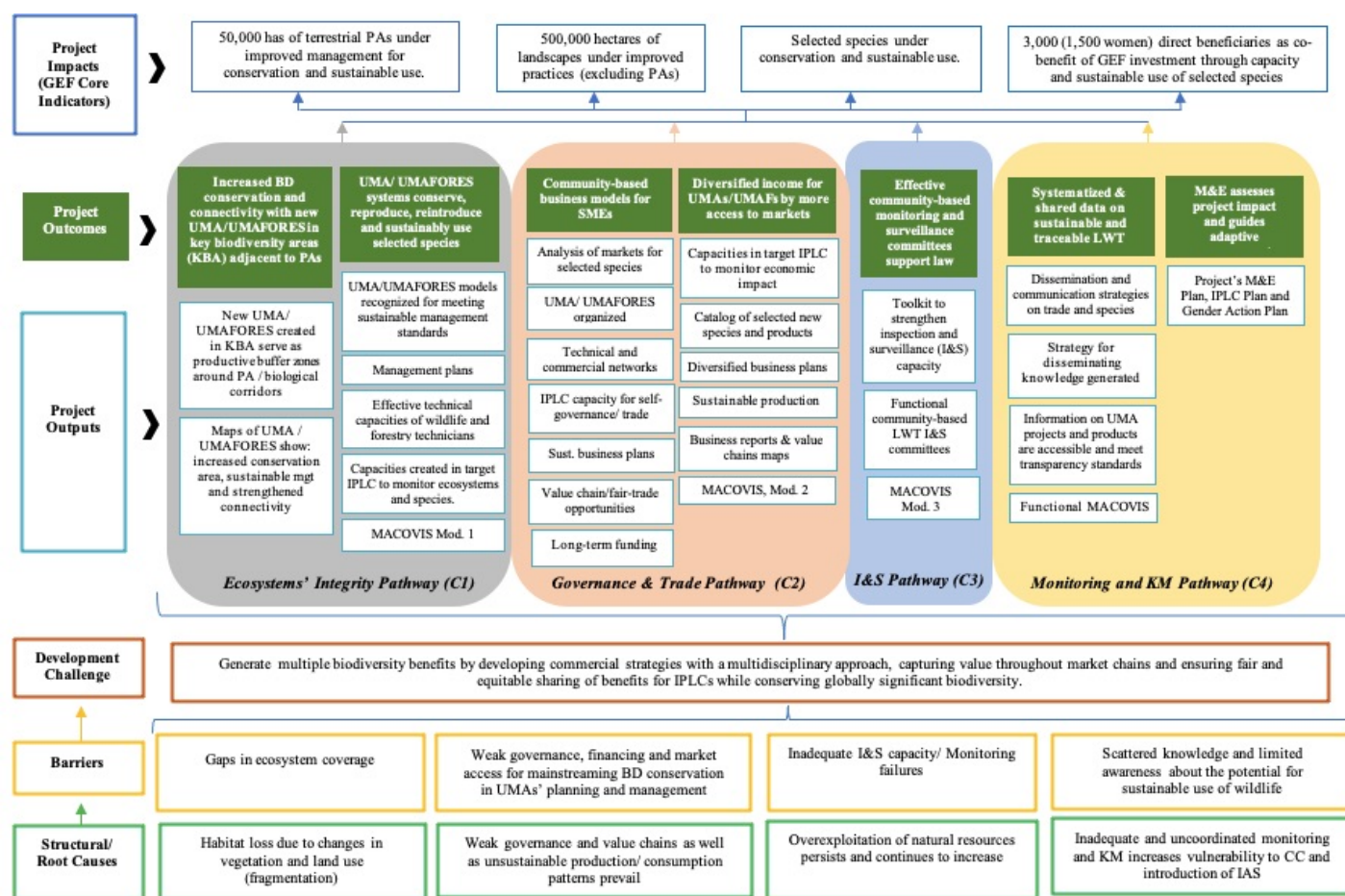
Finally, Component 4 (Monitoring, KM, dissemination, outreach and replication) will comprise activities that will assist in the systematization and sharing of information on legal, sustainable and traceable trade of wild species, while monitoring and evaluating the project impact and guide its implementation.

The ToC will serve multiple objectives, such as

1. improving the Project's design during the PPG phase and support adaptive management during implementation;
2. engage all stakeholders and develop ownership;
3. communicate the rationality of the Project's goals, outcomes, outputs, and activities to relevant internal and external audiences; and
4. ensure that adequate data is collected to enable sound monitoring and evaluation throughout the life span of the Project and beyond.

The ToC will be further refined during the PPG Phase.

Figure 1. Theory of Change MEX-UMAs (*To be further refined during the PPG Phase*)



## Project components

The project has four components:

### **Component 1: Ecosystem integrity**

**Outcome 1.1. Increased biodiversity conservation and ecosystem connectivity through newly created/ strengthened UMA/UMAFORES in key biodiversity areas (KBA) adjacent to Natural Protected Areas (PAs).**

By promoting the creation of new UMA/UMAFORES in key biodiversity areas, the project will increase productive buffer zones around Natural Protected Areas (PA) and biological corridors between them, thereby improving landscape connectivity.

Output 1.1.1. New UMA/UMAFORES created in key biodiversity areas to serve as productive buffer zones around Natural Protected Areas (PAs) and as biological corridors between them, improving landscape connectivity.

The Project will promote the creation of new UMA/UMAFORES in the following 5 Biocultural Regions: Nayar, Huasteca, Purépecha, Itsmo-Mixteca, and Maya. An initial analysis suggests it is feasible (time and resources) for the Project to result in new UMA/UMAFORES covering approximately 500,000 ha.

Output 1.1.2 Maps of UMA / UMAFORES show:

- increased area coverage under conservation and sustainable management schemes.
- strengthened connectivity between UMA/UMAFORES and neighboring PAs

The baseline satellite maps of the selected areas will serve as a reference to evaluate the impact of the project. These maps show the biocultural characteristics of the sites; the neighboring PA's and UMA / UMAFORES; as well as areas of high-BD that should be conserved and potential sites to generate new UMA / UMAFORES. Among the layers to be confirmed during the PPG, it is envisioned that the maps will include projections of the increase in the area allocated to new UMA / UMAFORES. The creation of new UMA / UMAFORES will increase the conservation of biodiversity within the sites, as well as provide connectivity between PAs, and will diversify the productive activities of the communities, allowing the generation of economic income.

**Outcome 1.2. UMA/ UMAFORES systems strengthened to conserve, reproduce, reintroduce (if necessary and feasible) and sustainably use selected species.**

The project will support existing UMA/UMAFORES within the 5 Biocultural regions to strengthen their ability to conserve, reproduce, reintroduce (if necessary and feasible) and sustainably use selected species in order to maintain population levels and improve ecosystem integrity (e.g. relative abundance of apex predators). An indicative list of selected species is available in Annex A and will be confirmed during the PPG, based on consultations with project partners and IPLC<sup>[1]</sup>.

Output 1.2.1 The UMA / UMAFORES model, and selected units recognized for satisfactorily meeting conditions of sustainable management<sup>[2]</sup> and recognized as other effective area-based conservation measures. The project aims to support selected UMA / UMAFORES that meet the conditions of sustainable management and effective area-based conservation measures. A preliminary analysis has identified potential areas within 5 Biocultural Regions, as indicated in Annex A, and will be confirmed during the PPG.

Output 1.2.2 Management plans with standardized methodologies and best practices for the sustainable use of selected species by IPLC.

The project will work with Indigenous Peoples and Local Communities (IPLC) to select and manage selected species through the development and implementation of standardized management plans. The creation and updating of these management plans will be based on standardized methodologies by group of species. Tailored Indigenous People and Local Communities Plan (IPLCP), Stakeholder Engagement Plan (SEP) and Gender Action Plan (GAP) will be

elaborated during the PPG and used to strengthen this output.

Output 1.2.3 Effective technical capacities of wildlife and forestry technicians for UMA/UMAFORES management and of government personnel in charge of evaluating their operation

The technical capacities of wildlife and forestry technicians will be strengthened through on-site and virtual workshops designed to improve the management of UMA/UMAFORES. Government personnel in charge of evaluating the operations of UMA/UMAFORES will also receive specialized training.

Output 1.2.4 Capacities created in target communities to carry out participatory monitoring of the state of their ecosystems and species

The project will support capacity-building activities aimed at IPLC to monitor locally-managed species' populations levels to ensure they are maintained or improved through the actions promoted by the project. This monitoring will also include habitat quality. Possible indicators to be used include the number of hectares of improved wildlife and forestry habitat (exact area TBD during PPG) through sustainable use practices (to be confirmed during the PPG).

Output 1.2.5 Module 1 of MACOVIS is generated.

Furthermore, this component will support the uploading of information to Module 1 of the Comprehensive System for Monitoring, Sustainable Use and Trade of Wild Species (MACOVIS). This system will integrate and analyze the ecological, geographical, legal, and commercial information derived from the monitoring, use and sustainable trade of native species of wild flora and fauna. MACOVIS will be established under Component 4 and will compile accurate and up-to-date information on population levels, harvest rates, NDF management plans, parts and derivatives marking systems in trade. Information of the UMA / UMAFORES deposited in Module 1 includes:

- MACOVIS report with the area (ha) of UMA / UMAFORES that consider elements of the voluntary guidelines of Decision CBD / COP / DEC / 14/8
- MACOVIS report with Density of cougar and lynx in the UMA / UMAFORES stable or increasing IA fragmentation index of indicator 1.1.2.
- MACOVIS report with stable or increasing Density of selected species under management in UMA / UMAFORES.
- MACOVIS report with % of vegetation cover maintained or increased in UMA / UMAFORES under management by characterization of remote sensing images (eg MODIS)
- MACOVIS report with % of monitoring reports accepted for integration.

**Component 2. Governance and trade**

This component will strengthen governance and financial mechanisms so as to promote production and business models that improve ecosystem integrity, maintain/ increase selected species populations, and create/strengthen resilient and inclusive value chains.

**Outcome 2.1. Community-based business models established to allow small enterprises to sustainably use biodiversity with enhanced value chains through strategic alliances with multiple stakeholders and multiple sectors.**

UMAs have promoted alternative production schemes compatible with caring for the environment, through the rational, orderly and planned use of the renewable natural resources contained therein, and that slow down or reverse the processes of environmental deterioration. They substantially modify the undervaluation practices, the abusive use and the restrictive models traditionally used in the country for the management of wildlife. The intention is to create exploitation opportunities that are complementary to other conventional productive activities, such as agriculture, livestock or forestry.

Not only have they sought to be a proposal towards a new alternative of sustainable production activities, their aspirations go further, in the sense of achieving in the owners and legitimate landowners a new perception regarding the benefits derived from the conservation of the land. biodiversity. The demands of society regarding viable alternatives for socioeconomic development in Mexico, are partly answered by the UMAs, which seek to promote the diversification of productive activities in the rural sector, based on the conservation-use of natural resources binomial, in order to achieve other sources of employment, income for rural communities, generation of foreign exchange, valorization of the elements that make up biological diversity and the maintenance of the environmental services that they provide to the place and its surrounding areas.

In another sense and in environmental and population terms, the establishment and management of UMAs can function as centers for the production of breeding stock, as germplasm banks, as alternatives for the conservation and reproduction of species, in research work, environmental education, training, as well as units of production of copies, parts and derivatives that can be incorporated into the different circuits of the legal market.

Therefore, it will be essential to first make a diagnosis of the national and international markets of selected species, for which a catalog of priority species will be generated for legal and sustainable use, making available, fair marketing mechanisms and with redistributive principles.

Once these priority species have been detected and the beneficiaries by region have been consulted, it will be possible to define value chains and identify fair trade opportunities for UMAs and UMAF products. It will also be possible to create groups of UMAs with similar conditions, possibly organized in some type of cooperative and in this way make more efficient the resources to satisfy the needs of human capital formation through training for the communities, especially by developing a sustainable business model ( financial, administrative, resource management, etc.) and strengthening the capacities of communities for self-management of products derived from wildlife, adding added value, avoiding intermediaries and allowing them access to preferential markets.

It has also been detected that one of the main obstacles faced by the UMAs is economic and financial, since they lack realistic and well-founded sustainable business plans and long-term financing where the production generated by the UMA provides sufficient net income to secure a long-term budget.

#### Output 2.1.1 Analysis of national and international markets for selected species (including current market limitations and emerging markets)

The project will conduct an analysis of national and international markets, divided by group of selected species, and identify critical opportunities to correct current limitations to access.

Output 2.1.2 UMA/UMAFORES groups with similar conditions organized to meet needs, training and get support. The project will foster the establishment of a network, platform, cooperative, and/or association of groups with similar conditions and targets.

#### Output 2.1.3 Technical and commercial information exchange networks established

#### Output 2.1.4 IPLC capacities strengthened for self-governance and trade

The project will build capacity within selected IPLCs to develop sustainable business models (financial, administrative and resource management aspects, among others); conduct participatory monitoring of the socioeconomic impacts of the project; and manage the supply of products derived from wild species with added value and with access to preferential markets. Furthermore, target IPLC will be trained to carry out participatory monitoring of the social impact of the projects.

Output 2.1.5 Sustainable business plans (realistic and grounded) developed and implemented. Business plans will assess all production and marketing costs (direct and indirect) and net revenue projections.

#### Output 2.1.6 Value chains defined and fair-trade opportunities identified for the products of selected species

The project will support case studies of the processes to define value chains and fair-trade opportunities the products of selected species in the target UMA and UMAFORES. The project will focus on the groups of species with which the most UMA are working. As such, the focus will be at the "group" level (rather than individual species): e.g. crocodiles, freshwater turtles, tarantulas, etc.

Output 2.1.7 Long-term financing for UMA/UMAFORES:

- i) UMA/UMAFORES-generated diversified production and expanded legal trade provides sufficient income to ensure long-term budget to sustain the UMA/UMAFORES.
- ii) Public-private partnerships between IPLC and investors, companies and markets established to provide increased revenue streams and net benefits from legal and sustainable natural resource use activities (i.e. ranching, trophy hunting, collecting, timber harvest; among others) occurring in the targeted UMA/UMAFORES.

Output 2.1.8 Distribution networks established with tracing mechanisms (labelling, document traceability, etc.)

The project will support the establishment of distribution networks based on reliable tracing mechanisms such as labelling, document traceability, and block chains among others. In particular, the CITES Resolution Conf. 11.2 (Rev CoP15) Universal tagging system for the identification of crocodilian skins, provides an effective example to be applied.

**Outcome 2.2. Diversified sources of income (species and products) for UMA/UMAFORES by increasing access to national and international markets.**

Federal budgets, such as the UMAS development subsidy, should be strengthened to allow the baseline operation of the project intervention areas, since these resources have historically served as seed capital for the establishment of new UMAS. Being one of the few federal resources in the form of a subsidy that allows the creation of infrastructure in the UMAS and even buying breeding stock, they had a significant impact on the number of hectares that were added each year to the UMAS system. However, in recent years they were not exercised and were diminished. Therefore, it is important that public-private partnerships are also established between indigenous peoples and local communities and investors, companies and markets to provide greater sources of income from legal activities for the use of natural resources such as ecotourism, hunting, ranching and, in general, any kind of extractive and non-extractive exploitation that occurs in the target UMAS. For this, it will be important to create certified distribution and market networks established with traceability mechanisms such as the one that exists for the use in UMAS of Totoaba (*Totoaba macdonaldi*). The Totoaba traceability mechanism allows to identify species that can be bred in captivity in a sustainable manner.

It is important to create new production models that are implemented for the selected species of this project, thus allowing the inclusion of more species in the short term and the diversification of the offer.

Diversified business plans should also be created for the communities that include access to preferential markets and products made for end users, thus avoiding intermediaries. Finally, a report of the business plans developed and maps of value chains generated should be made in order to make a Project evaluation.

The expected outputs for this outcome are:

Output 2.2.1 Capacities created in target communities to carry out participatory monitoring of the economic impact of the projects.

Output 2.2.2 Catalog of selected species and new species/products under management for legal and sustainable use made available to fair marketing mechanisms and with redistributive principles.

Output 2.2.3 Diversified business plans for communities include access to preferential markets and products made for end users.



Output 2.2.4 Sustainable production models implemented for selected species, allowing the inclusion of more species in the short term and diversification of the supply.

Output 2.2.5 Report of the business plans' performance and maps of value chains generated.

Output 2.2.6. Module 2 of MACOVIS is generated. Finally, this Component will generate deliverables for Module 2 of the MACOVIS in Component 4. In particular, the component will produce:

- MACOVIS report on the activities of UMA / UMAFORES groups created;
- MACOVIS report on % of social monitoring reports accepted for integration.

-

### **Component 3.** Inspection and surveillance capacities

Outcome 3.1 Effective community-based participatory inspection and surveillance committees for legal species trade (LST) in place to support law enforcement actions.

The project will work with selected UMA/ UMAFORES to create functional and funded community- based LST surveillance committees to support law enforcement actions.

Output 3.1.1 Toolkit to strengthen the inspection and surveillance capacities of LST at national and international level (species and product identification guides, trafficking routes).

The project will develop tools and instruments to improve law enforcement through a stronger governance scheme formed by local communities, government and civil society for wildlife (species and product identification guides, trafficking routes). It will facilitate contact between local communities and authorities to improve the handling and following up on complaints and carrying out related procedures. It will promote meetings that set government agencies and local communities side by side to share and explain diverse data and to agree on wildspecies trade regulations. The project will also provide assistance on the development of inspection and surveillance Committees under PROFEPA'S certification.

The project will also provide training and develop guidelines for capacity building for IPLCs and other stakeholders regarding inspection and surveillance of LST at the national and international level (species and product identification guides, trafficking routes, etc.).

Output 3.1.2 Functional and funded community-based LST inspection and surveillance committees.

The project will support the creation of functional community-based surveillance committees for inspection and surveillance of legal species trade (LST). To facilitate and guide this, the management plans of selected UMA/ UMAFORES will need to be revised to include critical actions for LST enforcement through surveillance committees and monitoring system. The project will support the capacity building of selected committees to ensure they have the necessary skills and resources to function effectively. Furthermore, the project will support the identification of financial mechanisms to ensure the effective and sustained functioning of these committees. While, the value chains and market access promoted in Component 2 will ensure an increment in financial resources, the PPG will consider other options.

Output 3.1.3 Module 3 of MACOVIS will be generated. The project will support the compilation of information generated through this Component so as to establish Module 3 of MACOVIS. It will boost comprehensive, transparent and open wildlife information through Module 3 in order to support participatory decision making and learning skills at the intervention zones. It will consolidate existing information for ecosystem-based management and decision-making

relevant to the five chosen regions. This updated information management approach will facilitate joint management decisions by government and beneficiaries, and thereby increase acceptance and support among IPLC for regulatory mechanisms such as type of species, status of those species, site, restrictions and even wildlife species bans.

In particular, this will include:

- MACOVIS report with % of community surveillance reports accepted for integration.

-

#### **Component 4.** Monitoring and knowledge management (KM)

Outcome 4.1 Systematized and shared information on legal, sustainable and traceable trade of wild species with relevant international and national partners.

Output 4.1.1 Dissemination and communication strategies are established on trade and species, available in the main indigenous languages. These will enable the project to spread information to all relevant local communities including IPLCs on the current state of the chosen wildspecies and the importance of transitioning to sustainable trade practices.

Output 4.1.2 Strategy for disseminating knowledge generated at various local, national and international levels (e.g., national or subnational legal wildlife trade dialogue platforms, website, reports, monitoring of results in international forums). The results obtained in projects will be disclosed locally, as well as the national and international framework that supports trade. Meetings or workshops to exchange experiences. The knowledge generated by all Project's components will also be applied to design the Project's replications and exit strategies.

Output 4.1.3 Information on UMA projects and/ or products are publicly accessible and meet transparency standards.

Output 4.1.4 Comprehensive System for Monitoring, Sustainable Use and Trade of Wild Species (MACOVIS) is developed, implemented and financed.

MACOVIS will serve as a platform to integrate and analyze the ecological, geographical, legal, and commercial information derived from the monitoring, sustainable use and trade of wild species of flora and fauna. The information that MACOVIS will handle is for the UMA / UMAFORES selected for interventions through the project (a prioritization process will choose these UMA/UMAFORES based on various criteria, such as community interest in participating in the project, species that they manage and use, among others). It will be fed with information from the current databases used for wildlife management in Mexico (including UMA and international trade databases of DGVS, UMAFORES of the DGGFS system, NDF database of CONABIO, SIREV of PROFEPA). It will generate automated reports with information from indicators in the project's results framework (to be confirmed during the PPG), including GEF Core Indicators. It will have several levels of access per user (sector / dependency), as well as several modules per project component. Possible deliverables include:

- Population trend of selected species at the local level (within the UMA / UMAFORES)
- Restored areas / Change of land use at the local level.
- Local ecosystem integrity.
- Local socioeconomic indices.
- Participatory monitoring reports (ecological monitoring, community surveillance, socioeconomic information).
- Report on productive diversification by UMA / UMAFOR.

4.1.5 Capacity created among IPLC, technical service providers, state and municipal authorities to upload information to MACOVIS, and monitor it. The project will support capacity building activities to train IPLC, technical service providers, state and municipal authorities to upload relevant information to the new Database for UMA/UMAFORES. Furthermore, state and municipal authorities will be trained on how to monitor it, in accordance with a manual/protocol to be established by the project.

**Outcome 4.2** M&E assesses project impact and guides adaptive management, measured by % implementation of the project's M&E Plan, Stakeholder Engagement Plan (SEP), Indigenous People and Local Communities Action Plan (IPLCP) and Gender Action Plan (GAP).

Output 4.2.1 Project's M&E Plan, SEP, IPLCP and GAP implemented, ensuring the achievement of the planned goals. In accordance with GEF, UNDP and national policies, a series of social and environmental management plans will be developed during the PPG based on analyses conducted during the PIF and PPG stages. As such, the project will ensure the implementation and monitoring of these plans, and pursue adaptive management strategies, where appropriate.

#### **4) Alignment with GEF focal area and/or Impact Program strategies;**

This project is aligned with the Biodiversity Focal Area and will contribute to the following objectives:

**BD-1-1:** Mainstream biodiversity across sectors as well as landscapes & seascapes through biodiversity mainstreaming in priority sectors: The project will advance biodiversity mainstreaming through spatial and land-use planning to ensure that land and natural resource use are promoted without degrading biodiversity. It emphasizes linking objectives of sustaining PAs and their conservation objectives with sustainable, legal and traceable use and trade of biodiversity within the PAs and surrounding areas through the promotion and strengthening of UMA/UMAFORES.

**BD-2-7:** Address direct drivers to protect habitats and species and improve financial sustainability, effective management, and ecosystem coverage of the global protected areas estate: The GEF support for the proposed project will be channeled towards: 1) effective protection of ecologically viable and climate-resilient ecosystems and advocate coverage of threatened species; 2) developing market-based opportunities for sustainable livelihoods to support the communities that rely on UMA/UMAFORES; and 3) developing institutional and individual capacities for effective management and surveillance of UMA/UMAFORES.

To improve sustainability of protected areas, UMA/UMAFORES would act as productive buffer zones around them and as biological corridors between them. In this regard, the project aims to support Aichi Targets 4, 5, 11, 12, 14 and 15.

#### **5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;**

Mexico is a net importer of wild species and forest products, but it is missing out on the opportunity of mobilizing resources for rural development through participation in a highly integrated international market. Current budgetary resources are channeled to maintaining the existing UMA/UMAFORES, performing inspections and assessments and managing the overall system through the Programme: "Subsidio de Conservación y Aprovechamiento de la Vida Silvestre" (Subsidy of Wildlife Conservation and Use). However, consolidating fair and equitable market value chains requires additional resources that are not available from public or private sources because of the risks associated with this kind of investments.

This project represents the opportunity to realign expenditures to increase local capacities and to create a new nature's investment class. GEF resources will be directed to finance activities focused on the market side of this initiative, specifically developing capacities to foster sustainability, traceability and legal trade to accomplish:

- Improvement of financial mechanisms to promote IPLCs business' models.
- Enhancement of value chains.
- Promotion of private sector investments and co-responsibility.
- Promotion of connectivity between protected areas.

Additional resources will be leveraged through blended financing that combines private, philanthropic and public sources. This project will support the creation of ad-hoc mechanisms to finance incremental costs of fostering incentives to attract private investors and buyers (i.e. comply international standards to trade high quality crocodile leather with international fashion designers, etc.).

#### **6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);**

The project will contribute to the conservation of globally significant biodiversity and sustainable use of the components of globally significant biodiversity. As such, it will generate the following global environmental benefits (GEBs):

- GEF Core Indicator 1: 50,000 hectares Terrestrial protected areas created or under improved management for conservation and sustainable use (the METT will be applied to selected PAs during the PPG)
  - o Sub-Indicator 1.2: Terrestrial protected areas under improved management effectiveness: 50,000 hectares
- GEF Core Indicator 4: 500,000 hectares of landscapes under improved practices (hectares; excluding protected areas)
  - o Sub-Indicator 4.1: Area of landscapes under improved management to benefit biodiversity: 500,000 hectares

The project will also monitor its impact through indicators related to:

- Population trends of selected species *in situ*.
- Land-use change.
- Ecological integrity.
- Socio-economic index (HDI-UNDP).

Post-COVID-19 recovery: The project is aligned with the GEF's push for a Green Recovery post-COVID through nature-based solutions. COVID-19 has had a devastating impact on Mexico's economy, with GDP contracting 17.3% since the start of the crisis and heading for its worst recession in a century, with the IMF predicting a 10.5% contraction this year<sup>[3]</sup>. For the post-COVID economic recovery to be sustainable, inclusive and resilient in Mexico, a return to 'business as usual' and environmentally destructive/negligent policies, investment patterns and activities must be exchanged for nature-based solutions (NBS) that optimize the synergies between nature, society and the economy<sup>[4]</sup>. The project will develop and strengthen institutional and practice-based tools to support

Mexico's recovery post-COVID through the promotion of nature-based solutions in the form of UMA/UMAFORES in 5 Biocultural Regions. These include expanding the current UMA/UMAFORES portfolio to increase coverage of key biodiversity resources and promote the sustainable use and marketing of selected species to ensure long-term society-wide benefits, particularly for IPLCs.

There is a strong economic rationale for investing in protecting nature as part of a post-COVID-19 Green Recovery - the benefits outweigh the costs at least fivefold<sup>5</sup>, with dividends including flood protection, clean water provision, soil conservation and avoided carbon emissions. This project will build on current experiences with UMA/UMAFORES and provide an opportunity to ease pressure on globally-significant biodiversity and the ecosystem services they provide. By addressing habitat fragmentation and strengthening ecosystem connectivity through sustainable and inclusive productive practices and market access, the project will foster income-generating products from sustainably-managed native species, increase sustainable livelihoods and ultimately create more resilient IPLC as they recover from the socio-economic impact of the pandemic.

Furthermore, all wildlife trade poses environmental and other threats, including the spread of zoonotic disease, and needs to be countered. Legal species trade (LST) requires monitoring to prevent the spread of disease to native animal species, domestic livestock, and humans. Preventing another zoonotic pandemic, such as COVID-19, requires significantly increasing conservation and sustainable use of natural habitats and biodiversity. Thus, UMA/UMAFORES represent an alternative for producers and buyers to sustainably and legally fulfil this demand, creating economic incentives for conserving critical natural ecosystems.

## **7) innovation, sustainability and potential for scaling up.**

Innovation: The community-based programs advanced through this project are innovative models that will generate important lessons for wider application, particularly the role of incentive measures to be introduced for conservation of populations of selected species and their habitat in Mexico. The strengthening of local governance, dialogue platforms and surveillance structures by the project will facilitate involvement of targeted populations and local stakeholders in conservation planning and local economic development. The project will also test innovative ideas for improving local livelihoods and creating enabling environment for sustainable use of natural resources. The promotion of sustainable legal use and trade of native wild species will provide alternate sources of livelihoods and help in job creation for local women and youth. The engagement of private sector (multi-national companies) in supporting green business models will also be explored. This project will also take advantage of new advances in research to improve the efficiency and effectiveness of the community-based conservation and participatory monitoring and evaluation of the project activities and their impact toward conservation of wild species and local economic development.

Sustainability: Sustainability will be ensured through incorporating local governance structures and community institutions with local, state and national government agencies into every aspect of project design and implementation. This will ensure the creation of a broad-based constituency that is essential to sustainable markets and achievement of conservation and development goals. The project will help increase market access for livelihoods based on the sustainable use of natural resources that ensure the conservation of selected species and habitats, developing and implementing business plans, and local enterprises development. These interventions will ensure environmental, social and financial sustainability. The outcomes and outputs described above include capacity building through targeted training programs, and also include institutional strengthening of government agencies, local governance structures and community institutions. The project will strengthen local ownership by creating an enabling environment for natural resources management in UMA, biodiversity conservation, and enhance institutional and local capacities. Through these actions, the project will support environmental and financial sustainability by ensuring wise use of natural resources, and contributing to conservation of natural resources and biodiversity, while supporting local livelihoods.

Potential to scale-up: On a national level, best practices from this project will be replicated in other parts of the country, as well as applied to other wildlife conservation activities at large. An initial analysis has identified a potential area of approximately 322,904 km<sup>2</sup> (approx. 32,904,000 hectares) with 52 PA (1,414,907 Ha), 4,561 UMAFORES (7,413,371 Ha) and 954 UMA (3,277,052 Ha), including:

- Priority areas for conservation
- Priority areas for restoration
- Corridors between key areas (*i.e.*, PAs, UMA, UMAFORES)
- Areas with more than 50% of ecological integrity<sup>[6]</sup>
- Municipalities with more than 30% of the population living in extreme poverty
- Municipalities with medium to very high marginalization
- Areas with more than 30% indigenous population

Furthermore, many of the innovative activities supported through this project for reducing threats to biodiversity and natural resources will be applicable in other regions with similar biodiversity and ecosystems. Lessons learned through the project's on-the-ground interventions in the targeted landscapes will be replicable for scaling-up, including income-generating community-based conservation mechanisms. This will be achieved at the national, regional and global levels through knowledge management and dissemination of best practices, as described under Component 4. The PPG will determine whether and to what extent replicability will be pursued during and/or after the project's lifetime.

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[1] The final list of criteria will be fully confirmed against SES requirements during the PPG, and will include the need for FPIC if/where confirmed. If the selection of species is not finalized during the PPG, then the procedures for making that final selection will be included in the ProDoc or in an Environmental and Social Management Framework (ESMF), to ensure compliance with the SES.

[2] In UMAs, habitat is managed in such a way as to maintain the conditions necessary for the permanence of the species. They operate based on a management plan authorized by SEMARNAT, in which the activities that will be carried out to achieve sustainability and sustainable use are reflected, e.g. carrying out population studies to determine extraction rates that do not risk the viability of the species.

[3] <https://www.ft.com/content/1e25c567-66c3-44e0-86ed-54805a5d6503>

[4] <https://www.sciencedirect.com/science/article/abs/pii/S0013935117316080?via%3Dihub>

[5] <https://www.campaignfornature.org/protecting-30-of-the-planet-for-nature-economic-analysis>

[6] Mora, F., 2017. A structural equation modeling approach for formalizing and evaluating ecological integrity in terrestrial ecosystems. *Ecological Informatics* 41, 74–90. <https://doi.org/10.1016/j.ecoinf.2017.05.002>

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[1] [http://dof.gob.mx/nota\\_detalle.php?codigo=5334865&fecha=05/03/2014](http://dof.gob.mx/nota_detalle.php?codigo=5334865&fecha=05/03/2014)

[2] The Mexican Official Standard 059 - NOM-059 - is the legal instrument that identifies the Mexican species or populations of species that are at risk through the application of the Method Evaluation of Risk of Extinction of Wild Species of Mexico (MER).

[3] According to the IPBES Global Assessment, biodiversity is projected to decline further in most scenarios of global change over the coming decades, while the supply and demand for nature's material contributions to people that have current market value (food, feed, timber and bioenergy) are projected to increase. On the other hand, changes towards sustainable production and consumption are recognized worldwide to contribute to reduce inequalities. Also, community-based social marketing actions and the implementation of strong measures to combat corruption at all levels have proven to enforce legality and sustainability of trade in wildlife.

[4] Estadísticas de comercio internacional de México de especies nativas con origen en el medio silvestre y propósitos comerciales (UNEP-WCMC, 2009-2017).

[5] Proyecto de Evaluación de las Unidades de Manejo para la Conservación de Vida Silvestre (UMA) 1997-2008:

[6] \$ MX 903,700,000 converted at 21.92 pesos to USD\$1, per official UN exchange rate, 1 September 2020.

## 1b. Project Map and Coordinates

**Please provide geo-referenced information and map where the project interventions will take place.**

Please refer to Annex A, which includes maps showing 5 biocultural areas where the project will intervene. While the maps cover a wide potential area, this will be narrowed down during the PPG, based on consultations with indigenous peoples and local communities (IPLC) in these areas to confirm their interest in participating and registering their lands as UMA/UMAFORES in order to conserve and sustainably use and manage their wild species.

The maps in Annex A will be available at CONABIO's server in an online map server database (*e.g.*, <https://www.wegp.unam.mx/conabio2>).



2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

Project stakeholders engaged to date in either the Project's formulation, consultations, or future engagement are quite ample, as shown in the stakeholder table below.

During the PIF formulation phase, key institutions that can contribute to the Project's success were consulted. For example, the Ministry of Environment (Vice Ministry of Environmental Management and Protection), the General Directorate of Wildlife, the General Directorate of Forestry and Soil Management, the National Commission of Natural Protected Areas, and the National Commission for the Knowledge and Use of Biodiversity. Additionally, the PIF team carried out consultations with other Ministries to align efforts with other related projects, including the Ministry of Agriculture and Rural Development. Further, private sector stakeholders and CSOs were engaged to secure the necessary co-financing, i.e., Fomento Social-Banamex.

In the upcoming phases, PPG and implementation, additional stakeholders will be formally engaged, based on previous informal consultations. For example, the National Institute of Indigenous Peoples, the Federal Environmental Law Enforcement Agency, legal wildlife traders, the academia, selected landowners, indigenous and local communities. To strengthen stakeholders' engagement, a stakeholders' engagement plan and an indigenous peoples' plan will be formulated during the PPG phase. These plans will be informed by the FPIC guidelines and a gender action plan.

The table below provides indicative information on how stakeholders, including civil society and indigenous peoples, are being engaged in the project preparation, and their respective roles and means of engagement.

Institution	Institutional responsibility and role in the project
Ministry of Environment and Natural Resources (SEMARNAT)	GEF focal point and environmental sector head. Responsible for directing, executing and controlling environmental policy, furthering its contribution to sustainable development.
Deputy Ministry for Environmental Management and Protection (Subsecretaría de Gestión para la Protección Ambiental – SGP A)	Responsible for enforcing the legal framework.
General Directorate of Wildlife (Dirección G	DGVS is the authority in charge of applying and generating the public policies to conserve and protect biodiversity and manage the sustainable use of wildlife and its habit

General Directorate of Wildlife and Forests (Dirección General de Vida Silvestre – DGVS)	at, including aquatic and forest ecosystems. It also manages the National Subsystem of Information of Wildlife and the System of Management Units for Wildlife Conservation – it's the administrative authority of CITES.
General Directorate of Forestry and Soil Management (Dirección General de Gestión Forestal y de Suelos – DGGFS)	DGGFS is the authority in charge of generating guidelines for evaluation of forest management programmes and other tools for timber and non-timber forest products use and trade. This area manages the National Forest Management System (SNGF), which is the tool to evaluate and systematize all the forest-related authority actions in the country, including trade and transport documents for legality and traceability forest products. DGGFS works in coordination with the 32 state representations of SEMAR, NAT and CONAFOR in the country to comply with the Forest Law.
National Commission of Natural Protected Areas (Comisión Nacional de Áreas Naturales Protegidas – CONANP)	CONANP's mandate is to protect and manage Mexico's Natural Protected Areas. As such, CONANP will provide baseline information regarding species and ecosystems, as well as contribute to the definition of ecological corridors between PAs and UMA/UMAFORES within and outside of the protected areas polygons.
National Commission for the Knowledge and Use of Biodiversity (Comisión Nacional para el Conocimiento y Uso de la Biodiversidad: CONABIO)	Technical Agency for the project: CONABIO develops various information and monitoring systems and strategies to support decision-making in the government, academia and civil society to conserve and sustainably use biodiversity while promoting social development and wellbeing, particularly of indigenous peoples and local communities that safeguard Mexico's ecosystems. Since 2000, CONABIO serves as CITES Scientific Authority, fostering the legal and sustainable use and trade of wild species with in CITES Appendices through the best available scientific, technical and commercial evidence. The institution will provide in-kind co-financing through biodiversity data systematization, generation of new information, expert networks information analysis, communication and dissemination of results and conclusions, elaboration of recommendations to conserve and promote the sustainable use of biodiversity. CONABIO has 25 years of experience and will provide knowledge and state-of-the-art studies on Mexico's biodiversity.
Ministry of Agriculture and Rural Development (Secretaría de Agricultura y Desarrollo Rural – SADER)	SADER has among its objectives to promote the exercise of a support policy that allows producing better, take better advantage of the comparative advantages of our agricultural sector, integrate rural activities into the productive chains of the rest of the economy, and stimulate the collaboration of Producer organizations with their programs and projects, as well as the proposed goals and objectives for the agricultural sector.
National Institute of Indigenous Peoples (Instituto Nacional de los Pueblos Indígenas - INPI)	The project will approach INPI for guidance regarding consultations with IPLC in the selected regions, as well as for the development of a communication strategy with a awareness and didactic materials in the major indigenous languages.
National Institute of Indigenous Languages (Instituto Nacional de Lenguas Indígenas - INALI)	The project will approach INALI for guidance regarding consultations with IPLC in the selected regions, as well as for the development of a communication strategy with a

S (Instituto Nacional de Lenguas Indígenas - INALI)	wareness and didactic materials in the major indigenous languages.
Academia, especially Intercultural Universities	Intercultural Universities are public institutions of higher education that contribute to achieving greater equity in the distribution of educational development opportunities in the country, they are characterized by their quality and cultural and linguistic relevance. These schools seek to provide opportunities for professional academic development and research to young people in rural populations of diverse cultural origin. Their locations favor the possibility that young people from various indigenous regions have access to higher education. There are 11 of them, all present in states where the program is expected to have impact. These universities could be a great support since they specialize in language and culture and Community Outreach. They could assist in the consultations with IPLC in the selected regions, as well as in the development of a communication strategy with awareness and didactic materials in the major indigenous languages.
Indigenous Peoples and Local Communities (IPLCs)	The project will engage Indigenous People or Local Communities that are the legitimate owners of the land where UMA/UMAFORES are already found or where there is potential to be established (property regime: ejidal, communal). The suitability of an Indigenous Peoples Plan (IPP) will be considered during the PPG; if deemed more suitable, all elements of an IPP will be included in the Project Document, thereby making the ProDoc effectively an IPP (which is in accordance with the SES).
Landowners (property regime: private)	Legitimate landowners where an UMA/UMAFORES is already found or where one is to be established, as well as others involved in the productive and value chains of the species managed in these systems.
Federal Environmental Law Enforcement Agency (Procuraduría General de Protección al Ambiente -PROFEPA)	The project will approach PROFEPA to support traceability systems for selected species and enhanced and strengthened national and international trade.
Private sector stakeholders	These are crucial for the implementation of the project as they have the necessary capacities and experience to develop profitable business models. Additionally, hybrid financial mechanisms will be implemented for the execution of the project. Currently, there are several micro-financing institutions and private funds willing to invest in sustainable wild species business models, to be confirmed in PPG. The Project will work on the harmonization of public and private sustainable sourcing policies, related to legal wildlife species trade.
	Civil Society Organizations play a key role to allow for and conduct actions planned for the development and operation of UMA/UMAFORES management plans, by promoting the engagement of local actors in the conservation and sustainable use, promoting

Civil Society Organizations	ing the engagement of local actors in the conservation and sustainable use, promoting diverse values of biodiversity and knowledge systems, providing technical support and sharing their expertise and best practices, and providing strategic leadership and effective coordination through regional/local implementation teams/experts. A preliminary analysis identified the following CSOs (to be confirmed during the PPG): Pronatura Veracruz A.C. (formerly Pronatura Mexico Veracruz Region); Amigos de Sian Ka'an; Alianza Mexicana por la Biodiversidad; AZCARM: (Association of Zoos and Aquariums of Mexico); RITA: The Indigenous Tourism Network of Mexico (Civil Association); Reforestamos México; and Naturalia.
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### 3. Gender Equality and Women's Empowerment

**Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).**

Women play a key role in the social dynamics of the target communities. The project will address key gender issues in order to mainstream gender as well as promote gender equality and the empowerment of women. In particular, the Project will provide an opportunity to tackle gender disparities by encouraging women's participation in project activities and decision-making fora. While the issue of land tenure is beyond the scope of this project, the interventions aimed at women and youth, particularly with regards to their active involvement in the value chains of products derived from target intervention sites, provide an innovative approach to engaging these members of the community. The project aims to mainstream gender considerations into the financing, technical assistance, capacity building and policy dialogue activities of the project through the following:

- The PMU will be composed of gender-sensitive staff, whose awareness of the importance of gender equality and skills in incorporating gender into their work are enhanced through capacity development; recruitment will also consider gender balance in the selection of candidates.
- Stakeholder engagement will ensure all consultations be designed in a gender-responsive way and women will be equally consulted and participate in all discussions related to the project.
- The project will give priority to UMA/ UMAFORES managed by women to be supported with technical assistance.
- All capacity building activities will ensure equal participation and decision-making by women and men.

During the PPG, a social and gender evaluation will be developed, in which gender roles, livelihoods, socioeconomic conditions and access to specific natural resources of men, women and youth will be analyzed. Additionally, indigenous peoples will be consulted through a Free, Prior and Informed Consent (FPIC) process that will provide more specific information about their situation in the project intervention area and identify any potential risks as well as mitigation options.

Based on the results of the social and gender assessment and FPIC, a gender action plan (GAP) and an indigenous peoples plan (IPP) with gender-sensitive and specific actions and indicators for women, indigenous and young people will be designed to contribute to closing the social gaps they face. These specific actions and indicators will be integrated into the project results framework. The project design will ensure that financial and human resources are set aside for gender mainstreaming during project implementation and for monitoring the effectiveness of this mainstreaming.

The project will not exacerbate existing gender-based inequalities, rather it will promote participatory methodologies for both men and women and awareness raising at both community and household levels to foster more gender-equitable decision making and enhance the economic participation of women and youth.

This project is expected to contribute to a total population of 3,000 direct beneficiaries, of which an estimated 50% will be women, TBD% will be youth and TBD% identify as indigenous peoples. However, this will be defined more precisely during the PPG.

To ensure the correct implementation of the gender perspective, a gender expert will be hired to develop a social analysis, a gender assessment and a gender action plan and the necessary budget during the PPG phase, with the objective of mainstreaming gender equality and the empowerment of women in all project components. The same measure will be taken for the implementation of FPIC, hiring a specialist for its facilitation and for the construction of the Indigenous Peoples Plan (IPP), allocating funds during the PPG for this action.

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes**

**closing gender gaps in access to and control over natural resources;**

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

#### 4. Private sector engagement

Will there be private sector engagement in the project?

Yes

**Please briefly explain the rationale behind your answer.**

Private sector stakeholders are crucial for the implementation of the project as they have the necessary capacities and experience to develop profitable business models. The project will pursue the identification and development of blended finance mechanisms. Currently, there are several micro-financing institutions and private funds willing to invest in sustainable wild species business models. For example:

AMEBIN: The Mexican Alliance for Biodiversity and Business is a mechanism for intersectoral dialogue to address issues related to the conservation, sustainable use and restoration of biodiversity in Mexico with a business perspective (five Alliance companies: Banorte, Citibanamex, Grupo Bimbo, Proteak and Walmart México). Their goal is to make companies aware of the importance of biodiversity and ecosystems for well-being, the economy, their businesses and their value chains; they promote investments by companies and institutions in sustainable use, conservation or restoration of biodiversity and natural resources. The Alliance also makes it possible to bridge the gap between the private sector and civil society organizations and generate the necessary confidence to enhance the efforts of both sectors regarding biodiversity. They could assist the project with the creation of business plans, or when identifying value chains and fair-trade opportunities. Their engagement in the project will be confirmed during the PPG.

## 5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Description of risks that might prevent the project objectives from being achieved	Level	Mitigation measures
The federal government could apply further budget reductions in response to a contracting economy from COVID-19.	<i>Moderate</i>	The project will consider options to search and diversify financing sources, such as the recovery of fiscal resources for reinvestment in productive and conservation projects; promoting private investment and international financing. Likewise, The Project will promote cost-effective resources management at UMA/UMAFORES level to optimize spending and cost savings.
Severe climate events such as droughts, strong winds, hurricanes (including climate change impacts.)	<i>Moderate</i>	- During the design and evaluation of UMA/UMAFORES management plans and business models, the project will consider resilience to the impact of severe weather events, including those caused by climate change. -Take into consideration local studies and evaluations of these climate events.
Participation in project activities could pose a potential risk of exposure to COVID-19.	<i>Low</i>	In recognition of current health restrictions associated with the COVID-19 pandemic, the project will employ videoconferencing equipment for virtual meetings and workshops, when necessary; and develop the workplan so that some activities in the field or related to consultations take place later, as necessary, to prevent exposure among project stakeholders and participants.
<b>Social and Environmental Risks identified in the Pre-SESP:</b>		
<b>Risk 1:</b> There may be potential gender gaps due to issues of land tenure, and as a result, the impossibility of women to legally constitute economic associations that could benefit from the project activities (use and commercialization of legal species). Further, the Project potentially reproduce discriminations against women based on gender, e	<i>Moderate</i>	During the development of the project, a gender analysis and Gender Action Plan (GAP) will be prepared. This will aim to define the activities that guarantee the involvement of women in the project.



<p>specially regarding participation in design and implementation or access to opportunities and benefits resulting from legal wildlife trade.</p> <p><b>Principle 2, Standard 5</b></p>		
<p><b>Risk 2:</b> Project activities could potentially impact natural habitats and/or environmentally sensitive areas depending on project intervention sites, if not designed or implemented well.</p> <p><b>Standard 1</b></p>	<i>Moderate</i>	<p>The design of the project interventions, led by appropriate experts, will take into account the specific regulations defined for the management of these natural areas according to their management categories, as well as what is defined in the Protected Areas Management Plan.</p>
<p><b>Risk 3:</b> Marginalized, vulnerable groups, potentially including indigenous peoples, could be excluded from decisions that affect them; and/or not benefit from the project. Project activities might create conflicts or tensions in communities. There could also be impacts (direct or indirect) on land use, access to resources, and/or land tenure.</p> <p><b>Principle 1, Standard 5, Standard 6</b></p>	<i>Moderate</i>	<p>A comprehensive Stakeholder Engagement Plan will be prepared during the PPG, and a project-level grievance redress mechanism (GRM) established. The suitability of an Indigenous Peoples Plan (IPP) will be considered during the PPG; if deemed more suitable, all elements of an IPP will be included in the Project Document, thereby making the ProDoc effectively an IPP (which is in accordance with the SES).</p>
<p><b>Risk 4:</b> Project activities could potentially pose a risk to endangered species.</p> <p><b>Principle 1, Standard 1</b></p>	<i>Moderate</i>	<p>During project design, species screening and prioritization will rely on list inclusion criteria, namely:</p> <ul style="list-style-type: none"> <li>- Native species to Mexico</li> <li>- Presence within the five potential regions of intervention of the Project</li> <li>- Species with national or international record of exploitation or use: <ul style="list-style-type: none"> <li>- Harvested species (DGVs)</li> <li>- Species under harvest (DGGFS)</li> <li>- CITES species with international trade (UNEP-WCMC)</li> <li>- Non-CITES species with exports from Mexico (DGVs)</li> <li>- Species subject to illegal trade (PROFEPA, WCMC)</li> <li>- Priority species for conservation.</li> </ul> </li> </ul> <p>Also, exclusion criteria will include:</p> <ul style="list-style-type: none"> <li>- CITES Appendix I species</li> </ul>

		<p>Species with current legal prohibitions in Mexico (e.g., parrots, primates, marine mammals).</p> <ul style="list-style-type: none"> <li>- Agricultural species</li> <li>- Extinct species</li> </ul> <p>The final list of criteria will be fully confirmed against SES requirements during the PPG, and will include the need for FPIC if/where confirmed. If the selection of species is not finalized during the PPG, then the procedures for making that final selection will be included in the ProDoc or in an Environmental and Social Management Framework (ESMF), to ensure compliance with the SES.</p>
<p><b>Risk 5:</b> Project could involve production of aquatic species, harvesting for forests, and other such activities that could have unintended adverse impacts if not designed or implemented well.</p> <p><b>Standard 1</b></p>	<i>Moderate</i>	<p>Once the specific intervention sites are defined and the species are selected, during the PPG, this risk and all others will be captured in an Environmental and Social Management Framework (ESMF), if determined necessary for SES compliance.</p>
<p><b>Risk 6:</b> Project outcomes could be sensitive to potential impacts of climate change</p> <p><b>Standard 2</b></p>	<i>Moderate</i>	<p>Project design will take into consideration the proposed intervention sites cross-referencing with the National Atlas of Vulnerability to Climate Change, to assess which intervention areas could be most vulnerable to which extreme events. Based on these measures, the PPG team will adjust any activity (as needed).</p>
<p><b>Risk 7:</b> Indigenous peoples are present in the Project area. Their culture, lands, livelihoods and other aspects of their existence could be impacted – positively or negatively – by the project’s activities. FPIC consultations have not yet started.</p> <p><b>Standard 6</b></p>	<i>Moderate</i>	<p>FPIC consultations will start immediately upon the commencement of the PPG, and will be fundamental to entire PPG phase. FPIC will be ensured on any matters that may affect the rights and interests, lands, resources, territories (whether titled or untitled to the people in question) and traditional livelihoods of the indigenous peoples concerned. The project will not take or appropriate the cultural, intellectual, religious and spiritual property of indigenous peoples without their FPIC. If FPIC is not secured, then the associated activities will not be pursued.</p>

e pursued.

The suitability of an Indigenous Peoples Plan (IPP) will be considered during the PPG; if deemed more suitable, all elements of an IPP will be included in the Project Document, thereby making the ProDoc effectively an IPP (which is in accordance with the SES).

## 6. Coordination

**Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.**

The project will be implemented under the National Implementation Modality (NIM). UNDP will be the GEF Implementing Agency responsible for the implementation, monitoring and evaluation of the Project in compliance with UNDP and GEF guidelines.

The GEF Executing Agency (national implementing partner) is the Ministry of Environment and Natural Resources (SEMARNAT), through the Deputy Ministry for Environmental Management and Protection (Subsecretaría de Gestión para la Protección Ambiental – SGPA), responsible for enforcing the above-mentioned legal framework. Within SGPA, the Project Coordinating Unit will be hosted by the following areas:

- General Directorate of Wildlife (Dirección General de Vida Silvestre – DGVs).
- General Directorate of Forestry and Soil Management (Dirección General de Gestión Forestal y de Suelos – DGGFS).

The National Commission for the Knowledge and Use of Biodiversity (CONABIO) will serve as the project's Technical Agency.

A Steering Committee will be created with the involved agencies and other relevant stakeholders. Thematically, the Steering Committee will be responsible for issues related to the legal, administrative and scientific implementation of the project.

This proposed project will liaise/ coordinate with and use relevant lessons and experience from the following GEF-funded projects:

- CI/GEF/CONANP: *“Conservation and Sustainable Use of Biological Diversity in Priority Landscapes of Oaxaca and Chiapas”*. The project seeks to strengthen the conservation of globally significant biodiversity in the national system of protected areas and corridors, through the integrated management of culturally diverse coastal and terrestrial landscapes of Oaxaca and Chiapas, Mexico. The project will coordinate with CONANP to ensure exchange of lessons learned regarding applicable sustainable use of BD in the pilot sites.
- UNDP/GEF/CONAFOR: *“Transforming Management of Biodiversity-Rich Community Production Forests through Building National Capacities for Market-Based Instruments.”* The objective is biodiversity management is integrated into forestry practices on community lands through market-based instruments. The project will coordinate with CONAFOR to ensure lessons learned regarding sustainable forestry and market access are considered in the development of models in the pilot sites.
- CI/UNEP/GEF/CONANP: *“Mainstreaming the conservation of ecosystem services and biodiversity at the sub-watershed scale in Chiapas, Mexico”*. The project will coordinate with CONANP to ensure exchange of lessons learned regarding applicable sustainable use of BD in the pilot sites.
- WWF/UNEP/GEF/CONANP: *“Integrating trade-offs between supply of ecosystem services (ES) and land use options into poverty alleviation efforts and development planning in the Mixteca, Mexico.”* The project will coordinate with CONANP to ensure exchange of lessons learned regarding applicable sustainable land use options and ecosystem services in the pilot sites.
- CONAFOR/World Bank: *“Strengthening Entrepreneurship in Productive Forest Landscapes”* (2018-2023). The objective is to strengthen sustainable forest management and increase economic opportunities for forest-dependent people and enterprises in selected forest landscapes in Mexico. The project will coordinate with CONAFOR to ensure lessons learned regarding market access and value chain development are considered in the design during PPG.
- UNDP/ GEF *“Strengthening of the Management of the System of Protected Areas to Better Conserve Threatened Species and their Habitats”* (2014-2020). The objective is to increase the effectiveness of Protected Areas in Mexico to contribute to the conservation of species at risk, through two main results a) Consolidated frameworks at the system level to support the conservation of species at risk; and b) Protected Areas are managed effectively for the

conservation of selected species at risk. The current proposal will benefit from lessons learned from the activities and mechanisms developed through the project.

- CI/SADER/GEF (approved PIF) *Integration of biodiversity in the agricultural landscapes of Mexico*. The objective is to incorporate biodiversity in natural landscapes in Mexico in the midst of the implementation of sustainable policies and practices in the agricultural sector in 6 regions of the country. The project will coordinate with SADER to ensure exchange of lessons learned regarding sustainable productive practices with potential in UMA/UMAFORES.

- FAO/TBD/GEF (PIF under elaboration for submission to December 2020 workplan) The project will coordinate with the Ministry of Welfare to ensure complementarity of the initiatives and avoid overlap. In particular, during the PPG, the two initiatives will ensure their interventions in Huasteca provide distinct but complementary impacts and do not overlap.

- CONABIO/BM/GEF *Sustainable production systems and biodiversity (SPSB)*. The project worked in biological corridors in the states of Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco and Yucatán with the aim of conserving and protecting Mexico's biodiversity of national and global importance through the improvement of sustainable management practices in productive areas of priority biological corridors.

- CONABIO/GEF *Mesoamerican Biological Corridor - Mexico*. The objectives were to strengthen local capacities in the sustainable use of natural resources, promote their conservation so that future generations can take advantage of them and serve as an instrument for government (public) resources to support communities and the conservation of biodiversity.

- CONABIO/WB/GEF *Sustainable Productive Territories*. The objective is to strengthen the sustainable management of productive landscapes and increase economic opportunities for rural producers in priority areas of Mexico.

- CONABIO/GEF *Capacity building for the implementation of the National Strategy on Biodiversity of Mexico (ENBioMex) and Action Plan 2016-2030*. The objective was the strengthening and equitable and inclusive development of capacities of the actors involved and coordinated efforts of institutional planning.

Actions in the project's intervention regions will be complemented by and build upon baseline results achieved and best practices of the UNDP GEF portfolio for the focal area of biodiversity; in particular the different institutional and local governance models that have been promoted at the territorial level and in Protected Natural Areas.

For example, the Nagoya Protocol project defined different examples of community consultation mechanisms for prior consent, which strengthened organizational capacities of indigenous and local communities to manage their genetic resources and to obtain fair benefits on third-party access.

The GEF Invasive Species project put into practice an inter-institutional Scientific Committee and identified the list of invasive species with the highest risk potential in Mexico and developed several analyses of the routes of entry into the country, as well as their impacts on related ecosystems and native species.

Through the GEF-UNDP Resilience project, adaptation plans were drawn up in NPAs, which involve both management bodies and the local population, proposing ad hoc conservation lines by type of ecosystem and taking gender considerations into account. The conservation potential of these ecosystems was also analyzed with connectivity maps and other territorial organization strategies such as ADVC and UMAs.

Likewise, some of the financial instruments analyzed, prepared and in some cases implemented with the GEF UNDP Species at Risk and BIOFIN projects will serve as models to mobilize the interest of other sources of small, medium and large-scale financing that seek to support safe investments and at the same time greening actions of their portfolios and support programs. These cases will make it possible to delineate the private sector co-financing strategy and its possible link with public programs.

The GEF-UNDP Tourism project was designed as a result of the accompaniment between federal and local authorities and civil society in three pilot sites / regions that will carry out coordinated activities for the conservation of indicative species in the value chains of this sector.

The proposed UMA/UMAFORES project will build upon all these experiences (proven and highly effective tools and instruments).

## 7. Consistency with National Priorities

**Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions**

Yes

**If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc**

- National Bio Strategy Action Plan (NBSAP)
- CBD National Report
- UNFCCC National Determined Contribution
- UNCCD Reporting
- Others: CITES

The project is aligned with the following:

National Development Plan's (PND) Axis 2 "Well-being", through its Objective 2.5 "Guarantee the right to a healthy environment with a focus on the sustainability of ecosystems, biodiversity, heritage and biocultural landscapes". The government of Mexico is committed to promoting sustainable development, which at the present time has been evidenced as an indispensable factor of well-being. This formula summarizes inescapable ethical, social, environmental and economic mandates that must be applied in the present to guarantee a minimally habitable and harmonious future and it must be applied in order to guarantee a livable and harmonious future and, thereby, comply with the provisions of Article 4, sixth paragraph, of the Political Constitution of the United Mexican States, related to the fact that every person has the right to a healthy environment for their development and well-being.

In this way, the Federal Executive will consider in all circumstances the impacts that its policies and programs will have on the social fabric, the ecology and the political and economic horizons of the country.

The PND proposes twelve guiding principles, from which the ones related to this project are: 4) Economics for well-being; 7) Do not leave anyone behind, do not leave anyone out;

- Mexico's National Biodiversity Strategy and its 2016-2030 Action Plan (ENBIOMEX). Aichi Targets 2, 3, 4, 8, 9, 10, 14 and 15.
- 2030 Agenda for Sustainable Development (with direct impacts on SDGs 12, 13, 14, 15, and 17, and indirect impacts on SDGs 1, 2, 8, 9, 10, 11).
- CITES mission expressed in its 2008-2020 strategic vision (Res. Conf. 16.3 [(Rev. CoP17)]).

CITES: The project is aligned with CITES Strategic Vision 2021-2030 (Resolution Conf. 18.3<sup>[1]</sup>) as well as with the North American Action Plans for the Sustainable Trade of 5 groups of species, which were prepared as part of a project by the Commission for Environmental Cooperation (CEC) to promote legal, sustainable and traceable trade in selected North American species that are listed in CITES Appendix II).

- **Environment Sector Program 2020-2024 (PROMARNAT)**: This tool, which governs federal public policies on environmental matters, highlights five priority objectives:

- 1.- Promote the conservation, protection, restoration and sustainable use of ecosystems and their biodiversity with a territorial and human rights approach, considering biocultural regions, in order to maintain functional ecosystems that are the basis of the well-being of the population
- 2.- Strengthen climate action in order to move towards a low-carbon economy and a resilient population, ecosystems, productive systems and strategic infrastructure, with the support of available scientific, traditional and technological knowledge.
- 3.- Promote water as a pillar of well-being, managed by transparent, reliable, efficient and effective institutions that ensure a healthy environment and where a participatory society is involved in its management.
- 4.- Promote an environment free from contamination of water, air and soil that contributes to the full exercise of the right to a healthy environment.
- 5.- Strengthen environmental governance, through free, effective, meaningful and co-responsible citizen participation in public policy decisions, ensuring access to environmental justice with a territorial and human rights approach and promoting environmental education and culture.

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[1] [https://www.cites.org/sites/default/files/document/E-Res-18-03\\_0.pdf](https://www.cites.org/sites/default/files/document/E-Res-18-03_0.pdf)

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Knowledge management is a cross-cutting component in the project’s design, promoting learning and continuous improvement, generating documents for upscaling of lessons learned and experiences and visibility strategies for capacity development. Component 4 aims to systematize knowledge management and communication strategy that compiles lessons and experiences from the implementation of pilot interventions. The project will establish dialogue platforms at different levels, produce pamphlets, website with online publications, radio clips, billboards, posters, etc. to be confirmed during the PPG. Results from the project will be disseminated within the project intervention areas through the different networks and forums available. In particular, the project will establish a Comprehensive System for Monitoring, Sustainable Use and Trade of Wild Species (MACOVIS) which will compile information generated in each of the project’s components and produce reports on a variety of issues concerning the trade of legal species of flora and fauna in Mexico. MACOVIS will provide a crucial tool for managing knowledge between stakeholders at different levels, as well as serving decision-makers with updated information relevant to public policies and programs related to promoting legal species trade (LST) in Mexico. The project will also participate in the electronic platform for sharing lessons learned among managers established by the UNDP-GEF Regional Service Center (RSC).

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification\*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.



**Supporting Documents**

Upload available ESS supporting documents.

Title	Submitted
PIMS Mexico 6610 Pre-SESP for PIF Annex D	

### Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Fernanda Montero Lara	Director for sustainable finance	Secretariat of Finance and Public Credit	9/24/2020

**ANNEX A: Project Map and Geographic Coordinates**

Please provide geo-referenced information and map where the project intervention takes place

The following maps show 5 biocultural areas selected for the project's interventions. While the maps cover a wide potential area, this will be narrowed down during the PPG, based on consultations with indigenous peoples and local communities (IPLC) in these areas to confirm their interest in participating and registering their lands as UMA/UMAFORES in order to conserve and sustainably use and manage their wild species.

The maps in Annex A will be available at CONABIO's server in an online map server database (*e.g.*, <https://www.wegp.unam.mx/conabio2>).

**PROGRAM/PROJECT MAP AND GEOGRAPHIC COORDINATES**

# Potential Intervention Area

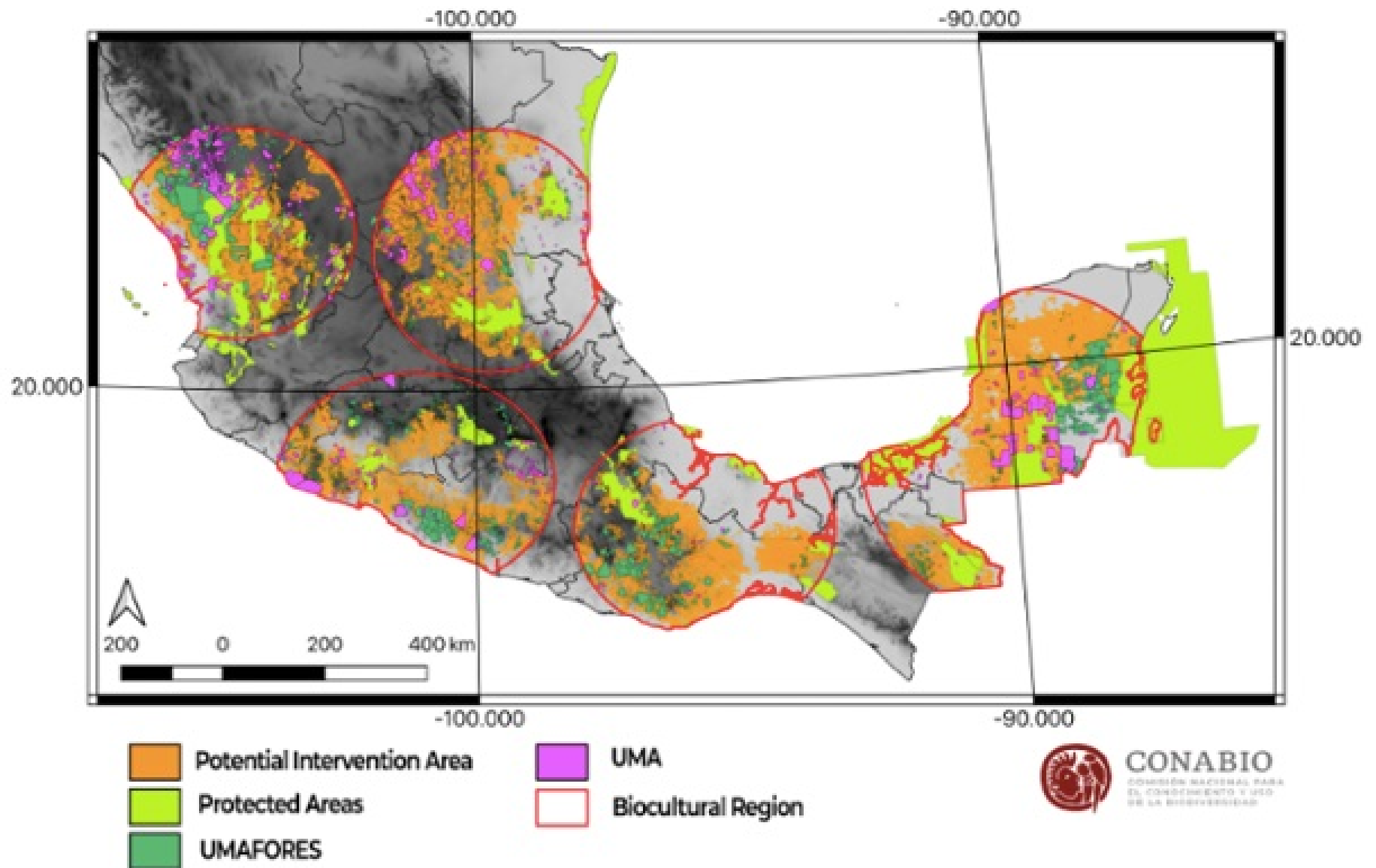


Figure 1. 5 Biocultural Regions: 1) Nayar, 2) Huasteca, 3) Purépecha, 4 Istmo-Mixteca and 5) Maya

Individual Biocultural Regions Selected for Project Interventions:

## Potential Intervention Area: Nayar Biocultural Region

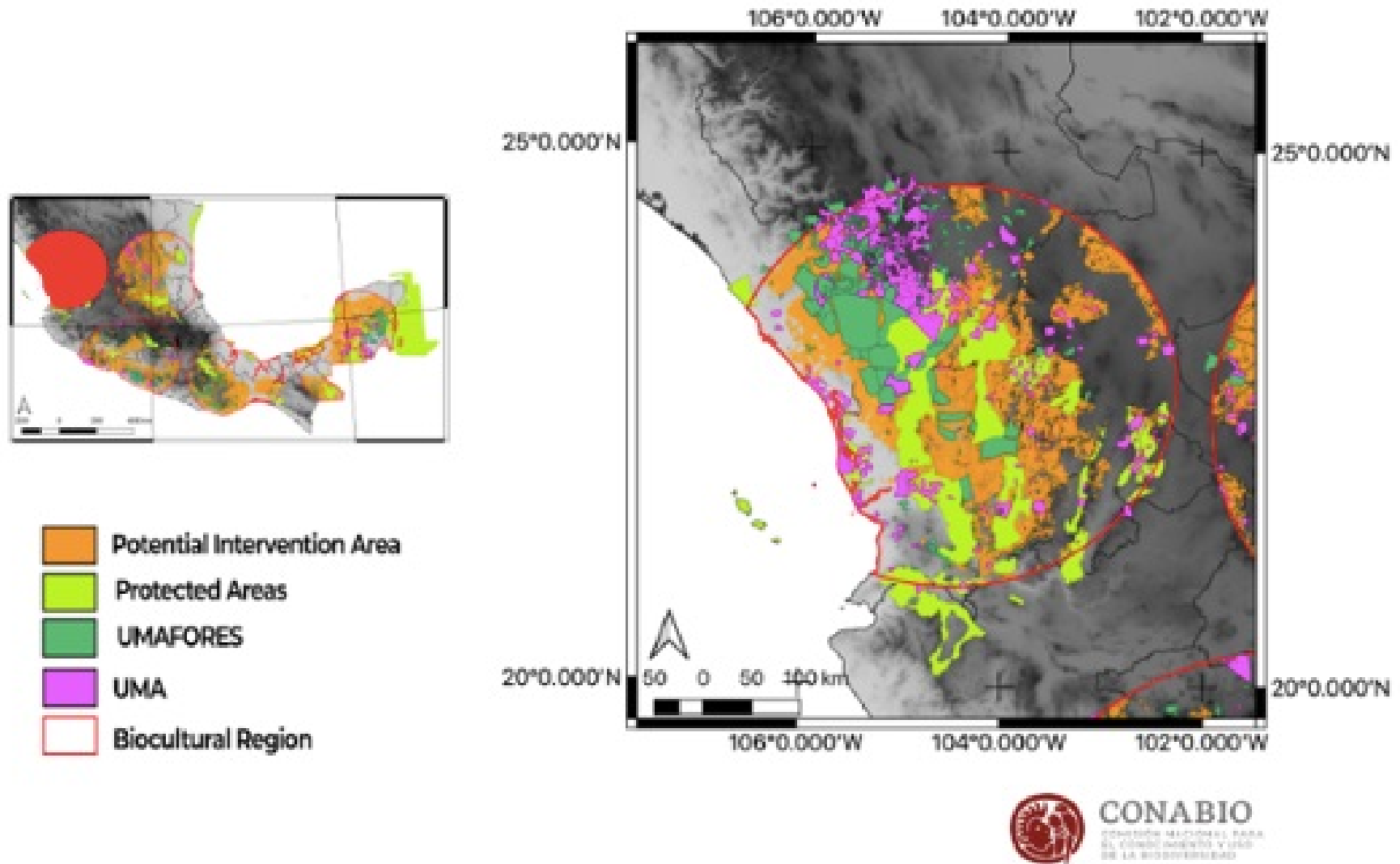


Figure 2. Nayar Region

## Potential Intervention Area: Huasteca Biocultural Region

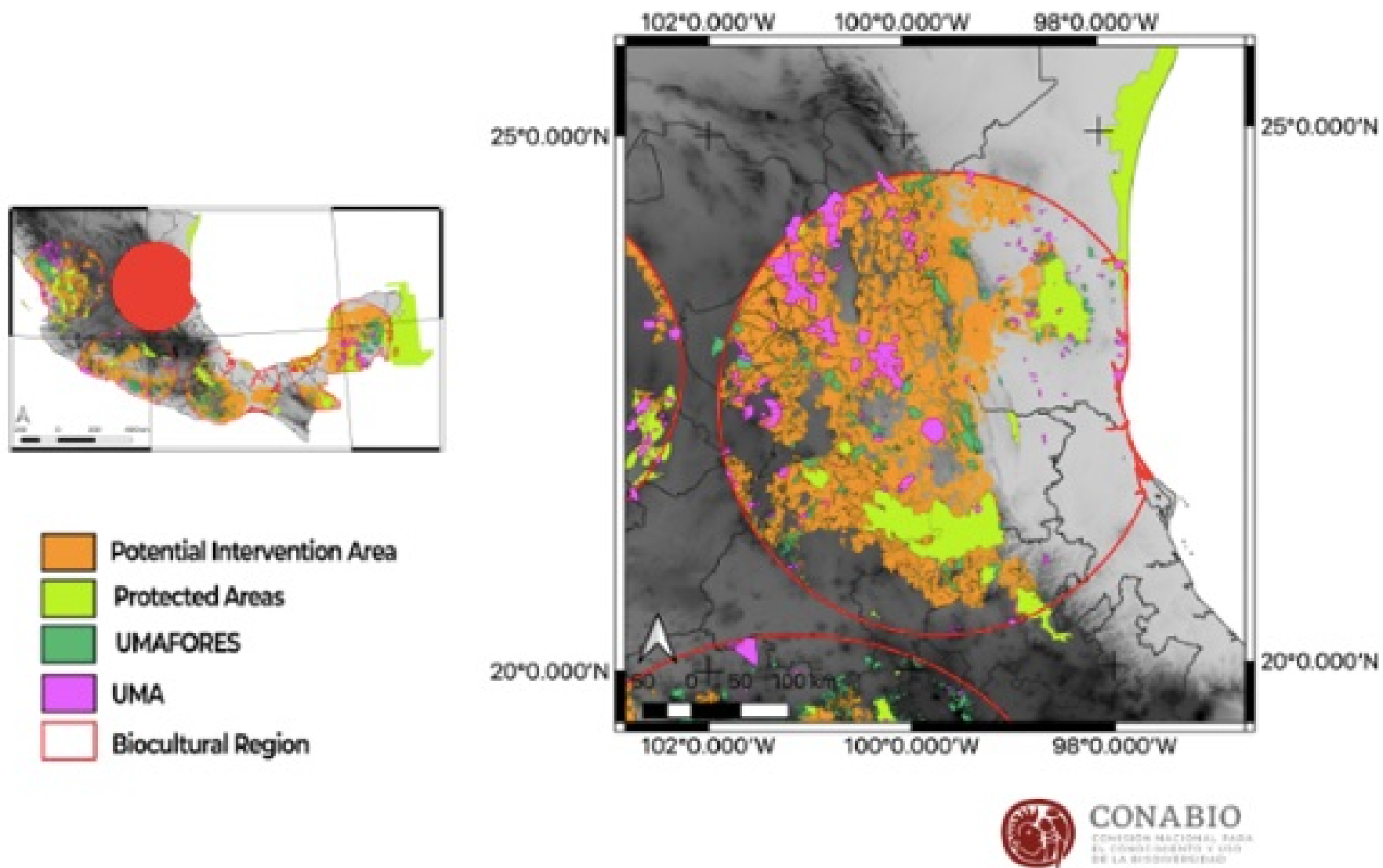


Figure 3. Huasteca Region

## Potential Intervention Area: Purepecha Biocultural Region

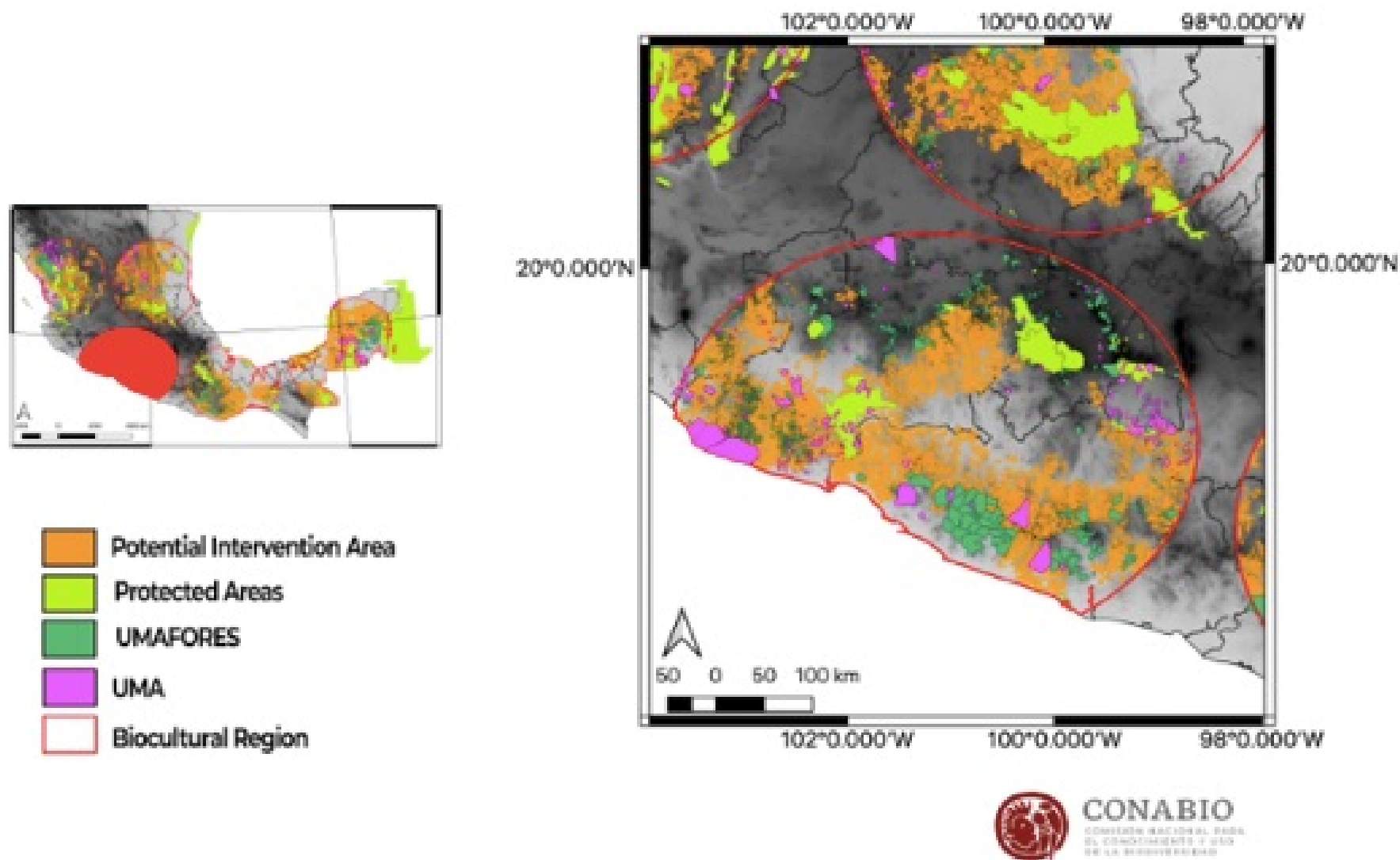


Figure 4. Purepecha Region

## Potential Intervention Area: Istmo-Mixteca Biocultural Region

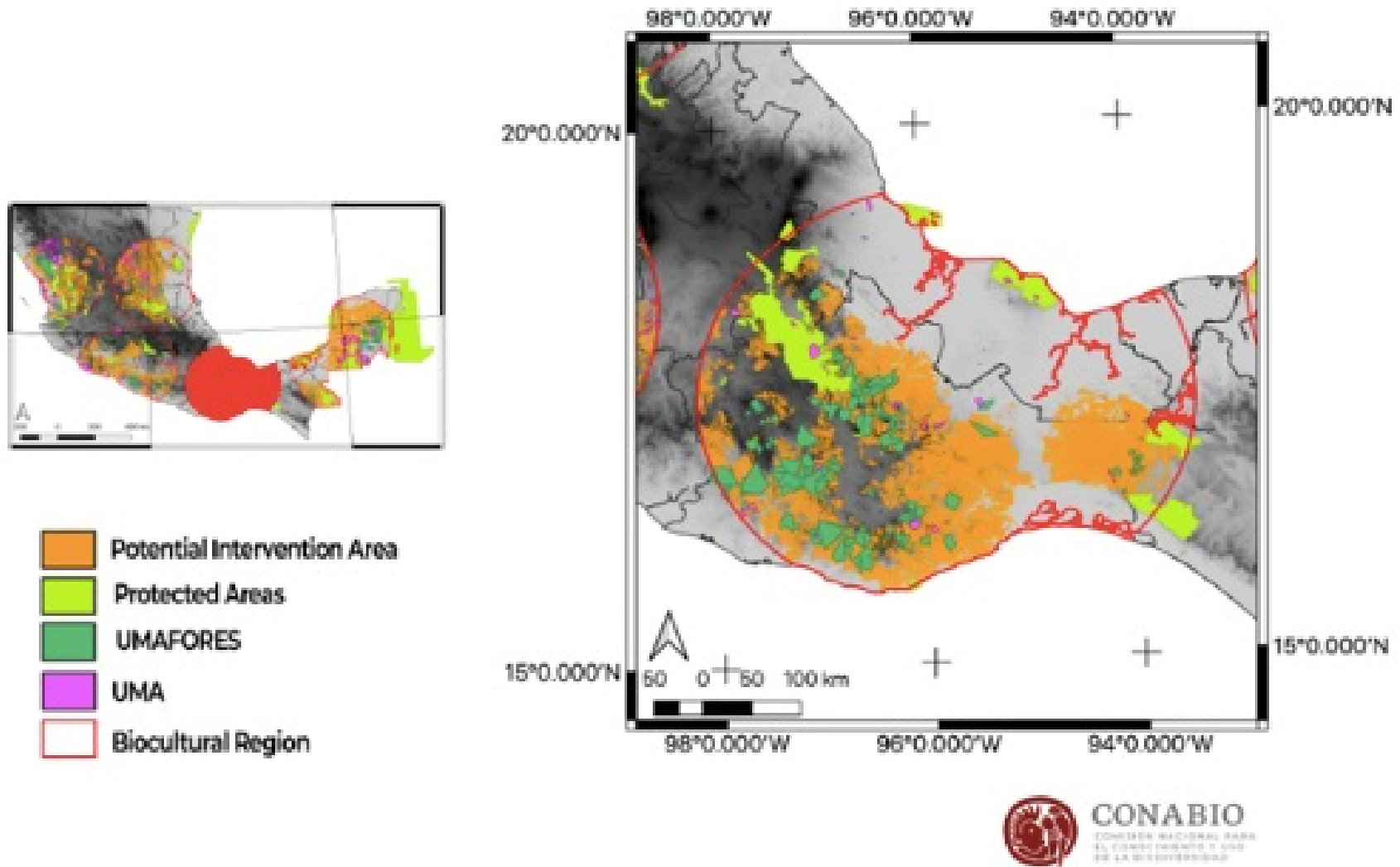


Figure 5. Istmo-Mixteca Region



# Potential Intervention Area: Maya Biocultural Region

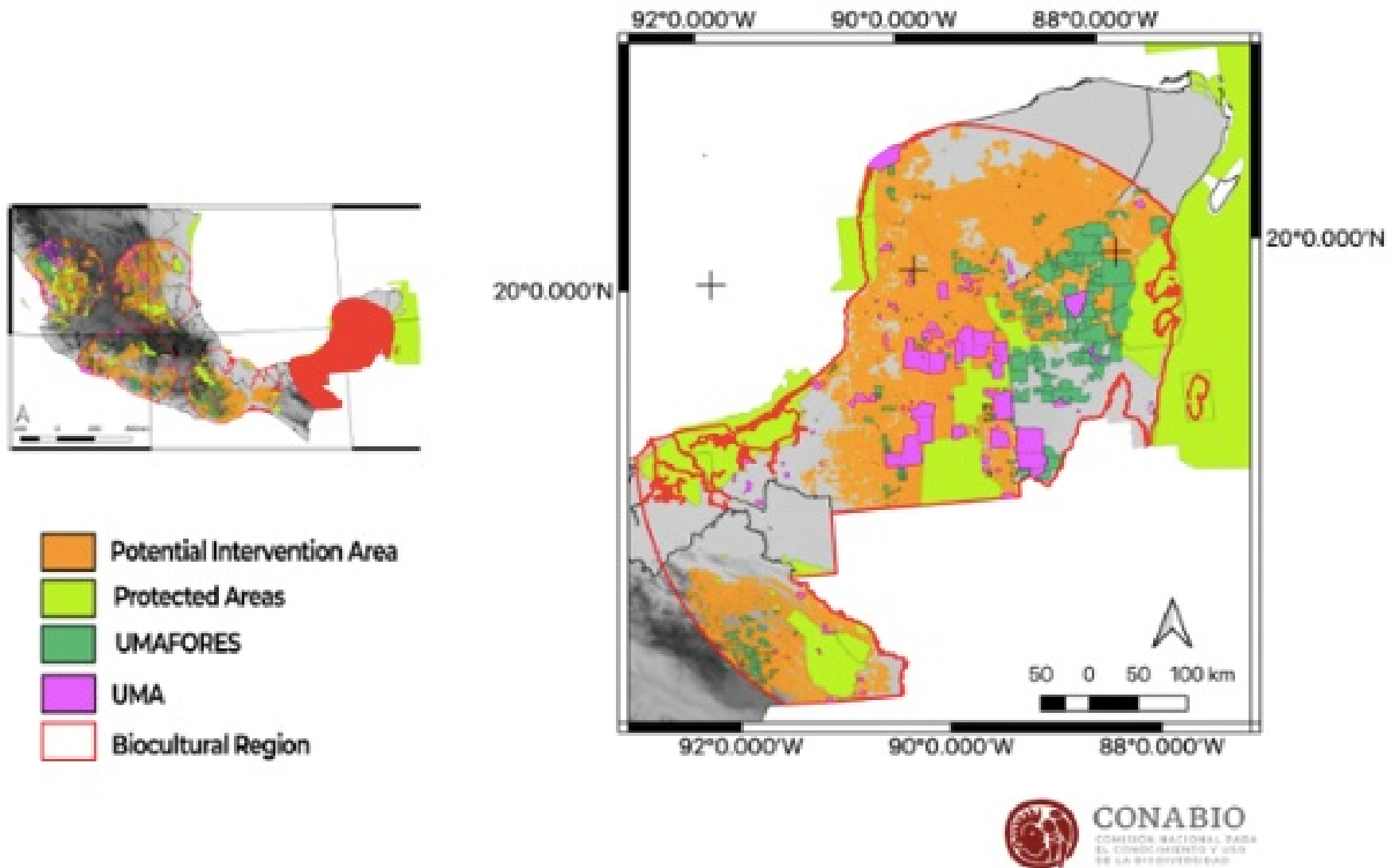


Figure 6. Maya Region

*Selection criteria for species to be applied during PPG:*

The following selection criteria resulted in approximately 50 species for each region, indicated in the list provided below.

<b>Inclusion:</b> <ul style="list-style-type: none"> <li>- Native species to Mexico</li> <li>- Presence within the five potential regions of intervention of the Project</li> <li>- Species with national or international record of exploitation or use:</li> <li>- Harvested species (DGVS)</li> <li>- Species under harvest (DGGFS)</li> <li>- CITES species with international trade (UNEP-WCMC)</li> <li>- Non-CITES species with exports from Mexico (DGVS)</li> <li>- Species subject to illegal trade (PROFEPA, WCMC)</li> <li>- Priority species for conservation</li> </ul>	<b>Exclusion:</b> <ul style="list-style-type: none"> <li>- CITES Appendix I species</li> <li>- Species with current legal prohibitions in Mexico (eg parrots, primates, marine mammals).</li> <li>- Agricultural species</li> <li>- Extinct species</li> </ul>
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### Indicative List of Selected Species

(Ver. 21 September 2020)

This indicative list includes approximately 50 species for each region, selected based on the criteria listed above. This list will be confirmed during the PPG, based on further analysis and consultations with project partners and the IPLC in the 5 Biocultural Regions.

Región 1 Nayar: Durango, Jalisco, Nayarit, Sinaloa, Zacatecas

#### Fauna

##### Mamíferos

1. Venado cola blanca, venado, mazatl, *Odocoileus virginianus* (11)
2. Gato montés, *Lynx rufus* (5)
3. Armadillo, *Dasypus novemcinctus* (5)

##### Aves

##### -Rapaces-

4. Aguililla cola roja, *Buteo jamaicensis* (8)
5. Gavilán de Cooper, *Accipiter cooperii* (8)
6. Gavilán azor, *Accipiter gentilis* (7)
7. Cernícalo americano, *Falco sparverius* (8)
8. Halcón esmerejón, *Falco columbarius* (7)
9. Búho cornudo, *Bubo virginianus* (8)
10. Lechuza, *Tyto alba* (8)

11. Búho Cara Canela, *Asio otus* (7)
12. Búho barrado, *Strix varia* (6)
- No rapaces-
13. Pato criollo, pato real mexicano, *Cairina moschata* (12)
14. Pato pijije, pato pijiji, *Dendrocygna autumnalis* (9)
15. Pato pichihiula, *Dendrocygna bicolor* (9)
16. Cardenal, *Cardinalis cardinalis* (9)
17. Cojolite, *Penelope purpurascens* (9)
18. Codorniz Moctezuma, *Cytornyx montezumae* (6)

#### Reptiles

19. Iguana, *Iguana iguana* (16)
20. Iguana mexicana de cola espinosa, *Ctenosaura pectinata* (8)
21. Monstruo de Gila amarillo, *Heloderma horridum* (12)
22. Monstruo de Gila, *Heloderma suspectum* (11)
23. Boa criada, mazacuate, *Boa constrictor* (12)
24. Tortuga pecho quebrado labios blancos, *Kinosternon leucostomum* (8)
25. Cocodrilo de río, *Crocodylus acutus* (4)

#### **No maderables**

##### Familia Cactaceae

1. Chacha, pitaya, pitaya roja, *Stenocereus thurberi* (10)
2. Basto, garambullo, *Myrtillocactus geometrizans* (9)
3. Cardón, cardón pelón, *Pachycereus pringlei* (9)
4. Biznaga, *Ferocactus histrix* (8)
5. Nopal de cruz, *Acanthocereus tetragonus* (8)
6. Tuna camuesa, *Opuntia robusta* (8)
7. Choya, *Cylindropuntia fulgida* (7)
8. Xoconostle, *Cylindropuntia imbricata* (6)

##### Familia Asparagaceae

9. Sotol, *Dasyllirion acrotrichum* (6)

##### Familia Ericaceae

10. Pingüica, *Arctostaphylos pungens* (6)

##### Familia Euphorbiaceae

11. Candelilla, *Euphorbia antisiphilitica* (16)

Familia Orquidaceae

12. Cola de pato, *Catasetum integerrimum* (10)
13. Flor de Mayo, *Oncidium sphacelatum* (7)
14. Lirio, *Prosthechea cochleata* (7)

**Maderables**

Familia Asparagaceae

1. Pata de elefante, soyate, *Beaucarnea recurvata* (7)

Familia Cordiaceae

2. Barcino, *Cordia elaeagnoides* (6)

Familia Cupressaceae

3. Ahuehuete, sabino, *Taxodium mucronatum* (6)

Familia Fabaceae

4. Machiche, machiché, *Lonchocarpus castilloi* (6)
5. Mezquite, *Prosopis juliflora* (5)

Familia Meliaceae

6. Palo de zopilote, *Swietenia humilis* (6)
7. Cedro, cedro rojo, *Cedrela odorata* (16)

Familia Acanthaceae

8. Mangle negro, *Avicennia germinans* (5)

Familia Malvaceae

9. Coquito o amapola, *Pseudobombax ellipticum* (5)

Familia Moraceae

10. Amate, *Ficus insípida* (5)

Familia Ericales

11. Guayparin, *Diospyros sonora* (5)
12. Madroño, *Arbutus arizonica* (5)

Familia Solanales

13. Cazahuate, cazahuate blanco, *Ipomoea arborescens* (5)

Familia Pinales

14. Ocote blanco, *Pinus strobiformis* (5)
15. Pino amarillo, *Pinus lumholtzii* (5)

Familia Lamiales

16. Guayacán amarillo, *Tabebuia chrysantha* (5)

## **Fauna**

### Mamíferos

1. Puma, *Puma concolor* (15)
2. Tepezcuintle, *Cuniculus paca* (15)
3. Tejón, coatí, *Nasua narica* (12)
4. Venado cola blanca, venado, mazatl, *Odocoileus virginianus* (11)
5. Coyote, coyotl, *Canis latrans* (9)

### Aves

#### -Rapaces-

6. Gavilán de Cooper, *Accipiter cooperii* (8)
7. Cernícalo americano, *Falco sparverius* (8)

#### -No rapaces-

8. Hocofoaisán, faisán, *Crax rubra* (13)
9. Pato criollo, pato real mexicano, *Cairina moschata* (12)
10. Pato pijije, pato pijiji, *Dendrocygna autumnalis* (9)
11. Pato pichihiuila, *Dendrocygna bicolor* (9)
12. Cardenal, *Cardinalis cardinalis* (9)
13. Chachalaca, *Ortalis vetula* (9)
14. Cojolite, *Penelope purpurascens* (9)

### Reptiles

15. Iguana, *Iguana iguana* (16)
16. Monstruo de Gila amarillo, *Heloderma horridum* (12)
17. Boa criada, mazacuate, *Boa constrictor* (12)
18. Cascabel chil-chil, *Crotalus durissus* (12)
19. Tortuga almizclera chopontil, *Claudius angustatus* (9)
20. Cocodrilo de pantano, *Crocodylus moreletii* (5)

### Anfibios

1. Rana verde de ojos rojos, *Agalychnis callidryas* (8)

## **No maderables**

### Familia Cactaceae

1. Pitaya, pitaya orejona, *Hylocereus undatus* (12)

2. Biznaga de chilitos, *Mammillaria magnimamma* (10)
3. Barba de viejo, cabeza de viejo, *Cephalocereus senilis* (9)
4. Basto, garambullo, *Myrtillocactus geometrizans* (9)
5. Nopal de cruz, *Acanthocereus tetragonus* (8)
6. Tuna camuesa, *Opuntia robusta* (8)
7. Pitajaya de cerro, *Disocactus speciosus* (7)
8. Pitaya, *Stenocereus pruinosus* (6)

#### Familia Euphorbiaceae

9. Corona de Cristo, *Euphorbia milii* (7)

#### Familia Orchidaceae

10. Cola de pato, *Catasetum integerrimum* (10)
11. Flor de Mayo, *Oncidium sphacelatum* (7)
12. Lirio, *Prosthechea cochleata* (7)
13. Lirio morado, *Laelia furfuracea* (6)

#### Familia Zamiaceae

14. Coyolito del cerro, *Dioon spinulosum* (8)

#### Familia Cyatheaceae

15. Maquique, *Cyathea fulva* (10)

### **Maderables**

#### Familia Asparagaceae

1. Pata de elefante, soyate, *Beaucarnea recurvata* (7)

#### Familia Cordiaceae

2. Barcino, *Cordia elaeagnoides* (6)

#### Familia Cupressaceae

3. Ahuehuete, sabino, *Taxodium mucronatum* (6)

#### Familia Fabaceae

4. Corazón bonito, *Dalbergia tucurensis* (6)
5. Granadillo, hormiguillo, *Platymiscium yucatanum* (6)
6. Machiche, machiché, *Lonchocarpus castilloi* (6)
7. Campinceran, *Dalbergia granadillo* (5)
8. Ébano, guaypinole, ya'ax-k' iik(maya), *Ebenopsis ebano* (5)

#### Familia Meliaceae

9. Cedro, cedro rojo, *Cedrela odorata* (16)

10. Palo de zopilote, *Swietenia humilis* (6)

Familia Pinaceae

11. Pino caribeño, *Pinus caribaea* (6)

12. Oyamel, *Abies religiosa* (5)

13. Ocote, *Pinus pseudostrobus* (5)

Familia Lamiaceae

14. Coyotomate, *Vitex mollis* (5)

Familia Combretaceae

15. Botoncillo, *Conocarpus erectus* (5)

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Región 5 Maya: Campeche, Chiapas, Quintana Roo, Tabasco, Yucatán

**Fauna**

Mamíferos

1. Tepezcuintle, *Cuniculus paca* (15)

2. Tejón, coatí, *Nasua narica* (12)

3. Venado cola blanca, venado, mazatl, *Odocoileus virginianus* (11)

4. Agutí, cereque, *Dasyprocta punctata* (8)

5. Pecarí de collar, *Dicotyles tajacu* (8)

6. Temazate, *Mazama americana* (5)

Aves

-No Rapaces-

7. Hoco faisán, faisán, *Crax rubra* (13)

8. Pavo ocelado, pavo de monte, *Meleagris ocellata* (13)

9. Chachalaca, *Ortalis vetula* (9)

10. Cojolite, *Penelope purpurascens* (9)

11. Pato criollo, pato real mexicano, *Cairina moschata* (12)

12. Pato pijije, pato pijiji, *Dendrocygna autumnalis* (9)

13. Pato pichi huila, *Dendrocygna bicolor* (9)

14. Cardenal, *Cardinalis cardinalis* (9)

Reptiles

15. Iguana, *Iguana iguana* (16)

16. Monstruo de Gila amarillo, *Heloderma horridum* (12)
17. Boa criada, mazacuate, *Boa constrictor* (12)
18. Cascabel chil-chil, *Crotalus durissus* (12)
19. Tortuga almizclera chopontil, *Claudius angustatus* (9)
20. Cocodrilo de pantano, *Crocodylus moreletii* (5)
21. Cocodrilo de río, *Crocodylus acutus* (4)
22. Tortuga blanca, *Dermatemys mawii* (7)

#### **No maderables**

##### Familia Cactaceae

1. Pitaya, pitaya orejona, *Hylocereus undatus* (12)
2. Nopal de cruz, *Acanthocereus tetragonus* (8)
3. Pitaya abrilena, pitayo, *Stenocereus pruinosus* (6)
4. Choj kaan, *Selenicereus grandiflorus* (5)

##### Familia Cordiaceae

5. Trompillo, *Cordia dodecandra* (6)

##### Familia Ericaceae

6. Pingüica, *Arctostaphylos pungens* (6)

##### Familia Fabaceae

7. Quiebra fierro, *Coulteria platyloba* (6)

##### Familia Orchidaceae

8. Cola de pato, *Catasetum integerrimum* (10)
9. Flor de Mayo, *Oncidium sphacelatum* (7)
10. Lirio, *Prosthechea cochleata* (7)
11. Lirio de San Antonio, *Sobralia macrantha* (6)
12. Night Scented Orchid, *Epidendrum nocturnum* (6)
13. Orquidea, *Rhynchostele rossii* (6)
14. Epidendrum diferente, *Epidendrum difforme* (6)
15. Orquídea, *Isochilus linearis* (6)

##### Familia Cyatheaceae

16. Maquique, *Cyathea fulva* (10)



## **Maderables**

### Familia Cordiaceae

1. Barcino, *Cordia elaeagnoides* (6)

### Familia Cupressaceae

2. Ahuehuete, sabino, *Taxodium mucronatum* (6)

### Familia Fabaceae

3. Nogal, *Dalbergia stevensonii* (11)
4. Corazón bonito, *Dalbergia tucurensis* (6)
5. Granadillo, hormiguillo, *Platymiscium yucatanum* (6)
6. Machiche, machiché, *Lonchocarpus castilloi* (6)
7. Cocouite, cocomuite, *Gliricidia sepium* (5)
8. Acacia, cachito de toro, cuerno de toro, cornezuelo, *Acacia cornígera* (5)

### Familia Meliaceae

9. Cedro, cedro rojo, *Cedrela odorata* (16)
10. Caoba, *Swietenia macrophylla* (6)
11. Palo de zopilote, *Swietenia humilis* (6)

### Familia Pinaceae

12. Pino caribeño, *Pinus caribaea* (6)

### Familia Zygophyllaceae

13. Ken, guayacán, *Guaiaacum sanctum* (13)

### Familia Anacardiaceae

14. Palo de cera, *Astronium graveolens* (5)

### Orden Moraceae

15. Palo amarillo, *Maclura tinctoria* (5)
16. Hule fresco, hule, *Castilla elastica* (5)

### Familia Combretaceae

17. Botoncillo, estachahuete, kanche, tabche, mangle botoncillo, mangle negro, mangle prieto, *Conocarpus erectus*, (5)

